Determinants and Impressions of Online Social Networks on Adolescent School Children: A Study of Greater Kolkata Region, India

Jaydip De and Sharmistha Chatterjee, West Bengal

Abstract

The recent progress of Information and Communication Technologies has paved the ways for online networking sites to accrue a scene in the trajectory of socialization. These neoliberal i-mediums have captivated the hearts of millions of teenaged and adolescent. Exploring the influence of social media on adolescent school children is the key thrust of this paper. Children responded in person, to a collection of questions relating their online behaviour. It is probed that adolescent children spend a considerable time surfing social media daily. It also arises controversies regarding the utilities and impacts of such sites in their lifestyle. Though the school going youths prefer other leisure activities, but the absence of scopes is making them increasingly leaned towards the virtual world. In such a circumstance, peer group connections and popularity related attractions are driving the youth towards web-media, which in turn affect them both positively and negatively.

Keywords: *online networking sites; socialization; i-mediums; adolescent school children; peer group.*

1. Introduction

Social media is one form of computer-mediated technology that allows a collection of websites, the internet dependent services and practices that support in collaborations (Abdulahi, et. al., 2014; Fagioli, et. al., 2015), community building (Lee and McLoughlin, 2010; Naveh, et. al., 2010; Ozmen and Atici, 2014; Badri, et. al., 2017), participation and sharing (Junco, et. al., 2010; Owusu-Acheaw and Larson, 2015). Presently it has become an integral part of everyday life as well as, a means to marshal parallel online and offline life (Wang, 2016). Day by day social media is becoming more acceptable and usable means of communication within some age groups, to be more particular, among the adolescents

(Al-Rahmi and Othman, 2013). Social media is, therefore, a peculiar subgroup of media, stamped by its sociality and thus differentiated from traditional print and audio-visual mediums (Bruns, 2015). Social networking sites are useful not because it is allowing the individuals to meet as strangers through online but rather permit users to articulate and make visible their social networks (Boyd and Ellison 2007; Valente, 2008; Liu and Ying, 2010; Smith, et. al., 2011; Popiolek, 2015). These are the latest online communication tool that allows users to form a public or semi-public profile where the individuals try to communicate through the virtual social networks (Subrahmanyam, et. al., 2008). Amongst the various social

networking sites; WhatsApp, Facebook, and Gmail are now gaining more and more patronage. Contemporary technological advents have some obvious impact on the young mind (Best, et. al., 2014). As a result, these have obtained immense importance in the life of the adolescents (Pack, 2015).

Social media with all its benefits and demerits accrued its position in the academic setting by collaborative learning and improve the students' academic performance(Yu, et. al., 2010), self-esteem, social and mental development. At the same time, there exists a wide discrepancy in terms of place and access; the influence of family, its economic condition, preferred sites, its purpose of use and its impact on decision making (Barker, 2009). The social media has a strong bi-polar impact on the school children. While the positive side incorporates socialization, communication, enhanced learning opportunities, accessing valuable information; the negative problems faced by the users are like cyberbullying, online harassment (Sengupta and Chaudhuri, 2011), sexting (Lenhart, et. al., 2011; Royen, et. al., 2016), virtual depression, lack of privacy (O'Keeffe, and Clarke-Pearson, 2011) and virtual addiction (Huang, 2011). Adolescents join online groups on the basis of their similar interests, but each one's motivation or gratification could vary depending on their demographic characteristics and their views (Park, et. al., 2009). These e-media portray a profound impact on peer group contacts of youth too (Shraim, 2014; Bahati, 2015; Nicolescu, 2016; Schindler, et. al., 2017). *As the youths are growing up with digital communications (*Schwartz, 2014) *like computers, smartphones, tablets, and internet, they cannot think of daily life without Google, Gmail, and Facebook etc. (Subrahmanyam and Greenfield, 2008).*

2. Objectives

Identifying the influence of social media on the lifestyleand behaviourof adolescent school children is the nucleus of this paper. This study tends to pinpoint the gender variations in different aspects related to accessing social media. At the same time discrepancies in place and device of access, theinfluence of families' economic condition, preferred site, thepurpose of use and their impact on personal life is also identified. To know their loved pass time, theemphasis is also given in formulating Leisure Preference Index (LPI).

