

GOMAL UNIVERSITY JOURNAL OF RESEARCH

Gomal University, Dera Ismail Khan, Khyber Pakhtunkhwa, Pakistan ISSN:1019-8180 (Print) ISSN: 2708-1737 (Online)



DOI:10.51380

Website

www.gujr.com.pk

HEC Recognized

Social Sciences

CrossRef

RELATIONSHIP OF SOCIAL MEDIA ADDICTION WITH ACADEMIC PERFORMANCE: MEDIATING ROLE OF STUDENT ENGAGEMENT

Abdul Khaliq Alvi¹, Umar Safder Kayani² & Allah Bux Lakhan³

¹PhD Scholar, School of Management, The Universiti Sains Malaysia, MALAYSIA ²Department of Management Sciences, NCBA&E, Main Campus Lahore, Pakistan ³Lecturer, Management Sciences, Government Degree College Ghotki, Sindh, Pakistan

KEYWORDS	ABSTRACT
Social Media Addiction, Students' Engagement, Students' Academic Performance	The current research addresses the issue of student academic performance while identifying its potential predictors. social media addiction is predicting variable and student performance is dependent variable whereas student engagement is mediating variable. Current research proposes following research hypotheses; firstly to examine the direct impact of Social Media
Article History	addiction on the student academic performance and student engagement while checking the direct impact of social media addiction on the student
Date of Submission: 18-01-2022 Date of Acceptance: 20-06-2022 Date of Publication: 30-06-2022	engagement respectively. Secondly, current research examines mediating effect of student engagement in relation between social media addiction and student academic performance. Students of Govt. universities are the target population. 250 university students were selected with the help of the snowball sampling technique. Results reveal that all three hypotheses are accepted over significant outcomes of statistical procedures. In future research, other potential predictors of student academic performance like use of Facebook, use of Twitter may include in addition to target students of private universities along with students of Govt. universities and compare the results.
Corresponding Author	Abdul Khaliq: khaliqalvi@student.usm.my
DOI	https://doi.org/10.51380/gujr-38-02-03

INTRODUCTION

It is believed that in this world, for survival, some basics are required to consider and connect wherein shared communication is key parameter (Masur, 2018). Development of information technology has augmented in this modern era by using the social means i.e: Twitter, Facebook, Instagram, however, mutual communication has significantly changed the ways (Stone & Wang, 2018; Smith & Anderson, 2018). The world is social means platform and local communications on the one side have some facilities by providing privacy, a fast medium to communicate unlike

the irrational and unnecessary usage of social media that impedes other stages of everyday life (Boursier, Gioia & Griffiths, 2020). The social media addiction creates hazardous impacts as a host of the approachable, interpersonal, fitness and presentation complications (Griffiths, 2018; Marino, Lenzi, Canale, Borraccino & Vieno, 2020; Hussain & Starcevic, 2020). The extreme usage of social media is directly linked to Internet as addiction, as it seems the general public is compelled to use social media unduly (Yan, Gaspar & Zhu, 2021). Persons with this addiction are often desperately worried about this tool in their routine life when there is no proper check and equilibrium and control on the usage of this variable (Erevik, Pallesen, Dhir & Torsheim, 2020).

The research has clearly indicated that there is drastic impact of using social media on general behavior, intellectuality, demonstrative effect, and psychic thinking patterns (Durak & Durak, 2019; Chen, Liang & Cai, 2018). During their duty timings, about 12% of employees were found addicted to it (Sun & Zhang, 2020). Unfortunately, huge utilization of social networking affected negatively ways of living, the nervous system, happy life, and in short-run people in addition to long-run decision making (Marino et al., 2020; Shakya & Christakis, 2017). In Serbia, for the central analysis when the sample of school students was taken the use of social media impacted adversely the overall performance of academic studies (Pantic et al., 2012) in the USA the early age groups witnessed same as above (Lin, Broström, Griffiths & Pakpour, 2020). The targeted users of social media have been analyzed as enormous users (Mulawarman, et al., 2020), Lau (2017) revealed that excessive use of internet has disturbed their academic development while pursuing their grades, by using social media for non-academic commitments. GPAs of sample number 1893 showed that maximum ratio of students focused on social media unintentionally (Junco, 2012). The research work done under laboratories is also proving that the unusual use of social media is not beneficial for smooth working there. The work through networking such as email, when done in the different tasking ways is not performing positively (Hamstead, et al., 2018).

