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TÍTULO: Relación entre adicción a teléfonos inteligentes, redes sociales, alienación y rendimiento académico entre estudiantes de pregrado.

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RESUMEN: El propósito de esta investigación es mostrar la relación entre las redes sociales y la adicción a los teléfonos inteligentes de los estudiantes universitarios y sus sentimientos de alienación y logro académico de los estudiantes. El estudio adoptó un método descriptivo con una muestra de 222 de la población de estudiantes universitarios de la Facultad de Educación y Desarrollo Humano de la Universidad de MU. Esta investigación utiliza datos descriptivos y no convencionales para examinar las estadísticas. Los datos se obtuvieron de una revisión de 108 estudiantes mediante el "Paquete Estadístico para las Ciencias Sociales" (SPSS). El estudio encontró que la alienación tiene un impacto significativo en la adicción a las redes sociales, pero la adicción al teléfono móvil tiene un efecto pequeño pero positivo en el promedio de calificaciones de los estudiantes.

PALABRAS CLAVES: adicción, rendimiento académico, educación, teléfonos inteligentes.

TITLE: Relationship between smartphone addiction, social media, alienation, and academic performance among undergraduate students.

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ABSTRACT: The purpose of this research is to show the relationship among social media and smartphone addiction of university students and their feelings of alienation and student academic achievement. The study adopted a descriptive method and a sample of 222 was drawn from the population of the undergraduate student of MU University College of Education and Human Development. This research uses descriptive and unconventional data to examine the statistics. The data were obtained from a review of 108 students and analysed by using the “Statistical Package for the Social Sciences” (SPSS). The study found that there is significant impact of alienation on social media addiction, but this addiction of mobile phone has small but positive effect on student’s GPA.

KEY WORDS: addiction, academic performance, Education, smartphones

INTRODUCTION.

On the report of internet Statistics (2017), about 40% of human population use the internet as compared to (1995) statistics when only 1% of the population used the internet. Compared to many developing and underdeveloped countries, developed countries have the highest internet usage. Such as, USA, Denmark, Japan have been recognized as the highest internet access countries of 91.1% and the access of internet in developing countries like India, Brazil is of 34.8% and 66.4% (Hawi and Samaha, 2016).

The use of the internet has drastically changed the dynamics of our lives. Consequently, it meets all the facets of our daily lives, including the way we socially interact, the way we reserve a taxi, the way we do banking, travelling, our social media surfing, and e-commerce. These changes are the result of easy access to the internet facility from our smartphones and a quick internet access of 4G technologies.

A high-speed internet connection reduces the need of any buffering and enables a smooth and seamless browsing experience. According to Chen and Nath, (2016) addiction of internet surrounds a very large segment the society worldwide.

The outcome of these new technologies has fascinated the public and makes us use internet more and more every day. People are considered friendly to their smartphones and feel always together (Lepp et al., 2015). This outcome is more prominent in the younger generation. However, the excess use of internet cause depression to many teenagers (Liang et al., 2016).

The number of smartphone users have increased significantly. Literature suggested that in 2011, 35% of Americans used smartphones compared to 64% of Americans in 2015. Moreover, like other developing countries, India has also emerged as the second largest smartphone market that comprises more than 220-million smartphone users (Livemint, 2017). This study will describe the effects of alienation, smartphone, and social media addiction on the academic performance of undergraduate students. In order to fulfill these objectives, this study will answer the following questions:

1. What are the levels of smartphones addiction, social media addiction and alienation on the university students?
2. Is there a relationship between GPA, alienation, and addiction to the use smartphone and Social Media?
3. Does the alienation banish students toward the use of smartphones addiction?
4. Does the use of smart phones and social media addiction and alienation affects the academic achievements of students?
5. Does addiction to the use of smartphones can predict leads to alienation?

DEVELOPMENT.

Literature Review.

The rapid growth and advancement of technology and related services have resulted in the exponential penetration of mobile devices such as smartphones in different regions around the globe. Smartphones with their enhanced capabilities such as texting, browsing, accessing the internet, social networking, video, music as well as navigation have attracted a considerable number of users whose growth increase on a daily basis (Ning, Davis, & Taraban, 2018).

