A Conceptual Framework Development of the Social Media Learning for Undergraduate Students of University of Sindh.

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Abstract: The main idea of this research is to develop the conceptual framework for the learning use of social network tools among undergraduate students of Sindh university. The development of the framework is based on different factors that are adopted from previous tested research theories. The impact of conceptual model is basically examining the Student's perceptions, EOU, Self-efficacy & their interaction towards Social media tools. Based on the previous studies and tested theories in the field of MIS/IS a conceptual model of social media as active learning strategy has been developed. To test & validate the Framework empirically the positivist research approach has been used to quantitatively analyze the data. As firstly, the framework has been developed through various investigation in the field of literature and then it became finalized by the experts. The initial step to start with various previous research theories with the help of literature review process, by investigating the use of different theories the technology acceptance model has established to determine the Student's perceptions, ease of use, Self-efficacy and their participation in social network sites, in this phenomena the questionnaire developed to test the framework. Further the data were statistically analyzed by means and St. Deviations to test the pilot results.

Keywords: TAM, SML, Conceptual-Framework, SAP, Student's Perceptions, Perceived Ease of Use.

I. INTRODUCTION

The progress in web 2.0 innovations have drastically impacted learning and teaching. It has given new learning openings [1] and poised to make a tremendous impact on all fields whether it's related to marketing, business, and healthcare or in an educational private or public sector it puts a great worth in the field of research. There are many forms of social media like websites and application used by individuals to collaborate with each other [2]. The youth mostly rely on social media and spending more and more time on it. Social media promote students to create relationship, provide them a collaborative environment to communicate with teachers and help them to create groups through the use of SML tools so that if student connect with university more likely will improve the learning skills and to persist and complete their education. Many educational sectors encourage the participation of students by providing them a facility of social media or learning management systems. Those channels promote student's engagement and motivate them in a learning process. There are so many social media platforms and e-learning systems used for students learning process. E-learning systems put a great value in the field of education, there are number of e-learning systems use nowadays such as Moodle, blackboard and CMs etc. these are web-based systems that most rapidly adopted in universities and colleges. Provide a vast amount of research. There are also so many failure aspects of these systems due to the lack of student's interaction these systems generate number of problems like improper use of features, less user engagement and facing the difficulty while conducting and getting assessment process from students [2]. Majority of students participate in a number of online communities and they are highly willing to make discussions on those platforms which provide them a material on their course related activities [3]. This research indicates that the positive use of SML for learning purposes can enhance new styles of teaching as well as learning. The main purpose is to develop the conceptual framework based on TAM for the positive use of social network tools.

II. METHOD

Research methods provides a path to the researcher that guide them to specific tools [4]. Research design is the overall specification of research. There are also some of the paradigms that has been used for the research patterns such as ontology, epistemology and methodology. Ontology actually defines the existence of something that is form of nature however, the epistemology is related to the knowledge of the external reality in ontology they are sought realities [5]. Moreover, there are two main

approaches that explain the domain of methodology 1) positivist and 2) interpretivist [5].

These two methodologies are different in nature. Positivist approach is scientific and quantitative in nature whereas the interpretivist is qualitative in nature. Both methodologies have some forms of positive and negative influences on research [6].

III. TYPES OF RESEARCH METHODS

A. POSITIVISM

One of the studies [7] mention this method as a natural science method used to study the social reality which is objective, it refers to one-way mirror in which research objective and researcher both are independent having no any kind of influence on each other.

B. POST-POSITIVIM

In the study of [8] argued that the philosophical background of post-positivism is objectivism. In post-positivism social phenomenon is an independent from the social actors. Positivism and post-positivism are also called 'Scientific deductive'. This method is used to carry quantitative and empirical research. These ideas are divided into small sets called variables/items. By these variables' hypotheses will generate and measure, after that numerical analysis will apply on these variables. So, the nature of this research varies on positivism. **Figure 1**. the actual view of this study. The problem was identified from the literature review then from the different theories the factors of technology acceptance model were adopted to develop the conceptual framework. Further based-on factors the questionnaire was developed and verified by the group of experts. After the cross-sectional survey the pilot test results were conducted to analyze the data.
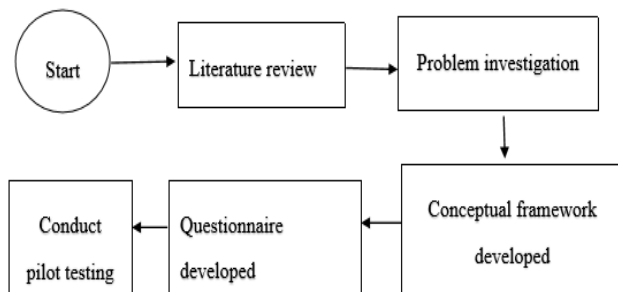

