

## **SOCIAL MEDIA MARKETING AND ITS IMPACT ON HIGHER EDUCATION STUDENTS: RELIABILITY AND VALIDITY ANALYSIS**

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### **Abstract**

The present study aims to discover the relationships between significant Social Media Marketing (SMM) characteristics and their impacts on students of higher education in selected districts of Haryana. The investigation was based on a research methodology using quantitative analysis with suitable statistical methods on random survey of 684 students of various higher education institutions. Exploratory and confirmatory factor analysis are applied to evaluate the observed validity of the model in on all the 50 variables and five factors which are capability, user friendly, implication, success and hindrance factors. Data from 684 respondents were gathered for using a Google form, and first order CFA was applied for analysis the data. According to the findings, five components account for 72.41% of the variation and have Eigen values larger than 1. The results of this study will be helpful to the higher education institution, social media marketers and policymakers in developing the various policies and researchers for further investigation in future studies.

**Keywords:** Social Media Marketing (SMM), First Order CFA, Higher Education, Implications, Capabilities, User Friendly, Success, Hindrance Factors, Reliability and Validity

### **INTRODUCTION**

In the current digital age, the emergence of social media platforms based on the Internet has made it possible for people to interact with huge worldwide audience. In high society of online conversation, these platforms have accelerated information generation, sharing, bookmarking, and networking. Roberts & Kraynak (2008) stated that customers and active online communities have given opportunities to users to present themselves and their products. Technically speaking, social media refers to a number of programmes that enable operators to post, tag, and blog. Xiang & Gretzel (2010) explained that social media platforms are a freshly developed source for online knowledge, shared, and used by consumers who want to educate one another about services, topics, and companies. social media networks accessible to students today are Google+, MySpace, Digg, Twitter, and Facebook. Due to their accessibility, quickness, and wide reach, these platforms have the power to shape trends in a variety of industries, including politics, technology, environment, and entertainment industry. People actively distribute material on social media, which acts as a vehicle for self-promotion. Xiang and Gretzel (2010) found that social media is also a sought-after tool for businesses to market and sell their products and services due to its viral nature. SMM usage has significantly increased over time. The benefits of using social media into their consumer outreach plans and

campaigns are being recognised by marketers. Tanuri (2010) stated that social platforms are being used for integrated marketing communication, customer engagement, and business analytics in various retailing areas. Understanding the relative importance of each social media platform and how it connects to marketing results is crucial. On these outcomes, various social media platforms, such as “blogs, “online forums, and “online communities have different effects (Stephen & Galak 2009). By browsing online websites, while in front of a computer, students may quickly acquire the information they require. Both students and marketers may be benefitted greatly from social media marketing, but there are also certain negatives for each group. Users are exposed to a variety of hazards and cybercrimes due to the easy access of information and lack of stringent control and regulation.

