Exploring Differences in Student's Digital Usage Motivations in Kashmiri context

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Abstract

This study aims at standardising student's Digital Usage Motivation Scale (DUMS) for identifying various kinds of individual differences among students based on various demographic variables. It aims at understanding influence of gender, residential background and socio-economic status on digital usage motivations. The study is based on a sample of university students of Kashmir. Data was collected through an offline survey (n=704) in compliance with ethical principles of research on human subjects. Using SEM (Structural Equational Modeling), model fit was obtained between hypothesised model and observed data with seven first-order digital usage motives factors as education, capital enhancing, social exchange, self-presentation, self-expression, entertainment and diversion and three second order motive factors as instrumental, socialising and mood management. The study establishes the psychometric properties of DUMS. Study has shown that males and females differ significantly on first order motive factors of education, capital enhancing and self-presentation and second order motive factor socialising. It was evidenced that gender, residential background and socio-economic status significantly influence digital usage motivations. This scale can be useful in understanding individual and group level differences in digital usage motives for successful implementation of ICT in educational settings.

Introduction

Over since the dawn of ICT, our understanding of its relevance in education has been largely based on the notion that today's students are significantly different than their

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predecessors, not only in the styles of life but also in their psychological characteristics (Dede, 2005; Oblinger and Oblinger, 2005). Digital technologies have been integral part of young people's lives; particularly the present generation of university students is believed to have been drawn from the first generation of Digital Natives who grew up with the ICT (Prensky, 2001). Today's university students supposedly prefer rapidity and are adept in acquisition and processing of information; prefer multi-tasking and non-linear access to information; show an aversion for lectures; prefer active rather than passive learning, and rely heavily on communications technologies to access information and to carry out social and professional interactions. (Prensky 2001) However, recent research claims that most of these preconceptions about student's ICT related behaviour are based on speculative presuppositions, revolving around the concepts like Digital Natives, Net Generation and Millennials (Joines, Scherer, and Scheufele, 2003). Margaryan, Little Jhon & Vojt (2010) argue that such claims may not be true in reality; substantial research is needed to provide accurate portrayal of technology adoption among students. Prensky (2001) also proposes a monotonous understanding of Digital Natives. Although his propositions may be true to the extent that present day 'Net Generation' may be significantly different than their teachers, but it may not be in the fitness of things to underestimate the influence of psychological, social, cultural factors in producing individual differences among Digital Natives in terms of their preferences, styles, motivations, uses etc. (Kennedy, et al., 2010; Joines, Scherer, and Scheufele, 2003).

Presently, it is important for universities to ensure that decision making about how to enhance the learning experiences of students through the use of ICT is both evidence based and empirically informed. Although, digital transformation in educational system is inevitable, but it will be misleading to ground such changes on unverified notions about student's digital behaviour (Kennedy, et al., 2010). A comprehensive understanding of student's digital behaviour should be guided by the fact that there are individual differences in technology adoption, use and likeness. The popular understanding that technology integration will make learning interesting for students seems to have been propagated by big IT companies with a motive to maximise their marketing in educational sector (Bayne and Ross 2007). The successful implementations of ICT in education depends majorly on identifying motivations that underlie its usage (Hernandez, Montaner, Sese, and Urquizu, 2011). Understanding student's needs and motivations behind ICT usage could be key to effectively harness the potential of

ICT in educational landscape. Most educational programmes attuned to influence student's behaviour through various digital facilities often underestimate student's social and psychological dispositions. Consideration of student's needs and expected outcomes with digital technologies must be the first step towards building digitally enabled educational programmes. Identification of student needs and motivations with digital media will lay down the principles for construction of e-content. Therefore, primary goal of this study is to develop a tool for understanding individual differences in students ICT usage based on their underlying motivations.

Research on understanding individual differences in student's motives for ICT usage has gained momentum since the last few decades (Senkbeil, 2018). The rationale behind understanding differences in student's ICT usage fall within two larger theoretical frameworks. One framework which is more central to psychological research on ICT, focuses on identifying problematic ICT or internet usage behaviours for example internet addiction (Young, 1998; Chou, Condron and Belland, 2005; Wang et al. 2011;La Rose, Lin, and Eastin, 2003). Other is more sociological in nature and focuses on class, gender and social-economic differences in digital usage, which falls within the larger framework of digital divide (Larose, Mastro and Eastin, 2004; Hargittai and Hinnant, 2008). This entails the second goal of the study which relates to identification of various types of digital divides like gender digital divide and geographical divide.