Jiang, Hou and Wang (2016) told that habit of Weibo (Twitter) had harmful effects on people. Analyzed that regular use of Weibo like Twitter in China also has hazardous effects on sharing of information which is under control. It is perceived that normal use of social networking does not lead to excess (Griffiths, 2010) and that's fact that it cannot lead to mental disturbance in addition to academic wastage (Jelenchick, Eickhoff, & Moreno, 2013) or educational waste of time (Pasek & Hargittai, 2009). The uncontrolled and imbalanced use of social engagement is a clear comparison between proper use and misuse that conclusively will lead to proper working based on proper utility (Andreassen, 2015). Research typically depends upon low or high usage of social media specifically Facebook (Hong et al., 2014). Given different people, sad behavior, lack of restlessness, and uneasy attitude are outcomes of Facebook (Bányai et al., 2017) and undesirably connected with particular well-being, subjective potency, and life fulfillment and unwanted delay of proper tasking which can be done timely when social media is used properly (Hawi & Samaha, 2017). The study has adverse influence of social media addiction on academic performance (Nida, 2018; Huang, 2014). This research is designed to check impact of social media addiction and student engagement and student academic performance. Student engagement considers as mediating variable for relationship of social media addiction with student academic performance.

LITERATURE REVIEW

Social Media Addiction

The social media addiction is regularly caught by resources of self-reports (as an uninterrupted perception that compresses level of symptoms) and quantifiable interviews (Chen & Lin, 2019). A new study directs that there is emergent need to catch unbiased indicators for such addictions, to increase rather than exchange the assessments and clinical interviews (Coyne., 2020). Such readings display that in line with time opinion models (Wilson & Wiysonge, 2020). The social media usage is fetching persistent and is speedily draining into classroom. Some practices are fairly constructive, as they can help students to enhance their professional skills (Carlson et al., 2016; Ostic et al., 2021). The internet addiction is observed as mounting health apprehension in many portions of the world, with some approximating rates of addiction ranging from 1.5% to 8.2% in European countries and USA. Some Asian countries are facing extreme rate of media addiction which is about 7% (Wolfling, et al., 2014; Hassan & Kyonka 2021). Social media is a certain type of Internet usage that remains to foster rates of internet addiction. Social media ("SM") is well-defined as the technological platform helping. Huang, et al. (2018) describe that social exchange theory explains relation of social media addiction with the student engagement in their study and examine that social media addiction has negative effect on student engagement. Kurniasih, (2017) also examines that social media addiction has negative influence on student performance based on social exchange theory. Based on social exchange theory, Pachler et al. (2019) examines the negative effect of the student engagement in their education on the student performance.

Student Engagement

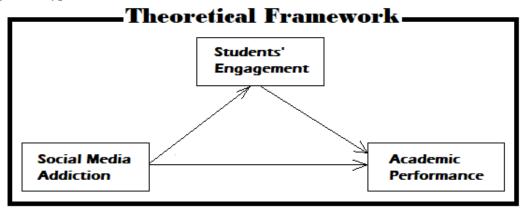
Upadyaya and Salmela (2013) worked on two way approach model for student engagement: (1) One of them is American analysis where said approach is considered as the multi-dimensional where students' attitude, behavior and emotions are related to academics and second approach is connected to European side based on the Bakker and Oerlemans (2011) approach, in which positive, task-oriented and mind pleasing approach is defined in this study we have employed Upadyaya and Salmela (2013). In this grave appraisal, engagement work means it's willingness to put effort into studies by using high level of energy for mental growth, academic significance, inspiration, and pride to fulfill challenges for commitment and dedication in studies for excellence in the different fields and to be fully concentrated on it and happily attached in your study work (absorption) (Schaufeli et al., 2002). Chiu (2021), "student engagement is state where engaged students do more than attend or perform academically; they also put forth the effort, persist, self-regulate their behavior toward goals, challenge themselves to exceed, and enjoy challenges and learning". The students' adjustments regarding engagement have some positive growth and best academic performance in general and specific success (Upadyaya & Salmela, 2013; Engels et al., 2019). Student engagement is considered as the consequence of the motivational process that can foster level of student energy to more engage in learning actions (Reeve, 2013; Sökmen, 2021).