Figure 1. Steps for Pilot Study

IV. RELATED WORK

Number of research studies suggest the theories based on social or public environment, among them Social Learning

theory proposed by Albert Bandura indicates the impact of various learning styles on different social media tools. He highlights that when social media used as a learning platform, then the majority of learner's attitude changed by observing the other student's actions in the learning community [9]. Students usually like to participate in collaborative and in interactive discussions that actually enhance the virtual learning environments, these platforms provide an ideal and learning host for interactive discussions known as Facebook [10]. There are multiple theories and approaches available related to social media tools one of study further indicates that finding theories is a challengeable task specially it's very hard to find the theory that has most appropriate outcome. Number of theories and approaches helps and encourages the participants in learning and active research process [11]. A study was examining the perceptions of university faculty members towards the use of social media learning in different learning environments such as traditional and formal learning environments and found that most of the population used social media tools for their personal and pedagogical activities. As a LinkedIn mostly common for professional users [12]. According to "Facebook, Twitter, and Other tools can be utilized in a similar way. Many other SN tools, such as collaboration, online surveys, crowd sourcing, bookmarking and citation, document sharing, and online storage, can be employed to enhance the education process in a way that was not possible before." Learning is actually a social phenomenon, which includes the discussions, participations, collaborations and information sharing among learners and individuals. These social networks provide the flexible and easy access within the privacy premises to take care of the freedom of speech related to reading or writing context, this flexibility made them feel more intuitive towards the learning platforms [14]. Social network like Facebook also provide its potential benefits to international students [27].

V. ORIGINAL TECHNOLOGY ACCEPTANCE MODEL

The most well developed and well designed and well-known models known as TAM that was originally proposed by Davis in 1986. This model considered to be conceptual and framework-based approach that hypothesized the user's behavior towards technology [15]. Tam model is actually based on theory of reasoned action and idea was proposed by Ajzen and fishbein [16]. Technology acceptance model helps to explain the reasons behind an individual acceptance or rejections towards the technology by using TRA [16] In the Davis model the perception of user can be hypothesized by behavioral intentions (BI), attitude towards use (A) and the two internal beliefs such as perceived usefulness and perceived ease of use.
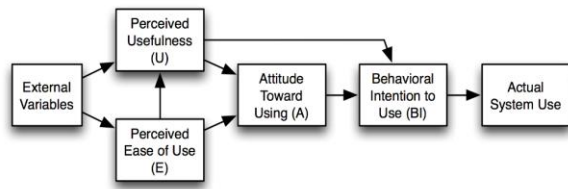
Figure 2. Technology acceptance model

Another model indicated the Tam2 model that is the extended version of Tam1.whereas the TAM 2 has been developed by Davis and Venkatesh [17]. both models prove to be a reliable model and both can measure the intentions of individual by two beliefs perceived usefulness and perceived ease of use. But tam two has other additional factors to measures the acceptance and rejection of user's towards using a technology. Some factors refer as cognitive factors in TAM2 such as result demonstrability, output quality, job relevance and perceived ease of use these four factors directly influenced on perceived usefulness whereas some social forces like subjective norm, image, and voluntaries are directly influenced on perceived usefulness [18]. As depicted in the below figure.
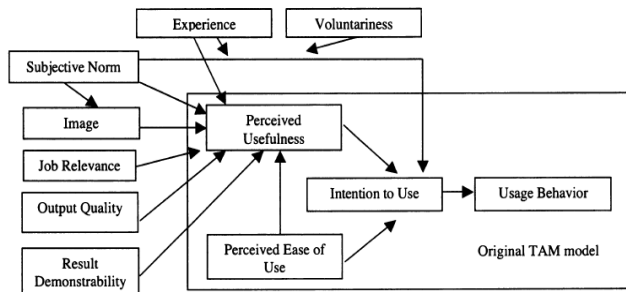

Figure 3. Extended Technology Acceptance Model 2.