A mobile device has become a part of the world's population daily activities due to the underlying benefits, for instance, smartphones offer real-time communication between individuals in distinct geographical localities through calls, messaging among other capabilities. This has greatly contributed to the utilization of smartphones to a great extent around the world due to the benefits thereof. The internet browsing among capabilities provided by smartphones has resulted in their utilization of higher learning institutions such as undergraduate students as their facilitate accessing, retrieving, sharing, and dissemination of academic material and information critical to student academic performance. As a result, the need for the utilization of smartphones within higher learning institutions is apparent and cannot be overlooked due to the aforementioned benefits, which enhances student academic performance.

On the contrary, the unregulated and uncontrolled utilization of smartphones among individuals, especially youths, has led to increased addiction to mobile devices resulting in a wide range of negative effects in both personal and academic life as well as within the work environments. According to Roberts, Yaya, and Manolis, (2014) students that are studying in a higher institution of learning especially colleges spend approximately nine hours a day in their mobile devices; therefore, a significant number of student an estimate of 40 to 48% undergraduates are subjected to the risk of smartphone addiction. The increased penetration and utilization of smartphones in different regions

around the globe due to their affordability and accessibility has resulted in the rise with respect to usage among college students subjecting to the risk of being addicted to these mobile devices.

Addiction relates to the behavioral dependence on a particular thing, service, or products on a continuous routine which includes, internet gaming, gambling, and device addiction, among others.

Boumosleh and Jaalouk (2018) define smartphone addiction as the development of behaviors that involves constant utilization of mobile devices, especially phones in accessing various services such that one tends to spend a considerable amount of time in their smartphones in comparison to other activities such as leaning.

Smartphones-based addiction is largely associated with the lack of regulation and control over the usage of mobile devices. Ning et al., (2018) conceded that the addition of smartphones is especially among the undergraduate students, and it is associated with lessened self-regulation and control in utilizing smartphones. This results in a psychological and related symptom such as depression, sleep disturbances, anxiety, and loneliness, reduced life satisfaction, increased stress levels, reduction of participation in physical activities as well as decrease the efficiency and educational performance of students (Roberts et al., 2014; Ning et al., 2018). Therefore, lack of self-control in using mobile devices such as a smartphone is the key or the primary cause of addiction, specifically among undergraduate students that leads to decreased academic performance as they inclined to spend more time with their phones in comparison to studying.

Similarly, Samaha and Hawi (2016) documented that the major drawback for an undergraduate student in relation to smartphone addiction is a significant decrease in academic performance when measured against the “Grade Point Average” (GPA). This damaging relationship between student’s academic performance and smartphones utilization remains unknown precisely because of the substantial number of factors that can influence the decrease in cognitive performance (Ning et al., 2018).

Smartphones act a channel through which individuals can access social networking platforms among other related communication, interaction, and socializing sites; thus, the relationship among the two can hardly be refuted as each contributed to the addiction of the other to some extent. Both smartphone and social media addiction, as well as alienation, impact the undergraduate academic performance in diverse ways; however, the rates of addiction relies upon each other. According to Boumosleh and Jaalouk (2018), the relationship between smartphones addiction and academic performance has concluded that smartphones addiction act as a channel that contributes to other forms of addiction, such as social media as well as alienation. This is because being addicted to smartphones is an indicator that one is addicted to its capabilities as well as the services it offers, which includes social networking platforms, which in turn lead to alienation from others.

Notably, students within higher learning institutions such as colleges and universities are the most common individuals in accepting and adopting mobile phone technology. A study carried out by Smith, Rainie, and Zickuhr in 2011 documented that the association between the utilization of mobile devices, student health as well as their academic performance is highly dependent on the activities or tasks that a student is involved in while using mobile devices. For instance, in cross-sectional research carried out among private institutions, undergraduate students within the United States found out that video gaming was highly associated with low-grade point students (Weaver et al., 2013). In addition, calling and texting was associated with a low GPA, and academic difficulties were found among the first-year students. Correspondingly, in a study conducted on an undergraduate student in public universities in 2014 by Karpinsk et al., (2013), recorded a negative association between academic performance and texting. Moreover, numerous studies have recognized a negative relationship among social networking sites specifically Facebook and GPA or the time spent by students studying (Junco, 2012; Karpinsk et al., 2013; Boumosleh & Jaalouk, 2018). Thus, this shows the negative

effects of both smartphones and social networking sites on the academic performance of undergraduate students.