On the sociological front not only access to technological artifact, but patterns of usage should also be considered when studying the social implications of technology. As technology has become more common among masses, it has become less important to look for mere demographic differences in terms of who is online and who is not. Rather there is a need to start looking for differences in terms of usages. We have to move from asking the question, "who is online?" to "what people are doing online?" (Hargitta, 2002). Verifying differences in use of digital technologies helps in understanding the second level of digital divide (Hargittai and Hinnant, 2008). For example, some scholars have tried to distinguish between people on the basis of their ability of 'capital enhancing' use of ICT, which refers to using internet for activities that can enhance one's life chances. Engaging in capital-enhancing activities is more likely to offer users opportunities for upward mobility than certain other types of online activities (e.g., checking sports scores, reading jokes) (DiMaggio and Hargittai, 2002). As it has been found that income can directly influence availability of physical access and attitudes for digital use (Warschauer 2002), people from high income

groups are more likely to use ICT for beneficial purposes (Hassani, 2006). Therefore, digital usage differences have serious implications in social reproduction of inequality (Warschauer, 2003).

Conceptualising motivation for ICT usage

Uses and gratifications theory (U and G) forms the most dominant approach for explaining individual differences in ICT usage. U and G theorists assert that whereas initial use of digital media may be a result of accidental exposure or curiosity, continuing use suggests there are underlying motivations driving repeated use. For example, if audiences were not receiving certain rewards or gratifications from using a mass medium, they would stop using that medium (Joines, Scherer, and Scheufele, 2003). U and G approach simply represents an attempt to explain the way in which individuals use media actively, among other resources in their environment, to satisfy their needs and to achieve their goals (Katz, Blumler, and Gurevitch, 1973; McQuail, Blumler, and Brown, 1972). U and G theory explains why psychological needs of users shape their motivation and decision to utilise a certain medium to obtain gratifications (Rubin, 1983). The theory has been criticised for the weaknesses of not being able to theoretically and methodologically distinguish between gratifications sought and gratifications obtained. The problem has been dealt to some extent by U and G theorists (Palmgreen, Wenner and Rayburn 1981). But the issue persists as gratification sought and obtained remain two different categories with one incomplete without the other. With frequent inability of U and G studies to explain the variance in media consumption and internet use, scholars have tried alternative approaches like social cogitative theory (SCT) of Bandura (1986) for getting insight into student's ICT usage (LaRose and Eastin 2004; Senkbeil, 2018). SCT states that individual's preference for a particular kind of media use is shaped by his expectations about the likely outcomes of future media (ICT in our case) consumption, which get continuously reformed through individual's experience and ability of forethought (Bandura, 1986). Logically, this appears to explain the relationship among gratifications sought, media behaviour, and gratifications obtained (Peters, et al., 2006; Palmgreen, 1985). According to LaRose et al. (2001), the outcome expectation construct parsimoniously fills the void between gratifications sought and gratifications obtained in U and G research (Peters et al., 2006). Instituting outcome expectations element within U and G model may augment the measurement of ICT usage and may improve the predictive validity of uses and gratifications research in general. This would bring greater consistency to the measurement of gratifications

(or incentive categories, in social-cognitive terms) as well. Outcome expectations reflect current beliefs about the outcomes of prospective future behaviour, but are predicated on comparisons between expected incentives and incentives attained in the past (LaRose and Eastin 2004). Therefore, an individual response to the statment 'I use internet to chat with my friends' is based on his past experience and his vicarious future expectations. Therefore, outcome expectations provide incentives for enacting behaviour, while expectations of aversive outcomes provide disincentives (Bandura, 1986). Outcome expectations act as motivators of current behavior (Bandura, 1986), therefore, outcome expectations represent motivational incentives to satisfy certain needs, (so called ICT usage motives), such as self-presentation, or social interaction (Senkbeil, 2018).

into student's digital use motives. As underlined above for conceptualising Digital Usage Motivation Scale, U and G approach has been used through the lenses of SCT theory (Senkbeil, 2018; Peters et al., 2006; LaRose and Eastin, 2004). Gratification from ICT use has been operationalised as outcome expectations instead of typical uses.