Student Academic Performance

Academically performance behavior is core issue of current world (Mahimuang, 2005; Paloş et al., 2019). Additionally, academicians have considered academic performance as a direct link to behavior, psychology and social spectacle (Chen 2005; Bhandarkar et al., 2021). Socialization and academics are regarded as same for school adjustment (Rienties et al., 2012; Coninck et al., 2021), future outcomes (Bhandarkar et al., 2021), future jobs performance (Sonny & Sherman, 1989; Abbasi et al., 2021). Positive schooling results in shape of the best academic performance

(Marks, 2010), rational performance or life adjustment (Crede, et al., 2015), and overall living standard (Hascher & Hagenauer, 2020; Nordlander & Stensöta, 2014). In addition to this, the satisfaction of the students is guided by the response they get in return based on their overall learning (Denton, 2014; Fishbach, Zhang & Koo, 2009; Zeng et al., 2022). Thus, the response of students typically shows how near or how away is target of them for their academic performance (Beatson, Berg & Smith, 2018), and in this connection, commonly we see their struggle in the academics to achieve goals for perusing their careers (Carrillo et al., 2009; Sahibzada & Himat, 2019).

Figurre 1 Hypothesized Research Model



Hypothesis of Research

The social Media Addiction harms student performance (Jacobsen & Forste 2011; Junco 2013; Karpinski, et al., 2013; Al-Menayes 2015). So, we can suggest the following below mentioned assuptions:

H1: The social media addiction has negative influence upon the student academic performance

According to Sun, (2020), the social media addiction hurts student engagement in the study. Consequently, from the existing research support upon the issue, we can suggest the following assuoption:

H2: The social media addiction has significant negative influence upon the student engagement

According to McClenney, et al., (2012), the student engagement has a positive impact upon the student academic performance. Consequently, from the literature, we can suggest the following ssumption:

H3: The student engagement has the positive significant impact upon the student performance Based on above fact, the current research proposes the following mediating hypotheses about mediation.

H4: Student engagement act as mediating variable in linking social media addiction and student academic performance.

RESEARCH METHODOLOGY

Scale and Measurements

The use of Facebook is estimated on two items scale (Junco, 2015). The responses are taken on a five-point Likert-type scale ranging from very frequently to never. The student performance is estimated with 24 items scale (Valle et al., 1999). In this connection, the responses are taken on a five-point Likert-type scale ranging from strongly disagree to strongly agree. Social media addiction is estimated on 6 items scale as aopted from the study (Andreassen, 2017). Therefore, the responses are taken on five-point Likert-type scale ranging from strongly disagree to strongly agree.

Research Design, Population & Sample

This is cross-sectional research. Students of universities are target population. 250 university students were selected with the help of the snowball sampling technique. The sampling method of this research is the same as technique of previous research (Ahmad et al., 2021; Saeed et al., 2014; Nadeem et al., 2021; Chiahti et al., 2021; Khan et al., 2021; Alvi et al., 2014; Khan, et al., 2019).

Reliability Analysis

The reliability of the scales is estimated by the value of Cronbach's Alpha. Data is reliable if its value >0.50. Results indicate that value of Social Media Addiction is 0.87, Student Engagement is 0.82 and Student Performance is 0.79 respectively. In this connection, all the values are more than 0.50. Therefore, from results, we say that data is reliable for variables of present research with respect to the consistencies among research variables under consideration in particular context.