3. Materials and Methods

This concurrent study is based on information obtained fromthe primary survey conducted on school children of Greater Kolkata region i.e. the suburbs of Kolkata, is carried through the following mutually interdependent stages.

3.1. Subject Selection

In order to draw arepresentative character from the school studentsusing social media,200 (Mean = 14.77 and SD = 0.88) students of different standards of secondary level from suburban Kolkata is selected randomly for this study (100male and 100 female).

3.2. Survey Design

A perception survey is conducted on 200 adolescents school children based on

a structured schedule, composed of both closed and open-ended questions. Since the key focus of this investigation is to identify the influence of social media on the lifestyle of school going children; the major questions asked of the respondents are focused on evaluating –

- The medium of accessing social media.
- The place of accessing social media.
- Preferred social media.
- The purpose of using social media.
- The impact of social media on academic performance and personal development.

The importance of different pass-times like playing games, reading story books, accessing social media, watching T.V. etc. are also identified through closed-end rank order questions.

3.3. Data Analysis

The percentage of respondents in various categories against different questions, for both male and female students, are computed and represented diagrammatically through statistical software. In order to quantify favourite leisure activity, students were asked to rank (Leisure Preference Rank) seven different activities (accessing social media, playing outdoor games, playing indoor games, playing computer games, reading story books, watching television and any other activities) in order of their preference from 1 to 7 (where 1 and 7 stands for the most and least preferred activity respectively). At first, the frequencies against Leisure Preference Rank are calculated for male and female students, separately. Thereafter the Leisure Order Score is obtained.
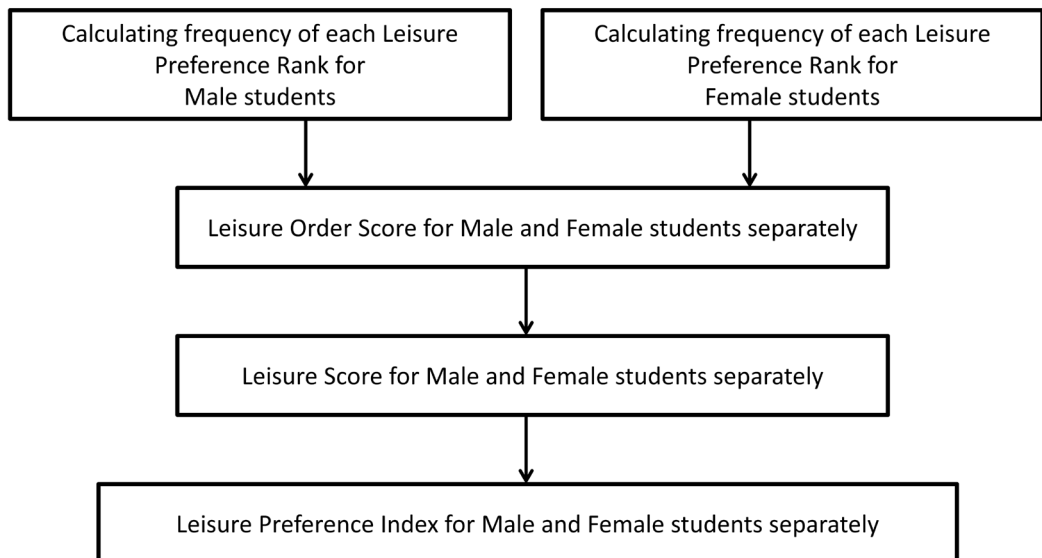

Fig. 1: Steps for Calculation of Leisure Preference Index

Leisure Order Score (LOS) = Frequency of Leisure Preference Rank x Reverse Rank *(i)*

Where 7 for the best and 1 for the worst

In the next stage, Leisure Score for all the leisure activities is computed.

- Leisure Score (LS) = $LOS_{LPR1} + LOS_{LPR2} + ...LOS_{LPR7}$ *(ii)*

Where LOS_{LPR1}= Leisure Order Score for Leisure Preference Rank 1

At last, the Leisure Preference Index (LPI) for each leisure activity is derived by using the following formula.

- Leisure Preference Index (LPI) = (Actual value of LS – Actual minimum value of LS) / (Actual maximum value of LS - Actual minimum value of LS) *(iii)*

It is important to note that the highest and lowest value of LPI is 0.00 and 1.00 respectively.