Referring to Bandura's (1986) incentive categories LaRose and Eastin (2004), in his model of media attendance (MMA) conceptualised six motives for digital usage—novel outcomes, status outcomes, social outcomes, activity outcomes, monetary outcomes, self-reactive outcomes. Peters et al., 2006 standardised the LaRose (2004) model in European contexts with same, incentive categories. Following the same Senkbeil (2018) modified MMA to include not only web-based

Table 1a
Different Models Based on Sct Of Bandura

1	Larose, Mastro and Eastin	Novel outcomes, status outcomes, social outcomes, activity outcomes, monetary outcomes, self-reactive outcomes
2	peters et al., (2006)	No change
3	Senkbeil, (2018)	Information seeking, learn and work, social exchange, self-presentation, entertainment, escapism.
4	Present study	Education, capital enhancing, relationship, self-presentation, self-expression, entertainment and diversion.

Following LaRose and Eastin (2004), Senkbeil (2018) peters et al., (2006), we applied SCT to get an insight

applications but also to desktop applications such as word processing, spreadsheet, and presentation

software and standardised it to German settings with six motives which included information seeking, learn and work, social exchange, self-presentation, entertainment, escapism. In Senkbeil (2018), model three underlying second order latent factors were identified namely instrumental orientation, social interaction orientation and hedonic orientation.

We identified seven first order motives in SDUMS, namely education (academic and informational use of ICT; Selwyn, 2008), self-expression and self-presentation these are in line social identity expressiveness and self-identity expressiveness (Tosun, 2012; Thorbjørnsen, Pedersen and Nysveen, 2007; Bargh, McKenna, and Fitzsimons, 2002), relationship, diversion, entertainment and capital enhancing (activities which are likely to enhance one's life chances; DiMaggio and Hargittai, 2002). Monetary incentives in LaRose and Eastin (2004) and learning and working motives in Senkbeil (2018) were replaced by capital enhancing motive in the current study. Information motive was modified to education which not only included seeking information but also novel life skills. In accordance with previous research (Metzger and Flanagin, 2002) where in it has been argued that with new technologies it is worthy to distinguish between instrumental and other types relaxation and entertainment motives. Following Senkbeil (2018) and Senkbeil and Ihme, (2017), we conceptualised three second order factors to SDUMS. Instrumental motives include capital enhancing and education. Social orientation includes self-expression, self-presentation, and relationship motives. Mood management includes those motives which direct ICT use for diversionary motives such as entertainment, relaxation, or escapism (e.g., Metzger and Flanagin, 2002; Senkbeil and Ihme, 2017).

Research Goals and Hypotheses

1. To test how well the proposed model of SDUMS reproduces the observed data.
2. To test the psychometric properties of SDUMS on a Kashmiri student sample.
3. To study the gender differences in digital usage motivations.
4. To study differences in digital usage motivations in terms of residential background.
5. To study correlation between digital usage motivations and socio-economic status.

Hypotheses

H1a: Observed data will reproduce the SDUMS model with a significant model fit.

H1b: SDUMS will have reliable and valid psychometric properties.

H1c: With respect to SDUMS, measurement invariance shall be established with respect to gender and residential background.

H3. Male and female university students differ significantly in terms of their digital usage motivations.

H4. There are significant differences in digital usage motivations based on residential background.

H5. Socio-economic status significantly influences digital usage motivations. This would further mean that students with better socio-economic status would use ICT more instrumentally.

Methodology

Sampling and data collection procedure

This study was based on a cross-sectional survey conducted from 2017-2018 in three major universities of Indian administered Kashmir. The data was collected considering the ethical principles of research with human participants. A sample of 704 individuals was randomly selected. The sample constituted of 309 males and 395 females, 392 rural and 310 urban students. The participation in survey was voluntary. Written informed consent was obtained from the heads of all the participating institutions. The data collection usually started with an introduction by the researcher spilling out the aims of the study and instructions for filling the questionnaire and took place in regular classroom settings in presence of the researcher.

