

Determinant Factors on Student Empowerment and Role of Social Media and eWOM Communication: Multivariate Analysis on LinkedIn usage

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Abstract

Background/Objectives: In recent times, there is phenomenal increase in usage of Social Networking Sites like Facebook, LinkedIn etc. by college students and young professionals. This study focuses on identifying key factors that influence LinkedIn usage and the role of eWOM communication in enhancing social connectivity and engagement of students in meaningful activities to improve their social and academic standings. A theoretical model on social networking by students is proposed and the results and recommendations of this study will be brought to practical use towards student empowerment.

Methods/Statistical Analysis: A preliminary survey was conducted to understand how young university students use the Social Networking Site LinkedIn and the responses were used to frame a questionnaire. A second level survey was conducted among the same set of participants by collecting their responses in five point Likert Scale. Exploratory Factor Analysis was conducted using the LinkedIn Survey responses to identify the hidden factors associated with the indicator items in the data set. Subsequently, a theoretical model was constructed using Structural Equation Modeling principles, depicting the interrelationships between the latent constructs and indicator items constituting a measurement model and a structural model. Four Hypotheses were framed such that Social Media Usage and eWOM communication have significant positive effect on Student Empowerment. Finally, Confirmatory factor analysis was done to prove the hypotheses and to analyze how well the model fits into the theory. The software IBM SPSS, and AMOS 23 were used to perform multivariate statistical analysis on the LinkedIn Survey response items. **Findings:** The exploratory study on LinkedIn Usage Survey responses revealed three latent factors that accounted for 69.462 percent of the total variance. The three key factors explaining the eWOM behavior of students in LinkedIn usage were Expert Opinion Seeking, Networking with Professionals and Notification of Profile Changes. The latent factors and associated relationships were used to frame a theoretical model based on SEM techniques. Based on Confirmatory factor analysis done on this model using the data set revealed that the model supported the hypotheses H1, H2, H3 and H4 and all indicators in the model significantly loaded to their respective factors and the predicting variables had a significant positive effect on the predicted variable. The factor loadings were fair to excellent ranging from .634 to .853 and the test for model fitness showed good fitness result based on value of various fitness indices which were within accepted limits. Based on CFA, the important fitness indices and their values arrived at were: CMIN/df = 2.022, NFI = 0.824, TLI = 0.887, RMSEA = 0.098 and CFI = 0.901.

Improvements/Applications: The accuracy of the predicting ability of the proposed theoretical model can be improved by augmenting this research study and statistical analysis to be extended to a larger target group belonging to different institutions to achieve good model fit as well as for testing the scalability of the model. As a future work, this model can be integrated with online learning systems also with the aim of improving student engagement in the current online learning scenarios.

Keywords: Confirmatory Factor Analysis, eWOM Communication, Exploratory factor Analysis, Multivariate Analysis, Online Social Networking Sites (OSN), Principal Component Analysis, Social Networking Sites, Structural Equation Modeling (SEM), Student Empowerment, Uses and Gratification Theory (U&G)

1. Introduction

In the past decade, there is a steady growth in usage of Online Social Networking Sites by college students and young professionals. It has become an indispensable tool for students and it offers instant connectivity and facilitates networking with friends, relatives, professionals and likeminded persons beyond institutions and geographic boundaries across the world. Already Social Media had proved its utility in helping online consumers to seek out for product and service information posted by other consumers as product reviews and experiences of usage of products for making complex purchase decisions. Users communicate in social media using the channel known as electronic Word of Mouth (eWOM). eWOM communication is very fast and the messages can reach a very large target audience instantly. The scalability and reach of eWOM are its main advantages^{2,4,7,9,21}.

As per research study³² by a global advertising firm in 2012, consumers trust recommendations from friends and family for making purchase decisions. This paper mainly focuses on identifying behavior patterns of Social Media Usage by students, naives and young professionals. This study was conducted by taking cue from e-commerce phenomena and to harness eWOM behavior of students by way of connecting with friends and professional experts. In this process students and novices get empowered in due course of time. This research study aims at identifying the important determinant factors motivating students in the usage of Social Networking Site LinkedIn.

2. Research Purpose

Social Networking Sites are becoming popular among college students in recent times and they offer enormous services to its members in every possible way in meeting their social needs. Students use Social Media to establish connection with their friends, family members and professional specialists for knowledge sharing, opinion seeking and seeking guidance from experts for finding solutions for the problems and challenges they face in their day to day life.

Most of the current research studies on Social Networking Sites mainly deal with e-commerce area helping consumers in taking correct decisions related to online purchasing. There is little research work done to identify the needs of the students and naives who were engaged in Social Networking activities. This research study fulfills this

research gap and add new knowledge in identifying the key determinant factors that explains the eWOM behavior of university students and consequent student empowerment resulting in improvement in their personal efficacy. This is a first approach and contribution on Social Media usage by college students especially meant for bringing practical insights for empowering students towards improving their academic and social skills. A theoretical model on social media usage has been proposed by defining some variables such as seeking opinions, networking and eWOM communication and the model will be able to predict social media activities have positive effect on student empowerment.