4. Major Findings

School going children are the future of the nation. Adolescent period is the time of psycho-physical transformation for both teen-aged boys and girls. Numerous colourful attractions divert the immature young mind in different directions; out of which some are creative and some other is destructive in nature. All these have a profound impact on their lifestyle. One such attractions is social media vis-à-vis social networking site.

4.1. Family Economic Condition and Mediums for Social Media Use

Generally, the economic status of any family provides its members the room to get accustomed to new technologies and mediums. Here the per-capita family income of the samples varies from Rs. 4,100/- to Rs. 33,333/- per month. Thus the students belong to lower, middle and upper economic classes. The $R^2 = 0.23$ for female and $R^2 = 0.13$ for male indicate that the correlation is much stronger for the female students.

4.1. Device Used to Access Social Media

Among the various electronic internet-enabled devices, smartphones and personal computers (both laptop and desktop) have an overwhelming dominance over the others (Fig. 2). Almost no difference is experienced for the male and female students. More than thirty percent of students access social media from multiple sources. Most interesting fact is that while all the male students access social media, four percent of female students do not access social media yet.
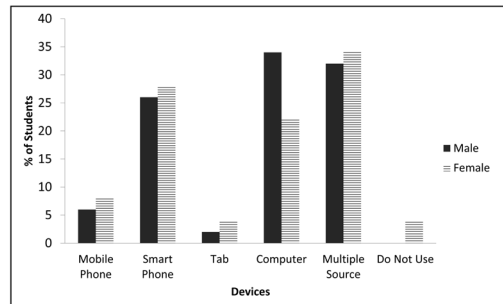

Fig.2: Device of Accessing Social Media

4.2. Place of Access of Social Media

Following the tendencies of the preferred device, home is the more likely place to access social media (Fig. 3). A sizeable portion of students also accesses social media from both cyber café and home. This depends on the opportunities. More than fourteen percent of male student have

to depend on only cyber café for accessing social media, but this tendency is negligible for their female counterparts, where the figure hardly reaches to four percent.
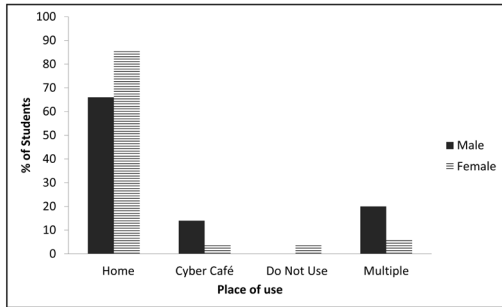

Fig.3:Place of Accessing Social Media

4.3. Years Accessing Social Media

The students considered for this study are mostly from the age group of fourteen to sixteen, still, a large portion of them are using social media for one to five years (Fig. 4).
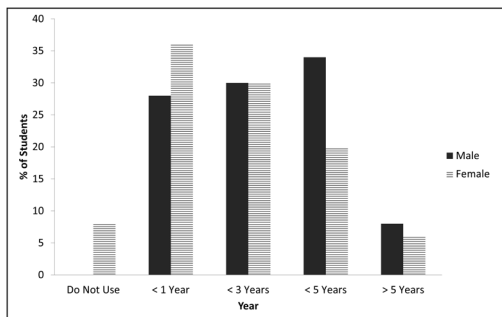

Fig.4:Years of Using Social Media

Even some of them are using it for more than five years. The important fact is that the social networking sites do not generally allow children below the age of fourteen. Thus they use to access these sites either by creating a fake account or from accounts of other family members.

4.4. Preferred Social Media

Students were asked to choose their preferred social media/ social networking site out of a list of nine sites i.e. Facebook, WhatsApp, Gmail, YouTube, Instagram, Orkut, Twitter, Pinterest and other. The outcome of the survey reveals that for male and female students Facebook and WhatsApp is the most favored social media respectively (Table 1). The attraction of Orkut, Instagram, Pinterest and Twitter aregenerally negligible. They always prefer such medium that helps them to contact new people and promote them in front of others. On a large scale site preference of relatives and individu als also influence individual's choice of Social media.Chatting with others and posting photographs are found to be the most dominant purpose for accessing social media by the adolescent school children. A notable number of students also use Gmail for exchanging study materials. In such instances, their parents play a decisive role regarding the duration of using social media.