Instruments

A draft of around 30 questions was framed considering the theoretical model of the study. These questions represented various dimensions of SDUMS. The draft was evaluated by 6 experts independently from the disciplines of psychology, education, computer science, information and media studies. Little modifications were made in the questions considering the comments of the experts. After which the questionnaire was introduced for tryout. The 18 item SDUMS is in the form of seven point likert scale which has statements ranging from never to very frequently.

Data analysis

Data was analysed using SPSS AMOS 22.0.0. Using maximum likelihood method the model, fit of theoretical model with the observed data was tested.

Model fit with first-order confirmatory factor analysis

With respect to H1a hypothesis, a decent model fit was obtained with first order CFA. The output of the AMOS yielded a chi-square value of 220.963, with 113 degrees of freedom and a probability of less than 0.0001 ($p = 0.000$), with CMIN/DF = 1.955. Because the chi-square has been found to be too sensitive to an increase in sample size and to the number of observed variables (Hair et al., 2006), the ratio of chi-square to its degree of freedom (x2/df) was

used, with a range of not more than 3.0 being indicative of an acceptable fit between the hypothetical model and the observed data (Carmines and McIver, 1981).

CFI (comparative fit index) = 0.976; GFI (goodness of-fit index) = 0.968; AGFI (adjusted GFI) = 0.951; PGFI (parsimonious GFI) = 0.639; RMR (root mean square residual) = .111; TLI (Tucker and Lewis index) = 0.967; NFI (normed fit index) = 0.952; RFI (relative fit index) = 0.936; RMSEA (root mean square error of approximation) = 0.037; BIC (Bayesian information criterion) = 601.256. The values of the fit indices mentioned above indicate a reasonable fit of the measurement model with data (Byrne, 2001).

Model fit with second order confirmatory factor analysis

In order to build a more parsimonious model and provide an account for the correlations among the lower order factors a higher order CFA (second order in this research) was conducted. Higher order factors account for the correlations among the lower order factors. The output of the AMOS analysis yielded a chi-square value of 282.235, with 124 degrees of freedom and a probability

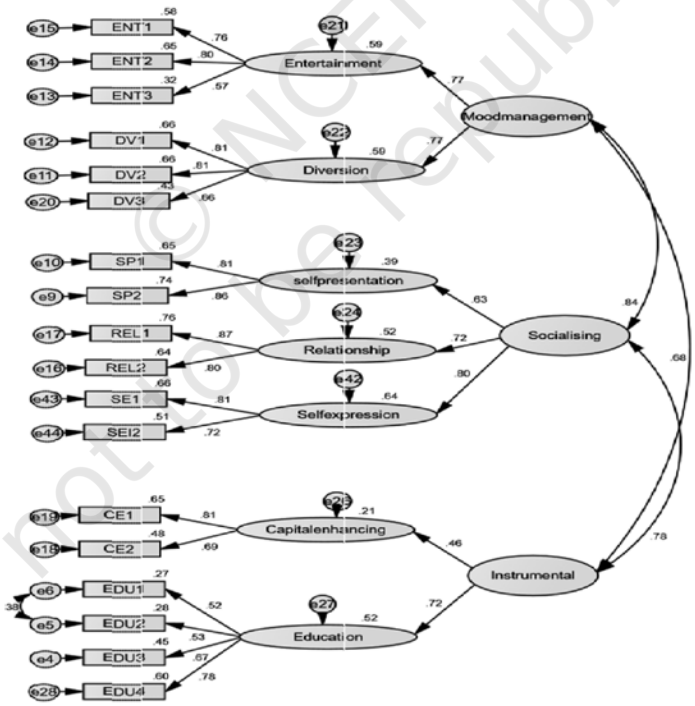

Figure 1 SEM of SDMS.

of less than 0.0001 (p = 0.000), CMIN/DF = 2.276; CFI = 0.965; GFI = 0.957; AGFI = 0.941; PGFI = 0.694; RMR = 0. 151; TLI = 0.957; NFI = 0.939; RFI = 0.925; RMSEA = 0.043. With respect to H1a the values of the fit indices mentioned above indicate a reasonable fit of the measurement model with data (Byrne, 2001).