2.1 Literature Review

Large number of research studies focus their attention on the importance of Social Networking Sites in recent times. As per research of¹ (2014), Recommender systems are offering help to consumers to narrow down the number of web pages to be viewed as well as reducing information overload while making important online purchasing tasks and enables them to make faster decisions. In⁴ (2012) and in² (2010) highlight that when customers are more socially connected, it results in more intense eWOM marketing that promote consumer-to-consumer communication, helps to reach the target audience faster and establishes more trust in eWOM. In⁵ (2011) highlights that conceptually eWOMs in Social Media Sites involves seeking, giving and passing opinions among the users. In⁶ (2014) emphasizes that eWOM has positive and negative implications on consumers in making online Purchasing Decisions. In¹⁵ (2013) have made comprehensive review of the state of art research related to User Behavior in Online Social Networks (OSNs) from several perspectives covering Social Connectivity and Interactions. According to the authors, Online Social Networks with a very large user base serves as a conducive climate for innovation amidst challenging problems to be solved. A large number of research studies have been done on specific Social Media Sites like LinkedIn, Twitter, Facebook etc with the perspective of Uses and gratification Theory^{13,14,16,33}. According to⁸, recommender systems play vital role in online social environments where user comments, discussions and reviews guide the consumers in knowing the quality, appeal and reputation of a particular resource.

2.2 Online Social Networking

Social Networking Sites are offering unprecedented connectivity and instant access among online users and provides

enormous opportunities to interact with a larger audience across the globe transcending geographical boundaries for sharing information and gaining knowledge.

The interactions that can happen in Social Networks can be better visualized using a Social graph as depicted in Figure 1. A Social graph consists of a set of vertices and edges. An user is represented as a node and when he or she is communicating, the edge between the user nodes represent the communication link. Social Networking Analysis is an emerging field in Big Data Analytics and it enables us to understand how people communicate and cooperate in Social Media¹¹.

The most popular Social Networking Site is Facebook which was launched in the year 2004 and its membership have already crossed 1 billion. Another prominent Social networking service is LinkedIn which was launched in the year 2003 and has 364 million registered users as on March, 2015. LinkedIn is mainly used by professionals for sharing their profiles showing their latest positions, skills and expertise etc. which will invite similar type of users to get connected. LinkedIn users certify the skill sets of other members and it helps to improve the reputation and social value of professionals (Figure 2). It benefits the recruiters to identify a more suitable person matching specific skill set and experience resulting in the members getting job offers from reputed companies. Provision for Profile updates and Notifications of profile change serve as stimulus for initiating eWOM communication among the contacts.

2.3 Student Empowerment.

The main goal of this research study is to empirically prove the proposed hypothesis that the eWOM behavior of students will have a strong influence on improving

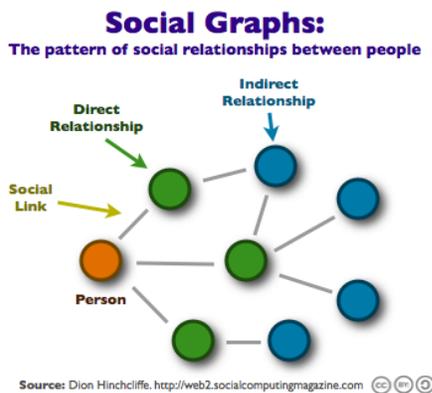


Figure 1. A Social graph.

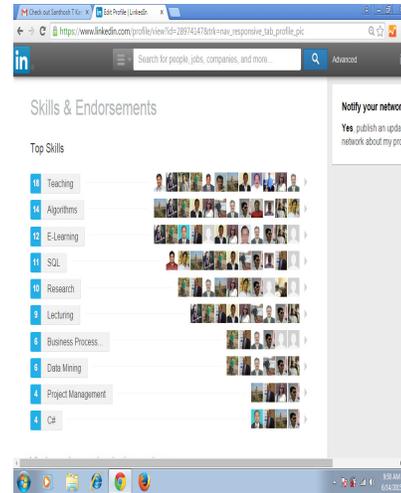


Figure 2. Skills and endorsements.

Student empowerment. Empowerment is a psychological construct and research studies^{39,40}, define empowerment as a most desirable motivating factor and it is deemed as an enabler in heightening motivation for achieving personal goals and has a strong role in improving self efficacy in a person which is needed for accomplishing tasks.