VI. DEVELOPMENT OF CONCEPTUAL FRAMEWORK

We have proposed a conceptual framework shown in figure 1. This research manly reflects the idea of framework-based approach. that explore the learner's perception towards the social media. There are so many models such as TRA (theory of reasoned action) and TPB (theory of planned behavior) that particularly use the various belief sets that are specific or limited for the situation and they contain the various limitation according to the situation that confound the various risk between number of factors and they can be used as only specific technical factors but in spite of that this theory got popularity in the field of physiology study [19]. But technology acceptance model is a model that is not specific or limited it can be used in every field and in any context to measure the perception of the user towards any particular sense. Technology acceptance model is widely use in the field of information systems and it has high

validity to measure it empirically in any field. It is a proved and testable model. In this study the Davis model has been used as a theoretical approach to find the perceptions of users towards the social media is a learning tool. In contrast with the Theory or reasoned action there are two different and additional factors in TAM model one as well as two known as perceive usefulness and perceived ease of use.

A. Perceived Usefulness:
It is a cognitive belief and a degree; it refers that using a technology or system can enhance his or job/work performance. The more the individual use the technology his attitude towards the system will be positive.

B. Perceived Ease of Use
The PEOU reflects degree that refers using an information technology can be free from someone mental effort. It means if individual finds the system easier to use his performance or interest towards technology also increase.

C. Intention to Use
Behavioral intention is directly influenced by PU and PEOU. Number of research studies consider the perceived ease of use and perceived usefulness are the most importance determinant of TAM [20] implementing such applications for learning information technology is exceptional [21].
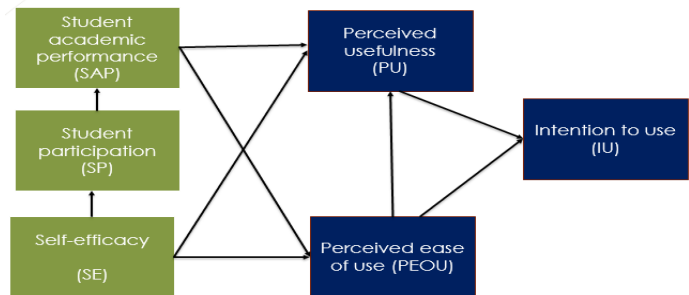

Figure 4. Conceptual Framework of the social media.

VII. FACTORS INFLUENCE TOWARDS SOCIAL MEDIA AS A LEARNING TOOL.

A. Perceived Usefulness
Perceived usefulness (PU) is defines as "the degree to which a person belief that using a particular system would enhance his /her job performance." [16][26]. In technology acceptance model, the PU is a most significant variable that has a stronger relationship with intended to use of system, this generally determines that users are more willing to accept a system because of the functions it performs.

Similarly, the social media learning theory indicates that, if student's thinks that the particular system is useful then they are more willing to accept and use that system in future [22]. This hypothesis as:

H3. PU will positively influence IU towards social media as a learning tool

B. Perceived Ease of Use

PEOU is another most important factor of Tam theory. This defined as "the degree to which a person believes that using a particular system would be free from mental efforts," [16] in TAM the PEOU is important factor that effects directly and indirectly the acceptance of IS [22] Whereas it directly effects on user acceptance of Is. The research shows that the direct effect of PEOU on PU increases the use of PEOU, because it increases the performance needed to save the efforts to do the similar work.
So, this hypothesis is summarized as follows:

H1. PEOU will positively influenced PU towards social media as a learning tool

H2. PEOU will positively influenced IU towards social media as a learning tool

C. Self-Efficacy

Self-efficacy is referring to beliefs in once own ability to do any task. According to [23] if people thinks that they can't perform because of the lack of their abilities then they will less likely to participate and perform any tasks.it explain the motivation of a desired behavior involved in any system. Some evidences support that self-efficacy directly affect the use of PU and PEOU. According to [24][28] And this may explain that if an individual has a high confident to perform any tasks then the use towards technology will increase. Moreover, the relationship of self-efficacy and PEOU is found in many prior studies. That determines that individual's strong willingness to desired system can increase the use of system and they find the system easy to use. [23] Another direct relationship also found between the participation of and self-efficacy. Also determines that the more the individual is confident then he/she will highly be able participate or collaborate in to groups discussion [25]. This has been hypothesized as:

