Uses and Gratifications from the Internet

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Abstract

The study was an attempt at assessing uses and gratification from Internet among students in Kerala. The study objectives sought to provide answers to questions such as what gratifications do they seek from Internet? Is the student population using this medium ritualistically to pass time, or instrumentally for education? Which of their socio demographic variables have a bearing on the gratifications sought?

The analysis provided answers to these question and related aspects. Some of these findings are on expected lines, some are pointers to future trends, and their implications are thought provoking, especially in the light of increasing diffusion of Internet in Indian society.

The study seeks to explore the gratifications sought from the internet. Survey method was used in this study. The study was confined to student community as teens and young adults are the most avid users of Internet. Kerala was chosen as study locale as it happens to be the most literate State in India with an even spread of educational facilities.

To arrive at a representative student sample of Internet users in the state of Kerala, a total of 900 students were surveyed in the three districts; 300 each in Thiruvananthapuram, Ernakulam, and Kozhikode districts respectively.

The central focus of this investigation was to identify the diverse gratifications sought by students from Internet. The analysis factored six gratifications: (i) Pass time & habit, (ii) Social interaction, (iii) Entertainment, and (iv) Education (v) IT application, and (vi) Financial benefit.

How would the six Internet gratifications sought compare across various demographic variables of students? Answer to this question formed the next objective of the study. Significant differences were noted based on demographic variables such as gender, location and level of education.

A large majority of students are using Internet more for the ritualistic use of passing time and entertainment.

Key words

Internet, Uses and Gratifications, Students

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Introduction

Interest in the new medium of Internet is at an all time high. While the ICT industry is working overtime to expand its applications and increase its reach, the consumer products and service sector is harnessing its multimedia capabilities to deliver messages to their potential customers, the users of Internet. Its increasing popularity as a platform for interactive communication has opened new vistas for education, learning, entertainment, social interaction and also for merchandising products and services in multifarious ways. As Lievrouw & Livingstone (2007) describe, Internet indeed is shorthand for a bundle of different media and modalities that make it the most complex and plural of the electronic media as yet explored.

For communication researchers the dynamic and interactive nature of Internet makes it particularly suitable for evaluation from the uses and gratifications perspective. Indeed, studies modeled after the uses and gratifications tradition have come to dominate the field of new media research. Such studies besides clarifying the basic tenets of the uses and gratifications theory have also served in predicting its uses and thereby its growth and development in the years ahead.

Past studies have shown that the Internet is used differently and the gratifications sought also vary, though not much in the type of gratifications, but in the importance attached to gratifications sought. And the gratification seeking behavior varies in relation to users' socio demographic variables. Past studies have also uncovered significant differences in the structure of Internet's uses and gratification in different countries and populations. The medium being new, exploratory studies continue to be conducted in different countries and locales so as to detect broad patterns in differences and similarities among users and their uses.

In that direction, the present study was an attempt at assessing uses and gratification of Internet among students in Kerala. The study objectives sought to provide answers to questions such as what gratifications do they seek from Internet? Is the student population using this medium ritualistically to pass time, or instrumentally for education? Which of their socio demographic variables have a bearing on the gratifications sought?

The analysis provided answers to these question and related aspects. Some of these findings are on expected lines, some are pointers to future trends, and their implications are thought provoking, especially in the light of increasing diffusion of Internet in Indian society.

The study seeks to explore the gratifications sought from the internet. Survey method was used in this study. The study was confined to student community as teens and young adults are the most avid users of Internet. Kerala was chosen as study locale as it happens to be the most literate State in India with an even spread of educational facilities.

To arrive at a representative student sample of Internet users in the state of Kerala, a total of 900 students were surveyed in the three districts; 300 each in Thiruvananthapuram, Ernakulam, and Kozhikode districts respectively. As the study concerned Internet use among students, the sample design had ensured adequate and equal representation to school, degree and post graduate students, 100 students from each category in each district. Two schools and two colleges were randomly selected from each district. one from an urban location and the other from a rural area. Thus, a total of six higher secondary schools, and six colleges represented the entire state. Following elimination of 183 questionnaires which were incomplete in one or the other part, the effective sample size was reduced to 717.

The central focus of this investigation was to identify the diverse gratifications sought by students from Internet. The analysis factored six gratifications: (i) Pass time & habit, (ii) Social interaction, (iii) Entertainment, and (iv) Education (v) IT application, and (vi) Financial benefit. Of these the four gratifications of (i) Pass time & habit, (ii) Social interaction, (iii) Entertainment, and (iv) Education were the most common gratifications identified by several of part researchers (Ferguson and Perse ,2000; Yang and Yowei Kang, 2006; Diddi and LaRose , 2006), though in varying order of importance. The last two gratifications of IT Application and Financial benefits had figured in the study of Choi, Watt, Dekkers and Park (2004). Some of these had also figured in other studies as well (example, Haridakis & Hanson, 2009), Hanson, Haridakis & Sharma, 2010, and Roy, 2009).