2.4 Student Engagement and Learning

In today’s world, there is shift in the teaching and learning paradigm and the responsibility of learning has been shifted to the learner. The following section highlight how the responsibility of learning in the current learning scenarios are entrusted to the learner and how the learner copes with his or her learning by adopting self regulated learning strategies. The faculties role has also been changed as the facilitator of learning. In order to face the challenges with this new situation students opt for online courses and engage themselves in using social network sites to cater to their various academic and social needs.

2.4.1 Self Direction Strategies

The current online learning scenarios are characterized by lack of direct face-to-face interactions and the students have to rely on alternate means to seek help from faculties and mentors. The students need self direction abilities and¹⁷ advocates many self regulating strategies to be followed by students for their academic achievement and success. The responsibility of learning now lies with students and they look for learning resources and seek guidance on their various academic needs from different sources²⁰. The social networking sites help them to achieve

their goals and satisfying needs for finding answers to such problems. There are plethora of information posted in various online websites such as blogs, User profiles in Online Social Networking Sites etc. which will be of great help to students to explore further to gain knowledge in specific domains.

However, in real situations it is very difficult to bring into practice of self regulation for students. Social Networking Sites and eWOM communications can help to get connected with their friends, faculties and experienced professionals and seek guidance and help. In¹² (2013), emphasize the importance of high quality Social relationship for student engagement and achievement.

2.4.2 Role of Social Networking in Student empowerment

Figure 3 shows the Venn diagram for the proposed model of student interaction in a Social Networking Site.

Some of the useful activities that can happen while using Social Media by students are:

- Posing questions and getting answers.
- Asking for expert opinion.
- Adding or updating a profile.

Online Social Networking sites are used by students to get connected with their friends, faculties and professional experts and various collaborative activities are happening among the contacts like sharing information and asking for expert help and guidance on grey areas etc. As can be inferred from the diagram that students are empowered by engaged in various activities in social networking sites.

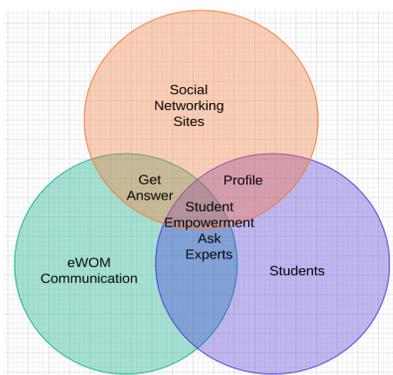


Figure 3. Student interactions in a social networking site.

2.5 Electronic Word of Mouth

This section highlights the importance of the concepts WOM and eWOM which form the basis for communication across Social Networking Sites.

While making purchase decisions on products, a customer get opinions from existing consumers regarding the details like quality, usability, and durability etc of a product. This kind of sharing opinions directly among people is known as Word of Mouth Communication. Usually people trust friends and family members in this aspect. Many consumers usually post information about the product they have purchased in Social Media by way of Product Reviews and it facilitates motivation for other consumers to make purchasing decisions based on the recommendations of other consumers. This kind of communication taking place among consumers is known as electronic Word of Mouth Communication. As Figure 4 shows, WOM communication happens directly in a face to face manner between sender and receiver. However, in e-WOM the communication is asynchronous and it has many advantages like permanence of the opinion and faster diffusion and reach^{31,38}.

2.6 Advances in Online Social networking

This section highlights some important research work done by many researchers on innovations and evolutions taking place in Social Media usage in the contemporary setups. Here the users can be novices, faculties, professionals, software developers and experts in a domain. Some of the recent terminologies, concepts and theories used in the current literature that are relevant to this paper is also highlighted in this section.

In²⁹ (2011) have defined a framework for social media which comprises six key elements starting with a profile which identifies a person. The other elements are experiences and skill sets highlighting one's reputation, Interactions taking place showing one's activities, Knowledge sharing, online visibility, contacts and relationships and group interactions.

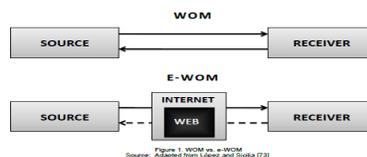


Figure 4. WOM vs. eWOM.

In²² (2015) have made an extensive study on usefulness of Yahoo! Answers, a social networking site where the users post questions and get answers. Here the collective intelligence of users helps in finding answers to questions which forms a most effective QA system. As per research studies by²³ (2015), Socially Aware Networking (SAN) is emerging new field that utilizes social properties of network nodes for designing network solutions.

An important aspect in social network analysis is community detection²⁴. Communities are characterized by nodes having strong connectivity within a group and weak connectivity across groups. The main usage of communities in networks is characterized by faster diffusion of messages posted by firms regarding their new products etc to a larger audience instantly. In spite of large online presence of Social Media, driving consumers to access the media in various ways for gratification of needs of consumers, still there are many challenges and issues that have to be addressed. According to many research studies, Uses and Gratification Theory^{25,26} is a powerful technique to address these problems.