On the other hand, the representation of national samples in Taiwan shows that heavy internet female users who prefer information seeking and chatting by using their smartphones recorded a higher academic performance as compared to non-heavy internet female users. In addition, females who favored information seeking, online gaming, and chatting recorded a lower grade point average in relation to their academic performance than the above-mentioned groups. With respect to the male gender, male student heavy smartphones users in terms of the internet in favor of online gaming had a low academic performance than male non-heavy smartphone users as well as male student favoring seeking of information and chatting (Chen & Tzeng, 2010; Chen & Peng, 2008). Therefore, there is a positive correlation between smartphones and internet addiction, which is associated with depression, anxiety, poor sleep, and quality of life, which, in turn, negatively affects the student's academic performance.

But many other researchers hypothesized that this negative relationship of smartphones and academic performance is the result of multitasking behaviors among students, which includes texting, listening to music, checking social media platforms, web surfing playing games, among other activities while studying or undertaking homework/ assignments (Junco, 2012). In the effort to validate this particular theory, a cross cultural research was carried out which involved both American and European students in higher learning institutions, a negative association of smartphone's utilization and academic performance based on multitasking was found out among the American sample (Karpinski, et al., 2013).

The results obtained showed that sending text, accessing social media, among other activities while in class or undertaking homework, had a negative relationship to academic performance. The constant

use of smartphones in classes or while undertaking school assignments reflects student's addiction to their mobile devices and as a result, negatively influence the student's academic performance.

In recent times, social media has turn into an important medium and channel of communication as well as socialization among individuals in diverse geographical regions. Apart from the distances, the importance of social networking sites is very useful as they enhance real-time communication between individuals and businesses; thus, it facilitates the sharing and spreading of information through files, videos, pictures, messages as well as conducting real-time conversations. Among the most dominate social media platforms including Facebook, Twitter, among others, which offer ways of communication directly between individuals through the internet. According to Al-Rahmi and Othman (2013), the driving force for the acceptance and adoption of these social networking sites around the globe are due to the progressive universal access, functionality, convenience as well as the flexibility of the social-based technologies.

In addition, social technologies are not limited in relation to affordability since they are frequently free or requires marginal investments such as internet connectivity to gain access; thus, eliminating potential hindrances and barriers to adoption. With respect to higher learning education, social media presence various merits, which include enhancing relationships, provision of customized and personalized course materials, and improvement of learning motivation and the development of collaborative learning abilities (Al-rahmi et al., 2014). As a result, social networking sites offer significant benefits to higher learning educations, which aid in enhancing the student's relationship, mode of contact, and interactions resulting in improved class participation, specifically with introverted students. Further, through social media capabilities, students can engage in group learning, which is online-based; hence, reducing the anxiety of the need to ask questions at schools. Therefore, these platforms offer a conducive environment through which students can engage in online learning, which reduces the fear of participation; thus, its significance cannot be overlooked.