Internal consistency

Satisfactory measures for internal consistency of SDMS were obtained. The scale has overall alpha score of .864 which is acceptable. The table 1 shows the reliability measures of the seven factors which are all above the cutoff score of .70 (Sax, 2001).

Convergent Validity

Anderson and Gerbing (1988) state that the convergent validity of a model can be accessed by determining whether the path estimates between the measurement items and their respective latent constructs are significant or not. In case of the AMOS output, the standardised estimates of all the measurement items were significant as shown in table 2. Each variable exhibits significant loadings which supports the convergent validity. Also, it could be seen that AVE for all the constructs is either greater than or close to .50 which confirms its convergent validity.

Table 1.
Reliability of Digital Usage Motive

S.no.	Factors	Mean	SD.	Cronbach's Alpha
1	Education	15.19	5.219	.780
2	Capital enhancing	4.17	3.397	.717
3	Relationship	7.85	3.573	.819
4	Self-presentation	4.53	3.715	.820
5	Self-expression.	6.56	3.347	.736
6	Diversion	10.1	4.960	.799
7	Entertainment	9.78	4.792	.751
	Overall	58.10	18.696	.864

Table 2
Standardised Regression Weights and AVE

Observed variable		Latent variable	Estimate	Squared Loadings	AVE
EDU3	<---	Education	.678	0.459684	
EDU2	<---		.542	0.293764	
EDU4	<---		.763	0.582169	
EDU1	<---		.532	0.283024	
SP2	<---	Self-presentation	.855	0.731025	
SP1	<---		.813	0.660969	

DV2	<---	Diversion	.813	0.660969	
DV3	<---		.810	0.6561	
DV1	<---		.657	0.431649	
ENT3	<---	Entertainment	.568	0.322624	
ENT2	<---		.803	0.644809	
ENT1	<---		.766	0.586756	
REL2	<---	Relationship	.789	0.622521	
REL1	<---		.879	0.772641	
CE2	<---	Capital enhancing	.715	0.511225	
CE1	<---		.781	0.609961	
SE2	<---	Self-expression	.724	0.524176	
SE1	<---		.803	0.644809	

Discriminant Validity

As proposed by Fornell and Larcker (1981), discriminant validity can be assessed by comparing the average variance (AVE) in indicators explained by the constructs and the corresponding inter-construct squared correlation estimates. For example, self-expression explains 58.44% of the total variability in the scale. The table 3 shows that the AVE's are greater than the inter-construct squared correlation estimates which supports discriminant validity. Therefore, with respect to the hypothesis H1b the factors of the Digital usage motivation scale have been found to be reliable and valid.

Measurement Invariance

Measurement invariance is the statistical property of a measurement which indicates that the same underlying construct is measured across the groups. Or, supports the statement that same hypothesis holds true across the groups (Cheung and Rensvold, 2002). There are essentially four levels of measurement invariance and each of these levels builds upon the previous by introducing additional equality constraints on model parameters to achieve stronger forms of invariance (Sass, 2011). As each set of new parameters is tested, the parameters known to be invariant from previous

Table 3
Showing Squared Inter-construct Correlation

Variable		Variable	Inter construct correlation	Squared correlations
Education	<-->	Self-presentation	0.257	0.066049
Education	<-->	Diversion	0.347	0.120409
Education	<-->	Entertainment	0.445	0.198025

Education	<-->	Relationship	0.501	0.251001
Education	<-->	Capital enhancing	0.333	0.110889
Education	<-->	Expression	0.411	0.168921
Self-presentation	<-->	Diversion	0.44	0.1936
Self-presentation	<-->	Entertainment	0.41	0.1681
Self-presentation	<-->	Relationship	0.384	0.147456
Self-presentation	<-->	Capital enhancing	0.303	0.091809
Self-presentation	<-->	Self-expression	0.566	0.320356
Diversion	<-->	Entertainment	0.594	0.352836
Diversion	<-->	Relationship	0.478	0.228484
Diversion	<-->	Capital enhancing	0.199	0.039601
Diversion	<-->	Self-expression	0.507	0.257049
Entertainment	<-->	Relationship	0.491	0.241081
Entertainment	<-->	Capital enhancing	0.222	0.049284
Entertainment	<-->	Self-expression	0.462	0.213444
Relationship	<-->	Capital enhancing	0.155	0.024025
Relationship	<-->	Self-expression	0.574	0.329476
Capital enhancing	<-->	Self-expression	0.38	0.1444