### **Social Media Marketing**

The term "social media marketing" refers to a variety of strategies. For instance, under the conventional Facebook model, the idea of a genuine "friend" on the site might be replaced by a brand, tangible item, or content (Facebook, 2011). Social media marketing helps the businesses to interact quickly with their target markets. It falls under the category of online marketing initiatives and entails using SM to promote a company and its products. Barefoot & Szabo (2010) found that various internet-based marketing techniques like newsletters, email and online sponsored campaigns. By bringing the ideas of exponential distribution and trust, social media marketing has revolutionised mass communication and mass marketing. Users are encouraged to forward messages to their friends and family, expanding the reach and effect of marketing campaigns (Hafele, 2011). Businesses gain from innovative marketing, outreach techniques and provide them access to more resources. The creation of analytical tools by official social network platforms has substantially increased the efficacy of social media marketing. With the use of various techniques, organisations may better comprehend and maximise their use of social media (Hafele, 2011) There are different Social Media platforms. with special characteristics and functionalities. Facebook is unquestionably the well-known social networking site among these. It was introduced by Facebook, Inc. in February 2004 and immediately became well-known. Facebook reported over 900 million active members as of May 2012. Users must register in order to utilise the features of the platform. They may make their own profiles, add friends, send and receive messages, and sign up for automated notifications to learn about the updates from other users after registering (Facebook, 2012). Users may also join user groups based on shared interests, and they can categorise their contacts as "People from Work" or "Close Friends." The main goals of Facebook are to promote global connectedness and exchange of knowledge. Other social networking platforms like “Twitter, “Google Plus, and “LinkedIn” function on similar principals, however there may be a few minor differences. A user is effectively promoting a company or product to their network of contacts when they choose to "like" it on social media. Other social media channels are also covered by this idea. For instance, Twitter is said to as a blend of social networking and microblogging (Bernie Borges, 2009). Users may follow their favourite companies and manufacturers on Twitter to get brief updates and promotions (Hafele, 2011). Each tweet on Twitter is normally restricted to 140 characters, and users can share anything in real time with their followers (Borges, 2009). Although Facebook and Twitter are two of the most well-known

and widely utilised social networking sites, there are many more as well. Kaplan and Haenlein (2010) classified a number of channels as social media, each with special benefits and opportunities for marketing. Although Twitter and Facebook now are the main branches, there are many more social media networks that are readily available today. Kaplan and Haenlein (2010) referenced by Nick Hafele (2011) claimed that there are a number of social networking websites, each and every offer distinct chances and returns for marketing reasons. Wikis and other editable data sources are notable examples of collaborative projects in this regard. Emerging trends suggest that these platforms are playing a bigger role as consumers' principal information sources (Kaplan & Haenlein, 2010; Hafele, 2011). Another popular marketing tool is blogs, which are run by both people and companies. By revealing insider information, advertising new items, and including connections to their primary sales channels, businesses use blogs to increase brand recognition. Readers of these blogs receive regular updates on noteworthy occasions and fresh campaigns run by the organisation. Additionally, blogs make it effortless to post remarks and criticism, allowing both supporters and detractors for posing queries and sharing thoughts. This encourages direct and honest contact between companies and their customers, which results in improvements and makes it easier for peers to share ideas. (Hafele, 2011). It is essential to take into account a variety of social media platforms to maximise the chance of success in social media marketing. There is no one-size-fits-all, social media service in the views of Ray et al. (2011), referenced by "Nick Hafele" (2011). They emphasise how important it is to vary the strategy to guarantee that communications properly reach the right target group. Better outcomes and engagement from social media marketing initiatives may be attained with a comprehensive and adaptable plan.

## REVIEW OF LITERATURE

**Whiting & Williams (2013)** examined the benefits and uses of social media to users. A preliminary examination was carried out with 25 in-depth interviews with social media users. Social interaction, leisure, communicative utility, information seeking, information sharing, amusement, relaxation, expression of opinion, convenience utility, and knowledge are the 10 gratifications identified as the benefits and applications of social media.

**Balakrishnan, Dahnil & Yi (2014)** investigated how social media marketing affects Generation Y consumers' brand loyalty and purchasing intentions of undergraduate students enrolled in Malaysian institutions. The findings showed that "electronic word-of-mouth" (EWOM), "online communities, and "online advertising on business websites, ,social media platforms are all effective ways to increase brand loyalty and product purchase intent.

**Hossain & Sakib (2016)** investigated how SMM traits affect brand loyalty among college students. The information obtained were examined using a multivariate regression analysis technique. According to the study's findings, university students' brand loyalty is significantly influenced by how relevant social media marketing material is to the brand. Furthermore, students' brand loyalty is positively impacted by meaningful and well-received SMM material.

**Zulqurnain, Shabbir, Rauf & Hussain (2016)** examined outcomes of both door-to-door marketing and social media promotion marketing to know how social media marketing affects

customers' views and choices. The investigation's findings supported that SMM does affect consumers' perceptions. The ANOVA results also confirmed findings, showing a substantial positive association between SMM and customer perception.

