



Impact of information and communication overload syndrome (I& COS) on performance of academicians of Universiti Utara Malaysia

Open
Acce

Saralah Devi Mariamdaran ^{1,*}

¹ School of Applied Psychology, Social Work and Policy (SAPSP), Universiti Utara Malaysia, 06010 UUM Sintok, Kedah, Malaysia

ARTICLE INFO

ABSTRACT

Article history:

Received 29 November 2016
Received in revised form 9 January 2017
Accepted 10 January 2017
Available online 31 January 2017

The study has been conducted over the issue of declining performance of academicians at University Utara Malaysia. In the current scenario it has been observed that because of social media information and communication overload syndrome affects the performance of academicians adversely. In this study information overload syndrome and communication overload syndrome have been taken as independent variable, furthermore, gender has been taken as controlling variable to find if any difference exists over the performance of academicians on the basis of gender or not. The findings of the study revealed that there are significant differences among the performance of male and female academicians on the basis of gender differences. Females are more affected because of information and communication overload as compared to males.

Keywords:

Information and communication
overload syndrome, Performance,
Academician

Copyright © 2016 PENERBIT AKADEMIA BARU - All rights reserved

1. Introduction

Counter productivity in the performance of academicians is because of information and communication overload syndrome. In the current society and modern era, the word of information and communication overload is not that new. Academicians get information through the networking like the blogs or through the emails and other sources where people are connected to each other then comes the phase of social media in which academicians share ideas and feelings between communities [1]. The level of understanding of any academician can be checked through various tests. One can also check the understanding and comprehension level by assigning the task assigned to an academician [2]. There has been increase in the number of studies on information and communication overload. It has been more focused on the education sector as they have a lot of load regarding research projects. They have to manage many things at the same time so the pressure

* Corresponding author.

E-mail address: devi@uum.edu.my (Saralah Devi Mariamdaran)

increases time to time as academicians in the field of psychology face many things at the similar time [3]. In the simple language, information overload is used to convey the notion and receiving too much information in very less time. Within the academician community it can be seen that this term is now taking place and has been increasing vastly. This is providing the synonyms and are now related to the cognitive overload and sensory overload for the academicians [4].

If academicians have to communicate with large number of the subjects which is to be done by the academicians on regular basis. The communication factor has overloaded the supply of the information [5]. They have to perform this in a very short time then they will see the errors. Therefore, the information will not be transferred in an effective way. The efficiency and effectiveness both of academicians will suffer [6].

Basically the concept of information overloading is way beyond like we think [7]. These issues were not taken that seriously as academicians were not able to feel them but now the problem can be clearly observed. A major decline in the performance in the psychology department has been seen, which is due to declining trend among the academicians because of burnout [8]. Therefore, the research has created that there are certain factors that are creating the problems which results in the decline of performance of academicians especially in research projects. The major reason behind this decline of performance is communication and information overload. This study has been tailored to identify the gender differences in the effect of information and communication overload syndrome. In the light of the above discussion the study aimed to fulfill the objective of identify the impact of information and communication overload syndrome over the performance of academicians. Furthermore, the study will focus on any gender difference, means the difference in the impact of information and communication overload on the basis of gender.

2. Literature review

The concept that has been discussed and included in the current study is performance of academicians at University Utara Malaysia. The performance of the university academicians is continuously deteriorating. The main reason behind this decline of performance of academicians at university is because of information and communication overload syndrome.

2.1. Performance of academicians at university

There is no standard definition for evaluating the performance of academicians. The standard approach focuses on achievement and curricula completion by the teachers, how university academicians cover the courses and conduct research work. The narrow definition allows the observation of the outcomes of any change in higher education, while the more extensive definition needs a more complex strategy of observation and a focus on the job market, that are the academicians providing the required knowledge to the students that they can fulfill the requirements of the market.