Internet Gratifications

To realise the objective of determining the gratifications college students seek from using Internet, data was collected using 30 gratification statements as primary motives to use Internet. These reflected ten different dimensions – entertainment, pass time, information, education, IT applications, escape, habit, social interaction, interpersonal relations and financial transactions. Respondents' motives were assessed for each statement through a 5-point Likert- type scale where the response choices were 'strongly agree', 'agree', 'neither agree nor disagree', 'disagree', 'strongly disagree'. These were scored from 5 (strongly agree) to 1 (strongly disagree) respectively and their descriptive statistics ascertained. Subsequently, the data was subjected to factor analysis with the purpose of reducing the 30 gratification statements into a few and group interrelated ones into factors.

As has been used by several Uses &Gratifications researchers (for instance, Ferguson and Perse (2000), Diddi and LaRose (2006), the technique of principal component analysis (PCA) was utilised to extract factors. Here, Kaiser Criterion (Kaiser 1960), a popular factor extraction method, was used as it retains factors with an Eigen value of greater than 1.

PCA Extracts Six Factors

The result of such an analysis is reported in Table 1. The first column of the table shows the Eigen value which indicates the overall strength of relationship between an extracted factor and its variables. The sum of the Eigen values equals the number of variables, 30 in this study. Kaiser's criterion extracted six factors whose Eigen value was greater than 1.

Table 1: Principal Component Analysis - Total Variance Explained

Components	**Initial Eigen values**			**Extraction Sums of Squared Loadings**			**Rotation Sums of Squared Loadings**		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	**7.567**	**25.224**	**25.224**	**7.567**	**25.224**	**25.224**	**5.032**	**16.772**	**16.772**
2	**3.715**	**12.382**	**37.605**	**3.715**	**12.382**	**37.605**	**3.992**	**13.308**	**30.081**
3	**2.517**	**8.390**	**45.995**	**2.517**	**8.390**	**45.995**	**2.269**	**7.562**	**37.643**
4	**1.431**	**4.770**	**50.765**	**1.431**	**4.770**	**50.765**	**2.259**	**7.529**	**45.172**
5	**1.394**	**4.648**	**55.412**	**1.394**	**4.648**	**55.412**	**2.113**	**7.042**	**52.214**
6	**1.112**	**3.707**	**59.119**	**1.112**	**3.707**	**59.119**	**2.072**	**6.906**	**59.119**
7	.963	3.210	62.330						
8	.872	2.908	65.237						
9	.777	2.588	67.826						
10	.759	2.531	70.357						
11	.710	2.367	72.724						
12	.642	2.139	74.862						
13	.608	2.025	76.887						
14	.568	1.892	78.780						

15	.560	1.867	80.647						
16	.547	1.824	82.471						
17	.506	1.687	84.158						
18	.481	1.602	85.760						
19	.450	1.500	87.260						
20	.446	1.487	88.747						
21	.410	1.366	90.112						
22	.406	1.353	91.465						
23	.388	1.294	92.758						
24	.374	1.246	94.005						
25	.353	1.176	95.180						
26	.343	1.145	96.325						
27	.309	1.031	97.357						
28	.300	1.001	98.357						
29	.266	.887	99.245						
30	.227	.755	100.000						
Total	**30.00**								

A key aspect of PCA is factor loading. In simple terms, factor loading are the correlation coefficients between the variables. The squared factor loading, which is analogous to Pearson's r, is the per cent of variance in that indicator variable explained by the factor. The rule of thumb that higher the load of a factor, the more relevant it is in defining the factor's dimensionality point out that the first factor, the most dominant one, explained 25.224 per cent of the total variance. The second factor accounted for 12.382 per cent of the total variance.

The third, fourth and fifth factors explained a variance of 8.390 per cent and 4.648 per cent respectively. The sixth factor accounted for 1.112 3.707 per cent of variance. Together, the six extracted factors explained 59.119 per cent of the total variance.

Rotated Factor Structure of Six Gratifications

The six factors were subjected to Varimax rotation with a cut off loading of above .45 as recommended by factor analysis experts (Hunter, 1980; Tabachnick & Fidell 1983). The Varimax rotation is the most commonly used rotation method which minimizes the complexity of the components by making the large loadings larger and the small loadings smaller within each component. As a result, the sets of similar components tend to group to gather. Therefore, it is often used in survey studies like the present one to see how groupings of questions items measure the same concept.