**Cook, Lynes & Fries (2021)** tried to comprehend how social marketing experts view errors and failures in the industry. This study used a constructivist and grounded theory method, and is qualitative and exploratory in nature. The users of social media feels that too little research, wrong strategy creation, and poor stakeholders management are the main typical errors made by organisation.

**Reyna González, Flores-Rivas & Merino Flores (2021)** investigated how SMM affected college students. The results showed a low degree of MMS (Missing Messaging Syndrome), highlighting the necessity of bolstering messaging and real-time communication to quickly notify students and allay their worries.

**Aguilar, Ongon, Samulde, Cleofe, Gerpacio & Melo (2022)** investigated the impact of SMM on the brand performance of small internet enterprises run by the students. The findings showed that SMM had a big impact on this small internet firms' brand success. Factors including entertainment, engagement, trendiness, promotion, and personalisation hardly impacted brand recognition and loyalty.

**Pathak & Hakhu (2022)** examined the effects of elements that contribute to the success and failure of the digital marketing model on the purchasing habits of medical doctor in Haryana. The results show a substantial association that acts as important determinant for the achievement of the online model, with a correlation between online model and buying behaviour of medical doctor. For more effective results, marketers must evaluate hindrance factors carefully to make sure they are in line with success factors.

**Farajnezhad, Bodaghi Khajeh Noubar & Fakhimi Azar (2022)** presented a structural model of deliberate client behaviour towards accepting social media marketing. The study employed a mixed (quantitative-qualitative) approach. Data were analyzed using structural equation modeling (SEM and focused that, "attitudes towards behaviour", "perceived ease", "comparative advantage", "flexibility", "mental norms", "perceived behavioural control", and "trust" are the important factors.

**Gupta & Singh (2023)** aims to make clear whether the digital marketing strategy is effective for software IT experts. It offers a model of the purchasing practices used in the digital age and lists the six important aspects that were taken into account when creating the model. The findings demonstrated that the predictors are appropriate for the model.

**Nasaruddin, Wonua & Ismanto (2023)** aims to investigate the influence of SMM and online customer reviews on the purchasing decisions of University of Nineteen November Kolaka students regarding Scarlett Whitening products. The findings of the study revealed that the social media marketing variable has a positive and significant influence on the purchasing decisions of University of Nineteen November Kolaka students regarding Scarlett Whitening products.

## **OBJECTIVE OF STUDY**

The present study aims to analyze the relationship between critical factors of social media marketing and its impact on higher education students in the selected districts of Haryana.

## **RESEARCH METHODOLOGY**

### **Research design**

The author used two different methodological frameworks. First, an exploratory study approach that adheres to the principles of random parameter models to pinpoint the components of social media marketing. It is predicated on the initial supposition that the model's parameters are random variables that differ amongst people in accordance with a certain distribution. The causal research design constitutes the second methodological approach used in this work. This method's primary goal is to define the underlying model by describing the link between the detected variables. With the dual goals of producing behaviourally unique parts within the overall pattern and controlling for data heterogeneity, multiple regression was used to build the general model of mixtures. With the exception that the latent variables, observable variables, measurement errors, and consequently the parameters to be estimated, are segment-specific. This general model is the same as for the scenario in which the parameters are invariant between the groups. The number of segments and parameter vectors, which may change freely across segments, are chosen in light of the information already known about the problem being studied as well as the degree of agreement between the models and the data.

### **Population and Sample Profile**

The students of higher education system in Haryana made up the study's target group. Using the sampling approach, a sample of 900 social media users was chosen based on statistics on social media adoption. The information was gathered through the use of a Computer-Assisted Web Interviewing (CAWI) approach and an author-designed online questionnaire. 684 valid responses were formed by the data gathering and database screening procedure. The interviewees were 22 years old, on an average. Overall, 52% of the population is male, and 48% are female. On the other hand, approximately 63% of the students are from commerce/management stream and 30% of the respondents are from science stream.