The direct link between Information and communication overload syndrome and performance of academicians has been the focus of extensive literature during the last two decades. The first body of literature explored the impact of computer uses. Since the Internet revolution, there has been a shift in the literature that focuses more on the impact of online activities: use of Internet, use of educative online platforms, digital devices, use of blogs and wikis, etc. This literature shows mixed results. On one hand, some research demonstrates that there is no evidence of a key role for Information and communication overload syndrome in higher education especially regarding deterioration of the performance of academicians. On the other hand, some studies show a real

impact of Information and communication overload syndrome on performance of university academicians [9]. Therefore, this study focuses on the gender differences to understand that do information and communication overload effect similarly on both the genders or not.

2.2. Information overload

Information overload refers to the difficulty that university academicians can have in understanding an issue and taking the right decision. Information overload occurs when the amount of input information in the university academicians' brain exceeds its processing capacity [10]. Academicians usually have fairly limited cognitive processing capacity. Consequently, when information overload occurs, it is likely that a reduction in decision quality will occur, which will consequently decline the performance of the academicians.

2.3. Communication overload

By the information and communication overload the efficiency of the academicians is badly affected. Communication overload syndrome adversely effects the performance of academicians. These are the possibilities by which we can face the poor performance and have the adverse effect on the health of academicians [11]. There is the negative impact on the research activities and such things need to be eliminated. The communication overload is creating the negative impact on the performance and other things such as health and they can affect the quality and the quantity and they consist of the present research [12]. The current research not only focus on the managers but this research is focused on the academicians and that are in the Malaysia and they are the university academicians and they are effected in the very bad way and this is happening due to the communication overload. Communication overload syndrome significantly affect the quality of thinking time because of deviated mind the thinking over the productive things is deviated and the thinking time increases [13].

2.4. Theoretical framework

This section includes the investigation about the information and communication overload syndrome and that can cause the overload of the work. Therefore, we would like to show the theoretical frame work and they are based on the four variables that explain the system in a very easy way we have used the term like the Information overload, Communication, gender as a controlling effect and we have used the term performance by this we have shown the theoretical frame work and to show the proper frame you need to see the Fig. 1.

In the proposed framework, the researcher has tried to show in Fig. 1 the basic linkage between independent variables that are information and communication overload and the dependent variable which is performance of academicians [14]. Furthermore, the framework highlights the controlling effect of gender differences which may change the level of effect of information and communication overload syndrome.

3. Methodology

This section discusses research design which refers to the philosophical framework within which data will be gathered and analyzed. Finally, this section discusses the population of the study which is the academicians of University Utara Malaysia, sample size and sampling frame of the study have

been discussed along with data collection techniques followed by the procedures for analyzing the data.

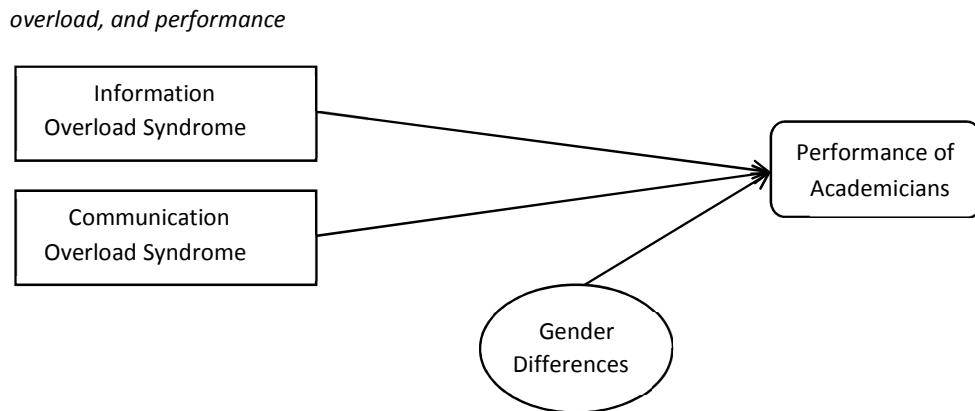


Fig. 1. Theoretical framework

The basic purpose of the study is to identify the controlling effect of gender over the relationship between information and communication overload syndrome and performance of academicians. This study includes information overload syndrome and communication overload syndrome as independent variables. Gender is taken as a controlling variable. Performance of university academicians is taken as a dependent variable.

