



# Social Media Usage, Overload and Exhaustion: A Performance Perspective

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Received: 19 June 2020

Accepted: 25 August 2020

DOI: <https://doi.org/10.32479/irmm.10190>

## ABSTRACT

This study is focused on investigating the negative consequences of social media usage at work through overloads that are a cause of exhaustion and ultimately impact performance. Performance of employee is taken as criterion of exhaustion. Three categories of overloads social overload, communication overload and information overloads serve as mechanism of negative consequences of social media during working hours. A sample of 300 employees of telecom sector of Pakistan contributed in the study. Data was analyzed by using partial least squares structural equation modelling technique. Results revealed that excessive use of social media positively influence information, communication and social overload. Information and communication overload were also found to have an enhanced effect on exhaustion of social media while social overload could not. Performance of employee was also found to be negatively influenced by exhaustion of social media. Study limitations and future directions are also discussed.

**Keywords:** Performance, Social Media, Exhaustion, Telecom Sector

**JEL Classification:** D89

## 1. INTRODUCTION

Employees are considered to be assets of an organization. Their job performance has always remained center of interest for organizations as well as organizational researchers (Austin and Villanova, 1992; Campbell, 1990). Performance is an employee outcome in any form like sales, customer satisfaction and revenue generation (Riva et al., 2019; Ali-Hassan et al., 2015; Janssen and Van Yperen, 2004; Scott and Bruce, 1994). It can be considered as the quality of work of an employee (Nayak and Sahoo, 2015). Performance is an essential aspect of organizational life because it is directly related to the behaviour of employees (Sparrowe et al., 2001) and it is believed that without having good performance of employees, the organizational sustainability and endurance is impossible (Al Hammadi and Hussain, 2019).

Performance is predicted by several aspects including external and internal to the individual. The level of knowledge, behaviour and

skills of employee are internal factors while working environment, organizational structure, flexibility in tasks and working hours and given incentives are the external factors. Conventionally, one of the best tools used by an organization to get best performance from an employee is through employee engagement that can be sustained (Pinto and Thalgaçpitiva, 2017; Shamir, 1990). Similarly, leadership also affects employee performance significantly through motivation and appreciation (Walumbwa et al., 2008). Stress (Altindag, 2020) and fear of higher authorities (Anderson, 2002) has also been identified as contributing factor towards low employee job performance. Stress of several natures has also become interesting in predicting performance. Kim et al. (2012), concluded that employee providing front-line services can get emotionally disturbed due to the social stress created by the customers. Stress adversely affects employee outcomes and of various natures. One of its form is technology associated termed as techno stress. A domain of researchers has also made efforts to investigate the impact of techno stress on the employees'

performance in information communication technology aspect (Ahuja et al., 2007; Hung et al., 2015; Shi et al., 2020).

Technology has also become a vital contributor towards Performance of employees (Petter et al., 2008). It enables employees to perform better by knowledge sharing, motivation and improved morale (Singh et al., 2019) However, technology also contributes adversely towards employee outcomes like non-workplace disturbance and health issues (Thomé et al., 2011). Most of the health issues arise from psychological disturbance and stress due to high usage of technology (Chesley, 2005). Consequently, it disturbs the performance level that is required by the organization to meet the required outcomes (Moqbel et al., 2013). Stress due to technology becomes techno stress (Brod, 1984). It leads to the decrease in sustainable practices that impact the performance outcomes of employees (Tarafdar et al., 2015). It can be said that negative changes in attitudes, thinking patterns, unproductive behavior are the consequences of techno stress (Trarafdar et al., 2015; Weil and Rosen, 1997).

A recent face of technology usage is in the form of social media. It is a platform available to the people to communicate with a single or several people while using internet (Cox and Rethman, 2011). Social media consists of a number of tools and applications used anywhere like at home or workplace (Ali-Hassan et al., 2015). Several activities can be carried out by the individuals on social networking sites (Hantula et al., 2011; Hou et al., 2014; Ndasauka et al., 2016), like gathering information, sharing information, time killing, communication and entertainment (Liu et al., 2016). Social media helps employees in communicating with others and feeling a bit relaxed form the tiring task performance at the work place (Ou and Davison, 2011). However, the habit of using social media at workplace can result in various problems like distracting an employee from performing tasks and causing time wastage (Bright and Logan, 2018; Li, 2019; Turel et al., 2019). Thus, the present study tries to dig out the negative impacts of excessive social media usage on Performance of employees.