RESULTS & DISCUSSION

The results have been presented in this section as obtained through the statistical procedures to examine the assumed hypotheses emerged from the theoretical framework to pridue the desired outcomes thus helps in reaching the conclusion. The following results re thus obtained from the statistics. The results have been thus validating through existing research by providing support to these results and thus make sure to clear the position of current study in existing knoelodge database.

Table 1 *Correlation Analysis*

	Social Media Addiction	Student Engagement
Social Media Addiction	1	
Student Engagement	-0.38**	1
Student Academic Performance	-0.44**	0.46**

Correlation analysis provides the nature of all relationships. Table no 1 indicates that r=-0.38 for relation between Social Media Addiction and Student Engagement. r=-0.44 for relation between social media addiction and student performance. r=0.46 for relation between student engagement and student performance. This means that two relations are negative and, one is positive. Therefore, results provide significant information about association for strength and direction.

Table 2 *Regression Analysis*

	D	0.0		D.O.	D
	В	S.E	F	R2	Decision
Path c(Step 1)					
Outcome: Student Performance					
Predictor: Media Addiction	-0.39	0.062	112.23	0.26	0.000 < 0.01
Step 2 (Path a)					
Outcome: Student Engagement					
Predictor: Social Media Addiction	-0.44	0.042	125.64	0.29	0.000 < 0.01
Step 3 A (Path b)					
Predictor: Student Engagement					
Step 3B (Path c')	0.46	0.074	146.24	0.31	0.000 < 0.01
Outcome: Student Academic Performance					
Mediator: Student Engagement	0.35	0.045			0.000<0.01
Predictor: Social Media Addiction	-0.22	0.075			0.000<0.01

P<0.01, P<0.05, P<0.10"

The table represents different values about regression. Simple linear regression and multiple linear regression is method which is used for analysis. This method is the same as researchers (Malik et al., 2015; Shah et al., 2020; Jamil et al., 2014; Ullah et al., 2021; Alvi et al., 2014; Alvi et al., 2017). The value of F for relation of social media addiction with student performance is 112.23 and R2=0.26, β =-0.39, p<0.01, Hence, hypothesis no 1 is verified. The value of F for relation of the social media addiction with student engagement is 125.64, $\beta = -0.44$, R2=0.29, p=0.000 <0.01. Hence, hypotheses no 2 is verified. The value of F for the relation of student engagement with student performance is 146.24, β = 0.46, p 0.000 < 0.01. Hence, hypothesis no 3 is verified. For checking mediation influence of student engagement on the relation of social media addiction with student performance, This research analyses three direct relationships. Table no 2 describes that all these relationships are significant. For evaluating mediation effect of student engagement, the current research regresses the independent variable (social media addiction) with mediator variable (student engagement) on student performance. It is observed that value of β is reduced from -0.39 to -0.22. This value describes that mediation is exist for relation of media addiction with student performance in the specific context, but this is partial mediation.

CONCLUSION

Students are very conscious about their academic performance. Media Addiction is also spread widely and affects the lives and academic performance of students. Current research proposes three hypotheses about direct link of firstly student engagement with the student performance secondly direct relationship of firstly social media addiction with the student performance and student engagement with student performance. The results reveal that all three hypotheses are accepted. This means that social media addiction has negative impact on student performance, social media addiction has negative impact on the student engagement and student engagement has a positive engagement on Student Performance. Additionally, Student Engagement acts as intervening variable for relationship of social media addiction with student performance. The research, adds to body of knowledge by proposing social media addiction, student engagement, and student performance in a single model. In future direction it is proposed that this kind of

studies will conduct on students of private universities as well where students are facing many problems as compared to Govt. Universities. From administrative point of view, universities will enhance the level of student performance by controlling Social Media Addiction and elevating the concept of student engagement. The social implication of current study is that parents must care about addiction to social media because it has negative impact on academic performance. This creates a harmful impact on children as well by killing their time in social media activities and restraining them from physical games which have a positive impact on physical health and minds.