In the present study, the Varimax rotation grouped together the 30 Internet use motives under the six factors as reported in Table 2. The first column presents the motives that have loaded together under the six factors. The loading of the motives under each of the six factors have been highlighted in their respective columns. Based on their constituent motives, the six factors are named by the researcher as (i) pass time & habit, (ii) social interaction, (iii) entertainment, (iv) education, (v) IT application, and (vi) financial benefit.

i) Pass Time & Habit Gratification

The first factor which explained the highest variance had nine motives, three each belonging to the dimension of using Internet (i) to escape from day-to-day pressure and problems; (ii) as a part of daily routine, habit, and (iii) to pass time. These three indeed are interrelated concepts. For instance, using Internet may become a part of their daily habit for some of those who began using Internet to get away from daily problems and to pass time when they had nothing else to do. The mean scores of these nine items which were ranged

from 3.78 to 3.10 indicate to the high utility salience of passing time, escape and habit gratification.

ii) Social Interaction Gratification

The second important factor named social interaction gratification had six motives relating to the use of Internet to meet people online, belong to a group, maintain personal relations and to express care. These are interrelated in their utility dimensions which stem from the Internet's immense potential to establish contact and communicate with others through emails, facebook and the like. The items mean scores ranged from 3.21 to 2.66.

iii) Entertainment Gratification

The 30-items motives inventory had three statements relating to the use of Internet for entertainment, fun and enjoyment. These three with moderate mean scores of 2.84, 2.39 and 2.94 formed the third factor which has been named as entertainment gratification. Internet is not just plain text but a multimedia system that offers sound, real to life graphics, games and of course a plethora of video products that are rich in entertainment value. But their moderate mean scores of 2.84, 2.39 and 2.94 respectively suggest that students' Internet utility for entertainment is lower than habit and passing time utility.

iv) Education Gratification

Internet provides access to an endless variety of information on every conceivable subject with pedagogic value. Some such material is specifically designed for the curricular needs of the students' community. In that context, the six motives relating to use of Internet for information and education were found grouped as the fourth important factor for which students use Internet. Hence, the fourth factor was named education gratification. The low mean scores of the six items (ranging from 2.45 to 1.60) indicate students' lower utility of Internet for education and information purposes.

Table 2: Rotated Factor Matrix of Internet Gratifications

Factor Structure	Factor 1 **Pass time & Habit**	Factor 2 **Social Interaction**	Factor 3 **Entertain-ment**	Factor 4 **Education**	Factor 5 **IT Application**	Factor 6 **Financial benefit**
Factor 1 Motives Items **To forget problems** (16) (3.70; 1.14)	**.750**	.172	7.743E-03	-2.551E-02	-2.140E-02	3.533E-02
Escape (6) (3.78: 1.11)	**.724**	.191	8.487E-02	-5.443E-02	-7.694E-02	3.261E-02
Forget problems (26) (3.37; 1.20)	**.708**	.188	.167	-2.082E-02	2.530E-02	.127
Habit (2)(3.47;1.18)	**.684**	.322	.205	3.475E-02	-4.089E-02	7.939E-02
Daily routine (12)(3.63;1.13)	**.678**	.288	.136	.105	-8.960E-02	7.070E-02
Occupy time (25)(3.23; 1.18)	**.650**	.105	.301	-.166	9.471E-02	.157
Same time activity (22)(3.63;1.13)	**.632**	.332	-5.496E-02	.121	-.131	9.430E-02
Nothing better to do (15)(3.30;1.21)	**.625**	-7.597E-02	.330	-.141	7.153E-02	-1.539E-02
Passing time (5) (3.10;1.22)	**.606**	-3.014E-02	.437	-.235	6.444E-02	2.583E-03
Factor 2 Motives Items	.193	**.749**	.127	9.200E-02	5.311E-02	6.416E-03