Excessive social media usage involves excessive and prompt notifications and people at workplace are distracted again and again by these notifications (Salo et al., 2019; Larose et al., 2014). We conceptualize these notifications as overloads. Different types of overloads are created by the connections made on virtual communities such as information, communication and social overload (Misra and Stokols, 2012). The communication overload and social overload are mainly caused by excessive use of social media (Tarafdar et al., 2019). Researchers have linked up information overload and techno stress to lower job performance and satisfaction (Shi et al., 2020). In this context, this study analyses the effect of excessive social media usage on overloads and exhaustion of social media towards Performance under the light of transactional theory of stress and coping. Previous studies have used techno stress to assess the relationship of stressor and outcomes in perspective of professional technology (Tarafdar et al., 2015).

It has also been investigated that the technology characteristics are involved in creating techno stress, but the research didn't involve

the level of usage in prior investigation. The current study used the level of usage as a predictor of stress created by the use of social media that creates stress. On the basis of theory of stress and coping, this study proposed a framework of stressor (overloads), strain (anxiety) and outcome (performance of the employee) that will help in understanding the mechanism of techno stress created by the extreme usage of social networks (Tarafdar et al., 2019). According to previous researches, this problem of too much usage of social media at workplace has not been addressed sufficiently in information and communication researches (Yu et al., 2018).

We investigated our framework in information and communication technology sector of Pakistan. It is one of the most important sectors of Pakistan with a large number of employees but insufficient in research on performance of employees. This research work will directly measure the impacts of social media usage on employee performance by taking the impact of three types on loads including information overload, communication overload and social overload on the employees as a result of social media usage on the work place.

## 2. LITERATURE REVIEW

### 2.1. Usage of Social Media and Over-Load

Social media including social network sites and other platforms have changed peoples' life with their high growth and spread in a couple of decades (Chang and Hsiao, 2014). A number of studies have discussed the positive aspects like communicative and informational use of social media at workplace (Yu et al., 2018; Nisar et al., 2019). Researchers have also stated that people do use social media to interact with working partners and to gain knowledge related to their work to become more expert and efficient (Landers and Schmidt, 2016). It is important to consider that a significant amount of time is dedicated by individuals at organizations to social media websites like twitter and face book to remain updated (Clark, 2010; Ngai et al., 2015). It was explored by Sheer and Rice (2017), that at workplace and after workplace employees increasingly use mobile instant messaging to contact their work contacts. Various professional platforms have also been launched that helps in sharing expertise and recruitment purposes (Leader-Chivee et al., 2008). It has hence, become inevitable to use social media even at workplace for various reasons by employees (Koch et al., 2012).

In general, the balanced usage of social media is helpful for improving the performance (Ali-Hassan et al., 2015; Kang et al., 2012; Wang et al., 2016). If it is used for information sharing, finding solution to problems, improve organization communication and developing alliance with colleagues, then improves performance of the employees (Landers and Schmidt, 2016). On the contrary, researchers suggest that frequent use of instant messaging at workplace leads to a decrease in performance and final results are unfavorable (Warnakula and Manickam, 2010; Mansi and Levy, 2013). Researchers like Kirschner and Karpinski (2010), have argued that constant usage of social media at workplace declines the performance of the employees due to constant interruptions. Moreover, Excessive usage of social media leads to techno stress that directly reduces the productivity of the employees (Kirschner and Karpinski, 2010).

An individual may get exposed to a large amount of information uses social network sites to interact such that it becomes impossible to cope with and it will lead to information over-load on employee (Whelan et al., 2020; Edmunds and Morris, 2000). It can be called as technology over-load (Karr-Wisniewski and Lu, 2010) and it leads to the social media fatigue (Bright et al., 2015). Scholars have described this overload phenomenon in several ways like social networking sites' addiction (Choi and Lim, 2016), the dependence on social media or social media dependency (Wang et al., 2015), excessive use (Hou et al., 2014). The theory-based studies on excessive use of social media are rare as compared to the other studies. In the previous studies made on it, social media usage is just studied as a problematic use or just a habitual thing (Ursavas, 2014), but studies made on the significances of the social media overload at workplace are still scarce (Cao and Sun, 2018). Continuing the same domain of research, this study has proposed that excessive usage of social media creates information, communication and social overloads as psychological mechanisms towards employee outcomes. The following hypotheses are proposed:

- H<sub>1a</sub>: Excessive use of social media at workplace has significant positive impact on creating information overload  
 H<sub>1b</sub>: Excessive use of social media at workplace has significant positive impact on creating communication overload  
 H<sub>1c</sub>: Excessive use of social media at workplace has significant positive impact on creating social overload.