H4. Self- efficacy of student will positively influence towards PEOU
H5. Self- efficacy of student will positively influence towards PU
H6. Self- efficacy of student will positively influence towards SP

D. Student Participation

Student participation refers a desired behavior engaged in particular technology. One of the studies [25] determines that increasing the use of social platforms make the huge number of entrepreneurs in different fields. A study suggests that when an individual engage and collaborate in different online discussions then their level of achievement will also increase [25]. Number of prior studies determines that the university students shown their immense attachment towards for social interactions, through the different sites like instant messaging, emails, blogs online journals they get the huge amount of information. This helps them to improve their academic growth and performance [7][28]. This has been hypothesis as:

H7. SP will positively influence the SA

E. Student Academic Performance

Students' academic performance and achievement plays the most important role for individual, the academic excellence could be measure through different assessment process. This can be done by exams and check through student's results. That explains the student's academic performance that reflects their grades [6]. A study examines the direct association of academic performance and the usage of social media that reflects the once cognitive beliefs towards a particular technology. This indicate that if student's academic performance increase than social media use is also increase [6]. This has been hypothesis as:

H8.SAP will positively influence PU
H9.SAP will positively influence PEOU

F. Pilot testing.

Pilot test refers to pre-test before going to large scale testing. It is known as preliminary small-scale testing. So, if anything missing in the pilot study it can be added to the full-scale experiment to improve the chances of clear outcome. This testing is mainly done before huge or large-scale quantitative research.

G. Questionnaire

To analyze the data, we have used a questionnaire to verify the factors of conceptual model. The five-point Likert scale has been used to determine the relationship between parameters and check the pilot results of this study.

H. Data analysis

Data were statistically recorded and analyzed by SPSS.20/windows program. Personal data of the participants and survey were calculated for frequency and percentage. Data concerning perceived ease of use,

perceived usefulness, and intention to use, self-efficacy, student participation and student academic performance were analyzed quantitatively for means and standard deviations.

Table 1: Demographics of Survey Participants (N: = 50)

Demographics	frequency	Percentage
Gender		
MALE	26	52
Female	24	48
AGE		
17-19 years	7	14
20-22 years	36	72
22-25 years	7	14
26 or above	0	0
Social media usage duration		
1hr/less	9	18
2hr	14	28
3-4hr	13	26
4hrs /above	14	18

VIII. RESEARCH FINDINGS AND DISCUSSIONS

A. Participants' Profile

Participant of this study were undergraduate students of university of Sindh Pakistan, a questionnaire was distributed to approximately 50 students, of which 48% were female and 52% were male participant.

The participant was divided into different age groups of 17 to 19 years old 14% and 20 to 22 years old age groups 72% and 22 to 25 years old 14% and finally 26 or above age groups were 0%. As shown in Table 5.

A question was asked about social media usage 28% students use social media 4hrs or above and 28% use it to max 2hrs. Where's the 26% use social media max 3 hrs. and 18% use it up to 2hrs.
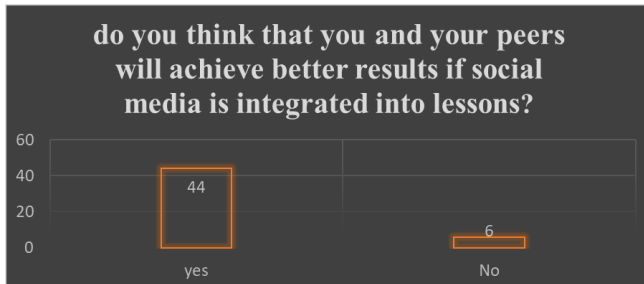
B. Participant general information

Figure 5. a closed ended question

A closed ended question was asked from students about the integration of social media into lessons. 12% respondent said no, and 88% respondent said yes.

