

# Effects of Social Media on Students' Collaborative Learning using Technology Acceptance Model

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## Abstract:

The students use social media sites for various purposes such as for communication, sharing their knowledge, ideas, thoughts and connect with the people those who are under his/her circle. The goal of the present research is to examine the adaptation of social media in academic to develop collaborative learning in students' of higher education. Technology Acceptance Model (TAM) is utilized to explore the effect of characteristics of the students on actual use of social media networking sites. The research was undertaken in Viruthunagar district, Tamil Nadu with the sample size of 150 students who are using social media sites. Data collected from a survey through questionnaire which is later evaluated by using AMOS (Analysis Moment Structure) software to validate the conceptual framework. The study finding shows that the TAM factors impact has occurred indirectly through its "Perceived easy to use" and "Perceived Usefulness" and is directly effects on "Attitude". Students' attitude has changed into intention to utilize social media. And the motive is positively effects on the students' collaborative learning.

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## 1. Introduction

In this examination the researchers expand on the point of view that social media networking sites get from the technology innovation development and along these lines explore the determinants of appropriation community taking of such stages from a reception of collaborative learning between higher education students. The Technology Acceptance Model (TAM) effectively clarifies the reception of various telecommunication modernism instruments. As per Davis et al. (1989), the present miniature anticipates the probability of another telecommunication being maintained within an association of people or associations. The motivation behind the examination is twofold. To begin with, we hope to affirm the elevation of utilization of social media networks and examine a few attributes of its end

user. Next, we intend to analyze the significance of TAM inside the setting of advanced technological stage, just like social media networking. Given that ultimate technological contemplated still comprise of business relevant instruments, this will establish a trial of this analysis in an alternate setting and add to the comprehension of appropriate motivation of online social media networks. Basically social media networking sites are used as a communication device; scholastic research here is still in its earliest stages. Studies tending to online social networking sites from an instructive viewpoint have recently started to discover significance of training for collaborative learning, specifically respective motivation of appropriate web-based social networking.

## 2. Technology Acceptance Model

This examination takes an interest in this exertion, theoretically and for all intents and purposes, by embracing the Technology Acceptance Model (TAM) as a base instrument which is the most generally utilized and approved model and have been connected in a few research teach crosswise over different advancements of technology. The TAM expands on the Theory of Reasoned Action (TRA). TRA has its underlying foundations in social brain science and endeavors to clarify why people draw in into deliberately proposed practices. The straightforwardness of this study and its usability build it exceptionally prominent and appropriate to several investigation frameworks in which expectation of conduct is the real reason for the specialist in this exploration to enhance collaborative learning with higher education students. In TAM, a user's inspiration to receive advanced technology can be clarified by three develops: perceived ease of use (PEU), perceived usefulness (PU), attitude towards usage of social media and intention to using of social media for collaborative learning. Both PEU and PU are convictions affecting on attitude towards usage of social media, while PEU has additionally an immediate impact on PU. A more recent advancement of TAM incorporated the CL to utilize as another factor that would be straightforwardly impacted by PU and intention to use social media.

## 3. Review of Literature

Venkatesh and Davis (2000) attempted to increase the version via calculate extra specifications. The advanced version is called TAM2. The elements that specified and affecting "perceived ease of use" and "perceived usefulness" are social have an impact on consideration and intellectual device determinants. Further in particular, those variables are instinctive criterion, work applicability, output

satisfactory, outcome verifiable, and perceived ease of use and perceived usefulness.

Park (2009) utilized an enlarged TAM version in an investigation carried out in Korea. A pattern subsisted of college students. From the provincial college who had visited at the last one direction of e-learning. The desire of the study concentrated on analyzing the popularity of e-gaining knowledge of direction and what factors have an effect on the very last acceptance of such publications via college students. It passed out that self adequacy turned into the component that utmost impacts the physiological purpose accompanied by means of social impact, which defines by way of the inducement theory of students who have a chief have an impact on even if he will utilize a path of e-mastering.