Despite the significance of the integration and utilization of social media platforms in the higher learning education system, a thorough inspection of using these tools is obvious to ensure that they must be used for the academic purposes. Al-Rahmi and Othman (2013) explained that social networking platforms engage the students in distinct activities; hence, they have to be carefully examined to enhance understanding. Students, especially teens, use social media for socializing and communication purposes, such as showcasing their social lifestyle, conversing with peers, sharing information, and reinventing their personalities. The continuous usage for social media for purposes other than academic-based results a wide range of diverse effects such as addiction, which affects students' academic performance negatively. Ozer (2014) supports this argument by asserting that Facebook users has usually shown a poor academic performance because they waste most of their time on social media platforms for non- academic purposes. It indicates a negative relationship between social media usage and academic performance, regardless of the level of student's education. In order to determine this negative relationship of social media usage with students' academic performance is a lot more historic as compared to the underlying benefits. Huang (2018) attested that internet addiction was recorded in the digital age with the increased use of the internet, which gave birth to a wide range of social networking sites in the last couple of decades. Internet-addicted users prefer to alienate themselves from others, setting their professional as well as personal responsibilities aside, which results in ultimate poor academic performance (Lau, 2017). Social media users tend to devote a large portion of their time to these platforms and spend less time on their education compared to non-heavy social media users. Al-rahmi et al. (2014) attested that among the distinct distractions that affect the student academic performance, Facebook remains one of the constant and primary distractions within the current civilization. The impairments of the academic performance among students within higher learning institutions are correlated with internet dependency, specifically social networking platforms, among other synchronous communication forums and sites.

A survey conducted by Huang in 2018, examined the relationship of social media and academic performance of undergraduate students, concluding that social media has a poor and negative effects on the academic performance, specifically when these platforms are overused in ways that do not enhance the improvement of the academic performance. Similar research conducted by other scholars examines the same problem and identified that there is a significant but a negative relationship between social media usage and the academic performance; hence, the need to ensure control and regulation over the use of these particular sites is critical (Al-Yafi, El-Masri, & Tsai, 2018). Overuse of social-media results in addiction, which in turn leads to alienation, whereby the addicted individual excludes themselves from others and spends their time in social media platforms. This shows a correlation between social media addiction and alienation of social-media users. Social media and alienation are intertwined since addiction to these platforms give rise to alienation. Also, alienation gives rise to loneliness, which leads to a search for other means to the communication or interacts with others leading to social media addiction; thus, these two aspects are interrelated since the occurrence of one influence the other.

Alienation relates to a concept that is utilized in explaining the estrangement of students within the learning process. According to Alamoudi et al. (2018), alienation refers to the state of isolation from a particular individual, group, or activity which a person belongs to or should be involved in. Alienation concept is deeply rooted in various theories from education, social to based political concepts. The inadequate sense of belonging within a person results in diverse effects in their productivity, which impacts their ultimate performance. Alienation draws various effects on students' life; for instance, a student who alienates themselves from others to engage in academic activities recorded improved and high academic performance; hence, portraying an important aspect of alienation with respect to learning. On the contrary, alienation from others due to personal reasons such as low self-esteem, lack of a sense of belonging, isolation due to language barrier, economic

status results in various psychological and mental condition such as stress, depression, anxiety among other effects which affects the students' performance negatively. Therefore, there are both a positive and a negative relationship between alienation and academic performance of students; however, the negative outweighs the positive.

McPhee and McEntee (2014) define academic alienation as the concept comprising of three specific dimension namely normlessness, powerlessness and social alienation whereby they result from a subjective state of isolation despite the presence of others due to the experience of meaningful relationship amongst peers, families or even the society at large. Since then, alienation has been recognized as an important determinant of students' academic performance, without adequate cohesion with other students as well as educators, it becomes challenging for learners to ask questions or discuss certain aspects. Therefore, alienation has a negative relationship with student academic performance as it strengthens the distance between students and educators making it hard to enquire from others, especially in case of a concept one fails to understand during lecture delivery.

Hence, a relationship has been established between smartphone addiction, social media, and alienation with academic performance of undergraduate students. Smartphone addiction possesses some positive relationship with academic performance when used for academic purposes. However, the utilization of smartphones for purposes other than academic results in negative effects on the students' academic performance. This is because students spend a considerable amount of time in their smartphones visiting social media platforms, chatting, texting, watching music, videos, among other non-academic and related activities resulting in spending less time in academic work. Smartphones provide a wide range of capabilities such as access to social technologies, whereby students tend to use their smartphones to access social networking platforms resulting in ultimate addiction to their mobile devices.