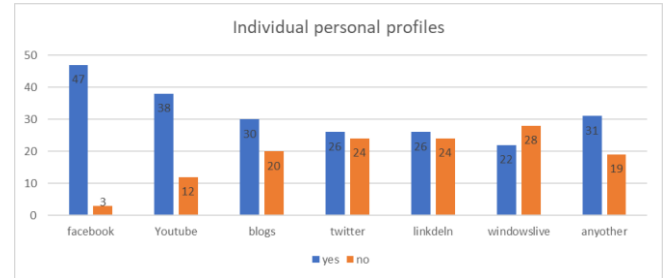### C. Participant general information

Figure 6. individual personal profiles

Student were asked to pick the platforms on which they have created their personal profiles. among 50 students 21% rely on Facebook, 17% on YouTube, 14% use blogs, 12% use twitter, 10% on LinkedIn, and 14% have created their profiles on other social platforms.

D. Reliability Test using Cronbach's Alpha

Reliability is the most important factor of the measurement of quality and this can be helpful for identifying the inconsistencies and their effects on measurement of results through this test a researcher will be able to reduce the inconsistencies of the number of items. In this study the number of factors is consisted on multiple items. Values for all the constructs shown in Table 2. indicates that the scales used were reliable.

Table 2. Reliability testing of six items

Constructs	items	Cronbach's Alpha	Reliable if ≥ 0.7
Perceived usefulness	6	0.78	Yes
Perceived ease of Use	6	0.72	Yes
Intention to use	5	0.83	Yes
Self-efficacy	5	0.84	Yes
Student participation	4	0.79	Yes
Student academic performance	4	0.83	yes

Table 3. Shows the overall mean of perceived usefulness towards social media as a learning tool. which was at high level. The first high mean fell on item no.1 (Mean = 4.26) and the second fell on item 2. Mean = 4.08. nearly all item was at positive level except the item 4. that were at moderate level.

Whereas perceived ease of use towards social media as a learning tool. which was at positive level. The first high

Table 3: Mean of Perceived usefulness

ITEM	Mean	St. Deviation
PU1	4.26	.922
PU2	4.08	1.08
PU3	3.70	1.03
PU4	3.28	1.17
PU5	3.82	.98
PU6	3.56	1.40
PEOU1	3.76	1.23
PEOU2	3.34	1.11
PEOU3	3.06	1.05
PEOU4	3.18	1.08
PEOU5	3.76	1.18
PEOU6	4.08	1.08
IU1	3.68	1.09
IU2	3.76	1.15
IU3	3.66	1.00
IU4	3.52	1.26
IU5	3.98	.97
SE1	3.64	1.22
SE2	3.60	1.05
SE3	3.94	1.05
SE4	3.56	1.21
SE5	3.90	1.27
SP1	3.56	.972
SP2	3.76	1.02
SP3	3.72	1.07
SP4	3.94	1.09
SAP1	3.84	1.01
SAP2	3.64	1.06
SAP3	3.68	1.07
SAP4	3.42	1.16

mean fell on item no.6 (Mean = 4.08).   The item 1 and 5 were positive. Except the item 2, 4 and 3 that were at moderate level. Moreover, intention to use social media as a learning tool. which was at positive level. Nearly all of the item was at positive level and self-efficacy towards social media as a learning tool. Nearly all of the item was at positive level. student participation towards social media as

a learning tool also shows the positive level of number of responses. student academic performance towards social media as a learning tool. which was at positive level. All of the item was at positive level except the item 4 that's a moderate level.

IX. CONCLUSION AND FURTHER DIRECTIONS FOR FUTURE.

This study examines the use of technology acceptance model. The TAM based framework has been developed that reflects the learning aspects of students towards social media learning. There are number of external constructs that effects on the internal factors of the technology acceptance model. The pilot results of this research show that social media is a tool for learning rather than distraction and can be best implemented for e-classroom activities. this study needs the extended research based on the pilot results at multiple department of university. A pilot test results has been conducted with the help of survey method. The further findings and other studies also suggest that learning through social media tools is quite easy and stress-free task rather than using different learning management systems that are inflexible to use because of their content management. Implementation of social media tools in education can help students and teachers to get frequent information. The conceptual Framework of this paper also reveals that using social media as a learning tool can improve the skills of online learners and provide a freedom of expression to individuals. This study provides the large-scale analysis for future directions.

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