Social Interaction(24)(3.14; 1.25)						
Interpersonal relations (3) (2.66;1.15)	6.519E-02	**.722**	.325	-8.155E-02	.104	6.741E-02
Belong to a group (13) (3.21;1.19)	.190	**.720**	-4.102E-02	2.207E-02	6.137E-02	-9.211E-02
Expression of care (23) (3.13;1.17)	.196	**.710**	.149	9.970E-02	-1.464E-02	-8.268E-02
Interact with others (4) (2.54;1.09)	.117	**.670**	.402	-6.009E-02	7.560E-02	.108
Feel less lonely (14) (3.06;1.19)	.270	**.660**	-2.782E-03	7.050E-02	-3.309E-03	-5.128E-03
Factor 3 Motives Items **For fun** (11) (2.84;1.16)	.279	.206	**.690**	3.479E-02	-.136	-.128
To enjoy (21) (2.39;1.08)	.285	.313	**.683**	5.748E-02	-4.633E-02	.116
To get entertained (1) (2.49;1.03)	.375	.258	**.595**	2.797E-02	-.160	3.748E-02
Factor 4 Motives Items **For information** (17) (1.60; 0.69)	-5.391E-02	-6.719E-02	.141	**.698**	.123	-.126
Help in education (8 (1.69; 0.83)	-.303	-.110	-1.905E-02	**.631**	.236	.237
Learn about world (7) (2.02; 0.95)	.210	.276	-.109	**.561**	.158	-.205
Practice online tests (28) (2.10;1.08)	-.134	.256	-.216	**.521**	.103	.415
Know about (27) (2.45; 1.17)	.169	.403	-7.770E-02	**.508**	9.452E-02	-.153
Prepare for tests (18) (1.62; 0.83)	-.377	-.118	.157	**.492**	.251	.297
Factor 5 Motives Items **Learn IT technology** (9) (2.29;1.02)	-4.746E-02	5.738E-04	-3.692E-02	.245	**.797**	6.775E-02
Computer use (19) (2.26;1.09)	-7.676E-02	5.897E-02	1.054E-03	.170	**.794**	.161
Web applications (29) (2.47; 1.10)	2.455E-02	.196	-.184	.113	**.678**	.212
Factor 6 Motives Items **For job search/e-banking** (30)(2.99; 1.33)	3.110E-02	-1.469E-02	-.108	4.707E-02	4.515E-02	**.792**
To save money (10) (3.60; 1.15)	.181	-4.235E-02	.105	-5.251E-02	.147	**.680**
Search bargain prices (20)(3.53; 1.18)	.254	-3.739E-02	8.132E-02	-8.365E-02	.253	**.618**
Eigen value	**7.567**	**3.715**	**2.517**	**1.431**	**1.394**	**1.112**
Common variance explained	**25.224**	**12.382**	**8.390**	**4.770**	**4.648**	**3.707**

Note: The factor solution explained 59.119% of the total variance. In the first column, numbers in first parentheses refer to the serial number of motives as listed in the questionnaire (see Chapter III/Appendix). Values in second parentheses represent Mean and Standard Deviations of items.

v) IT Application Gratification

Included in the motives inventory were three statements concerning use of Internet to learn web applications, computer use and gain control of information technology. These three related motives formed the fifth factor named here as IT application gratification**.** The moderate mean scores of 2.47, 2.29 and 2.26 of these motives are indicative of a moderate use of Internet to learn computer use and web application.

vi) Financial Benefit Gratification

The 30 motives for using Internet had three motives relating to students' use of Internet to look for products and services at bargain price, e-banking/commerce, and use of Internet as it saves on money. These formed the last factor named the financial benefit gratification. This gratification was of higher utility value among students as its three items had a relatively higher mean scores of 3.60 3.53 and 2.99.

In sum, the analysis showed that students were using Internet primarily for the two ritualistic gratifications of passing time and habit, and entertainment. The fairly high mean scores of passing time & habit clearly point out to the ritualised or passive use of Internet among students. The remaining four gratifications namely, social interaction, education, IT application and financial benefits are instrumental or goal directed gratifications. Among these, the two gratifications of social interaction and financial benefits were more salient as their items scores had a higher mean values. Use of Internet for education appears to have a relatively low priority, though www provides education content in large measures. Perhaps students are yet to realise the value of education content that can be accessed on the web.

Internet Gratifications Across Demographic Variables

How would the six Internet gratifications sought compare across various demographic variables of students? Answer to this question formed the next objective of the study. To seek answers for the question, the scores of the items grouped under each gratification were summed and their statistics were subjected to appropriate statistical test such as the *t* test in the case of gender and location variables which had two groups. In the case of other variables which had more than two groups, the data was subjected to ANOVA followed by a Bonferroni test to identify the group(s) that differ(s) from the rest. The results of such analysis are reported hereunder.

1 Gender Groups and Gratifications

The t-test revealed that male and female students differed in four of the six gratifications (see Table 3). The tendency to use Internet to fill free time, escape and as a daily habit was higher among female students (Mean 32.2744) as compared to male students (Mean 29.9511).

Using Internet to interact with others in an effort to maintain social relations was also significantly higher among female than male students. Likewise, women had a relatively stronger tendency (Mean 8.1026) to use Internet for fun and entertainment than men (Mean 7.2752). Such a pattern had a reverse order in the case of education gratification. Here, the use of Internet for education and information was stronger among male (Mean 11.7859) than female (Mean 11.2179) students.

