# IMPACT OF PERCEIVED THREAT ON ACADEMIC PERFORMANCE USING SOCIAL MEDIA AMONG STUDENTS STUDYING IN ARTS, SCIENCE AND ENGINEERING COLLEGES IN COIMBATORE

**K.P.BALAKRISHNAN[1]**
**DR.S.SARAVANAKUMAR[2]**
*[1]PH.D RESEARCH SCHOLAR*
*[2]PRINCIPAL*
*VELLAKOIL ARTS AND SCIENCE COLLEGE*
*TRICHY MAIN ROAD ,VELLAKOIL*
*TAMILNADU, INDIA 638-111*

## ABSTRACT

Social media as an information facility in institutions of learning provides a platform for efficient teaching and learning processes. However, to promote the proper use of social media in educational subsector, policies that guide and enable users should be implemented as suggested in existing literatures. it is significant to examine the question of what effect social networks have on users, in particular, how the use of social networks affects the academic success of students or positively contribute to their performance. Therefore, the study framed to examine the relationship between threat perceived among students and their academic performance. Survey method was employed to collect the primary data from 572 selected college students through the structured questionnaire. The Graduate and Post Graduate students from different colleges in Coimbatore are randomly selected considering extension of adoption of technology in their learning habits. The statistical tools used are Simple percentage analysis, Garrett Ranking Method and Structural Equation Modeling. SEM model used to measure the direct effect proved insignificant relationships with reference to threat to privacy and academic performance as well as threat to health and academic performance. Though social media usage positively contribute towards academic performance of students there are few trepidation need to be addressed by inculcating the students maintaining privacy using social media where they feel threat to their privacy information need to be handled competently through appropriate settings this can avoid negative consequences more feared by female than their counterpart. Likewise, academic achievement have significantly affected due to over usage of gaming and entertainment activities. Some of the students feel dizzy and lack of concentration in studies which need to be addressed and bring clarity in their lifestyle. Therefore, it is concluded that using social media have both positive and negative effects, however, positive effects contribute highly towards their academic achievements through e-learning resources.

**Key words: Students, Social Media, Academic Performance, Perceived Threat, Privacy, etc.**

## INTRODUCTION

Social media as an information facility in institutions of learning provides a platform for efficient teaching and learning processes. However, to promote the proper use of social media in educational subsector, policies that guide and enable users should be implemented as suggested in existing literatures. Currently, the global information revolution is growing rapidly. Government and educational institution managers should be ready to provide secure online services to their youth especially those in institutions of higher education. However, as agreed by several previous researchers the promotion of the usage of social media to interested parties, education sub sectors must fully implement policies and guidelines to enable research students to incorporate social media into their daily teaching and learning processes as the medium has become an everyday occurrence in the life of an average youth.

**Boyd and Ellison (2007)** defined social network sites as public web-based services that allow users to develop a personal profile, identify other users with whom they have a connection, read and react to postings made by other users on the site, and send and receive messages either privately or publicly. These web based

services allow individuals to construct a public or semi-public profile within a bounded system. Among the most popular are Facebook and LinkedIn.

Academic life in these context is describe as the activities that relates to the work done in colleges and universities especially which involves studying and reasoning rather than practical or technical skills. Higher education on the other hand is an educational level that primarily describes post-18 learning that takes place at the universities as well as other colleges and institutions that awards academic degrees and professional qualification.

Privacy concern as a direct determinant of BI. While it is not directly included in TAM, PC may exert its influence on acceptance as a direct determinant of behavioural intention. The rationale is that PC can be regarded as a factor that negatively affects attitude toward using SNWs. The limited studies on privacy concern in SNW have suggested that users' privacy concern creates negative attitudes toward SNW **(Boyd, 2008; Schmidt, 2006).** Privacy concern can also be conceptualized as a type of perceived risk.

Academic success or performance is defined as the level of satisfaction of the educational objectives of a student, teacher or institution in the short, medium or long term (Paul et al. 2012).