## 2.2. Stress as Exhaustion of Social Media

A person's exposure to overload created due to social media results in the psychological stress. Research on information systems have used exhaustion to represent the stress faced by a person to relate the psychological reactions. Schaufeli et al., (1995) concluded that stress is the mental association of a person with long term engrossment in demanding situations. While working on social networking sites exhaustion, Weinert et al., (2015) said that social exhaustion is created due to social overload. In this study we measure the effects of these three overloads on social media exhaustion for the individuals at work.

Exhaustion in this context represents the feeling of being tired mentally and physically due to the use of social media. The concept of techno stress was initially used by Brod (1984) and then it was redefined by Weil and Rosen (1997) stating that any adverse effect on the behavior or attitude created directly

or indirectly due the use of technology is techno stress. Social overload takes the person to a level where the feeling of excessive use begins and results in exhaustion which makes a stressful environment and effects psychologically (Dhir et al., 2018). Researchers have used the theory of social support and concluded that social overload is that part of social media usage which shows the dark side of it (Weinert et al., 2015; Maier et al., 2015). Following the theoretical basis of theory of stress and coping we hypothesized the following relationships among overloads and social media exhaustion:

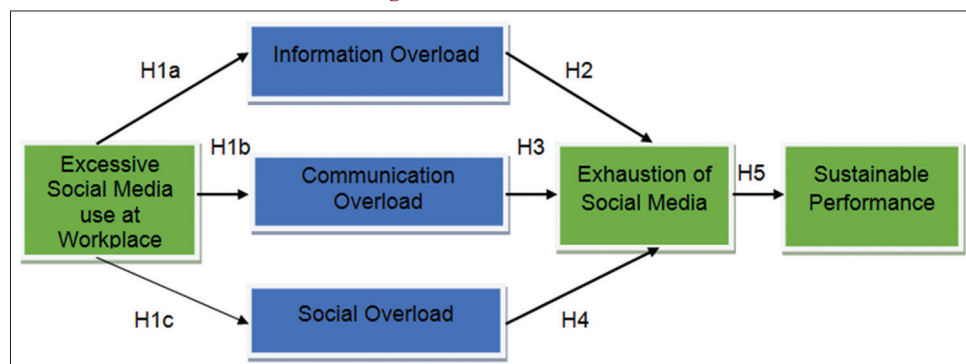
- H<sub>2</sub>: Information overload has significant positive impact on exhaustion of social media  
 H<sub>3</sub>: Communication overload has significant positive impact on exhaustion of social media  
 H<sub>4</sub>: Social media overload has significant positive impact on exhaustion of social media.

## 2.3. Exhaustion of Social Media and Performance

Researchers have made efforts to investigate and suggest conclusions on the impact of techno stress on the employees' performance (Whelan et al., 2020), in information communication technology aspect (Sarabadani et al., 2020). Studies have identified the impact of techno stress on the performance of employees like decreased performance, lessen job engagement, increase in turnover ratio and decreased organizational commitment Hung et al., 2015; Srivastava et al., 2015). Stress leads to the critical reduction in outcomes of an employee caused (Palmer et al., 2004). Previous researches have focused on the impact of psychological stress on the performance on the employee. Like, Kim et al. (2012) concluded that employee providing front-line services can get emotionally disturbed due to the social stress created by the customers and it adversely affects their performance.

The outcome of an employee is important as organizations want to justify the investment made in the form of resources employed for their employees (Ali-Hassan et al., 2015). This phenomenon can be explained under the context of theory of stress and coping (Folkman et al., 1987). This theory explains stress as operation between the environment and an individual (Lee et al., 2016). Thus, this study tries to investigate the impact stress on the performance of the employees created due to the excessive use of social media. Hence the following relationship is anticipated in the Figure 1 given below.