REFERENCES

- Abbasi, G. A., Jagaveeran, M., Goh, Y. N., & Tariq, B. (2021). The impact of type of content use on the smartphone addiction and academic performance: The Physical activity as the moderator. *Technology in Society*, 64, 101521.
- Ahmad, Z., Alvi, A. K., & Ahmed, N. (2021). Impact Of Organizational Trust On Process Innovation Through the Mediating Role Of Knowledge Creation Practices. *PalArch's Journal of Archaeology of Egypt/Egyptology*, 18(10), 1492-1505.
- Alvi, A. K., Kahn, A., Ahmed, A. A., & Zulfiqar, M. (2014). A study of employee compensation and employee job engagement on banks of Lahore, Pakistan. *Science International (Lahore)*, 26(5), 2411-2414.
- Andreassen, C. S. (2015). Online social network site addiction: A comprehensive review. *Current Addiction Reports*, 2, 175–184
- Bányai, F., Zsila, Á., Király, O., Maraz, A., Elekes, Z., Griffiths, M. D. & Demetrovics, Z. (2017). Problematic social media use: The results from a large-scale nationally representative adolescent sample. *PLoS One*, 12, e0169839.
- Beatson, N. J., Berg, D. A., & Smith, J. K. (2018). The impact of mastery feedback on undergraduate students' self-efficacy beliefs. *Studies in Educational Evaluation*, 59, 58-66.
- Bhandarkar, A. M., Pandey, A. K., Nayak, R., Pujary, K., & Kumar, A. (2021). Impact of social media on the academic performance of undergraduate medical students. *Medical journal armed forces India*, 77, S37-S41.
- Boursier, V., Gioia, F., & Griffiths, M. D. (2020). Do selfie-expectancies and social appearance anxiety predict adolescents' problematic social media use? *Computers in Human Behavior*, 110, 106395.
- Carlson, J. R., Zivnuska, S., Harris, R. B., Harris, K. J., & Carlson, D. S. (2016). Social media use in the workplace: A study of dual effects. *Journal of Organizational and End User Computing (JOEUC)*, 28(1), 15-31.
- Carrillo, M. T., Bailles, E., Caseras, X., Martínez, À., & Pérez, J. (2009). Formative assessment and academic achievement in pre-graduate students of health sciences. *Advances in health sciences education*, 14(1), 61-67.
- Chen, S. C., & Lin, C. P. (2019). Understanding the effect of social media marketing activities: The mediation of social identification, perceived value, and satisfaction. *Technological Forecasting and Social Change*, 140, 22-32.
- Chen, Y., Liang, C., & Cai, D. (2018). Understanding WeChat users' behavior of sharing social crisis information. *International Journal of Human–Computer Interaction*, 34(4), 356-366.