Social media tools represent an important source of value creation for firms across the globe. Indeed, there are billions of users who connect every day on social media (e.g. Facebook, Twitter, WhatsApp, etc.). Most of these users are youths in universities and educational institutions (Badri et al. 2017) . They present significant advantages for students like "Increasing Student Collaboration'' "Rich eLearning Media available'' and "Real-time news and information discovery'' (Draskovic et al. 2017).

## LITERATURE REVIEW

**Rauniar et al. (2014)** conduct a study on social media usage based on TAM. They select Facebook as a case and try to find the effects of perceived ease of use, critical mass, capability, perceived playfulness, perceived usefulness, and trustworthiness on social media use. They propose a revised TAM model by taking social media into consideration. They validate the model and find the significant effects of the revised dimensions.

**Ebner and his colleagues (2010)** in the study about microblogs are another type that was investigated new type of communication that can help informal learning at outside of the classrooms. Moreover, the use of social media for educational purposes was analyzed also qualitatively by interviewing with university students and results showed that they use social media intensively for educational purposes such as exchanging practical and academic information, experiences, social support and also connecting with peers and sharing documents

Studies found out that academic outcome of students who spent most of their time interacting using social media are positive because they were able to share and generate ideas and concepts related to their studies. They also use these sites for having fun as these social media sites are helpful in their academic work **[Amin, 2016].**

Based on the study of **Alwagait, Shazad and Alim[2],** it was found that social media usage on weekly basis displayed a positive skew where most students do not use social media excessively. Respondents in their study felt that time management and football were factors that contributed towards negative academic performance besides excessive social media use.

Heavy Internet users and no heavy Internet users differed significantly on a number of dimensions. No heavy users had better relationships with administrative staff, academic grades, and learning satisfaction than heavy Internet users. Heavy users were more likely than non-heavy Internet users to be depressed, physically ill, lonely, and introverted **[Chen and Peng, 2008].**

## SIGNIFICANCE OF THE STUDY

Social networks are becoming more popular among college going students and are a new way of spending free time and serve as a separate channel for finding the necessary information, both educational and entertaining, however, threat perceived by health and privacy. Therefore, it is significant to examine the question of what effect social networks have on users, in particular, how the use of social networks affects the

academic success of students or positively contribute to their performance. Therefore, the study framed to examine the relationship between threat perceived among students and their academic performance.

## OBJECTIVE OF THE STUDY

i.     To investigate the impact of social media threat on academic performance

## METHODOLOGY

This study is an empirical research based on survey method. Both primary and secondary data have been used in this study. The research is descriptive in nature as the present study has made an attempt to describe the characteristics of students.  Survey method was employed to collect the primary data from 572 selected college students through the structured questionnaire. The Graduate and Post Graduate students from different colleges in Coimbatore are randomly selected considering extension of adoption of technology in their learning habits. The statistical tools used are Simple percentage analysis, Garrett Ranking Method and Structural Equation Modeling.

## DEMOGRAPHIC VARIABLES

Demographic variables of the students from various engineering and arts & science colleges using social media are classified based on their age, gender, educational qualification, stream of education, occupation of parents, monthly family income and place of residence are presented in Table 1.

### Table 1: Demographic characteristics of the students

| Sl | Demographics | Frequency | Percent |
|---|---|---|---|
| 1. | **Age** | | |
| | Below 21 years | 238 | 41.6 |
| | 21 to 25 years | 204 | 35.7 |
| | Above 25 years | 130 | 22.7 |
| 2 | **Gender** | | |
| | Male | 176 | 30.8 |
| | Female | 396 | 69.2 |
| 3 | **Educational Qualification** | | |
| | Under Graduate | 292 | 51.0 |
| | Post Graduate | 177 | 30.9 |
| | M.Phil. / Ph.D. | 103 | 18.0 |
| 4 | **Stream of education** | | |
| | Arts | 307 | 53.7 |
| | Science | 166 | 29.0 |
| | Engineering | 99 | 17.3 |
| 5 | **Occupation of the head** | | |
| | Government Organisation | 57 | 10.0 |
| | Private Organisation | 332 | 58.0 |
| | Self Employment | 183 | 32.0 |
| 6 | **Monthly Income** | | |
| | Less than Rs.30,000 | 320 | 55.9 |
| | Rs.30,001 to Rs.50,000 | 181 | 31.6 |
| | Morethan Rs.50,000 | 71 | 12.4 |
| 7 | **Place of residence** | | |
| | Rural | 117 | 20.5 |
| | Semi-urban | 226 | 39.5 |
| | Urban | 229 | 40.0 |