Smartphones addiction is directly linked with social media since student utilizes their smartphones to access social media platforms such as Facebook, Twitters, among others while in class or to undertake academic assignments. The primary cause of smartphone addiction is alienation whereby students isolate themselves from others, i.e., peers, educators, and family, and use a considerable amount of time accessing social media platforms through their smartphones resulting in addiction. Thus, the relationship of smartphone addiction, social-media and alienation with respect to the academic performance of undergraduate students can be termed as negative. Smartphone addiction is largely influenced by access to social networking sites as well as alienation, which in turn affects the students' academic performance negatively.

Research methodology.

Quantitative method was used in this study and the data used for this research was gathered from the population which consist of the undergraduate students of “MU University College of Education and Human Development”.

The number of participants in this study is 108 students and they form the sample of the study. The study used a structured questionnaire developed for data collection. The data collection took the following procedure such that in phase 1, data were collected using online based questionnaire. The questionnaire administers consist of four sections and the first section covers the student background information (age, gender ,) the second part contains questions on measuring mobile phone addiction, The third part includes the measure of alienation among students, the fourth part measures social media addiction. The respondent's perception is been assessed by a 5-point Likert scale (1= Strongly disagree, 2 = Disagree, 3 = Not sure, 4 = Agree, 5 = Strongly agree).

Results.

Table 1. Respondents' characteristics.

	Frequency	Percent
Gender		
Male	108	91.5
Female	6	5.1
Age		
17-20 years	14	11.9
21-24 years	76	64.4
25-28 years	20	16.9
29-32 years	2	1.7
GPA		
2.00	2	1.7
2.00-2.99	24	20.3
3.00-3.99	44	37.3
4.00-5.00	43	36.4
Residence – during the period of study at college		
With parents	68	57.6
Alone	19	16.1
Other	26	22.0

Table 1 represents the characteristics of study respondents. Frequency values show that there was majority of male respondents (91.5%). Age of 11.9% respondents was 17-20 years while 64.4% were aged 21-24 years. 16.9% of study participants were 25-28 years old. While only 1.7% were above 29-year-old. Most of them have GPA from 3.00 to 3.99 (37.3%) and from 4.00 to 5.00 (36.4%). Very few have GPA below 3.00 (20.3%). From all respondents, 57.6% were living with parents, 16.1% were living alone while 22.0% have other sources of residence.

Table 2. Technology Usage among Respondents.

Average number of free time hours per day.	Frequency	Percent
Less than an hour	23	19.5
1-2 hours	17	14.4
2-3 hours	29	24.6
4-5 hours	19	16.1
5-6 hours	24	20.3
Average number of hours of cell phone use per day.		
Less than an hour	8	6.8
2-3 hours	27	22.9
3-4 hours	27	22.9
5-6 hours	23	19.5
More than 6 hours	28	23.7

Most frequently used social media tools.		
Twitter	13	11
Whatsapp	21	17.8
Facebook	1	0.8
Snapchat	10	8.5
Instagram	2	1.7
No any tool used	71	60.2
Time spent on the social media per day.		
1 hour	9	7.6
2 hours	33	28
More than 3 hours	65	55.1
Missing	11	9.3

Table 2 contains descriptive information about technology usage among respondents. Results show that 19.5% respondents have less than an hour free time per day, 14.4% have 1-2 hours, 24.6% have 2-3 hours, 16.1% have 4-5 hours, and 20.3% have 5-6 hours free per day. Percentage regarding average number of hours of cell phone use per day illuminates that 22.9% respondents use cell phone for 2-3 hours and 3-4 hours per day. It is also resulted that 23.7% of them use cell phones more than 6 hours a day. Only 19.5% were using 5.6 hours. Whatsapp and snapchat were among most frequently used social media tools among participants as the percentage was 17.8% and 8.5% respectively. Majority (60.2%) have not reported any social media tool use. Those, who were using those tools, were spending more than 3 hours a day on social media. Very few were using social media for 2 hours (28%).

Table 3. Level of smart phones addiction, social media addiction and alienation among university students.