levels are constrained. Thus, the process of assessing measurement invariance is essentially the testing of a series of increasingly restrictive hypotheses (Byrne, 2001). We tested for invariance by gender using the male (n= 309) and female (n=395) subsamples, and by educational backgrounds with rural (n=392) and urban (n=225) and semi-urban (n=87) subsamples.

With respect to H1c, measurement invariance has been established with respect to gender and residential background. Table 4 and 5 shows the results from the analysis of measurement invariance by gender and residential background. It shows the various kinds of models that have been compared. Table 4 and 5 indicates satisfactory measures for establishment of metric invariance with regard to both variables suggest the same construct is measured across groups and that the units of the scale are the same. Thus, the relations between the factors can be compared across groups (Sass, 2011).

Table 4
Measurement Invariance Test Results with regard to Gender

Model	df	x2	Model comparison	Δ df	Δ x2	CFI	ΔCFI
M1 (Configural)	248	433.258				.959	
M2 (first order factor invariance)	259	447.627	M2-M1	11	14.369	.958	-.001
M3 (Metric)	263	451.900	M3-M2	4	4.273	.958	.000
M4 (Scalar)	269	458.487	M4-M3	6	6.587	.958	.000
M5 (residual).	276	474.612	M5-M4	7	16.125**	.956	.-002
M6 (Measurement residuals)	295	501.483	M6-M5	19	26.871	.955	-.001

Table 5
Measurement Invariance Test Results with regard to Residential Background.

Model	df	x2	Model comparison.	Δ df	Δ x2	CFI	ΔCFI
M1 (Configural)	419	644.866				.950	
M2 (first order factor loadings)	430	659.864	M2-M1	11	14.998	.949	-.001
M3 (Metric)	434	662.171	M3-M2	4	2.203	.950	.001
M4 (Scalar)	440	669.263	M4-M3	6	7.092	.950	.000
M5 (residual).	447	683.964	M5-M4	7	14.701**	.948	-.002
Measurement residuals	466	707.175	M6-M5	19	123.211	.947	-.001

Gender Differences in SDUMS

Table 6 show gender differences in ICT usage. Males and females differ on first order motive factors of 'capital enhancing', 'self-presentation' and education; also on second order motive factors of socialising. It can be concluded from mean scores of males and females that males prefer 'capital enhancing', 'self-presentation' and 'socialising' use of ICT as compared to females. Whereas females prefer using ICT for educational purposes. Therefore, the hypothesis H3 stands.

Table 6
Results of the Independent Samples t-tests carried out to determine Gender Differences in terms of the Student uses and motives for ICT

	Gender	N	Mean	SD.	t.
Capital-enhancing	Male	309	4.6019	3.41218	2.961**
	Female	395	3.8405	3.35200	

Self-presentation	Male	309	5.6742	3.47204	7.529**
	Female	395	3.6413	3.65888	
Education	Male	309	14.4660	5.12091	-3.286**
	Female	395	15.7595	5.23172	
Socialising	Male	309	20.2477	8.05774	3.762**
	Female	395	17.9249	8.22317	

Rural-urban Differences in SDUMS

Residential background forms an important context in understanding ICT related behaviour in Indian society. There is huge digital divide between rural and urban areas in India. Table 7 indicates that there is a significant difference between ICT usage motives of rural, urban and semi urban students. Urban students are more like to use ICT for instrumental and mood managing functions. No significant difference was found in socialising motives. Therefore, H4 stands.