Table 3: T-Test - Gender and Gratifications

Gratifications	Gender	N	Mean	Mean difference	Std Deviation	*t*	df	Sig (2-tailed)
1. Pass Time & Habit	Male Female	327 390	29.9511 32.2744	-2.3233	7.4979 7.6086	-4.099	715	**.000***
2. Social Interaction	Male Female	327 390	17.2049 18.1821	-.9772	5.2634 5.3505	-2.454	715	**.014***
3. Entertainment	Male Female	327 390	7.2752 8.1026	-.8273	2.6649 2.7677	-4.055	715	**.000***
4. Education	Male Female	327 390	11.7859 11.2179	.5680	3.6221 3.2868	2.200	715	**.028***
5. IT Applications	Male Female	327 390	7.0000 7.0205	-2.0513E-02	2.6654 2.5991	-.104	715	.917
6. Financial Benefits	Male Female	327 390	10.0979 10.1410	-4.3166E-02	2.7984 2.8579	-.203	715	.839

Note: * *t* values are significant beyond .05

In respect of the remaining two gratifications – IT application and financial transactions – there were no statistically significant differences between the two gender groups. In other words, the pattern of using Internet to learn and enhance IT application skills, and for financial transactions was similar among students irrespective of the gender differences.

2. Urban-Rural Location and Gratifications

The *t* test revealed certain similarities and differences in the Internet gratifications of rural and urban students as reported in Table 4. Both groups were similar in using Internet for three gratifications namely pass time and habit, social interaction and financial transaction. In respect of these three gratifications, the visible differences were not statistically significant.

On the remaining three gratifications, the urban students differed from their rural cousins. The differences between the groups were significant beyond .05 levels. The tendency of using Internet for entertainment was more salient among rural students (Mean 7.9060) than students living in urban centres (Mean 7.4448).

Likewise, urban students showed a higher tendency of using Internet for educational purposes (Mean 11.7972) than students living in rural areas (Mean 1.2706). Using Internet to learn about IT application and computers was also more salient among urban students (7.3310) than students from rural locales (6.8050).

Table 4: T-test –Location and Gratifications

Gratifications	Location	N	Mean	Mean difference	Std Deviation	*t*	*df*	Sig (2-tailed)
1.Pass Time & Habit	Rural Urban	436 281	31.4037 30.9217	.4820	7.5352 7.8076	.824	715	.410
2.Social Interaction	Rural Urban	436 281	17.5986 17.9502	-.3516	5.2703 5.4226	-.862	715	.389
3.Entertainment	Rural Urban	436 281	7.9060 7.4448	.4611	2.7573 2.7212	2.197	715	**.028***
4.Education	Rural Urban	436 281	11.2706 11.7972	-.5265	3.4721 3.4045	- 1.997	715	**.046***
5.IT Applications	Rural Urban	436 281	6.8050 7.3310	-.5259	2.5742 2.6821	- 2.627	715	**.009***
6. Financial Benefits	Rural Urban	436 281	10.0459 10.2384	-.1926	2.8812 2.7471	-.890	715	.374

Note: * *t* values significant beyond .05

3 Education Groups and Gratifications

To compare the six Internet gratifications in respect of the three educations groups the data was subjected to one-way ANOVA.

The ANOVA results presented in Table 5 showed that the students' use of Internet for the gratification of passing the time & habit was similar among all students irrespective of whether they are studying in schools or pursuing graduate or post graduate courses. Such a deduction stems from the fact that between groups *F* ratio of 2.750 was not significant at .05 level.

But in respect of the remaining five gratifications, there were statistically significant differences between the three groups of students. This indicates that students studying at the level of school graduate courses and post graduate courses differ in using Internet for five gratifications of social interaction, entertainment, education, IT application and financial benefits. In respect of the gratifications of social interaction and IT applications, the between groups differences were statistically significant at .029 and .002 probability level. The between group differences in respect of the remaining three gratifications namely, entertainment, education and financial benefits had a higher statistical significance above .000 probability level.

Table 5: One way ANOVA: Education and Gratification

Gratifications / Education	Sum of squares	*df*	Mean square	*F*	Sig
Grat 1: Passing Time & Habit					
Between groups	319.586	2	159.793	2.750	.065
Within groups	41487.337	714	58.106		
Total	41806.923	716			
Grat 2: Social Interaction					
Between groups	201.229	2	100.615	**3.568**	**.029***
Within groups	20135.951	714	28.202		
Total	20337.180	716			
Grat 3: Entertainment					
Between groups	119.625	2	59.812	**8.062**	**.000****
Within groups	5297.249	714	7.419		
Total	5416.873	716			
Grat 4: Education					
Between groups	183.350	2	91.675	**7.836**	**.000****
Within groups	8353.520	714	11.700		
Total	8536.870	716			
Grat 5 :IT Application					
Between groups	88.996	2	44.498	**6.544**	**.002****
Within groups	4854.915	714	6.800		
Total	4943.911	716			
Grat 6: Financial Benefits					
Between groups	228.835	2	114.418	**14.849**	**.000****
Within groups	5501.608	714	7.705		
Total	5730.444	716			

Note: **F* values significant beyond .05 level; ***F* values significant beyond.01 level.