According to²⁷ (2015), advancements in information and communication technologies have triggered the advent of Social Networking Sites such as Facebook, LinkedIn etc attracting an ever increasing user base across the globe transcending the geographical boundaries. They facilitate users get connected and interact with numerous contacts and satisfying their personal, professional, educational needs irrespective differences of gender, age etc.

In³⁰ (2015) have made an extensive study on user behavior on the most popular OSN, Facebook for the 5 years period starting from the year 2009. According to them, Online Social Networking fascinates millions of users and promotes socialization among the contacts and helps reputation building.

In³⁵ (2015), defined a Framework for social media usage of popular sites such as Facebook, LinkedIn or Twitter for Dutch Online Users. According to them this kind of networking with people helps users increase their Social Capital. LinkedIn, for example, is considered as helping users to be more productive and successful as it provides connectivity to people, helps recruiters selecting people for companies. In³⁶ (2013) have made a study on how social media helps job recruiters by tracing the interactions of software developers in online work spaces. For example, a study was made on GitHub, an Online Coding community to understand how recruiters assess their candidates by going through their profiles

by matching their skill sets with the job requirement for hiring Software Developers. In³⁴ (2014) have made a study on Social Media usage by Software Engineering professionals. According to them, Social media has become an indispensable tool providing capabilities like Collaboration and communication among teams, learning by experience etc. The amount knowledge transfer in face-to-face contact have limitations in scale and reach. However in recent times, the knowledge diffusion through social networks are very high in terms of speed, scale and reach. In³⁷ observed that social media brings to its users team work and collaboration in sharing one's creations with others as well as mentoring novices by experienced persons.

3. Research Method

A preliminary Survey to collect important aspect of Social Media usage by young university students especially LinkedIn was chosen as an example for Social Networking Site. Qualitative and Quantitative research methods were adopted for analysis of Survey responses. First Exploratory Factor Analysis was conducted on Survey responses to identify hidden latent factors contributing to eWOM behavior of students in Social Media Usage. Next a Theoretical Model was constructed based on Structural Equation Modeling (SEM) Principles by defining a Measurement model consisting of indicator variables and Latent constructs and a Structural Model consisting latent constructs with interrelationships. Four Hypotheses were framed specifying the impact of one variable's effect on other. Finally, Confirmatory Factor Analysis was resorted for model validation and to establish the goodness of fit of the theoretical model.

3.1 Theoretical Framework

A theoretical model has been constructed that explains how students and young professionals use social networking sites and the role of eWOM communications in promoting student empowerment in terms of acquiring knowledge and skills necessary to improve academic standings and social values. By enrolling and establishing contacts in Social Networking Sites, eWOM communication opens a plethora of activities like communicating with their friends, families, relatives and peers and professional experts. The Figure 5 shows the theoretical model

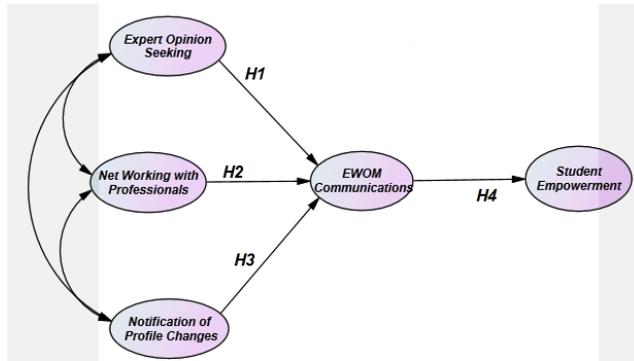


Figure 5. Theoretical model.

depicting the five latent constructs and their relationships. The latent constructs or factors are Expert opinion seeking, Networking with professionals, Notification of profile changes, eWOM communications and Student Empowerment.

3.2 Hypotheses

Based on the theoretical model, the following hypotheses were framed and this study aims to test and prove their validities using exploratory and confirmatory approaches as explained in the following sections:

- H1 : Seeking expert opinion has a positive impact on eWOM Communication.
- H2 : Networking with professional has a positive impact on eWOM Communication.
- H3 : Notifications and profile changes has a positive impact on eWOM Communication.
- H4 : eWOM communication has significant positive impact on student empowerment.

3.3 The Scope of the Study

This research work was undertaken in two Phases. In the first Phase, Exploratory study was made on LinkedIn usage Survey response items. Principal Component Analysis was performed on the response items in order to identify hidden constructs that explain the eWOM behavior of students which is a qualitative phenomena. Next, a Theoretical Model consisting of a Measurement Model and a Structural Model was constructed using the latent constructs and the measurement variables and four hypotheses were proposed. In the second Phase of the study, Confirmatory study Factor Analysis was done to prove that the Theoretical Model fits well with the Data Set consisting of user response items.