### **Analysis of Data**

Confirmatory factor analysis is used to assess the extent to which observed variables (indicators) align with the expected underlying constructs (factors). It serves as a tool to examine and refine theories by evaluating the goodness-of-fit between the projected model and the actual data.

### **First Order Confirmatory Factor Analysis**

In a first-order CFA, each observed indicator is associated with one latent construct, and the factor loading represent the strength and direction of the association between the indicator and the latent construct. The latent construct is not influenced by any other latent variable in the model. In CFA (First Order) analysis, the researcher needs to pre-specify the number of factors



to be considered. These factors may or may not be correlated with each other. In the present study, CFA (First Order) was conducted to confirm the dimensions proposed in the research which include capabilities, implications, user-friendliness, success factors, and hindering the growth.

Figure 1 illustrates the use of the pooled CFA method in which all the variables, namely social media marketing and its impact on higher education students: Reliability and Validity analysis

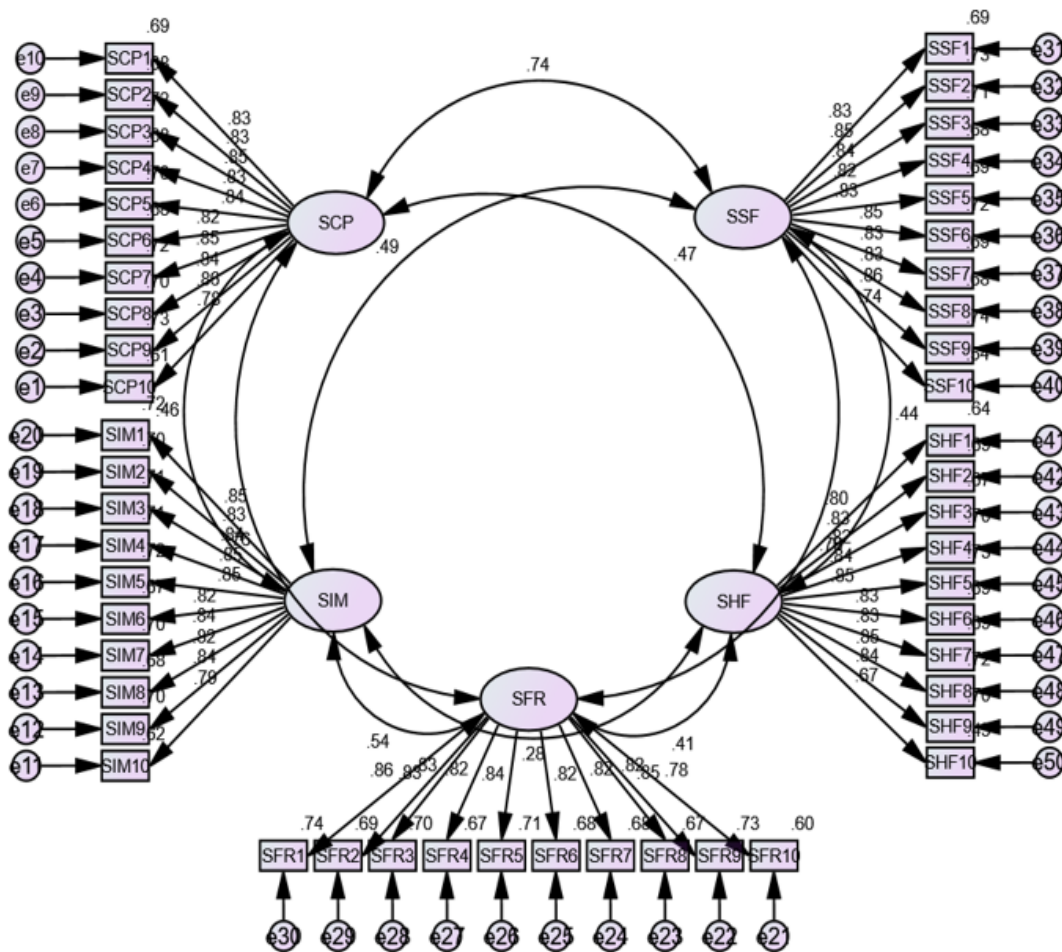


Figure 1: First Order CFA Measurement Model

The factor loading values of items are presented in Figure 1 along with their respective latent constructs in. All the reported values are higher than the minimum acceptable value of 0.5, and they are statistically significant at 0.001 level as per the criteria established by Hair et al. (2006).

**Table 1: Reliability and Validity values**

Construct	Items	Factor Loadings	CR (Above 0.7)	AVE (Above 0.5)
Capabilities	“SCP1”	0.828	0.957	0.691
	“SCP2”	0.825		
	“SCP3”	0.846		
	“SCP4”	0.826		
	“SCP5”	0.838		
	“SCP6”	0.823		
	“SCP7”	0.847		
	“SCP8”	0.838		
	“SCP9”	0.855		
	“SCP10”	0.781		