This study follows a quantitative methodology [15]. This study will adopt a survey research design [16]. The survey method will allow the researcher to gather quantitative data and analyze it using descriptive and inferential statistics. The basic reason behind using primary data in this that secondary data may not be appropriate to fulfill the given situation [17]. In this research the data will be collected at a point in time. For this study the estimated data collection period is three months. The unit of analysis may be a person, an organization or a group [18]. In this study the unit of analysis will be the academicians of University Utara Malaysia.

In order to measure a variable in quantitative study the researcher use close ended questions. To measures the items, the best way is to use a Likert scale. In this study different number of items will be used to measure the variables using five point Likert scale because when the behaviors have to be measured five and seven both the Likert Scale are used but five is preferred because it reduces the chances of errors. For calculating the sample size, the table given by Zikmund was used.

All the data was tabulated in the SPSS 22 for measuring descriptive. Then PLS-3 has been used for structural equation modeling [18]. PLS-SEM is considered as best for developing of a theory and model testing.

Almost 250 questionnaires were filled by the academicians of University Utara Malaysia. The response rate was good because the academicians were easy to approach and the questionnaires were distributed to them with in the campus.

The analysis of normality is compulsory before structural equation modeling [18]. To check normality Skewness and Kurtosis have been applied in this study [19]. According to Kline [19] skewness value should be below 3 and kurtosis value should be below 8. Based on the recommendations of Kline, the absolute values of Skewness and Kurtosis of all the items in this study are within the acceptable range of < 2 and < 7 , respectively.

Table 1
 Skewness and Kurtosis

Variables	Skewness	Kurtosis
Information overload	1.78	4.38
Communication overload	2.21	4.27
Performance of Academicians	2.01	3.81

To check the issue of multicollinearity VIF and tolerance have been calculated the value of tolerance should be above 0.10 and the value for VIF should be less than 10 [20].

Table 2
 Multicollinearity Test based on Tolerance and VIF Values

Variables	Tolerance	Variable Inflation Factor (VIF)
Information overload	0.52	2.586
Communication overload	0.82	2.488

3.1. Evaluation of PLS SEM

After initial screening of the data next step was to assess the outer model and inner model [19]. Smart PLS 3.0 was used to determine causal links among the constructs in these theoretical models. Reliability and validity are the two main criteria used in PLS-SEM. The reliability of the instrument was measured through Cronbach’s alpha, Composite Reliability (CR), and Average Variance Extracted (AVE). The value of Cronbach’s alpha is considered as acceptable if it is above 0.7 [21]. Likewise, the threshold level for CR is above 0.7 [15]. Another very important test is to calculate AVE, the value above 0.5 is considered as good and acceptable [22]. The calculated values for the variables used in the study are as shown is Table 3.

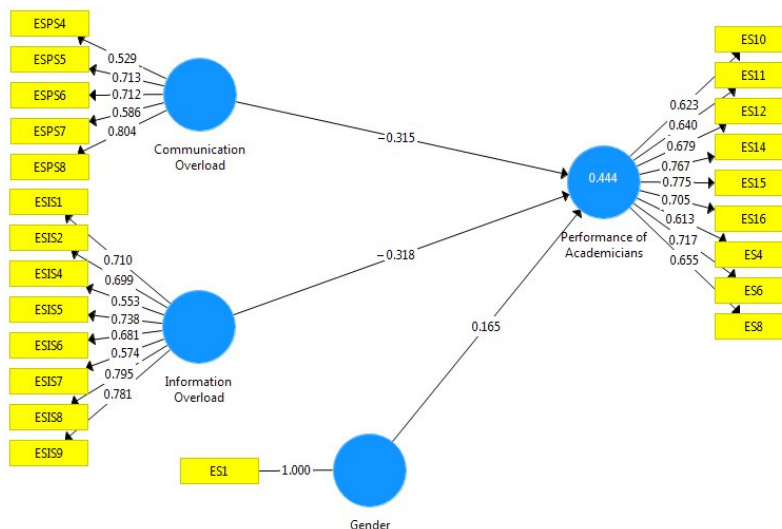


Fig. 2. Measurement model

On the basis of the analysis it would be right to say that the outer model confirms that the survey items measure the constructs they were designed to measure, thus ensuring that they are reliable and valid. The measurement model is given in Fig. 2.