3.3.1 Preliminary Survey

A preliminary Survey was conducted from a group of University students to collect information on LinkedIn Usage. Based on the responses received 27 Indicator Items were finalized to prepare Survey Items for the main LinkedIn Usage Survey. The main Survey will be undertaken with a group of students to get answers in 5 point Likert Scale which indicates the level of importance given by each respondent to each variable. Explorative factor analysis will be conducted on the collected data in order to identify major factors which correlates with the 27 variables identified in the preliminary Survey.

3.3.2 LinkedIn Usage Survey

LinkedIn Usage Survey was conducted to identify and understand the hidden factors that are perceived as important by the respondents regarding the usage of Social Networking Sites. This survey presents the 27 indicator items as questionnaire by using a Five-point Likert Scale which ranges from 1 (Strongly disagree) to 5 (Strongly agree) to a group of University students asking for responses. A factor analysis of LinkedIn Usage survey responses is planned to aggregate related variables into factors.

3.3.3 Exploratory factor Analysis

Principal Component Analysis (PCA) was done on the input data set. PCA applies a variable reduction method and this technique is powerful when variables are highly correlated. This method reduces the number of observed variables to a smaller number of principal components which account for most of the variance of the observed variables. Eigen values are used to indicate the amount of variance explained by each component.

We select the principal components by retaining components with Eigen values greater than one. That is, we retain components accounting for maximal variance and component with trivial amount of variance are discarded.

3.4 Confirmatory Factor Analysis

In final phase of the study, Confirmatory Factor Analysis (CFA) was performed using the Data Set consisting of LinkedIn Survey response items. CFA is a statistical technique used to estimate the measurement model. CFA is used to test the proposed hypotheses. We need to prove that

a relationship exists between indicator variables and their underlying latent constructs. CFA is used to confirm if the number of factors and loadings of the indicator variables on them conform to what is expected on the basis of theory.

4. Results and Discussions

4.1 LinkedIn Survey Data Analysis

Principal Component Analysis with Varimax rotation and Kaiser Normalization have been performed using the data set which are the responses received from 97 respondents who indicated their level of importance to each of 27 items as shown in Table 13. IBM SPSS version 19^{18,19} was used for PCA and the results are tabulated in Table 1 through Table 7.

4.2 Findings of Principal Component Analysis

Out of 97 responses received in LinkedIn Usage, only 93 cases were valid and 4 cases were treated as invalid as shown in Table 1.

The Table 2 shows results of KMO sampling adequacy test.

SPSS returned Kaiser-Meyer-Olkin Measure of Sampling Adequacy of 0.927 which indicates that we could proceed with Principal Component Analysis (PCA) that is used to identify the key latent factors or components. Table 3 show the SPSS output on Explanation on total variance observed in responses to LinkedIn Usage Survey. It was found that three components account for 69.462 percent of variances.

The main PCA results are arrived at by extracting Eigen values that are greater than or equal to 1.00 with respect to the 27 variables used. Orthogonal rotation of the variables yielded 3 factors, accounting for 23.0397, 23.976 and 20.088 percent of variances respectively to a total of 69.462 percent. Table 4 shows the explanation for total variance after rotation.

To enhance interoperability of factors only with factor loadings greater than 0.57 (for Factor 1), greater than

Table 1. Case processing summary

| Particular | Number of Cases N | Percentage |
|-------------|-------------------|------------|
| Cases Valid | 93 | 95.9 |
| Excluded | 4 | 4.1 |
| Total | 97 | 100.0 |

Table 2. KMO and Bartlett's test

| Kaiser-Meyer-Olkin Measure of Sampling Adequacy : 0.927 | | |
|---|--------------------|----------|
| Bartlett's Test of Sphericity | Approx. Chi-Square | 2357.325 |
| | df | 351 |
| | Sig. | .000 |

Table 3. Total variance explained

| Component | Initial Eigen values | | |
|-----------|----------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % |
| 1 | 15.916 | 58.946 | 58.946 |
| 2 | 1.677 | 6.212 | 65.158 |
| 3 | 1.162 | 4.303 | 69.462 |

Table 4. Total variance explained after rotation

| Component | Rotation Sums of Squared Loadings | | |
|-----------|-----------------------------------|---------------|--------------|
| | Total | % of Variance | Cumulative % |
| 1 | 6.857 | 25.397 | 25.397 |
| 2 | 6.474 | 23.976 | 49.374 |
| 3 | 5.424 | 20.088 | 69.462 |

0.69 (for Factor 2) and greater than 0.57 (for Factor 3) were selected for inclusion in their respective factors as shown in Table 5. Table 5 shows how the related variables are grouped together into factors that are significant for the study.