Table 7

Differences in ICT usage motivations by Residential Background

	ANOVA					Post Hoc (LSD)		
	Group	N	Mean	SD.	F	Group	Group	Sig
Education	Rural	392	14.5561	5.35272	7.839**	Rural	Urban	000
	Urban	225	16.2667	5.08060			Semi-urban	.240
	Semi-urban	87	15.2759	4.50759		Urban	Semi-urban	.129
Entertainment	Rural	392	9.1352	4.59173	10.185**	Rural	Urban	.000
	Urban	225	10.9200	4.84794			Semi-urban	.303
	Semi-urban	87	9.7126	5.02993		Urban	Semi-urban	.044
Instrumental	Rural	392	18.9133	7.23360	3.216**	Rural	Urban	.014
	Urban	225	20.3200	6.58697			Semi-urban	.971
	Semi-urban	87	18.9425	5.49282		Urban	Semi-urban	.111

Mood-management	Rural	392	19.0658	8.38463	4.462**	Rural	Urban	.003
	Urban	225	21.1422	8.33170			Semi-urban	.632
	Semi-urban	87	19.5402	8.24876		Urban	Semi-urban	.129

Socio-economic status and SDUMS

Table 8 shows correlation between variables of the study. It indicates that parental education and economic status are significantly correlated with ICT usage motivation for education, entertainment, and relationship. This high correlation supports the hypothesis that socio-economic status plays an important role in ICT usage motivation. As the socio-economic status improves people tend to use ICT more instrumentally.

Table 8
Correlations between ICT usage motivation Variables and Socio-economic Status.

		1	2	3	4	5	6	7	8	9	10	11	12
1.	Education	1	.324**	.233**	.186**	.263**	.290**	.876**	.340**	.377**	.404**	.182**	.172**
2.	Entertainment		1	.172**	.345**	.481**	.348**	.332**	.855**	.457**	.367**	.168**	.165**
3.	Capital enhancing			1	.232**	.147**	.286**	.673**	.185**	.275**	.125**	-.042	.063
4.	Self-presentation				1	.356**	.442**	.257**	.407**	.768**	.315**	.030	.054
5.	Diversion					1	.384**	.273**	.866**	.492**	.404**	.053	.021
6.	Self-expression						1	.362**	.426**	.798**	.442**	.042	.032
7.	Instrumental							1	.351**	.423**	.369**	.120**	.163**
8.	Mood management								1	.552**	.449**	.126**	.105*
9.	Socialising									1	.756**	.076	.075
10.	Relationship										1	.107*	.088*
11.	Parental education											1	.580**
12.	Economic status												1

Correlation is significant at the 0.01 level (2-tailed).
Correlation is significant at the 0.05 level (2-tailed).

Discussion and Conclusion

As ICT use motivation vary from culture to culture, it has been observed that most of the research conducted on ICT use motivations has been restricted to western societies (Roy, 2009). As use profile is influenced by culture gender and ICT development index (ITU, 2016), ICT use profile of Indian users needed to be properly researched (Roy, 2009). Given, the lack of research in Indian context this study aims to fill this gap. The study presents psychometric properties of SDUMS in Kashmiri Indian context. This scale will help in identifying individual differences in students ICT related behaviour. With the current

magnitude of ICT adoption among students population it becomes increasingly important to accurately portray individual differences in ICT related behaviour. The scale has been observed to have good psychometric properties like reliability and validity.

Taking clue from social cognitive and U and G approaches the scale has seven first order factors with sound reliability measures as education, capital enhancing, relationship, self-presentation, self-expression, diversion and entertainment. The scale has three second order factors as instrumental, socialising and mood management. The final scale has a total of 18 questions with seven point like rt scale ranging from never to very frequently.

Establishment of configural, metric and scalar invariance with regard to gender and residential background suggest the same construct is measured across groups and that the units of the scale are the same. Based on these results, the relations between the factors can be compared across groups (Vandenberg and Lance, 2000; Sass, 2011).