In some other examine (Saadé, Nebebe & Tan, 2007) utilized TAM and took part intentionally 362 college students of Concordia University in Canada who participating programs in multimedia learning machine and stuffed out a survey. The cause of this study was to assess students' comfort with this multimedia device using TAM. In view of various TAM is utilized, it termed MAM (Multimedia Acceptance Model). Established on this theoretical version, and that was build up for the cause of study, it changed into proven that "perceived usefulness" has a extensive effect on mindset to the usage of MML and for this reason, "attitude" plays an crucial function within the usage of behavioral intentions. Nonetheless, it has verified a terrible courting among "perceived usefulness" of the scheme and the "behavioral intention" but additionally among "perceived ease of use" and "mind-set".

In addition, Dasgupta, Granger and Mcgarry (2002) tried to research the end user popularity of digital collaboration innovation through the use of a program control device. For the motive of the research they utilized a prolonged TAM and

participated sixty two students who had participated at three publications and utilized this device in a single course. The recommendations suggests that perceived usefulness had as a fantastic effect on perceived usefulness rather than usefulness, in sequence, has a terrible courting with gadget usage. However, gadget usage should affect scholar activities inside the direction.

Placed on TAM one more associated take a look at (Hsu & Chang, 2013) befell in Taiwan, which motive was to search the recognition of Moodle through the use of a prolonged TAM. In this investigation every other issue changed into brought, the perceived comfort as an outside variable. In this have a look at participated forty seven university students and thirty five elder excessive faculty students. The recommendations proven that perceived accessibility may want to impact perceived usefulness and attitude into the usage of Moodle and upload to this, perceived usefulness impacted the mindset towards the use of Moodle.

Liaw (2008) stated that attempted to research novices' pride, behavioral intentions, and capability of the slate e-getting to know program and provide comment about the motives which disenchant a few newcomers. He took feedback from 424 college students and utilized an incorporated TAM primarily positioned on social intellectual concept and concept of deliberate conduct. The recommendations advocate that there was a notably connection among behavioral aim of students to take part in e-getting to know and efficiency of e-learning, recognized self-efficiency is the greatest powerful component that have an effect on rookies' delight with the Blackboard e-studying machine, and recognized delight and capability might be afflicted by behavioral purpose via the utilization of e-studying.

Sun, Ray, Glenn, Yang and Dowming (2008) attempted to analyze the variables causing user pride in e-learning due to it is shown that various end users forestall their on-line studying later their preliminary involvements. In this study become utilized an incorporated TAM and involved 295 students from Universities of Taiwan. The outcomes revealed that user PC tension, teachers mindset towards e-Learning, e-Learning path affability, e-Learning direction exceptional, perceived usefulness, perceived ease of use, assortments in tests are the variables impacting newcomers' recognized delight and this outcomes could help the establishments of e-gaining knowledge of situations to enhance user pride and certainly the efficacy of e-getting to know structures.

In a examine of Valenzuela et al. (2009), people pronounced that the primary purpose why they joined Facebook was to hold in touch with old buddies and support the relationships with coworkers. Valenzuela et al. (2009) observed two differences among Facebook users and nonusers. First, they concluded that adoption of Facebook was not random, due to the fact that they found demographic variations between respondents. Younger girls were much more likely to be users than older adult males. Secondly, they concluded that Facebook attracted college students who had been greater civically engaged.

#### **4. Perceived Usefulness**

"Perceived Usefulness" is nothing but obtaining helpful sources from the different systems or methods which is straightforward and requires no efforts. One of the essential segments of TAM is seen helpfulness which has been utilized by numerous data framework scientists. Perceived Usefulness can be characterized as how a man can use a distinct framework would develop his or her academic activities. In other word e-learning positively gives impact on the

execution to the students, in this way they are more viable while utilizing mobile networks.

## 5. Perceived Ease of Use

Seen usability is characterized as how much a man trusts that utilizing a definite framework would be a free of exertion. At the end of the day, the students who get the training on the web, it is normal that they are ready with the utilization of mobile networks. Nowadays the students are very well disposed with mobile networks like social media sites since they regularly utilize it. It reflects the goal of the students towards the use of mobile networks.