- Chiahti, M. F., Shokat, W., Alvi, A. K., Afzal, A., Irum, S., & Kaur, P. (2021). Factors Affecting Bank-specific and Macroeconomic profitability Determinants of Islamic and Conventional Banks in Pakistan. *Global Business & Management Research*, 13(2).
- Chiu, T. K. (2021). Student engagement in K-12 online learning amid COVID-19: A qualitative approach from self-determination theory perspective. Interactive learning environments, 1-14.
- Coyne, S. M., Rogers, A. A., Zurcher, J. D., Stockdale, L., & Booth, M. (2020). Does time spent using social media impact mental health?: An eight year longitudinal study. *Computers in Human Behavior*, 104, 106160.
- De Coninck, D., Matthijs, K., & Luyten, P. (2021). Depression in Belgian first-year university students: A longitudinal study of self-definition, interpersonal relatedness, mentalizing, and integration. *Journal of Clinical Psychology*, 77(7), 1715-1731.
- Engels, M. C., Pakarinen, E., Lerkkanen, M. K., & Verschueren, K. (2019). Students' academic and emotional adjustment during the transition from primary to secondary school: A cross-lagged study. *Journal of school psychology*, 76, 140-158.
- Erevik, K., Pallesen, S., Dhir, A., & Torsheim, T. (2020). General and alcohol-related social media use and mental health: A large-sample longitudinal study. *International Journal of Mental Health and Addiction*, 1-12.
- Fiorilli, C., De Stasio, S., Di Chiacchio, C., Pepe, A., & Salmela-Aro, K. (2017). School burnout, depressive symptoms & engagement: Combined effect on student achievement. *International Journal of Educational Research*, 84, 1-12.
- Francis Dr, J. E. (2018). Linking rubrics and academic performance: An engagement theory perspective. *Journal of University Teaching & Learning Practice*, 15(1), 3-15.
- Griffiths, M. D. (2010). The role of context in online gaming excess and addiction: Some case study evidence. *International Journal of Mental Health and Addiction*, 8, 119–125
- Griffiths, M. D. (2018). Adolescent social networking: How do social media operators facilitate habitual use? *Education and Health*, 36(3), 66-69.
- Hamstead, Z. A., Fisher, D., Ilieva, R. T., Wood, S. A., McPhearson, T., & Kremer, P. (2018). Geolocated social media as rapid indicator of park visitation & equitable park access. *Computers, Environment and Urban Systems*, 72, 38-50.
- Hascher, T., & Hagenauer, G. (2020). Swiss adolescents' well-being in school. *Swiss journal of educational research*, 42(2), 367-390.
- Hassan, M., & Kyonka, E. G. (2021). A Behavior Analytic Perspective on Treatment of Problem Gaming and Problem Social Media Use. *The Psychological Record*, 71(2), 219-235.
- Hawi, N. S., & Samaha, M. (2017). The relations among social media addiction, self-esteem, and life satisfaction in university students. *Social Science Computer Review*, 35, 576–586.
- Hong, F. Y., Huang, D. H., Lin, H. Y., & Chiu, S. L. (2014). Analysis of the psychological traits, Facebook usage, and Facebook addiction model of Taiwanese university students. *Telematics and Informatics*, 31, 597–606.
- Huang, H. (2014). Social media generation in urban China: A study of social media use and addiction among adolescents. Berlin: Springer.
- Huang, H. C., Cheng, T. C. E., Huang, W. F., & Teng, C. I. (2018). Impact of online gamers' personality traits on interdependence, network convergence, and continuance intention: Perspective of social exchange theory. *International Journal of Information Management*, 38(1), 232-242.
- Hussain, Z., & Starcevic, V. (2020). Problematic social networking site use: A brief review of recent research methods and the way forward. *Current opinion in psychology*, 36, 89-95.