ICT in developing countries like India can bridge socio-economic divides and empower the marginalised, including women and minority groups (Khan, and Ghadially, 2010). However, a successful utilisation of the ICT depends upon the assumptions that digital technologies are designed and set up in ways that are supportive of gender and cultural differences. Without regard to the social context in which ICTs are expected to operate, they can amplify the existing economic, political and social inequalities. Awareness of the gender dimension of access, need and use of information technologies is also crucial for an effective deployment of new technologies to ensure that girls and boys benefit equally from the tremendous potential of the ICT (Best and Maier, 2007).While initially the focus of research was to understand the difference in the magnitude of online behaviour based on gender (Bimber, 2000) now research suggests that such difference in terms of magnitude may no longer exist (Ono and Zavodny, 2003). Therefore, researchers (see Wasserman, and Richmond-Abbott, 2005; Imhof, Vollmeyer, and Beierlein, 2007) started looking into variety of use in ICT. In this connection, this study distinguishes between ICT usage motivation between males and females. Males use ICT more for self-presentation and capital enhancing whereas females use ICT more for educational purposes (Selwyn, 2008). We also found that females use ICT less for socialising than do males. These findings further add to earlier studies like Weiser's (2000) found that women use it mainly for interpersonal communication and educational assistance.

With technologies becoming cheaper, ICT at present is being widely used for various purposes in developing countries like India, despite the urban-rural digital

divide. Although, some studies claim that ICT penetration is increasing rapidly in India and the influence of demographic variables like residential background on ICT behaviour of students has significantly diminished (Kumar, 2012). But, India ranked low at 138th in 2016 and 135th spot in 2015 on IDI (ICT development index) out of 175 countries according to an international ITU report (ITU, 2016). Despite low IDI, people in India have shown increasing dependence on internet resources from last decade, computer technology in India has become an almost integral part of college and university education (Kumar, 2012). India being a country dominated by a major rural population, rural urban divide forms an important context while discussing ICT related issues in Indian society (see also Sampat Kumar, and Basavaraja, 2016; Rao, 2005).Therefore, it becomes increasingly essential to explore and understand ICT usage motivations of rural and urban students to effectively cater to their ICT related needs. The study evidenced that there are rural urban differences in ICT usage motives. People from urban students have been distinguished from their rural and semi-urban counterparts by their more pronounced use of ICT for instrumental and entertainment purposes.

Socio-economic status which was calculated based on economic and educational status of parents positively correlated with ICT usage motivation for education, capital enhancing and entertainment. Whereas it was not significantly correlated with other ICT usage motivations. It could be understood that as socio-economic status improves students tend to use ICT more instrumentally. As it has been earlier established that there are social class differences in ICT usage motivations. These differences widen the definition of digital divide as a particular kind of ICT usage or attitude put people at a relative advantage or disadvantage than others (DiMaggio and Hargittai, 2002; Hargittai, 2008). Using ICT more instrumentally is a kind of culture capital shared by people with better socio-economic status, which puts them at relative advantage than those from lower ranks (Selwyn, 2004; Tondeur, Sinnaeve, Van Houtte and van Braak, 2011). If this form of digital divide goes unattended in educational settings, it will significantly accentuate the hitherto social distinctions. If the differences in expected outcomes are not taken into consideration, the problems of social and digital inequity may worsen by creating unequitable educational conditions.

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Annexure 1 SDUMS

Label	Statement	Never	Almost never	Very rarely	Rarely	Often	Frequently	Very frequently
	I use ICT.....							
	Instrumental usage							
EDU1	to find information related to my course.							
EDU2	to find information related to current events and happenings.							
EDU3	to finish my classroom assignments & projects.							
EDU4	to learn new things.							
CE1	to seek information from government offices related to the working of public policies, schemes and programmes.							

CE2	to communicate with job providers for my better job placement.							
	Socialising							
REL1	to communicate, chat and maintain relationship with friends and classmates							
REL2	to communicate, chat and maintain relationship with close relatives, kins etc.							
SP1	to upload and share my personal activities, photos/videos etc.							
SP2	for posting and updating information about myself on social networking portals.							
SE1	to share information, videos, images, texts which I consider important.							
SE2	to share information/videos/images for public awareness.							
	mood management							
DV1	to engage myself with internet when I feel emotionally disturbed.							
DV2	to engage myself with internet when I feel lonely.							
DV3	to release stress							
ENT1	for downloading and watching music / videos/ movies.							
ENT2	to entertain myself.							
ENT3	to play games.							

**All* items are positive with never =0 and very frequently =6