**Source: Primary Data**

Table 1 shows maximum (41.6%) of the respondents are in the age below 21 years, 35.7% of the respondents are in the age between 21 and 25 years and the remaining 22.7% of the respondents are in the age above 25 years.  Majority (69.2%) of the respondents are female and 30.8% students surveyed are male.  Majority (51%) of the students are doing under graduation, 30.9% are studying post graduation and the remaining 18% are pursuing M.Phil. / Ph.D. studies.  Majority (53.7%) of the students are studying in the arts stream, 29% are studying in the science stream and 17.3% are studying in the engineering stream.  Majority (58%) of the parents of the students are occupied in private organisations, 32% are self employed and the remaining 10% are working in government organisations.  Majority (55.9%) of the parents of the students are earning less than Rs.30000 per month, 31.6% of the parents are earning between Rs.30001 and Rs.50000 and the remaining 12.4% of the respondents parents are earning more than Rs.50000.  More than one third (40%) of the students are residing in urban areas, almost equal proportion (39.5%) are residing in semi-urban areas and the remaining 20.5% of the students are residing in rural areas.

## GARRETT RANKING METHOD

### Table 2: Rating of the students towards using social networking sites

| Attributes | R1 | R2 | R3 | R4 | R5 | R6 |
|---|---|---|---|---|---|---|
| Social activities | 113 | 130 | 206 | 28 | 23 | 72 |
| Electronic news / magazine | 64 | 110 | 62 | 62 | 101 | 173 |
| Communication via | 132 | 96 | 41 | 38 | 152 | 113 |
| Research / Education | 218 | 151 | 99 | 17 | 53 | 34 |
| Surfing | 20 | 65 | 88 | 156 | 83 | 160 |
| Entertainment (Downloads, Music, movies, softwares, etc.) | 25 | 20 | 76 | 271 | 160 | 20 |

Rating of the respondents based on six attributes viz. Social activities, Electronic news / magazine, Communication via,  Research / Education, Surfing and Entertainment (Downloads, Music, movies, softwares, etc.) for which the students rated their opinion and the results are computed using Garrett Ranking Method with the Garrett Score, Mean and rank presented in the Table 3.

### Table 3: Garrett rank showing students opinion on using social networking sites

| Attributes | Garrett Score | Garrett Mean | Garrett Rank |
|---|---|---|---|
| Social activities | 31810 | 55.61 | 2 |
| Electronic news / magazine | 25774 | 45.06 | 5 |
| Communication via | 28397 | 49.65 | 3 |
| Research / Education | 35170 | 61.49 | 1 |
| Surfing | 24314 | 42.51 | 6 |
| Entertainment (Downloads, Music, movies, softwares, etc.) | 26135 | 45.69 | 4 |

Table 3 shows students rating towards purpose of using social networking sites and the attributes are computed using Garrett Ranking Method and the results are presented with the highest score and mean achieved by the attributes.  First rank was for "Research / Education: Score=35170, Mean=61.49", followed by 2nd Rank "Social Activities: Score=31810, Mean=55.61", 3rd Rank "Communication Via: Score=28397, Mean=49.65", 4th Rank "Entertainment (Downloads, Music, Movies, Software, etc.: Score=26135, Mean=45.69", 5th Rank "Electronic news / magazines: Score=25774, Mean=45.06" and finally, (6th) last rank "Surfing: Score=24314, Mean=42.51".