Table 1: Preferred Social Media of the Students

Social Media	% of Male Student	% of Female Student
Facebook	60	44
WhatsApp	40	64
Gmail	36	58
YouTube	10	4
Instagram	0	10
Orkut	2	2
Twitter	2	2
Pinterest	2	0
Other	4	4

4.5. Frequency of Using Social Media

Most of the students use social media almost every day. The number of the occasional user of social media is negligible. Both the percentage of the daily user and the occasional user is greater for girls than the boys.
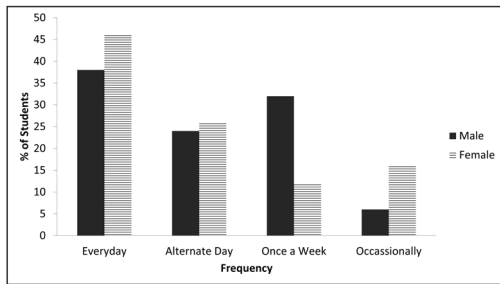

Fig.5: Frequency of Using Social Media

4.6. Purpose of Using Social Media

Students were given a list of five options like educational purpose, entertainment purpose, communication purpose, making new friends and playing online games; to select their preferred reason for accessing social media.
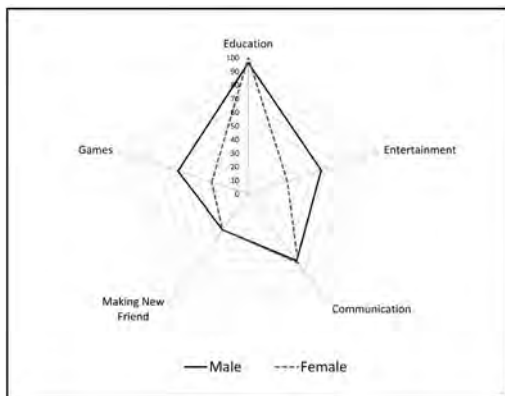

Fig. 6: Purposes of Using Social Media

Most of the student use social media for educational purpose (Fig. 6) followed by communication, entertainment, playing games and making new friends. Considering their opinion regarding the educational importance of social media, more thanseventy-five percent student (Fig. 7) agree that social media has a positive impact on their educational performance. This response is much true for the female students.
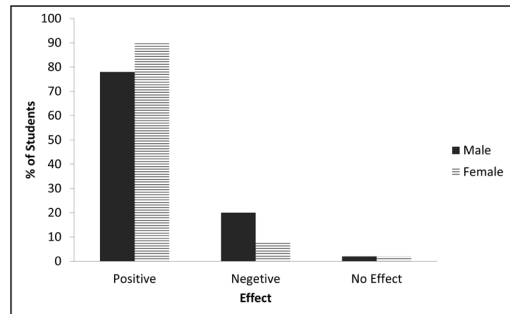

Fig. 7: Perceived Effect of Social Media on Education

4.7. Perceived Impact of Social Media

A majority of students agreed that accessing social media helps them to boost their confidence. While the female students feel that social media enhance their sympathetic attitude; the boys confessed that social mediamake them popular among others (Fig. 8). Mostly they don't feel any shyness in using social media and sharing their information, photographs.
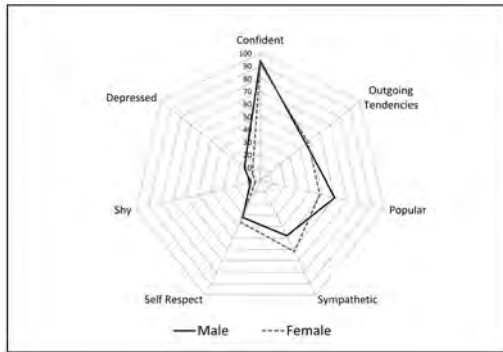
Fig. 8: Perceived Impact of Social Media on Personal Behaviour

4.8. Time Spent off Socializing Offline after Joining Social Media

Accessing social media have a profound impact on the social life of every individual. Social networking sites are often blamed for decreasing offline interpersonal relationships, regardless of the age of users. These sites make individual addicted towards social media, hence deliberately reduces offline societal works (Fig. 9). Which in turn might cause a person unsocial and if it is continued for a prolonged period personality disorder might be experienced.
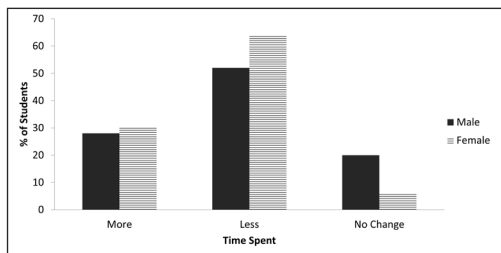

Fig. 9: Time Spent on Socializing Offline after Joining Social Media

This study on the adolescent student, do not display an anomaly. Because of more than half of both male and female students think that since they started accessing social media, time spends in offline socialization have reduced considerably. This tendency is more prominent for the female students.

