

# EVALUATING STUDENT'S SATISFACTION OF USING SOCIAL MEDIA THROUGH COLLABORATIVE LEARNING IN HIGHER EDUCATION

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## ABSTRACT

*Social media have permeated all generations of Internet users, becoming a prominent communications tool and found to be facilitating teaching and learning, particularly in the student community. Thus, academic institutions and faculty are increasingly using social networking sites, such as Facebook and LinkedIn, to connect with students and to deliver instructional content. This has led to a rise in questions about the impact of social media for collaborative learning and the possibility of using it as an effective teaching tool. To learn more about the student's satisfaction with social media usage for collaborative learning improvement between students, we conducted a survey in a typical university in Malaysia. Basic aim of this research is to identify the characteristics and factors surrounding the usability of the social media for collaborative learning in higher education. A total of 134 Universiti Teknologi Malaysia (UTM) students were used in the survey. We development a conceptual framework in which we propose that interactive with peers and teachers, engagement, perceived ease of use and perceived usefulness ;that explain the positive effects and benefits of using social media to enhancing student learning through collaborative learning which, in turn, improves student academic performance. The results revealed a statistically significant negative relationship between perceived usefulness and their satisfaction. Further, engagement and perceived ease of use was found to be highly correlated with students' satisfaction for using social media for collaborative learning among students.*

**KEYWORDS:** *Social media; Collaborative learning; Higher education; Students' satisfaction.*

## I. INTRODUCTION

According to [1] observed that, social media is Internet-based technology which is often used to advertise possibilities for social interaction among its customers. It's enhanced through new communication tools and sites which are known as social media. In recent occasions, using social media is viewed as growing and adopting communication relevant to academic purpose. However, the interest rate of utilizing social media across nations varies. In certain countries and among various user communities many universities are now striving to develop ways of using social media to support learning. In an attempt to define social media [2] asserts that, social media or networking as a term refers to networked tools or technologies that stress the social facets of the web like a medium of communication, collaboration, and inventive expression. However, the word social media is frequently interchangeable using the terms Web 2. 0. and social software. Because the early seventies, internet programs have permitted customers to switch messages with each other, maintain personal profiles and write blog-like journal records. It's good to say that, the majority of the apparently new qualities of social media been around lengthy prior to the creation of certain social media like the Facebook [3]. Social media is used for various reasons and purposes in higher education and it is exploited for enhancing teaching and learning through providing both teachers and students with academic support services, including e-mentoring, e-feedback and other e-facilities .This study focuses on suggesting factors that are exploited through social media in higher education to obtain conceptual framework for improving students' learning especially in higher education. This is achievable through social media applications like Facebook, YouTube, blogs, and twitters. The purpose of social media in higher education includes enhancing communication and

information sharing among both teachers and students [4]. For instance, Facebook is used to initiate contact with course peers. Students regard social media as one of the three key means used in facilitating educational experience, alongside face-to-face meetings and using the learning management systems [5].

According to [6] there is a demand for more effective collaborative learning which is best made certain through smooth communication between students and teachers concerning their training. Students are not convinced with existing platforms for interacting using their teachers about training however the students are receptive to new social media which will facilitate learning with teachers [7]. The University students in Malaysia, although exposed to social media programs and appear to become so comfortable using them for learning reasons, yet students are discovered to be passive instead of active integrating social media in mastering. While integrating social media in collaborative learning it's been recognized that students do not know even colleagues who reported very negative encounters using the mediums, that the thought of utilizing a social media for collaborative learning appeared appealing to them. Similarly, [8] analyzed Facebook use among students and found few good examples of collaborative learning. Rather, students centered on swapping practical and academic information and encounters and support. Thus the basic aim of this research is to identify the characteristics and factors that will be used by social media users in higher education for improving students' satisfaction through collaborative learning. Part 2, social media use include the, academic use and benefits of social media, Part 3 the research mythology include the respondents, data collection procedures and conceptual framework and instruments. Part 4 the result and discussion finally Part 5 future work and conclusion.