Figure 1: Research model



H<sub>5</sub>: Exhaustion of social media has significant negative impact on Performance.

### 3. RESEARCH METHODOLOGY

This research is based on empirical testing of hypotheses, with structured surveys as the primary strategy of research. The data was collected from the employees of the telecommunication sector in Pakistan by employing the Krejcie and Morgan (1970) approach for deciding the appropriate sample size for this study. It was confirmed that the targeted participants are those who use social media during working hours. All the participants were explained briefly about the purpose of research and the context of study. Primary data was collected by using questionnaire. Telecom service providers in Pakistan employees were mainly focused as they are more exposed to the usage of social media due the facilities provided to them at workplace.

A total set of 480 surveys had been distributed from which 300 surveys were attained completed in all aspects. Response rate was 62.5%. The respondents were explained that use of social media includes instant messaging services like WhatsApp, IMO, Snapchat etc., social networking sites like Face book, Instagram, LinkedIn, etc., entertainment websites like YouTube, Daily motion, etc., informational websites (other than Facebook) like News channels, micro blogs like Twitter. The measurement of excessiveness of the use of social media at work is adopted from that of Caplan (2002) and Caplan and High (2006). Study of Karr-Wisniewski and Lu (2010) was used for the scale of communication overload and information overload from the scale suggested by Maier et al., (2015) and adopted for social overload construct. Exhaustion of social media is measured with the help of the scale proposed by Ayyagari et al., (2011). Employee performance was measured with 8 items obtained from Janssen and Van Yperen (2004). A Likert scale with 5 points of measurements was used to measure the entire above-mentioned items. Responses range from 1 for strongly disagree to 5 for strongly agree.

Table 1 given above shows that the frequency of use of social media at workplace is quoted high. 59.16% of the employees use social media more than 10 times in days and about 24% use from six to 10 times a day. This frequency is enough to interrupt their work performance as using social media more than ten times by highest number of respondents shows that they get continuously by the demands of social media and their work got affected due to again and again interruptions created by the demands of social media. Else that it also shows their own interest level in using social media during working hours that means they easily get diverted from their job responsibilities using different kinds of social media. Normally working hours are 8 in a day out of which 43.58% employees showed that more than an hour in collective is wasted on using social media including social sites micro blogs. That can be taken as a big time to decline the performance of employees during working hours.

**Table 1: Demographics**

Demographics	Items	Percentages
Gender	Male	68.28
	Female	31.72
Age	20-25	36.58
	26-35	46.79
	35 and above	16.63
	Education	Bachelors
Tools of social media	Maters and above	53.37
	Instant messaging	40.38
	Social sites	53.69
Daily frequency of use	Micro blogs and others	5.93
	Rarely	3.4
	1-5 times	13.67
	6-10 times	23.77
Time spent daily	Above 10 times	59.16
	Rarely	2.1
	<30 min	15.89
	<1 h	38.43
	1 h and more	43.58

### 4. DATA ANALYSIS AND RESULTS

Measurement model includes tests of convergent validity; construct reliability and discriminant validity along with the conduction of confirmatory factor analysis SPSS and Smart partial least square (PLS) were used. If the composite reliability and Cronbach's alpha are greater than 0.70 reliability is considered as valid (Fornell and Larcker, 1981). To assess the convergent validity the loadings of items for the related constructs should be high enough. According to Fornell and Larcker (1981) and Bagozzi and Yi (1988), the value of average variance extracted must be greater than 0.50 and value of item loading must be greater than 0.60.

From Table 2 it can be seen that the value of the average variance extracted (AVF) for excessive social media use at work is 0.73, for information overload it is 0.64, for communication overload it is 0.58, for social overload it is 0.65, for exhaustion of social media it is 0.64 and for job performance it is 0.69. Thus, the valued of AVF is greater than 0.50 for all the constructs. Cronbach's  $\alpha$  is greater than 0.70 for all the constructs and the values of composite reliability is also greater than 0.70. As the values of all the measures meet the standard levels recommended, it shows that reliability is established. When the correlation between the constructs is less than square roots of average variance extracted for each construct the discriminant validity is shown. Table 3 given below represents that the correlation among the constructs is less than the square root of average variance extracted for each construct. Hence, the discriminant validity is supported as indicated by the findings.