Implications	“SIM1”	0.847	0.958	0.694
	“SIM2”	0.835		
	“SIM3”	0.844		
	“SIM4”	0.845		
	“SIM5”	0.849		
	“SIM6”	0.818		
	“SIM7”	0.835		
	“SIM8”	0.825		
	“SIM9”	0.839		
	“SIM10”	0.789		
User Friendly	“SFR1”	0.863	0.956	0.687
	“SFR2”	0.828		
	“SFR3”	0.834		
	“SFR4”	0.821		
	“SFR5”	0.844		
	“SFR6”	0.824		
	“SFR7”	0.823		
	“SFR8”	0.818		
	“SFR9”	0.853		
	“SFR10”	0.776		
Success factors	“SSF1”	0.833	0.956	0.687
	“SSF2”	0.852		
	“SSF3”	0.844		
	“SSF4”	0.823		
	“SSF5”	0.829		
	“SSF6”	0.848		
	“SSF7”	0.828		
	“SSF8”	0.827		
	“SSF9”	0.861		
	“SSF10”	0.737		
Hinderance factors	“SHF1”	0.803	0.953	0.669
	“SHF2”	0.829		
	“SHF3”	0.82		
	“SHF4”	0.838		
	“SHF5”	0.853		
	“SHF6”	0.833		

	“SHF7”	0.831		
	“SHF8”	0.85		
	“SHF9”	0.837		
	“SHF10”	0.673		

According to earlier studies of Hair et al. (2011) and Becker et al. (2012), the constructs should have a “composite reliability” value more than the adequate threshold of 0.7. In Table 1, the composite reliability values for “Capabilities”, “Implications”, “User Friendly”, “Success”, and “Hindrances” factors are reported as 0.957, 0.958, 0.956, 0.956, and 0.953, respectively. Based on these values, all constructs have scored higher than the acceptable range of 0.70. Therefore, the investigator proceeded with further data analysis. An AVE value greater than 0.5 is an essential condition. Table 2 indicates the “Average Variance Extracted” (AVE) values for all constructs. All the reported values are above 0.50, indicating that the variable accounts for at least 50% of the variance in the latent construct. This finding supports the presence of convergent validity. Discriminant validity refers to the ability to differentiate and establish uniqueness among the constructs. In the measurement model, constructs with higher values of discriminant validity demonstrate that each construct is distinct and unique in comparison to the other constructs within the model.