4.9. Reliability of Social Media in Socializing

Though the students agree that they spent a long period of time regularly, to access social media; but they are quite dubious regarding the reliability of these networks (Fig. 10). However, the female students in slightly greater percentage rely these sites than their gender counterparts.
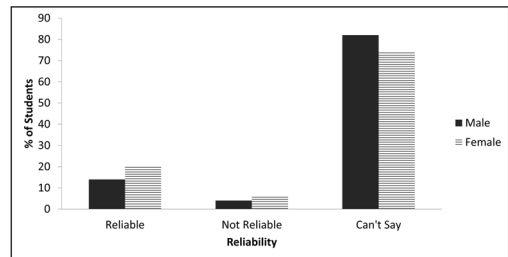

Fig. 10: Reliability of Social Media in Socializing

4.10. Influence of Social Media in Personal Life

A lot of problems like influencing personal views, facing different types of harassments, invasion of privacy, cyberbullying, problems related to networking, etc. are faced by the adolescent children from social networking sites.
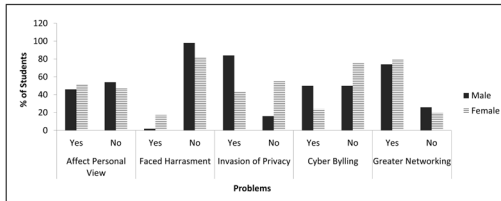
Fig. 11: Influence of Social Media on Personal Life

Cyberbullying and invasion of privacy are found to be the dominant problem faced by the students (Fig.11). For female candidates incidence of harassment (mainly emotional) is also noted.

4.11. Leisure Preference Index

The increasing pressure of educational activities makes life boring and monotonous.

Leisure activities help to throw away fatigue and rejuvenate themind. The Leisure Preference Index (LPI) is calculated to identify the most preferred leisure activity of the students concerned. Interdependency of Leisure Order Score and Leisure Score ultimately help to obtain the LPI. Psychiatrists also rely on leisure activities for stress management. Seven different leisure activities were selected for this study, such as: accessing social media, playing outdoor games, playing indoor games, playing computer games, reading story books, watching television and any other. The LPI not only helps to identify the preferred leisure activity but also ranks them and pinpoint the gender variation in leisure preference.

Table 2: Leisure Preference Index

Leisure	Social Media	Outdoor Games	Indoor Games	Computer Games	Reading Story Books	Watching T.V.	Other
Male	0.71	0.89	0.60	0.98	0.45	1.00	0.00
Female	0.34	1.00	0.59	0.28	0.60	0.82	0.00

Here, the values of LPI ranges between 0.00 and 1.00, greater the value better the importance. From the Table2 it is clearly identified that for male and female students, watching television and playing outdoor games are the most preferred leisure activity respectively. In both the two instances other activities found to become least important.

5. Discussion and Analysis

Social media has occupied a substantial segment of young minds. Adolescent children are becoming much more attracted to virtual society than the real one. The boring school life and monotonous activities orient them towards social media. Sometimes spending more time surfing social networking sites than study. The illusion created by social media, distract the immature mind towards a world of internet-induced society. As an outcome of social media, e-friends become closer than real friends, family, and parents. This study identifies that use of social media by an individual student is largely influenced by his or her family economic status. Social media usage by parents and relatives also determine the orientation of the students.

Irrespective of gender, access to modern electronic devices also making the students leaned towards social media. Making friends and becoming popular among others of similar age, are the two most dominant purposes for accessing social media by the students. Searching social media profiles of school and private tutors, and making gossips with friends is another preferred reason for accessing social networking sites. In many instances, students maintain e-mail accounts for academic reasons, but in such cases, usages are mostly governed by parents. The paucity of green space in urban life and absence of playground is found to be one important reason for social media addiction of the adolescent school children. In many instances, working parents become unable to make time for their son or daughter hence allows their child to access social media as a pass time. But this tendency is making the immature mind addicted to electronic devices and the internet.