## SEM MODEL EXPLAINING DIRECT EFFECT OF PRIVACY AND HEALTH THREAT ON ACADEMIC PERFORMANCE

Structural equation model is conducted to measure privacy and health threat on academic performance of students using social media.  Initially, the figure explains the highest impact of item influencing the direct effects followed by the covariance between exogenous variables (Threat to privacy and threat to health) and finally, the path regression explaining relationship between exogenous and endogenous (academic performance) variables.

The threat to privacy construct is mostly explained by "PV2 i.e. fear among students about social network may misuse their private information" followed by PV3 and PV1 which are concerned about negative consequences as well as worries about access of private information by unknown parties.  Likewise, Threat to health is highly explained by "H1" that is students are addicted to social network that interfere in their academic achievements and "H4" is their academic grade decline in the recent past due to unnecessary use of social network".  Therefore, the covariances between threat to privacy and threat to health as well as path regression considering academic performance as dependent variable is predicted for significance level in the Tables 4 and 5.

**Figure: Direct Effect of privacy and health threat on academic performance of students using social media**
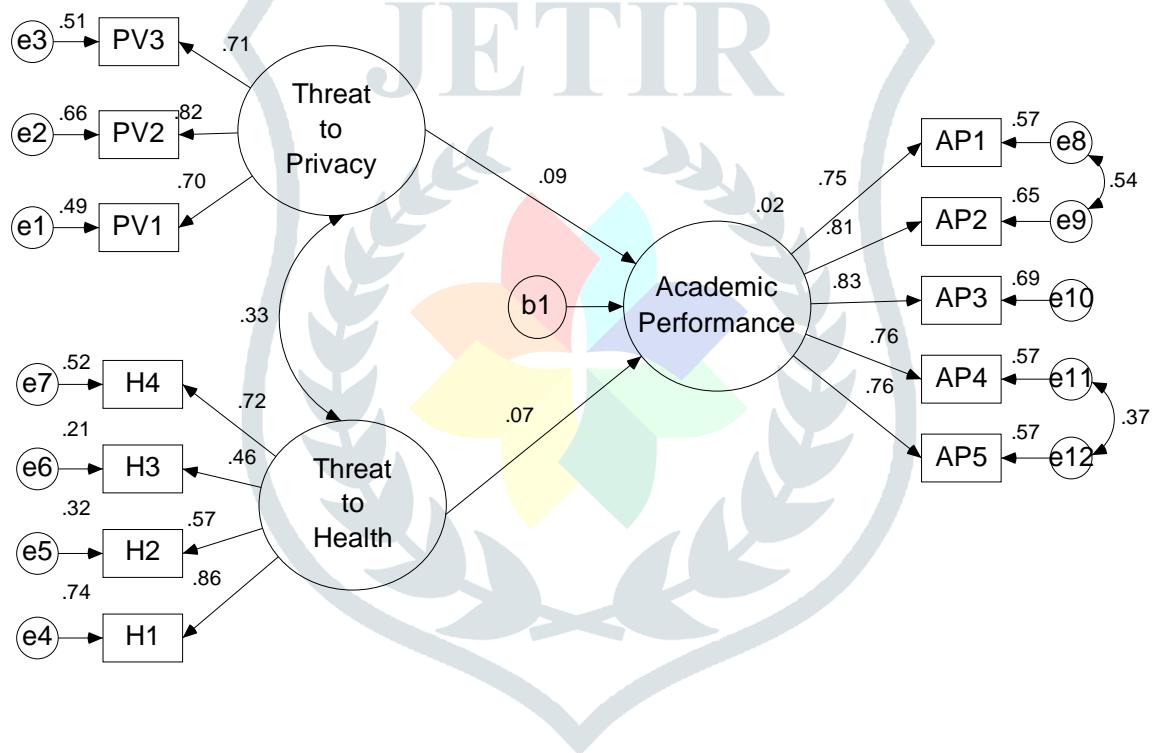
**Table 4: Covariances measuring direct effects of privacy and health threat on academic performance of students using social media**

| | | | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| Threat_to_Privacy | <--> | Threat_to_Health | .223 | .038 | 5.815 | *** |
| E8 | <--> | e9 | .271 | .037 | 7.379 | *** |
| e11 | <--> | e12 | .216 | .037 | 5.819 | *** |

Table 4 correlation between Threat to privacy and threat to health are significantly correlated proved with statistical significance (CR=5.815, Sig.0.000) to reject $H_0$. To achieve the goodness of fit e8 and e9 as well as e11 and e12 are covaried after observing modification indices.