**Table 2: Discriminant validity values**

	CR	AVE	MSV	MaxR (H)	SCP	SIM	SFR	SSF	SHF
<b>SCP</b>	0.957	0.691	0.584	0.958	<b>0.831</b>				
<b>SIM</b>	0.958	0.694	0.296	0.958	0.458	<b>0.833</b>			
<b>SFR</b>	0.956	0.687	0.584	0.957	0.764	0.544	<b>0.829</b>		
<b>SSF</b>	0.956	0.687	0.584	0.958	0.74	0.492	0.764	<b>0.829</b>	
<b>SHF</b>	0.953	0.669	0.217	0.955	0.465	0.276	0.412	0.444	<b>0.818</b>

Table 2 displays the value of square roots of Average Variance Extracted (AVE) (indicated in bold) diagonally, along with the correlation values placed below the AVE values. The square root of AVE values for each construct is greater than the corresponding correlations, both vertically and horizontally. This confirms that discriminant validity has been achieved in accordance with the established standards (Hair et al., 2009).

### Model fit indices

Table -3 showed the value of Standardised Root Mean Residual (SRMR) i.e. 0.050, which is under the permitted limit of 0.08. “The Comparative Fit Index (CFI) value, used to assess incremental fit, is reported as 0.958, and the Root Square Error Approximation (RMSEA) value is 0.041, both of which fall within the acceptable norms.



**Table 3: Model Fit values**

Name of criteria	Index	Actual Values	Acceptance Level	Literature
Incremental Fit	CFI	0.958	CFI>0.90	“Bentler (1990) and Awang (2012)”
Absolute Fit	RMSEA	0.041	RMSEA<0.08	“Browne et al (1993) Kline (2005), Hooper (2008) Hair et al. (2010)”
	CMIN	2.136	CMIN<3	“Marsh and Hocevar (1985), Kline (2005), Hooper (2008) and Awang (2012)”
	(S)RMR	0.050	SMR<0.08	“Kline (2005) & Hooper (2008)”

## MANAGERIAL IMPLICATIONS

The findings of the study are significant for social media service providers who want to acquire a competitive edge and enhance the user experience as well as advertisers looking for efficient ad forms. This also offers valuable insights and recommendations for marketing managers and professionals involved in devising strategic plans and utilizing technologies to enhance the content of social media marketing. By implementing the suggestions, they can positively influence the behaviour of students and achieve more effective results in their marketing efforts. Managers of e-commerce websites may concentrate on increasing students' confidence, while marketers of such websites may concentrate on increasing student's pleasure. With the help of this study, marketers may know the preference pattern of students among the various districts of Haryana so as to develop various social marketing strategies which help them in capturing the young generation for working their products and services.

## CONCLUSION

The study developed and experimentally verified a model of students' rational reaction pattern behaviour towards social media marketing. The constructs are interrelated with each other and influence the behaviour of students. Other factors of social media marketing are also discovered to know the reaction on the behaviour of higher education students. Implications construct is one of the best constructs for influencing the student's behaviour. According to the study, SMM influencers significantly influenced the attitudes and decision-making of the students in higher education. SMM has a big impact on college students in the selected districts of Haryana. Higher education institutions and social media marketers should ensure that the educational content is tailored to students' preferences, ensuring accuracy and credibility, strategically working with influencers, and distributing relevant and helpful advertisements if they want to leverage this influence effectively.

## LIMITATIONS AND SCOPE FOR FUTURE RESEARCH

Even this research offered some crucial insights, there are also certain limitations. The study, like most marketing research, only employed one data group, which may have prevented it from taking into account the respondents' deliberative views. In this study, individual analysis was employed, and the snowball sampling technique was applied to collect sample students'

data. Therefore, this study could not the exact relationship between the critical factor of SMM and its impact on the students of higher education of Haryana. The focus of future research should be on changing preference pattern of students regarding product range and service scope. Also, the students of Haryana in respect to critical factors of social media marketing (SMM) may be compared with the students of other states which will offer a chance for more investigation into the impact of social media marketing on the students in higher education of other districts of Haryana.

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