Interdependence of variables affects the results of research. There should be no or very less interdependence among the variables. This interdependence is named as multicollinearity statistically. Possibility of high multicollinearity is always a serious threat to the research works. Variance inflation factor (VIF) is used in this study to check the possible multicollinearity of independent variables. Hair et al., (2011) explained that the value of VIF should be <5. The calculated VIF for the research of 2.38 which is acceptable level of multicollinearity as it is <5. Hence, the risk of multicollinearity is eliminated from this research.

**Table 2: Construct reliability and validity**

Construct	Items	Mean	SD	Loadings	Cronbach $\alpha$	CR	AVE
Excessive Use of social media at work (EUSM)	EUSM	3.06	1.09	0.87	0.83	0.9	0.73
	EUSM	2.87	1.13	0.91			
	EUSM	2.82	1.1	0.82			
Information overload (IOL)	IOL1	3.2	1.05	0.83	0.76	0.86	0.64
	IOL2	2.75	1	0.86			
	IOL3	3.04	0.93	0.77			
Communication Overload (COM)	COM1	2.73	0.99	0.8	0.73	0.83	0.58
	COM2	3.4	1.06	0.69			
	COM3	2.8	0.96	0.78			
	COM4	3.24	0.92	0.71			
Social overload (SOL)	SOL1	2.77	1.02	0.8	0.85	0.89	0.65
	SOL2	2.98	1.05	0.76			
	SOL3	2.63	1.03	0.79			
	SOL4	2.71	1.05	0.8			
	SOL5	3.03	1.04	0.79			
Social media exhaustion (SME)	SME1	2.91	1.02	0.76	0.84	0.89	0.64
	SME2	2.7	0.98	0.84			
	SME3	2.8	1.08	0.84			
	SME4	2.63	1	0.86			
Job performance (SJP)	JP1	3.72	0.79	0.82	0.84	0.9	0.69
	JP2	3.78	0.77	0.83			
	JP3	3.73	0.81	0.83			
	JP4	3.83	0.94	0.82			

**Table 3: Discriminant validity and correlations**

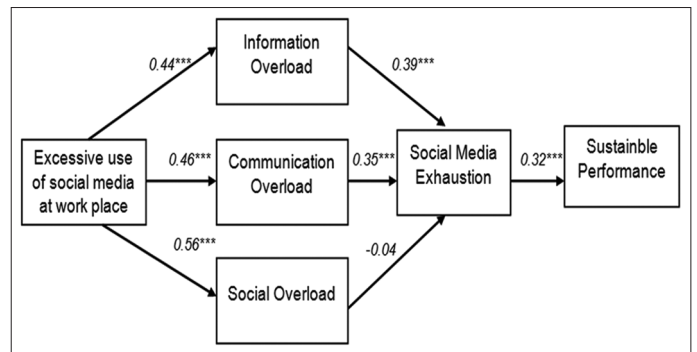
Construct	Mean	SD	EUSM	IOL	COM	SOL	SME	JP
EMSU	2.92	0.91	0.88					
IOL	2.95	0.82	0.43	0.83				
COM	3.06	0.71	0.49	0.71	0.73			
SOL	2.87	0.83	0.53	0.47	0.42	0.77		
SME	2.73	0.85	0.34	0.65	0.61	0.31	0.81	
JP	3.78	0.67	0.02	-0.16	-0.09	-0.11	-0.33	0.87

**4.1. Structural Model and Results**

The structural model that was constructed in theoretical framework portion was tested by using PLS graph. Figure 2 given below is representing the outputs of the PLS graph. As per the results of the graph, it is concluded that the model of the research is significantly supported by the data. Only  $H_4$  is not supported by the findings. Information overload is affected significantly by the extreme usage social media at work ( $\beta = 0.48, t = 6.83$ ). Communication load is also affected by the excessive usage of social media at workplace ( $\beta = 0.46, t = 7.21$ ).