**Table 5:Path regression measuring direct effects of privacy and health threat on academic performance of students using social media**

| | | | Estimate | S.E. | C.R. | P |
|---|---|---|---|---|---|---|
| Academic_Performance | <--- | Threat_to_Privacy | .113 | .066 | 1.711 | .087 |
| Academic_Performance | <--- | Threat_to_Health | .071 | .054 | 1.312 | .190 |

Table 5 shows path regression between Threat to privacy and academic performance among students using social media are not found to be significantly related which is explained through unstandardized coefficient estimates $\beta=0.113$, t=1.711, sig.0.087 to accept $H_0$. Likewise, relationship between threat to health of students using social media and their academic performance are not statistically significant which is proved through $\beta=0.071$, t=1.312, sig.0.190 to accept $H_0$. Further, goodness of fit of path regression model measuring direct effects of privacy and health threat on academic performance of students using social media is explained in the Table 6.

**Table 6: Goodness of Fit index measuring direct effects of privacy and health threat on academic performance of students using social media**

| | CMIN | DF | CMIN/DF | RMR | GFI | AGFI | NFI | RFI | TLI | CFI | RMSEA | P CLOSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Model | 145.159 | 49 | 2.962 | 0.050 | 0.959 | 0.935 | 0.953 | 0.937 | 0.957 | 0.968 | 0.059 | 0.094 |

Table 6 shows goodness of fit index for the model measuring direct effects of privacy and health threat on academic performance of students using social media achieved threshold specified by Hu and Bentler (1999), where, GFI, AGFI, CFI, NFI, RFI and TLI more than 0.95 level, while, CMIN/DF is less than 3 and RMR < 0.5 and RMSEA less than 0.8 have been achieved and the results are CMIN=145.159, CMIN/DF=2.962, RMR=0.050, GFI=0.959, AGFI=0.935, NFI=0.953, RFI=0.937, TLI=0.957, CFI=0.968, RMSEA=0.059 and PCLOSE is insignificant at 0.094 and the model resulted as good fit.

## SUMMARY

## DEMOGRAPHIC RESULTS

➢ Maximum (41.6%) of the respondents are in the age below 21 years,
➢ Majority (69.2%) of the respondents are female
➢ Majority (51%) of the students are doing under graduation,
➢ Majority (53.7%) of the students are studying in the arts stream,
➢ Majority (58%) of the parents of the students are occupied in private organisations,
➢ Majority (55.9%) of the parents of the students are earning less than Rs.30000 per month,
➢ More than one third (40%) of the students are residing in urban areas,

## GARRRETT RESULTS

➢ Majority of the students are suing for research / education and social activities and least students are using for electronic news/ magazine as well as surfing purposes.

## MODEL RESULTS

➢ SEM model used to measure the direct effect proved insignificant relationships with reference to threat to privacy and academic performance as well as threat to health and academic performance. Further, the next part of the study examines usage of social media influencing satisfaction and academic performance of students from various arts, science and engineering colleges from Coimbatore.

## SUGGESTIONS AND CONCLUSION

Though social media usage positively contribute towards academic performance of students there are few trepidation need to be addressed by inculcating the students maintaining privacy using social media where they feel threat to their privacy information need to be handled competently through appropriate settings this can avoid negative consequences more feared by female than their counterpart. Likewise, academic achievement have significantly affected due to over usage of gaming and entertainment activities. Some of the students feel dizzy and lack of concentration in studies which need to be addressed and bring clarity in their lifestyle. Therefore, it is concluded that using social media have both positive and negative effects, however, positive effects contribute highly towards their academic achievements through e-learning resources.

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