The significance of usability connotes how much a development is seen not to be hard to comprehend, learn, or work shown that a simple to utilize site can improve the user's encounter. In a state of harmony with these perceptions it can be fought that if an online networking page/s is anything but difficult to utilize; education services experts can improve persistent encounter through online social media networking sites towards education.

## 6. Attitude towards Usage

The elements foresee states of mind of clients toward the framework. Encourage demeanor saw value impact clients to utilize the framework. The utilization of framework can be anticipated by behavioral expectation state of mind towards learning can be characterized as your response and correspondence toward the e learning sites. It demonstrates your enthusiasm towards e learning sites and furthermore your introduction of utilizing sites and online networks. State of mind is characterized as a man's certain or negative feeling about playing out the objective conduct. Mindfulness obliges state of mind and "inspirational mentality towards Information and Communication Technology (ICT) is broadly perceived as an important condition for the viable

execution", expressed that e-learning achievement is influenced by various sorts of components including clients' demeanors towards e-learning and additionally their fulfillment with utilizing innovation amid educating/learning background.

## 7. Intention to Use Social Media

The aim towards web-based social networking system among the students in community oriented learning holds the key factors in structure innovation utilize models with the hypotheses expanded frame the central standards of TRA. Such standards consider expectation to utilize the framework as the capacity of demeanor towards person conduct and subjective standards that were stretched out to Theory of Planned Behavior (TPB). In such manner, asserted that people who discover happiness in utilizing a web framework will see constructive communications and shape more prominent behavioral aim to utilize it.

## 8. Using Social Media for Collaborative Learning

An awesome and broad acknowledgment and incorporation of online networking has been accomplished into educational perspectives in the last years. All things considered, the online networking viability in upgrading scholastic execution regarding community oriented learning has been noted to have expanded. As indicated by surviving examinations, web-based social networking is an important apparatus that makes strides students' scholastic exhibitions. Also, collective learning with the help of online networking like Facebook, Hangout, twitter, etc., energize learning and learning sharing among the students, educators, and teachers alike, all things considered conditions.

## 9. Objectives

1. To identify the usefulness of social media for students
2. To find the attitude of the students to use social media
3. To identify the intention of the students towards use social media
4. To analysis the use of social media towards collaborative learning of students

## 10. Conceptual frame work

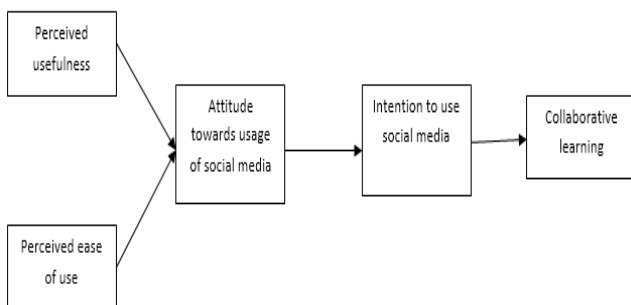


Figure 1. Conceptual frame work

## 11. Research methodology

Data has been collected through questionnaire which is later evaluated by using AMOS (Analysis Moment Structure) software to validate the conceptual framework. Sampling size of the research is 150. The samplings are collected from the students those who are studying under graduation. The methodological approach of this research study allowed the researchers to explore research question being presented and evaluate and analyze data with respect to the research hypotheses

Therefore, the research hypotheses are improved based on TAM model hypotheses

Hypothesis 1: There is a significant impact of Perceived usefulness on Attitude towards usage of social media

Hypothesis 2: There is a significant impact of Perceived ease of use on Attitude towards usage of social media

Hypothesis 3: There is a significant impact of Attitude towards usage of social media on Intention to use social media

Hypothesis 4: There is a significant impact of Intention to use social media on Collaborative learning