6. Conclusion

Science always tends to discover technologies that could provide new and improved tools to develop and intensify the instruction and learning process. Social media has emerged as a highly useful medium for interpersonal communication among the individuals, irrespective of their age, sex, language, religion, and class. Millions of users are depending on these computer-based communication technologies every day (Sexton, 2011). In the recent years, the technological innovations are becoming much easily available to young aged people. Social media can be used in many innovative ways in the field of literacy and education. Students are mostly found using social networking sites just for messaging or texting; but rather than this they should learn to figure out how to use these internet based e-technologies for a positive outcome in their life. These social networking sites have a negative side too and affect them by distracting from academic activities, invading privacy issues, losing their ability to engage in face to face communication and using useless blogs. All these can influence the youth adversely. As per the study conducted on the adolescent students, regardless of their gender; it is found that some feel that social networking sites helps in easy peer communication, enhance their educational and mental development, and boost confidence. But, in this race of making themselves more technology prone and virtually social adolescents experience different unwanted cases of cyberbullying and mental harassment too. Therefore, it can be argued that like the two sides of a coin, the social networking sites are also having a dual-faced positive and negative impact on the young mind. But, the adolescent school children, belonging to a mentally and physically sensitive age group must be aware and should know the proper way to harness the benefit from this internet hosted sites and technologies.

References

Abdulahi, A., Samadi, B., and Gharleghi, B. (2014): A Study on the Negative Effects of Social Networking Sites Such as Facebook among Asia Pacific University Scholars in Malaysia. *International Journal of Business and Social Science, 5*(10), 133-145.

Al-Rahmi, W. M., and Othman, M. S. (2013): The Impact of Social Media use on Academic Performance among university students: A Pilot Study. *Journal of Information System Research and Innovation, 4*, 1-10.

Badri, M., Nuaimi, A. A., and Rashedi, A. A. (2017): School performance, social networking effects, and learning of school children: Evidence of reciprocal relationships in Abu Dhabi. *Telematics and Informatics, 38*(4), 1433-1444.

Bahati, B. (2015): Extending student discussions beyond lecture room walls via Facebook. *Journal of Education and Practice, 6*(15), 160-171.

Barker, V. (2009): Older Adolescents' Motivations for Social Network Site Use: The Influence of Gender, Group Identity, and Collective Self-Esteem. *Cyber Psychology & Behavior, 12*(2), 209-213.

Best, P., Manktelow, R., and Taylor, B. (2014): Online communication, social media and adolescent wellbeing: A systematic narrative review. *Children and Youth Services, 41*, 27-36.

Boyd, D. M., and Ellison, N. B. (2007): Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication, 13*, 210-229.

Bruns, A. (2015): Making Sense of Society Through Social Media. *Social Media + Society, April-June 2015*, 1-2.

Fagioli, L. P., Riso-Aguilar, C., and Deil-Amen, R. (2015): Changing the Context of Student Engagement: Using Facebook to Increase Community College Student Persistence and Success. *Teachers College Record*, 1-42.

Huang, H. (2011): Social Media Addictions among Adolescents in Urban China: An Examination of Sociopsychological Traits, Uses and Gratifications, Academic Performance and Social Capital. *Doctoral Thesis, The Chinese University of Hong Kong*, 1-17.

Junco, R., Heiberger, G., and Loken, E. (2010): The effect of Twitter on college student. *Journal of Computer Assisted Learning, 27*(2), 1-14.

Lee, M. J., and McLoughlin, C. (2010): Beyond distance and time constraints: Applying social networking tools and Web 2.0 approaches to distance learning. In G. Veletsianos, *Emerging technologies in distance education* (pp. 61-87).

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., and Rainie, L. (2011): Teens, Kindness and Cruelty on Social Network Sites How American teens navigate the new world of "digital citizenship. *Pew Research Center's Internet & American Life Project*, 1-86.

Liu, Y., and Ying, X. (2010): A Review of Social Network Sites: Definition, Experience and Applications. *The Conference on Web Based Business Management*, (pp. 749-752).

Naveh, G., Tubin, D., and Pliskin, N. (2010): Student LMS use and satisfaction in academic institutions: The organizational perspective. *The Internet and Higher Education, 13*(3), 127-133.