- Jamil, M. F., Alvi, A. K., Tariq, R., & Saeed, M. (2014). Relationship of women autonomy and gender equality in UMT Lahore, Pakistan. *Sciece International (Lahore)*, 26(5), 2477-2479.
- Jelenchick, L. A., Eickhoff, J. C., & Moreno, M. A. (2013). "Facebook depression?" Social networking site use and depression in older adolescents. *Journal of Adolescent Health*, 52, 128–130.
- Jiang, T., Hou, Y., & Wang, Q. (2016). Does micro-blogging make us "shallow"? Sharing information online interferes with information comprehension. *Computers in Human Behavior*, 59, 210–214.
- Khan, M. Y., Alvi, A. K., & Chishti, M. F. (2019). An Investigation on The Linkages Between Poverty and Education: A Statistical Review. *Gomal University Journal of Research*, 35(1), 44-53.
- Khan, S. U., Ali, A., Khan, A., Khan, M. U., Alvi, A. K., & Khan, A. U. (2021). Organizational Politics as Mediator in Linking Psychological Empowerment and Employees' performance In Educational Context. *Elementary Education Online*, 20(2), 1232-1238.
- Kurniasih, N. (2017). Internet addiction, lifestyle or mental disorder? a phenomenological study on social media addiction in Indonesia. *KnE Social Sciences*, 135-144.
- Lau, W. W. F. (2017). Effects of social media usage and social media multitasking on the academic performance of university students. *Computers in Human Behavior*, 68, 286–291
- Lee, B. C., Hsieh, S. T., Chang, Y. L., Tseng, F. Y., Lin, Y. J., Chen, Y. L., ... & Chang, S. C. (2020). A web-based virtual microscopy platform for improving academic performance in histology and pathology laboratory courses: A pilot study. *Anatomical sciences education*, 13(6), 743-758.
- Lei, H., Cui, Y., & Zhou, W. (2018). Relationships between student engagement and academic achievement: A meta-analysis. Social Behavior and Personality: *An international journal*, 46(3), 517-528.
- Lin, C. Y., Broström, A., Griffiths, M. D., & Pakpour, A. H. (2020). Investigating mediated effects of fear of COVID-19 and COVID-19 misunderstanding in the association between problematic social media use, psychological distress, and insomnia. *Internet Interventions*, 21, 100345.
- Malik, A., Alvi, A. K., & Arif, S. (2015). Work Related Stress in Banks Operating in Lahore. *Science International (Lahore)*, 27(5),4629-4633.
- Marino, C., Lenzi, M., Canale, N., Dalmasso, P., & Vieno, A. (2020). Problematic social media use: associations with health complaints among adolescents. *Annali dell'Istituto Superiore di Sanità*, 56(4), 514-521.
- Masur, P. K. (2018). Situational privacy and self-disclosure: Communication processes in online environments. *Springer*.
- Mendoza-Denton, R. (2014). A social psychological perspective on the achievement gap in standardized test performance between White and minority students: Implications for assessment. *The journal of negro education*, 83(4), 465-484.
- Mulawarman, M., Hunda, F. N., Suharso, S., & Muslikah, M. (2020). The Correlation Between Emotional Intelligence, Academic Achievement, and the Use of Social Media in Senior High School Students. *International Journal of Innovation, Creativity and Change*, 11(3), 325-335.

- Nadeem, M. A., Alvi, A. K., & Rehman, K. U. (2021). The Relationship of Proactive Personality with The Organizational Citizenship Behavior: Intervening Role of Thriving at Work. *Gomal University Journal of Research*, 37(2), 134-141.
- Nida, T. K. (2018). Facebook addiction and its association with academic performance. *Biomedical Journal of Scientific & Technical Research*, 3(5), 1–3
- Nordlander, E., & Stensöta, H. O. (2014). Grades—for better or worse? The interplay of school performance and subjective well-being among boys and girls. *Child Indicators Research*, 7(4), 861-879.
- Ostic, D., Qalati, S. A., Barbosa, B., Shah, S. M. M., Galvan Vela, E., Herzallah, A. M., & Liu, F. (2021). Effects of social media use on psychological well-being: Mediated model. *Frontiers in Psychology*, 12, 2381.
- Pachler, D., Kuonath, A., & Frey, D. (2019). How transformational lecturers promote students' engagement, creativity, and task performance: The mediating role of trust in lecturer and self-efficacy. *Learning and Individual Differences*, 69, 162-172.
- Paloş, R., Maricuţoiu, L. P., & Costea, I. (2019). Relations between academic performance, student engagement and student burnout: A cross-lagged analysis of a two-wave study. *Studies in Educational Evaluation*, 60, 199-204.
- Pantic, I., Damjanovic, A., Todorovic, J., Topalovic, D., Bojovic-Jovic, D., Ristic, S., & Pantic, S. (2012). Association between online social networking and depression in high school students: *Behavioral physiology viewpoint*. *Psychiatria Danubina*, 24, 90–93.
- Rienties, B., Beausaert, S., Grohnert, T., & Kommers, P. (2012). Understanding academic performance of international students: The role of ethnicity, academic and social integration. *Higher education*, 63(6), 685-700.
- Sahibzada, J., & Himat, A. N. (2019). Impacts of Formative Assessment on EFL Students' Academic Performance at Kandahar University. *American International Journal of Social Science Research*, 4(2), 102-111.
- Salmela, K., Tang, X., Symonds, J., & Upadyaya, K. (2021). Student Engagement in Adolescence: A Scoping Review of Longitudinal Studies 2010–2020. *Journal of Research on Adolescence*, 31(2), 256-272.
- Schaufeli, W. B., Martinez, I. M., Pinto, A. M., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of cross-cultural psychology*, 33(5), 464-481.
- Schlenker, B. R., Schlenker, P. A., & Schlenker, K. A. (2013). Antecedents of academic engagement and implications for college grades. *Learning and Individual Differences*, 27, 75-81.
- Şenol, E., & Durak, M. (2019). Cultural Adaptation Of The Adapted Mobile Phone Use Habits (Ampuh) And The Adapted Cell Phone Addiction Test (Acpat) In Turkish Students And Adults. *Uluslararası Bilimsel Araştırmalar Dergisi (IBAD)*, 2(1), 571-578.
- Shah, N. H., Khan, H., Alvi, A. K., & Khan, H. Z. (2020). The Impact and Level of Cultural Values and Ethically-Minded Consumer Behavior on the Consumer-Based Brand Equity of Nestle: Evidence from Pakistani Cultural Context. *Ilkogretim Online-Elementary Education Online*, 19(3), 2579-2595.
- Shakya, H. B., & Christakis, N. A. (2017). Association of Facebook use with compromised wellbeing: A longitudinal study. *American Journal of Epidemiology*, 185(3), 203–211.
- Smith, A., & Anderson, M. (2018). Social media use in 2018. Pew Research Center. Retrieved from http://www.pewinternet.org/2018/03/01/social-media-use-in-2018/.