In this study, a systematic model analysis of the structural model was carried out to provide a detailed picture of the results and to test Hypotheses 1 to 2 comprehensively. The original number of

cases was used as the number of cases, and 5,000 was used as bootstrapping samples [18-20]. The first model focused on the analysis of the direct relationship between the independent variables and the dependent variable (H1 to H2).

Table 3
 Construct reliability

Variable	Cronbach's Alpha	Composite Reliability	AVE
Academicians performance	0.81	0.71	0.57
Information overload	0.82	0.78	0.61
Communication overload	0.87	0.77	0.57

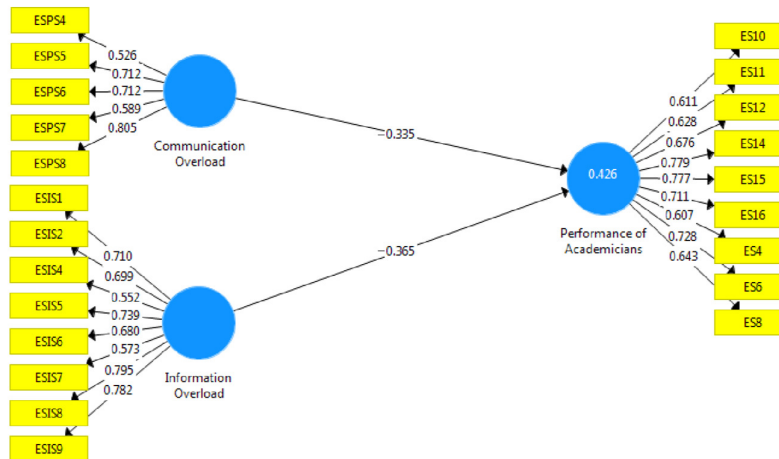


Fig. 3. PLS algorithms direct relationships

Based on the PLS-SEM algorithm and bootstrapping procedure as mentioned above, Fig. 3 shows the path coefficient of the independent variables and the dependent variable. The result reveals that all the exogenous variables have a negative coefficient with the endogenous variable. The bootstrapping result in Fig. 4 shows that the relationship between both the independent variables and the dependent variable is significant at $p < .01$ [20]. Table 4 presents the path coefficients, t-statistics and p-values.

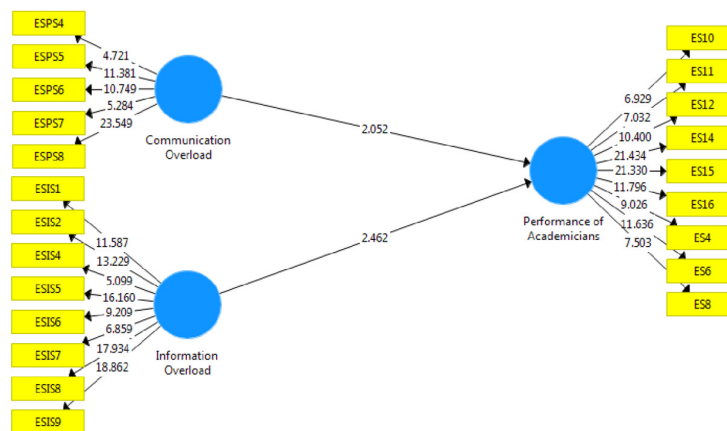


Fig. 4. PLS bootstrapping direct relationships

Table 4
 Result hypothesis testing (Direct Relationships)

Paths	Beta	Sample Mean	Standard Deviation	T Values	P Values	Decision
IOS -> Performance of	-0.335	0.359	0.125	2.041	0.001	Supported academicians
COS -> Performance of	-0.365	0.258	0.134	2.427	0.003	Supported academicians
R2 0.426						

3.2. Controlling effect

In this study the controlling effect of gender has been identified; the results have shown that gender has a significant effect means there are significant differences over the impact of gender for the effect of information and communication overload syndrome over the performance of male and female academicians.