Nicolescu, R. (2016): The social media landscape. In R. Nicolescu, *Social Media in Southeast Italy* (pp. 31-60).

O'Keeffe, G. S., and Clarke-Pearson, K. (2011): Clinical Report--The Impact of Social Media on Children, Adolescents, and Families. *Pediatrics, 127*(4), 800-804.

Owusu-Acheaw, M., and Larson, A. G. (2015): Use of Social Media and its Impact on Academic Performance of Tertiary

Institution Students: A Study of Students of Koforidua Polytechnic, Ghana. *Journal of Education and Practice, 6*(6), 94-101.

Ozmen, B., and Atici, B. (2014): Learners' Views Regarding the Use of Social Networking Sites in Distance Learning. *The International Review of Research in Open and Distributed Learning, 15*(4), 21-42.

Pack, K. (2015): The Influence of Sccial Media on Adolescent Self-Concept. *Doctoral Dissertation, California School of Professional Psychology, Alliant International University*, 1-30.

Park, N., Kee, K. F., and Valenzuela, S. (2009): Being Immersed in Social Networking Environment: Facebook Groups, Uses and Gratifications, and Social Outcomes. *Cyber Psychology & Behavior, 12*(6), 729-733.

Popiolek, M. (2015): The Role of Facebook in the Process of Acquiring Information Own Research Study. *Journal of Education Culture and Society, 1*, 75-86.

Royen, K. V., Poels, K., and Vandebosch, H. (2016): Harmonizing freedom and protection: Adolescents' voices on automatic. *Children and Youth Services Review, 64*, 35-41.

Schindler, L. A., Burkholder, G. J., Morad, O. A., and Marsh, C. (2017): Computer-based technology and student engagement: a critical review of the literature. *International Journal of Educational Technology in Higher Education, 14*(25), 1-28. Retrieved July 14, 2018, from https://doi.org/10.1186/s41239-017-0063-0

Schwartz, S. E., Rhodes, J. E., Liang, B., Sánchez, B., Spencer, R., Kremer, S., et al. (2014): Mentoring in the digital age: Social media use in adult–youth relationships. *Children and Youth Services Review, 47*, 205-2013.

Sengupta, A., and Chaudhuri, A. (2011): Are social networking sites a source of online harassment for teens? Evidence from. *Children and Youth Services Review, 33*, 284-290.

Sexton, S. (2011): What Is the Perceived Impact of Social Media on Personal Relationships in Adolescence? *Thesis for Master of Arts, Faculty in Communication and Leadership Studies, School of Professional Studies, Gonzaga University*, 1-16.

Shraim, K. (2014): Pedagogical innovation within Facebook: A case study in tertiary education in Palestine. *Learning in Networks, 9*(8), 25-31.

Smith, S. M., Shaik, N., and Boles, E. W. (2011): Web 2.0 for Tele-Monitoring. In D. A. Scigliano, *Telemonitoring in the K-12 Classroom: Online Communication Technologies for Learning* (pp. 215-254).

Subrahmanyam, K., and Greenfield, P. M. (2008): Virtual worlds in development: Implications of social networking sites. *Journal of Applied Developmental Psychology, 29*, 417-419.

Subrahmanyam, K., Reich, S. M., Waechter, N., and Espinoza, G. (2008): Online and offline social networks: Use of social networking sites by emerging adults. *Journal of Applied Developmental Psychology, 29*, 420-433.

Valente, A. (2008): *Social Network Site vs. Social Networking Site?* Retrieved July 14, 2018, from Master of Media: https://mastersofmedia.hum.uva.nl/blog/2008/10/06/social-network-site-vs-social-networking-site/

Wang, X. (2016): Social media and social relationships. In X. Wang, *Social Media in Industrial China* (pp. 97-126).

Yu, A. Y., Tian, S. W., Vogel, D., and Kwok, R. C. (2010): Can learning be virtually boosted? An investigation of online social networking impacts. *Computers & Education, 55*, 1494–1503.

Jaydip De
UGC- Senior Research Fellow
Department of Geography, University of Calcutta,
35, Ballygunge Circular Road, Kolkata-700019, West Bengal
de.jaydipde@gmail.com

Sharmistha Chatterjee
Assistant Teacher (Social Studies)
Techno India Group Public School, Konnagar, Hooghly, PIN- 712246, West Bengal
sharmistha.chatterjee19@gmail.com