Table 6 shows the Reliability Statistics on Principal Component Analysis conducted and the Chronbach's Alpha = 0.975, which indicates high level of internal consistency.

A total of three factors with Eigen values greater than one were derived and these factors explained 69.462% of the total variance. Figure 6 shows a plot of Eigen values (Scree Plot) in descending order for each component.

Scree plot clearly indicated which factor accounts for the lot of variance. Factors above the bend in the elbow of the plot are worthy of inclusion and those below are relatively unimportant.

Factors derived from PCA were labeled into meaningful categories as shown in the Table 7. This table shows the important factors that are significant and explains how the users are engaged in Social Networking Sites.

The identification and naming of these three latent factors helps us to construct a Theoretical Model using these latent constructs as well as proposing certain hypotheses.

Table 5. Selection of principal components

| Component-1 | | Cut off 0.57 |
|-------------|---|--------------|
| 1 | Faculty's motivation | 0.825 |
| 6 | Project Identification | 0.769 |
| 12 | Assistance for acquisition higher degree | 0.726 |
| 11 | Group Discussion on Jobs | 0.717 |
| 17 | Reach companies and get jobs | 0.632 |
| 3 | Network Student, faculty, and Professionals | 0.624 |
| 19 | Expert Opinion seeking | 0.572 |
| Component-2 | | Cut off 0.69 |
| 22 | Watching Career advancement of Contacts | 0.827 |
| 27 | Notifications are useful | 0.817 |
| 23 | Connecting with foreign contacts | 0.789 |
| 26 | Aquaint with important skill sets | 0.697 |
| Component-3 | | Cut off 0.57 |
| 13 | View Profile of others | 0.775 |
| 5 | Easy Contact with Professionals | 0.742 |
| 1 | Getting connected with contacts | 0.704 |
| 14 | Networking with contacts | 0.572 |

Table 6. Reliability statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|------------------|--|------------|
| .972 | .973 | 27 |

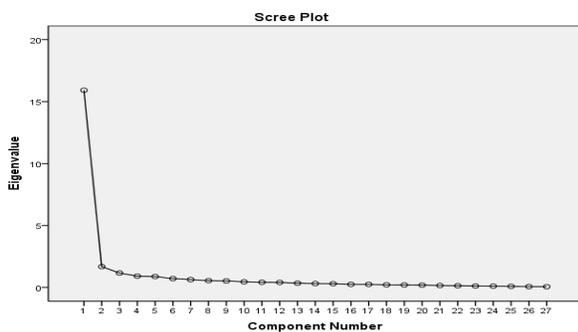


Figure 6. Scree plot.

A confirmatory factor analysis will establish the goodness of fit for the proposed model. If goodness of fit would be established, the model will be able to predict that a

Table 7. Naming the factors

| Factor Number | Items |
|---------------|---|
| Factor 1 | Faculty Interaction and Expert Opinion Seeking |
| Factor 2 | Notification of Profile Changes and skill set endorsement |
| Factor 3 | Networking with people and viewing other user profiles |

positive eWOM behavior may result in significant effect on Student Empowerment while using Social Networking Sites.

4.3 Data Analysis using CFA

Exploratory Factor Analysis identified latent factors explaining the eWOM behavior of students on LinkedIn Usage. However, in order to firmly establish the relationships between the latent constructs and to bring into practical use of these study results, we need to construct a Theoretical model comprising of a measurement model and a structural model. Confirmatory factor analysis has to be done to empirically test how well the model fits into Dataset.

Data analysis is done as per recommendations from (1988)⁴¹. Multivariate Data Analysis has been done using Structural Equation Modeling principles to analyze all the paths in the model simultaneously for examining casual relationships and to establish the goodness of fit of the model. AMOS⁴² software has been used to construct the Five Factor Model constituting a measurement model and a structural model and the software allows to define various relationships between the latent constructs as well as between indicator items and corresponding latent constructs. The graphics output of AMOS software helps to assess the fit of both measurement and structural components of the proposed model.

4.4 Findings of Confirmatory Study

Figure 7 depicts the path diagram showing path coefficients along the significant paths. It also shows the covariances between latent constructs. The high values of path coefficients reveal strong dependency relationship between constructs. Figure 8 shows the results of Confirmatory Factor Analysis in graphical form. Table 10 shows the standardized regression weights or Path Coefficients as reported by AMOS. It can be seen from the Table 10 that all measured variables significantly loaded

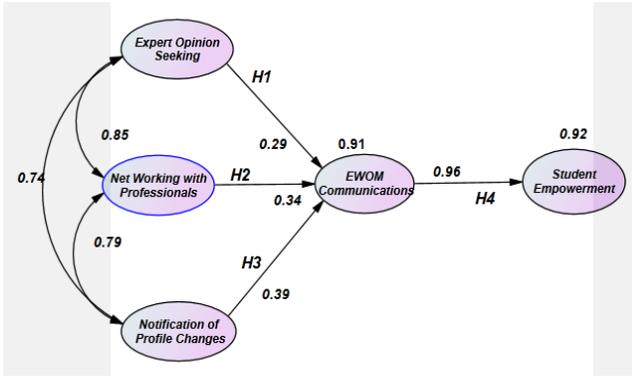


Figure 7. Path diagram.