Such ANOVA results are good enough in drawing a conclusion that young men and women studying for school level courses, graduate courses and postgraduate programmes differ in using Internet for the five gratifications of social interaction, entertainment, education, IT application and financial benefits. But the *F* ratios do not pinpoint the group(s) that is/are different from the other group(s). To identify the group(s) that differed from the rest, a post-hoc analysis of ANOVA was carried out through a test of multiple comparisons of groups.

Here it must be pointed out that ANOVA tests which yield significant *F* values simply suggest that the means are not the same across the groups under comparison. The significant *F* values however do not tell as to which of the group means differ. Therefore, post-hoc testing of ANOVA results is essential to determine which group(s) differ(s) from the rest. One such multiple comparison procedure available is the Bonferroni test developed by Italian mathematician Carlo Emilio Bonferroni**.** The test allows for pair-wise comparisons of groups. In the present case, the comparison is among three pairs: (i) school students and graduate students, (ii) school students and post graduate students, and (iii) graduate students and post-graduate students.

The Bonferroni test reported in Table 6 presents the group pairs in which statistically differences existed in respect of each of the five gratifications under scrutiny. In Table 6,

such pairs along with their mean differences and the *F* ratio's significance level have been highlighted.

In using Internet for social interaction gratification, statistically significant difference was restricted to students studying in school and graduate students. In this pair, the use of Internet for social interaction was more pronounced among school students than students of graduate courses.

In respect of entertainment gratification too, the difference was confined to one group-pair of post graduate students and school students. Between the two groups, the tendency of using Internet for entertainment was more pronounced among post graduates than students studying school level courses.

The tendency of using Internet for educational purposes was more common among school students than students pursuing post graduate courses. The remaining two gratification of IT application and monetary gratification were more salient among students of school level courses and graduate students than those pursuing post graduate courses.

Table 6: Post Hoc Bonferroni Multiple Comparisons Test for Educationand Gratifications 2 to 6

Gratifications (dependent variables)	(I) Education	(J) Education	Mean difference (I-J)	Standard Error	Sig
Grat 2: Social Interaction	**School students**	**Graduate students**	**1.2395**	.477	**.028***
		PG students	.8634	.488	.232
	Graduate students	School students	-1.2395	.477	.028
		PG students	-.3761	.495	1.000
	PG students	School students	-.8634	.488	.232
		Graduate students	.3761	.495	1.000
Grat 3: Entertainment	School students	Graduate students	-.5213	.244	.100
		PG students	-1.0033	.250	.000
	Graduate students	School students	.5213	.244	.100
		PG students	-.4820	.254	.174
	PG students	**School students**	**1.0033**	.250	**.000****
		Graduate students	.4820	.254	.174
Grat 4: Education	**School students**	Graduate students	.6061	.307	.146
		P G students	**1.2443**	.314	**.000****
	Graduate students	School l students	-.6061	.307	.146
		P G students	6382	.319	.137
	PG students	School students	-1.2443	.314	.000
		PG students	-.6382	.319	.137
Grat 5: IT Application	**School students**	Graduate students	-2.2886E-02	.234	1.000
		P G students	**.7526**	.240	**.005****
	Graduate students	School students	2.289E-02	.234	1.000
		P G students	**.7754**	.243	**.004****
	P G students	School students	-.7526	.240	.005
		Graduate	-.7754	.243	.004

		students			
Grat 6: Financial Benefits	**School students**	Graduate students	-.2833	.249	.768
			1.0607	.255	**.000****
		P G courses	.2833	.249	.768
	Graduate students	School students	**1.3439**	.259	**.000****
		P G students	-1.0607	.255	.000
	P G students	School students	-1.3439	.259	.000
		Graduate students			

Note:* Mean differences significant beyond .05 level; ** Mean differences significant beyond .01 level

Thus, educational level of students is found to have a statistically significant bearing on five Internet gratifications. In that, the tendency of using Internet for the gratifications of social interaction and education was significantly higher among school students than post graduate students.

The use of Internet for the gratifications of IT application and financial benefits was also significantly among schools and graduate students than their seniors, the post graduate students. In respect of the entertainment gratification, significant differences were in evidence between the pair of post graduate students and school students. Between the two, the tendency of using Internet for entertainment was significantly higher among post graduates.

4 Income Groups and Gratifications

To detect the bearing of the independent variable of students' economic status on their Internet gratifications, the data was subjected to one-way ANOVA. The ANOVA results presented in Table 7 showed that in respect of the three gratifications of social interaction, education and IT applications, all students were similar irrespective of the income group to which they belonged. However, students' economic status had a statistically significant bearing on the three other gratifications of passing time & habit, entertainment and financial benefits. In other words, the significant *F* ratios indicate to the differences between the three income-group pairs: (i) low income group and middle income group, (ii) low income group and upper income group, and (iii) middle income group and upper income group.