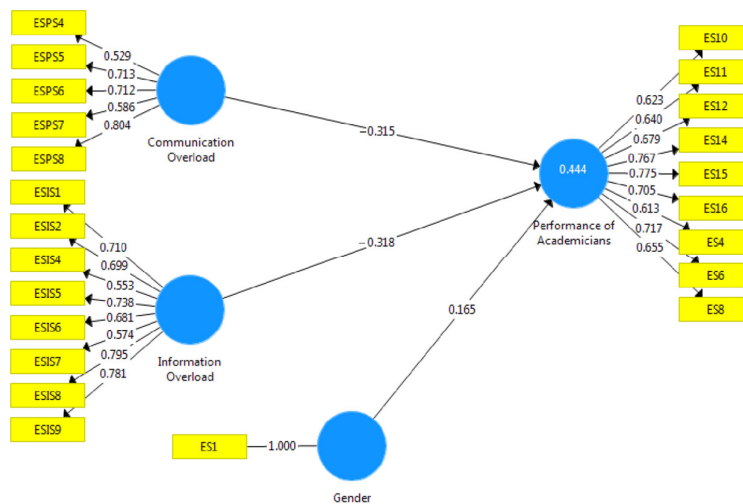


Fig. 5. Controlling effect algorithms

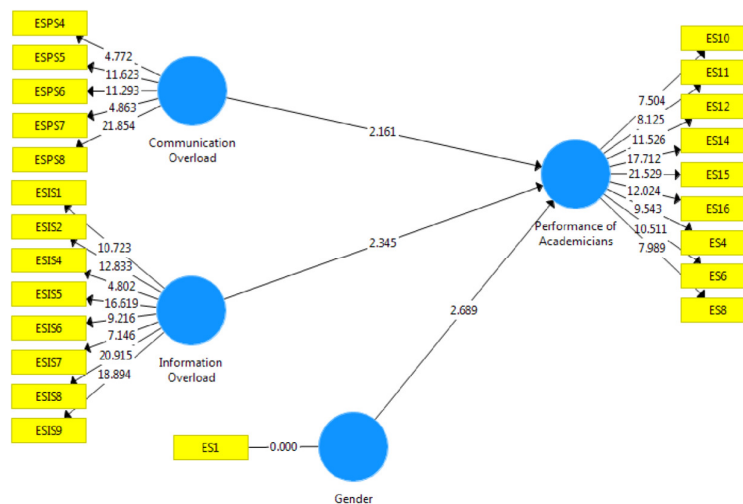


Fig. 6. Controlling effect bootstrapping

The descriptive when segregated with male and female showed a significant difference between the impact over male and female academicians. The study thus showed that gender have a major impact over the performance of academicians because of information and communication overload syndrome. Males and relatively less effected by the information and communication overload syndrome as compared to females.

4. Conclusion

In conclusions, the findings of the study highlighted that there are significant differences on the basis of gender in the performance of academicians at University Utara Malaysia. Information overload effect the performance of academicians on the basis of gender. Female academicians are more prone to have low level of performance when the information overload syndrome effects them as compared to males. The result of the study showed that both the participants' males and females are negatively affected by information and communication overload syndrome. As the information increases and there is a gender differences than performance decreases. There is a significant difference among gender, information overload and performance. Therefore, this study indication of the significant differences among all the variables.

The overall outcomes recommend huge contrasts between of male and females in regards to the relationship among gender, information overload and communication overload and performance of academicians at University Utara Malaysia. In particular, females see an essentially more grounded negative relationship between information and communication overload syndrome.