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Mobile Phone Addiction	113	1.43	5.00	2.9691	.54197	.294
Alienation	112	1.14	5.00	2.9826	.69354	.481
Social Media Addiction	109	1.14	5.00	2.7736	.57427	.330
Valid N (listwise)	109					

Table 3 shows level of smartphone addiction, social media addiction and alienation among university students. Minimum response value for mobile phone addiction was 1.43 while it was 1.14 for Alienation and Social Media Addiction each. Maximum response value for all scales was 5.00. Mean value for mobile phone addiction was 2.96, which is above average. Same is the case with Alienation (M = 2.98) and Social Media Addiction (M = 2.77). Respondents have above average alienation and addiction of social media.

Table 4. Correlations between GPA, alienation, and addiction to the use smartphone and Social Media.

		GPA	Mobile Phone Addiction	Alienation	Social Media Addiction
GPA	Spearman's rho	1.000	.078	.045	-.117
	Sig. (2-tailed)	.	.414	.642	.226
Mobile Phone Addiction	Spearman's rho	.078	1.000	.168	.432**
	Sig. (2-tailed)	.414	.	.077	.000
Alienation	Spearman's rho	.045	.168	1.000	.172
	Sig. (2-tailed)	.642	.077	.	.074
Social Media Addiction	Spearman's rho	-.117	.432**	.172	1.000
	Sig. (2-tailed)	.226	.000	.074	.

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

Table 4 is the dissemination of correlation between GPA, alienation, and addiction to mobile phone and social media. Spearman's rho value between GPA and MPA shows .078 correlation, between GPA and alienation was .045, and between GPA and SMA was -.117. However, their relationship was insignificant. Only the relationship between MPA and SMA ($r = .432$) was considerable at 0.01 level.

Table 5. Regression analysis to measure impact of alienation on social media addiction.

Model Summary			ANOVA ^b		
Model	R	R Square	Mean Square	F	Sig.
1	.210 ^a	.044	1.567	4.925	.029 ^a

a. Predictors: (Constant), Alienation.

b. Dependent Variable: Social Media Addiction.

Table 5 is the result of regression analysis in order to measure impact of alienation on social media addiction among university students. R value was .210 that predict positive but small effect. However, the probability value .029 indicated significant impact of alienation on social media addiction.

Table 6. Regression analysis to measure impact of alienation, smart phone addiction and social media addiction on GPA.

Model Summary				ANOVA ^b		
Constant	Standardized coefficient	R	R Square	Mean Square	F	Sig.
Social Media Addiction	.033	.111 ^a	.012	.276	.430	.732 ^a
Alienation	.060					
Mobile Phone Addiction	-.111					

a. Predictors: (Constant), Social Media Addiction, Alienation, Mobile Phone Addiction.

b. Dependent Variable: GPA.

Table 6 represents the results of regression test to measure impact of alienation, smart phone addiction and social media addiction on GPA. Standardized coefficient shows very small positive effect of Social Media Addiction and Alienation on students' GPA. On the other side, Mobile Phone Addiction have negative impact ($\beta = -.111$). Somehow its effect is also very small as shown in R square and Significance value ($R^2 = .012$, $P = .732$).

Table 7. Regression analysis to measure impact of smart phone addiction on alienation.

Model Summary			ANOVA ^b		
Model	R	R Square	Mean Square	F	Sig.
1	.220 ^a	.044	2.291	4.925	.028 ^a

c. Predictors: (Constant), Smart Phone Addiction.

d. Dependent Variable: Alienation.

Table 7 is the result of regression analysis in order to measure impact of smart phone addiction on alienation among university students. R value was .220 that predict positive but small effect. However, the probability value .028 indicated significant impact of smart phone addiction on alienation.

CONCLUSIONS.

This study found that there is significant impact of alienation on social media addiction. Standardized coefficient shows very small positive effect of Social Media Addiction and Alienation on students' GPA. Moreover, the results highlighted that mobile phone addiction have negative impact. Somehow its effect is also very small.

BIBLIOGRAPHIC REFERENCES.