Results also show that social overload is also influenced by the extreme use of social media at workplace ( $\beta = 0.56, t = 7.21$ ). From the above-mentioned hypothesis of study i.e.  $H_{1a}$  to  $H_{1c}$  are supported. Results of information overload communication overload i.e. ( $\beta = 0.37, t = 4.41$ ) and ( $\beta = 0.33, t = 4.09$ ) respectively, shows that these both are significantly affecting the exhaustion created by social media by having a positive relationship among them. This validates proposed hypothesis i.e.  $H_2$  and  $H_3$ . But contradictory to the results of above-mentioned independent variables, results of impact of social overload over social media exhaustion were different. As per the obtained results ( $\beta = -0.04, t = 0.59$ ), there was no significant impact of social overload on the social media exhaustion. So  $H_4$  has been rejected.  $H_5$  is supported strongly by the results ( $\beta = -0.32, t = 4.70$ ). Negative  $\beta$  shows that there is strong negative relationship

**Figure 2: Structural model**



between job performance and exhaustion created by social media. This represent that exhaustion created by social media decreases the performance of the employees. The variance of information overload is 20%, communication overload is 22%, social overload is 31%, and social media exhaustion is 45%.

**5. DISCUSSION AND CONCLUSION**

This study intended to investigate effects of excessive use of social media on the performance of the employees from the techno stress prospective. These three were supposed to enhance the exhaustion and level of stress on an individual created by the usage of social media excessively on workplace. This research supports the argument according to which excessive usage of social media at workplace leads to reduced job performance of the employees as it boosts stress that psychologically disturbs a person also prompts negative perceptions. This result was contradictory to arguments of Ou and Davison, 2011 and Van Zoonen et al., (2017) that social media usage enhances performance. The results disclosed different findings. First, it shows that emotions and psyche of individuals are negatively disturbed due to the excessive usage of social

media. Results show that regularity of usage of social media play an important role in developing social overload on the individual as it exposes them to many social connections. This outcome is same as the previous findings on extreme usage of information and communication technology which argues that high use of it leads to overload (Karr-Wisniewski and Lu, 2010; Weinert et al., 2015; Maier et al., 2015).

Secondly, the overloads of information and communication significantly enhance the stress created by the excessive usage of social media, but the impact of social overload on the exhaustion is not supported. One reason behind this could be that the loads related to communication and information demands to be immediately replied during work hours even due to the socially built up relations and links with working groups while social overload is based on the personal activities mainly that can be handled after the completion of tasks or after working hours. Mostly when an individual thinks that social requests are getting difficult to handle at workplace or during completion of tasks it tries deal with them after working hours. Moreover, some previous studies like Sun and Shang (2014) and Ali-Hassan et al., (2015) showed that the social related use can be helpful in making social capital and enhancing performance.

Thirdly, the outcomes of exhaustion of social media on the performance are investigated in this study. The results of the data collected indicate that the afore-mentioned variables are strongly connected negatively with each other. It means that both have negative relationship increase in social media exhaustion decreases the performance. The excessive usage of social media occupies the emotional resources, time and energy of the employees and they get exhausted. The exhausted individual cannot use its resources efficiently and result in low performance. The third finding of the study is also in line with the findings of Brooks and Claiiff (2017) that suggested the negative impact of techno stress created due to the usage of social media on the performance of employee.

## 6. IMPLICATIONS AND FUTURE RESEARCH

The current study uses the theory of stress and copying (Lazarus, 1966) in relation to the excessive use of social media at workplace. This study proposed and extended the model using techno stress created by excessive social media usage while taking habit of using different tools and applications of social media as stressor, stress of social media and Performance as outcome. This research will contribute to the previously done work in understanding the concepts and relation of the variables. First of all it differentiates from the previous studies in way that most of the studies tried to find out and support the optimistic impact of social media related to working place context for example the studies of Ou and Davison (2011) and Ali-Hassan et al., (2015). The current study is an attempted to highlight the other side of it. The increased level of usage of social media can generate too many problems. Therefore, this study suggests that use of social media beyond the optimum and its negative outcomes should not be ignored. Use of social media beyond the optimum level can expose employee

to the negative results. Organizations should be well aware of the consequences of social media use at workplace in fact the negative consequences that ultimately decrease performance. For this the organizations should make different strategies to, control the habit of employees of using social media to release their stress.

Future research may explore other underlying mechanisms through which excessive use of social media impacts sustainable employee performance. We have used telecom industry as target population for this study; this industry is inherent with usage of internet and online resources. Thus, to validate the proposed framework, it can be applied in other industries where internet usage is rarely a part of work environment. Cross sectional study design could be another limitation, a longitudinal design would better enable to measure effects of social media usage towards performance across a particular time level.

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