## 12. Analysis and Interpretation

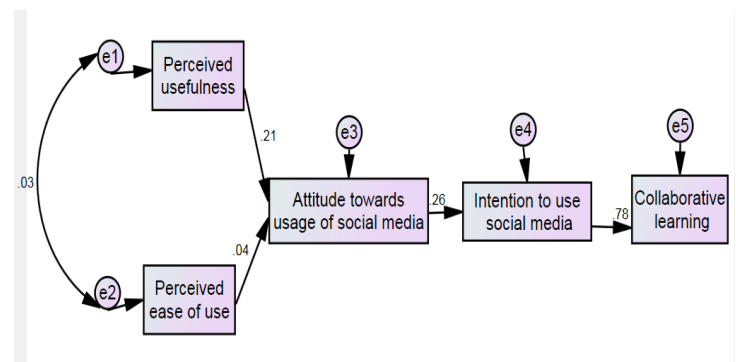


Figure 2. Proposed Conceptual Model

Table 1: Model fit statistics

Model fit statistics	Suggested value	Actual value
Chi square/df	$\leq 5.00$	4.852
Goodness of Fit Index (GFI)	$\geq 0.90$	0.981
Adjusted Goodness of Fit Index (AGFI)	$\geq 0.80$	0.944
Comparative Fit Index (CFI)	$\geq 0.95$	1
Root Means Square of Approximate (RMSEA)	$\leq 0.08$	0

Bentler and Bonnet (1980) study on model fit indicates that it can be checked by RMSEA (Root Means Square of Approximate) which is less than



0.08, has a good fit and less than 0.05 has a nearest fit. The Joreskog and Sorbom (1988) research propose that GFI (Goodness of Fit Index) should be more than 0.9 and AGFI (Adjusted Goodness of Fit Index) should be greater than 0.80. Bentler research suggests that CFI (Comparative Fit Index) should be more than 0.9. The value of AGFI (0.944) and CFI (1.000) indicate the adequate among the structural model and sample data. The GFI of 0.981 and RMSEA of 0.000 revealed the goodness of fit. This confirms that the available data set moderate the fits into the proposed structural model.

Structural path		Estimate $\beta$	SE	CR	P	Hypothesis
Attitude towards usage of social media	← Perceived usefulness	0.211	0.084	2.153	0.031	Yes
Attitude towards usage of social media	← Perceived ease of use	0.036	0.074	0.363	0.717	Yes
Intention to use social media	← Attitude towards usage of social media	0.263	0.103	2.713	0.007	Yes
Collaborative learning	← Intention to use social media	0.780	0.073	12.421	***	Yes

Table 2: Path Analysis for the Proposed Conceptual Model

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Table 2 shows causal connections among Perceived Usefulness and Perceived Ease of Use with Attitude towards use of social media and the table shows causal relationships between Attitude towards use of social media with Intention to use social media and Collaborative learning. From the table, beta value, error value and p-value corresponding to the causal relationship between all the variables.

All the social media dimensions (Perceived Usefulness and Perceived Ease of Use) have positive effects on Attitude towards usage

of social media and their beta values are 0.211, 0.036 respectively.

The variable Attitude towards usage of social media have positive impacts on Intention to use social media (beta=0.26)

And Intention to use social media have positive influences on Collaborative learning (beta=0.78).

### 13. Discussion and Conclusion

This investigation examines the functions of social media sites in the learning purposes. Media could broaden learning through offering new open doors like working with outside specialist and accepting convenient criticism, cooperative utilization of social media. Creating express procedures to help and instruct the students to cooperate collaboratively. The result shows that the social media effects the variable collaborative learning in a positive way, by this result the researcher advice that if we utilize social media for academic in a right direction it is very useful to the collaborative learning of the students. TAM is a pre-defined model. It is the right tool to adopt social media in collaborative learning of the students. It is suitable to utilize social media educational institutions, when there are clear connections with the education modules and when techniques are utilized to encourage coordinated efforts and achieve the development of the students' unique commitments.

### Reference

1. Venkatesh, V & Davis, F. D. (2000) . A theoretical extension of the technology acceptance model: Four longitudinal field studies. *Management science*, 46(2), 186-204.
2. Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Journal of Educational Technology & Society*, 12(3), 150-162.