Table 7: One way ANOVA: Income and Gratification

Gratifications / **Income Groups**	**Sum of squares**	**Df**	**Mean square**	***F***	**Sig**
Grat1 : Passing time & habit					
Between groups	435.222	2	217.611	**3.756**	**.024***
Within groups	41371.701	714	57.944		
Total	41806.923	716			
Grat2: Social Interaction					
Between groups	23.946	2	11.973	.421	.657
Within groups	20313.234	714	28.450		
Total	20337.180	716			
Grat3: Entertainment					
Between groups	111.516	2	55.758	**7.504**	**.001****
Within groups	5305.357	714	7.430		
Total	5416.873	716			
Grat4: Education					

Between groups Within groups Total	46.856 8490.014 8536.870	2 714 716	23.428 11.891	1.970	.140
Grat5 :IT Application Between groups Within groups Total	4.324 4939.587 4943.911	2 714 716	2.162 6.918	.312	.732
Grat6 : Financial Benefits Between groups Within groups Total	89.285 5641.158 5730.444	2 714 716	44.643 7.901	**5.650**	**.004****

Note: * *F* values significant beyond .05 level; ** *F* values significant beyond .01 level.

To ascertain which income-group pair(s) differ(s) from the rest, Bonferroni multiple comparisons test for three gratifications of passing time & habit, entertainment and financial benefits was conducted. The results reported in Table 8. The statistics of the group pairs in which statistically differences existed in respect of each of the three gratifications under scrutiny have been highlighted in the Table.

Table 8: Post Hoc Bonferroni multiple Comparisons Test for Income and Gratifications 1, 3 and 6

Gratifications (dependent variables)	(I) Income	(J) Income	Mean difference (I-J)	Standard Error	Sig
Grat 1. Passing tIme & Habit	**Low Income**	Middle Income	.1859	.669	1.000
		Upper Income	**2.1029**	.780	**.021***
	Middle Income	Low Income	-.1859	.669	1.000
		Upper Income	1.9170	.876	**.**087
	Upper Income	Low Income	-2.1029	.780	.021
		Middle Income	-1.9170	.876	.087
Grat 2. Entertainment	**Low Income**	Middle Income	.2393	.240	.955
		Upper Income	**1.0816**	.279	**.000****
	Middle Income	Low Income	-.2393	.240	.955
		Upper Income	**.8422**	.314	**.022***
	Upper Income	Low Income	-1.0816	.279	.000
		Middle Income	-.8422	.314	.022
Grat 3. Financial Benefits	**Low Income**	**Middle Income**	.7376	.247	**.009****
		Upper Income	.6659	.288	.063
	Middle Income	Low Income	-.7376	.247	.009
		Upper Income	-7.1665E-02	.323	1.000
	Upper Income	Low Income	-.6659	.288	.063
		Middle Income	7.166E-02	.323	1.000

Note: * Mean differences significant beyond .05 level; ** Mean differences significant beyond .01 level

In respect of passing time & habit gratification, statistically significant differences existed between low income and upper income group students with the low income group students being more pronounced in using Internet for passing time and habit than students of upper income families. The tendency of using Internet for entertainment gratification was significantly salient among low income and middle groups of students than students hailing from upper income families.

In respect of using Internet for the gratification of deriving financial benefits statistically significant differences existed only between the pair of low income and middle income groups of students. Between them, the low income group students were more salient in using Internet for obtaining benefits than middle income group students.

From such results it follows that gratifications of passing time & habit, entertainment and financial transactions depended upon students' economic status. Low income group students were more pronounced in using Internet for the gratifications of passing time & habit as well as financial benefits than students of high income families. The tendency of using Internet for entertainment gratification was far more salient among low and middle income group students than students whose families had high income. The high income group students perhaps have other habits and avenues other than Internet to pass their spare time and also to carry out financial transactions of know about bargain product/services, job search. As a result, their use of Internet for the gratifications of passing time & habit, entertainment and financial transactions remains significantly lower than students from low and middle income families.

Of the six gratifications factored in this study, the most salient was the ritualistic gratification of passing time and habit followed by entertainment gratification. From such an ordering, it can be deduced that students are using Internet for passing time and as a habit, and for entertainment.

Though they are using it for social interaction and financial benefits, they are not seeking internet for deriving educational benefits in spite of the fact that the WWW is a treasure trove of information and education on every conceivable subject. Some of the major reasons for such a showing could be the lack of awareness about the education potential of the net, lack of efficacy in searching for educational content and limited high speed access. Language barriers in educational content could also be hindering the use of Internet for educational purposes. Exact reasons need to be ascertained through in-depth interviews with students.