## **II. SOCIAL MEDIA USE**

According to [9] seven concepts and practices in undergraduate education exist, which is derived from student's engagement. These concepts are: cooperation among students, faculty contact, active learning, and prompt feedback, emphasizing time focused, interacting high anticipation and enhancing diversity. Social media offers space for informal conversations and strengthening existing associations additionally to create completely new ones with students of comparable interests and research areas, [10]. Another frequently reported advantage of social media is its potentials of facilitating information distribution. For instance, blogging tools are used by many people students to disseminate information within their area and also to everyone, although using social media in scholarly towns has introduced benefits, some limits and concerns are also elevated. Nevertheless the most reported obstacles to using social media in scientific studies are the possible lack of time for it. The relevance of social media to Educational success has been an issue of interest in both learners and teachers. It has been argued that social media programs share most of the characteristics of excellent education technologies, for example enabling peer feedback and matching the social contexts of learning, [11].

The conversational, collaborative and communal characteristics of social media services are thought to reflect a lot of what is proven to be good types of learning, so that they are shared and encourage active participatory role for customers [12]. Social media could also benefit students by enabling them to enter new types of collaborative learning according to their interests as well as for their immediate educational success argues that, Facebook have proven that students invest their energy in building associations around shared interests and understanding. It's convinced some educationists to integrate social media for the conventional interaction and dialogue between students and instructors. According to [13], some also have welcomed the capability of social media services to provide teachers a forum for simple media and positive networking with students.

In addition, [14] looked into virtual learning conditions, namely, Facebook, and YouTube, sites that students and researchers frequent, worked with, shared, planned and urged reference and knowledge consider the task to become more visible during these conditions. According [15] students' utilization of Facebook in the University of Cape Town, in addition to lecturer engagement with students through the new social media networking have proven a positive advantages in using Facebook in learning and teaching, Particularly for educational development among micro-

communities. Through social media students can share helpful information along with others around the world. Using the elevated utilization of social media, personal and work details are blurred [16]. However, contended that, by using the limitations between private and business clouding, a brand new kind of organization emerges. Professionals see the benefits of using social media in gathering information and growing the network. For instance the organizations marketing, relationship building and understanding discussing are advantages [17].

### **2.1 Academic use of Social Media**

The advantages of social media designed for academic gains seem to become a market for a lot of scientists in education and social sciences. To concur with this particular [18] keeps that; many scientists have addressed different regions of using social media networking at various academic and social levels. The accessible literature on social media submits helpful suggestions for applying in greater education. This clearly indicates that, the usage of social media by Students University is an interesting area of research for educationists and social scientists. Similarly, [19] added that, the accessible literature consists of advantageous styles and designs of utilizing it at University level. It describes the development of contents and fewer focuses regarding how to share, interact, collaborate and socialize by its use. Thus there's another reason to warrant using social media in greater education. That usage was confirmed by maintaining setup, which is accustomed to enhance study encounters of students by provision of e-support services for them. According to [20] maintains that, certainly there are prospective benefits of institutions that might be acquired by using social media networking for hooking up with current and prospective students. However, [21] says that, the rapid pace from the change has brought to a lot of institutions not creating strategies for using social media prior to using of programs.

According to [22] opined that, student's engagement signifies both time and effort students purchase educationally purposeful activities and indicates that because peers are extremely influential to student learning and values development, educational intuitions should make an effort to harness and shape this influence to ensure that it's educationally helping to strengthen academic anticipation. The primary advantages of choosing social media to aid learning and teaching won't be fully recognized until there's a much better knowledge of the way the social character of those social media assets may be used to lure low engaged or disengaged students to have interaction in educationally purposeful ways using their high-engaged peers and teachers to ensure that it adds to the prosperity of a lot of students [23].