3. Saadé, R., Nebebe, F., & Tan, W. (2007) . Viability of the " Technology Acceptance Model" in multimedia learning environments: A comparative study. *Interdisciplinary Journal of ELearning and Learning Objects*, 3(1), 175-184.
4. Dasgupta, S., Granger, M., & McGarry, N. (2002) . User acceptance of e-collaboration technology: an extension of the technology acceptance model. *Group Decision and Negotiation*, 11(2), 87-100.
5. Hsu, H. H., & Chang, Y. Y. (2013). Extended TAM Model: Impacts of convenience on acceptance and the use of noodle. *Online Submission*, 3(4), 211-218.
6. Jones, D., Cranston, M., Behrens, S., & Jamieson, K. (2005). What makes ICT implementation successful: A case study of online assignment submission Open Learning and Distance Learning Association of Australasia (ODLAA), University of South Australia.
7. Liaw, S. S. (2008). Investigating student's perceived satisfaction, behavioral intention, and effectiveness of e-learning: A case study of the Blackboard system. *Computers & Education*, 51(2), 864-873.
8. [8] El-Badawy TA, Hashem Y (2015) The Impact of Social Media on Academic Development of School Students. *International Journal of Business Administration* 6: 46-52:
9. [9] Mingle J, Adams DM (2015) Social Media Network Participation and Academic Performance in Senior High Schools in Ghana. *Library Philosophy and Practice (EJournal)*, pp: 1-51.:
10. Yu FY, Liu YH (2015) Social Media as a Teaching and Learning Tool for In- Class Q&A Activities to Promote Learning and Transform College Engineering Classroom Dynamics:
11. Alhassan Munkaila and Abukari Iddrisu (2015).The Impact of Social Network Sites on the Academic Performance of Students in the Polytechnics of Ghana. *International Journal of Economics, Commerce and Management*, Vol. III, Issue 11, ISSN 2348 0386.
12. Mahmoud Maqableh, Lama Rajab, Walaa Quteshat, Ra'ed Moh'd Taisir Masa'deh1, Tahani Khatib, Huda Karajeh (2015). The Impact of Social Media Networks Websites Usage on Students' Academic Performance. *Communications and Network*, 7, 159-171.
13. Apeanti, W. O. and Danso, E. D. (2014). Students' Use of Social Media in Higher Education in Ghana. *Innovative Journal*, Vol. 3, No. 1, pp. 3-9.
14. Salvation, M. and Adzharuddin, N. A. (2014). The Influence of Social Network Sites (SNS) upon Academic Performance of Malaysian Students. *International Journal of Humanities and Social Sciences*, 4(10), 131-137.
15. Leelathakul N, Chaipah K (2013) Quantitative Effects of using Facebook as a Learning Tool on Students' Performance. *International Joint Conference on Computer Science and Software Engineering (JCSSE)*.
16. Saba Mehmood (2013).The Effects of Social Networking Sites on the Academic Performance of Students in College of Applied Sciences, Nizwa, Oman. *International Journal of Arts and Commerce* Vol. 2 No. 1 January 2013
17. Bogdanov, E., Limpens, F., Li, N., El Helou, S., Salzmann, C., & Gillet, D. (2012, April). A social media platform in higher education. In *Global Engineering Education Conference (EDUCON)*, 2012 IEEE (pp. 1-8). IEEE.
18. Sacide Güzin Mazman and Yasemin Koçak Usluel (2010). Modeling educational usage of Facebook. *Computers & Education* 55 (2010) 444e453
19. Zhang, S., Zhao, J. and Tan, W. (2008), "Extending TAM for online learning systems: an intrinsic motivation perspective", *Tsinghua Science and Technology*, Vol. 13 No. 3, pp. 312-17.
20. Davis, F.D., Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 1989. 13(3): p. 319-340.
21. Venkatesh, V. and F.D. Davis, A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science* 2000. 45(2): p. 186-204.

ttp://www.scirp.org/journal/cn  
http://dx.doi.org/10.4236/cn.2015.74015.