1. Alamoudi, A. I., Arfaj, A. W. A., Almeshari, A. H., Alom, A., ALQuraini, A. A., Al-Rebh, Q. J., & Abdelbary, E. (2018). Effect of Alienation on Academic Achievement Performance of Medical Students of King Faisal University. *The Egyptian Journal of Hospital Medicine*, 72(6), 4712-4714.
2. Al-rahmi, W. M., Othman, M. S., & Musa, M. A. (2014). The improvement of students' academic performance by using social media through collaborative learning in Malaysian higher education. *Asian Social Science*, 10(8), 210.
3. Al-Rahmi, W., & Othman, M. (2013). The impact of social media uses on academic performance among university students: A pilot study. *Journal of information systems research and innovation*, 4(12), 1-10.
4. Al-Yafi, K., El-Masri, M., & Tsai, R. (2018). The effects of using social network sites on academic performance: the case of Qatar. *Journal of Enterprise Information Management*, 31(3), 446-462.
5. Boumosleh, J., & Jaalouk, D. (2018). Smartphone addiction among university students and its relationship with academic performance. *Global Journal of Health Science*, 10(1), 10-5539.
6. Chen, L., & Nath, R. (2016). Understanding the underlying factors of Internet addiction across cultures: A comparison study. *Electronic Commerce Research and Applications*, 17, 38-48.

7. Chen, S. Y., & Tzeng, J. Y. (2010). College female and male-heavy internet users' profiles of practices and their academic grades and psychosocial adjustment. *Cyberpsychology, Behavior, and Social Networking*, 13(3), 257-262.
8. Chen, Y. F. & Peng, S. S. (2008). University students' Internet use and its relationships with academic performance, interpersonal relationships, psychosocial adjustment, and self-evaluation. *CyberPsychology & Behavior*, 11(4), 467-469.
9. Hawi, N. S., & Samaha, M. (2016). To excel or not to excel: Strong evidence on the adverse effect of smartphone addiction on academic performance. *Computers & Education*, 98, 81-89.
10. Huang, C. (2018). Social network site use and academic achievement: A meta analysis. *Computers & Education*, 119, 76-83.
11. Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), 162-171.
12. Karpinski, A. C., Kirschner, P. A., Ozer, I., Mellott, J. A., & Ochwo, P. (2013). An exploration of social networking site use, multitasking, and academic performance among the United States and European university students. *Computers in Human Behavior*, 29(3), 1182-1192.
13. Lau, W. W. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in human behavior*, 68, 286-291.
14. Lepp, A., Li, J., Barkley, J. E., & Salehi-Esfahani, S. (2015). Exploring the relationships between college students' cell phone use, personality and leisure. *Computers in human behavior*, 43, 210-219.
15. Liang, L., Zhou, D., Yuan, C., Shao, A., & Bian, Y. (2016). Gender differences in the relationship between internet addiction and depression: A cross-lagged study in Chinese adolescents. *Computers in Human Behavior*, 63, 463-470.

16. Livemint, (2017) data from:

<http://www.livemint.com/Technology/Dml7WqfGXlJhpQobNjBtnN/India-overtakes-US-to-become-second-largest-smartphone-marke.html>

17. McPhee, I., & McEntee, A.(2014) Academic alienation: how academic capitalism impacts on the student experience of assessment in higher education in Scotland.
18. Ning, W., Davis, F., & Taraban, R. (2018). Smartphone Addiction and Cognitive Performance of College Students.
19. Roberts, J., Yaya, L., & Manolis, C. (2014). The invisible addiction: Cell-phone activities and addiction among male and female college students. *Journal of behavioral addictions*, 3(4), 254-265.
20. Samaha, M., & Hawi, N. S. (2016). Relationships among smartphone addiction, stress, academic performance, and satisfaction with life. *Computers in Human Behavior*, 57, 321-325.
21. Smith, A., Rainie, L., & Zickuhr, K. (2011). College students and technology.
22. Weaver, J., Kim, P., Metzger, R. L., & Szendrey, J. M. (2013). The impact of video games on student GPA, study habits, and time management skills: What's the big deal. *Issues in Information Systems*, 14(1), 122-128.

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