The present study revalidates one of the central assumptions of the uses and gratification theory which states that different people use media to obtain different types of gratifications. The socio demographic attributes of gender, rural and urban belonging, education and income defined the gratifications sought in varying ways. While some findings support past studies, some are contradictory.

The male and female attributes of gender variable had no bearing only two gratifications on IT application and financial benefits. In respect of other four gratifications, male and female differed. While male students used Internet for education, female students were using it for passing time, entertainment and social interaction. These findings, in part, contradict the findings of Weiser's (2000) study where men were found to use the Internet primarily for entertainment and leisure where as women used it mainly for interpersonal communication and educational assistance. However, the findings support Hargittai & Hinnant's (2008) deduction that males with higher education and income tend to use the Internet more for activities to improve their lot in life, i.e., for instrumental purposes, as compared to females who tend to use it more for ritualistic purposes like pass time etc.

In respect of social interaction gratification, the findings of the present study were similar to the findings of Livingstone & Bober(2004) which had shown that more than males, females tend to utilize the potential of the net for communication, as a social medium that can augment their socializing potential. Women are generally perceived to be more interested in keeping in touch, and interpersonal communication. Perhaps therefore they tend to use features of Internet like email, social networking for social interaction.

Unlike other studies, the present study reckoned the rural and urban background of students as an independent variable to assess its bearing on the kinds of gratifications students seek from internet. In seeking the gratification of pass time & habit, social interaction and financial transaction, the two groups of students were similar. But in respect of remaining three gratifications the groups differed. In that, the rural students were using the net more, for seeking entertainment as well as education gratifications than their urban counterparts. Although education gratification was not a top priority for most categories of students, yet it is heartening to note that rural students are using the limited facilities at their disposal in a more constructive manner for education. One possible reason could be that unlike urban students, rural students have limited avenues to meet their varied entertainment and educational needs. So they tend to seek the entertainment and education gratifications from Internet. Urban students were found to use net for information technology application, perhaps to develop their computer skills, learn new software etc. It would be worthwhile to explore the underlying reasons for such differences between rural and urban students.

Students pursuing different levels of education displayed significant differences with respect to five gratifications sought except the gratification of pass time and habit which was popular cutting across all levels of education. The Bonferoni test revealed that between among the educational groups, school students and postgraduate students differed on several counts**.** Contrary to the suggestion of Metzger, Flanagin, and Zwarun (2003) that college students would rely very heavily on the Web for both academic and general information, including entertainment and news, the study revealed that school students were more avid users of the net for education gratification than the postgraduate students. This finding was unexpected because the postgraduate students are generally perceived to have better technical skills and curricular needs and therefore are likely to depend heavily on online educational resources more than students studying in lower level courses. In this context, it would be worthwhile to investigate the reasons for this paradox.

Yet another unexpected finding was that the tendency of using net for entertainment was more pronounced among postgraduate students than school students. Contrary to expectations, postgraduate students lagged behind school and graduate students in seeking instrumental gratifications like IT applications and financial benefits. The habit of seeking these two gratifications was more predominant among graduate students. This finding is contrary to the findings of earlier studies which had uncovered a strong positive association between level of education and visits to capital enhancing sites (Hargittai & Hinnant, 2008). Here too, it needs to be ascertained as to why post graduate students stand out in seeking entertainment gratification and why do they lag behind lower education group of students in seeking the gratifications of IT applications and financial benefits.

Significant differences were noticed between school and graduate students only with respect to the gratification of social interaction, with school students displaying more interest in the socializing potential of this medium as compared to the graduate students.

The Bonferoni test showed that the economic status of students was not instrumental in defining the three gratifications of social interaction, education and IT applications. The other three gratifications of passing time & habit, entertainment and financial benefits were dependent on the students' economic background. Students hailing from low income families tended to use net for entertainment more followed by the middle class and least by upper class students. Also pass time and financial benefit gratifications were more salient for low income group than the high income group. Perhaps this stems from several reasons. Low income people may regard Internet as an economical and convenient way to pass time and for entertainment. But students from affluent families may have other exciting, expensive options to pass time and for entertainment.

In a nutshell, the findings clearly point out that students have come to use internet along with other media. The finding that most of the newest users of the net are school students suggests that as they grow in age and education their dependency on the net may get firmed up enabling it to become the most preferred medium on par with television, if not exceeding it.

But the findings relating to the gratification seeking tendencies, though on par with most of the findings elsewhere, demand the attention of the society, in particular the education subsystem. The tendency of using Internet for educational content is far away from becoming the dominant internet gratification . Concerns arise as a large majority of students are using Internet for the two ritualistic gratifications of passing time and entertainment.

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