References

- [1] DeAndrea, David C., Nicole B. Ellison, Robert LaRose, Charles Steinfield, and Andrew Fiore. "Serious social media: On the use of social media for improving students' adjustment to college." *The Internet and Higher Education* 15, no. 1 (2012): 15-23.
- [2] Toffler, Alvin. "Revolutionary wealth." *New Perspectives Quarterly* 30, no. 4 (2013): 122-130.
- [3] Csikszentmihalyi, Mihaly, and Rick E. Robinson. "Culture, time, and the development of talent." In *The Systems Model of Creativity*, pp. 27-46. Springer Netherlands, 2014.
- [4] Ruiz-Gallardo, José-Reyes, José L. González-Geraldo, and Santiago Castaño. "What are our students doing? Workload, time allocation and time management in PBL instruction. A case study in Science Education." *Teaching and Teacher Education* 53 (2016): 51-62.
- [5] Hair Jr, Joseph F., G. Tomas M. Hult, Christian Ringle, and Marko Sarstedt. *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage Publications, 2013.
- [6] English, Mary C., and Anastasia Kitsantas. "Supporting student self-regulated learning in problem-and project-based learning." *Interdisciplinary Journal of Problem-based Learning* 7, no. 2 (2013): 6.
- [7] Abbott, Andrew. "The problem of excess." *Sociological Theory* 32, no. 1 (2014): 1-26.
- [8] Schoenfeld-Tacher, Regina M., Lori R. Kogan, Beatrice Meyer-Parsons, Kenneth D. Royal, and Jane R. Shaw. "Educational research report: Changes in students' levels of empathy during the didactic portion of a veterinary program." *Journal of Veterinary Medical Education* 42, no. 3 (2015): 194-205.
- [9] Cho, Jaehee, and Seungjo Lee. "International Research International Students' Proactive Behaviors in the United States: Effects of Information-Seeking Behaviors on School Life." *Journal of College Student Development* 57, no. 5 (2016): 590-603.
- [10] Gouws, Rufus H., and Sven Tarp. "Information overload and data overload in lexicography." *International Journal of Lexicography* (2016): 1-30.
- [11] Mullins, Jeff, and Rajiv Sabherwal. "How much information is too much? Effects of computer anxiety and self-efficacy." (2014).
- [12] Li, Ying. "Design of Mobile Technologies for Traveling with Public Transport: A Battle Against Information Overload." Master's thesis, 2015.
- [13] Zhang, Shuwei, Ling Zhao, Yaobin Lu, and Jun Yang. "Do you get tired of socializing? An empirical explanation of discontinuous usage behaviour in social network services." *Information & Management* 53, no. 7 (2016): 904-914.

- [14] Hystad, Sigurd W., Jarle Eid, Jon C. Laberg, Bjørn H. Johnsen, and Paul T. Bartone. "Academic stress and health: Exploring the moderating role of personality hardiness." *Scandinavian Journal of Educational Research* 53, no. 5 (2009): 421-429.
- [15] Sekaran, Uma. *Research Methods for Business: A Skill Building Approach*. John Wiley & Sons, 2007.
- [16] Zikmund, William G., Barry J. Babin, Jon C. Carr, and Mitch Griffin. *Business research methods*. Cengage Learning, 2012.
- [17] Zikmund, William G. *Business Research Methods*. New York: McGraw Hills, 2007.
- [18] Hair, Joe F., Marko Sarstedt, Christian M. Ringle, and Jeannette A. Mena. "An assessment of the use of partial least squares structural equation modeling in marketing research." *Journal of the Academy of Marketing Science* 40, no. 3 (2012): 414-433.
- [19] Kline, Rex B. *Principles and Practice of Structural Equation Modeling*. New York: The Guilford Press, 2005.
- [20] Hair, Joseph F., Christian M. Ringle, and Marko Sarstedt. "Editorial-partial least squares structural equation modeling: Rigorous applications, better results and higher acceptance." *Long Range Planning* 46, no. 1 (2013): 1-12.
- [21] Wong, Ken Kwong-Kay. "Partial least squares structural equation modeling (PLS-SEM) techniques using SmartPLS." *Marketing Bulletin* 24, no. 1 (2013): 1-32.
- [22] Henseler, Jörg, and Wynne W. Chin. "A comparison of approaches for the analysis of interaction effects between latent variables using partial least squares path modeling." *Structural Equation Modeling* 17, no. 1 (2010): 82-109.