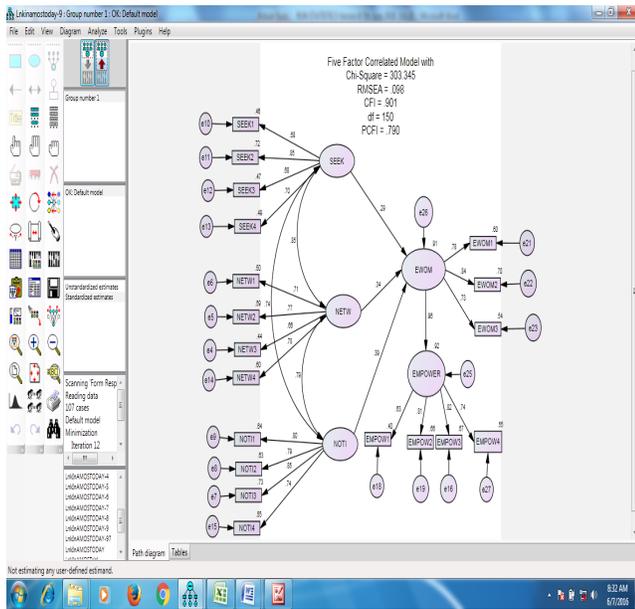


Figure 8. Model fit.

Table 8. Model fit summary

| CMIN | CMIN/DF | NFI | TLI |
|---------|---------|-------|-------|
| 303.345 | 2.022 | 0.824 | 0.887 |
| | CFI | PCFI | RMSEA |
| | 0.901 | 0.79 | 0.098 |

Table 9. Hypotheses testing results

| Hypotheses | Path | Support | Regression Weight |
|------------|-----------------|---------|-------------------|
| H1: | SEEK -> eWOM | Yes | 0.292** |
| H2: | NETW -> eWOM | Yes | 0.344** |
| H3: | NOTI -> eWOM | Yes | 0.395** |
| H4: | eWOM -> EMPOWER | Yes | 0.959** |

**P < 0.001

Table 10. Standardized regression weights

| Latent Construct | Indicator Item | Standardized Regression Weight (Factor Loading) | Squared Multiple correlation |
|------------------|----------------|---|------------------------------|
| Empower | empow1 | 0.634 | 0.402 |
| | empow2 | 0.813 | 0.661 |
| | empow3 | 0.820 | 0.672 |
| | empow4 | 0.744 | 0.553 |
| Ewom | ewom1 | 0.776 | 0.602 |
| | ewom2 | 0.837 | 0.700 |
| | ewom3 | 0.735 | 0.540 |
| Netw | netw1 | 0.709 | 0.503 |
| | netw2 | 0.768 | 0.589 |
| | netw3 | 0.663 | 0.440 |
| | netw4 | 0.776 | 0.602 |
| Noti | noti1 | 0.799 | 0.638 |
| | noti2 | 0.792 | 0.628 |
| | noti3 | 0.853 | 0.727 |
| | noti4 | 0.741 | 0.549 |
| Seek | seek1 | 0.677 | 0.458 |
| | seek2 | 0.846 | 0.716 |
| | seek3 | 0.685 | 0.469 |
| | seek4 | 0.700 | 0.491 |
| Ewom | Empower | 0.959 | 0.915 |
| Empower | | | 0.919 |

on the respective factors. The factor loadings range from 0.634 to 0.853 indicating that the indicator items and the latent factors were interrelated to each other. It is apparent that the results show that each of the 19 measured items load on appropriate factors only.

Figure 8 shows the model constructed using AMOS software graphically. It highlights various fit indices as reported by the software. It can be seen from the results that the parameter estimates (unstandardized) and the critical ratios for all the 19 items were found significant. It can be inferred that the proposed model supported the indicator items and their relationships with corresponding latent constructs.

The nomenclature used in this study as per Figure 8 can be better understood by referring to Table 13 which shows the list of indicator items and their meanings.

Table 8 shows various fit indices as reported by AMOS run. By assessing these indices, it can be inferred that all

fit indices are within the acceptable limits. The important fit indices and their values are as follows:

Chi Square = 303.345, df = 150, p < .001, CMIN/df = 2.022, RMSEA = 0.098, CFI = 0.901, IFI = 0.902, NFI = 0.824, TLI = 0.887. Since the fit indices are within accepted level, the results of Confirmatory Factor Analysis ascertained strong support for reliability and five factor structure of the measurement model. It can be inferred that the 19 indicator items are reliable instruments for measuring the five latent constructs.