- Sökmen, Y. (2021). The role of self-efficacy in relationship between the learning environment and student engagement. *Educational Studies*, 47(1), 19-37.
- Steinmayr, R., Crede, J., McElvany, N., & Wirthwein, L. (2016). Subjective well-being, test anxiety, academic achievement: Testing for reciprocal effects. *Frontiers in psychology*, 6, 1994.
- Stone, C. B., & Wang, Q. (2018). From conversations to digital communication: The mnemonic consequences of consuming and sharing information via social media. *Topics in Cognitive Science*, 1-20.
- Sun, Y., & Zhang, Y. (2020). A review of theories and models applied in studies of social media addiction and implications for future research. *Addictive Behaviors*, 106699.
- Tayama, J., Schaufeli, W., Shimazu, A., Tanaka, M., & Takahama, A. (2019). Validation of a Japanese version of the work engagement scale for students. *Japanese Psychological Research*, 61(4), 262-272.
- Ullah, W., Alvi, A. K., & Soomro, M. A. (2021). Relationship of Shyness with Life Satisfaction: The Mediating Role of Career Success. *Gomal University Journal of Research*, 37(2), 154-165.
- Upadyaya, K., & Salmela-Aro, K. (2013). Engagement with studies and work: Trajectories from postcomprehensive school education to higher education and work. *Emerging Adulthood*, 1(4), 247-257.
- Upadyaya, K., & Salmela-Aro, K. (2021). Positive youth development through student engagement: Associations with well-being. *Handbook of Positive Youth Development*, 361-374.
- Wilson, S. L., & Wiysonge, C. (2020). Social media and vaccine hesitancy. *BMJ Global Health*, 5(10), e004206.
- Wölfling, K., Beutel, M. E., Dreier, M., & Müller, K. W. (2014). Treatment outcomes in patients with internet addiction: a clinical pilot study on the effects of a cognitive-behavioral therapy program. *BioMed research international*, 2014.
- Yan, Z., Gaspar, R., & Zhu, T. (2021). How humans behave with emerging technologies during the COVID-19 pandemic? *Human Behavior and Emerging Technologies*, 3(1), 5-7.
- Zeng, K. J., Irina, Y. Y., Yang, M. X., & Chan, H. (2022). Communication strategies for multi-tier loyalty programs: The role of progress framing. *Tourism Management*, 91, 104460.