The covariance and correlation between the latent constructs are shown in Table 11 and Table 12.

4.5 Hypotheses Testing Results

The SEM results revealed that all the three exogenous constructs (Seek, Netw and Noti) were found statistically significant determinants of the two endogenous constructs (eWOM and Empower) as indicated in the Figure 5 which is the Theoretical Model.

Figure 7 shows the path diagram which shows the test results and it is the visual representation of the model with the complete set of relationships among the latent constructs. The dependence relations are depicted by straight arrows, with the arrows emanating from the predictor variable and pointing to the dependent construct. Curved arrows represent the correlations between constructs.

The Table 9 shows the results of the hypotheses tests as reported by AMOS which includes the regressions weights of each of the significant paths. All these regression weights range from fair to large (0.292** to .959**).

Table 11. Covariances between latent constructs

| Relationship | | | Estimate | S.E. | C.R. | P |
|--------------|------|------|----------|------|-------|-----|
| seek | <--> | netw | .320 | .046 | 6.968 | *** |
| netw | <--> | noti | .367 | .074 | 4.981 | *** |
| seek | <--> | noti | .320 | .046 | 6.968 | *** |

Table 12. Correlations between latent constructs

| Relationship | | | Estimate |
|--------------|------|------|----------|
| seek | <--> | netw | .848 |
| netw | <--> | noti | .791 |
| seek | <--> | noti | .739 |

Table 13. Indicator items

| Variable | Item |
|----------|--|
| empow1 | Helping to find jobs |
| empow2 | Endorsement enhances morale |
| empow3 | Communicating enhances confidence contacts |
| empow4 | Setting and achieving goals |
| ewom1 | Discussion in groups |
| ewom2 | Job related Opinion seeking |
| ewom3 | Information and knowledge sharing |
| netw1 | Getting connected with people |
| netw2 | Network with professionals |
| netw3 | View other's profiles |
| netw4 | Network with contacts |
| Noti1 | Watch career progress of contacts |
| Noti2 | connecting with foreign contacts |
| Noti3 | Getting acquainted with important skill sets |
| noti4 | Notifications are important |
| seek1 | Networks with peers, faculties , and professionals |
| seek2 | Seeking expert guidance |
| seek3 | Help in selection of project |
| seek4 | Getting motivation from teachers |

The three independent constructs Seek, Netw and Noti were found statistically significant determinants of the two dependent constructs eWOM and Empower.

5. Discussion on Results

This study identified the important Determinant Factors that can influence eWOM behavior of university students in Social Media usage. The results of the study revealed that Expert Opinion Seeking, Networking with professionals and Notification of Profile Changes had significant positive effect on eWOM Communication that engages the students in Social Networking Sites with positive outcomes like enhancing their personal efficacy, add Academic and social values. eWOM communication in turn had a positive effect on student empowerment. Student empowerment is an enabling process which is characterized by heightened motivation for accomplishing tasks through a strong sense of improvement in self efficacy in a person.

The relationship between latent constructs and observed variables are depicted in Figure 8 graphically.

The rectangles represent indicator items and the ellipses represent the latent constructs.

By referring to Table 10 and Figure 8, it can be inferred that the factor loadings for each latent construct was high and it reflects that there is a good model fit. Also the proposed model reflects reality and fits well into theoretical predictions as indicated by the fitness indices.

6. Conclusion and Future Work

There was a Gap in Research on how students use LinkedIn, a Social Networking Site. Also there was gap in research and lack of understanding on factors loading to eWOM. This research study is a first contribution for finding a methodological solution in this aspect. In this study, contributions are made on identifying important factors influencing eWOM communication of college students and young professionals while using Social Media.

This paper highlighted the how social networking sites are used by students for communicating with peers, faculties and other professions to enhance their social values and to fulfill their social and academic needs.

Principal component analysis of the LinkedIn Usage responses had identified three important latent factors on Social Media usage by students. These factors were Expert Opinion seeking, Notification of Profile changes and Networking with Professionals. A theoretical model was proposed highlighting the relationship among five latent constructs consisting of exogenous and endogenous constructs. Confirmatory factor analysis conducted on Survey responses revealed that an excellent model fit was achieved as per the fitness indices reported by SEM analysis done using software AMOS. Ultimately the model helped to predict enhancement of student empowerment by using Social Media. The determinant factors on student empowerment and the role of eWOM communication and Social Media usage was empirically tested and validated.

Future work involves testing for scalability by performing experiments on a larger target group. Also this research method can be extended to students belonging to different universities in different countries.

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