### **2.2. Uses and Benefits of Social Media**

Social media has rapidly designed a significant effect on the area of higher education. According to [24] Cited Ewan McIntosh as saying social media in most of its forms has started to transform the way in which instructors teaching, students learning, education managers lead learning and can continue doing so. Because of a mix of the functional utilization of social media by college and college students and also the need for institutions of greater education to satisfy students where they previously are schools and colleges are progressively anxious to build up a social media existence.

Social media networking has been employed for an array of activities, including growing the general university experience [25], growing educational possibilities [26], making admission choices [27], library services, counseling students after tragedies [28], performing courses in second life [29], and recruitment [30]. Additionally, students' organizations and students' life departments are progressively depending on social media to advertise occasions as well as their activities [31]. Institutions and people also have begun experimentation with novel methods for using social media in an array of greater educational functions. Among others, this includes the City University of New York's development of a closed social media networking for faculty, graduated students, and staff [32]. Using social media seemed to be associated with greater amounts of inspiration, affective learning, along with a better class atmosphere. An experimental study was carried out to examine the result of instructor self-disclosure through Facebook on student motivation, affective learning, and class climate.

### III. METHODS

The data for this study was collected by way of a survey questionnaire administered on 134 Undergraduate and postgraduate students of UTM during the 2012/2013 academic session. We tested the proposed hypotheses using a sample. The age-range of the respondents was between 18 to 36. The sample consisted of 41 males and 93 females. Students were instructed in the survey to offer information about their experiences in using social media through collaborative learning. A quantitative approach was used to draw the data for the study.

#### 3.1 Respondents

In this research 134 set of questionnaires was randomly distributed to postgraduate students of the Faculty of Computing (FK) in Universiti Teknologi Malaysia. SPSS application (Version-20) was used to analyze the data. The instrument used for this study was designed based on the objectives of the study. It was piloted and the Cronbach's alpha of the reliability and validity of the instrument was put at .790. This is acceptable and the instrument has met the reliability requirement for the study. The questions which are easy to understand and the answers were divided into four sections to make it clearer.

#### 3.2 Data Collection Procedures

A five-point Likert scale (1 for strongly disagree to 5 strongly agree) was applied in this study. The questionnaire was fine-tuned with reference to a pilot study carried out with students, and tested before-hand, examines the students' opinions about the use of social media through collaborative learning and students' satisfaction of using this technology. A questionnaire consisting of 56 items was designed, and a pilot test was conducted with 20 students and then a final survey was later conducted. Following minor revisions to the layout, the survey was administered at the end of the semester (June, 2013). Each participant was provided with a questionnaire and a brief background to the study.

The table on appendix shows the 28 items used to measure the constructs included in our framework. Interactivity with peers and the teacher was measured using a subset of four items from [33] Engagement was measured using three items adapted from, [34] Perceived ease of use and Perceived usefulness was measured using a subset of four items from, [43]. Collaborative learning was measured using four items adapted from, [35] and finally, students' satisfaction was measured using five items from, [36].

#### 3.3. Conceptual framework and Instrument

This study accounts for a brief discussion on the contents in the suggested framework for evaluating student's satisfaction of utilizing social media through collaborative learning in greater education at University is presented. However, this research finds that social media integration relates to the student's satisfaction of social media variables observed for utilization of the social media in greater education. The variables observed to be used of social media, in this study are: interactive with peers and teachers, engagement, perceived ease of use and perceived usefulness of use. Influence student's satisfaction because the dependent variable, are the students' perception as the independent variable. Similarly, a conceptual framework that identifies instruments by which using social media influences students' satisfaction through collaborative learning is supplied (see Fig. 1). We suggest that student awareness from the interactive with peers and teachers, engagement, perceived ease of use and perceived usefulness of use that derive from using of social media promote active collaborative learning and, which ultimately results in enhanced students' satisfaction.

Social media increases the quality of perceived interaction within the class both among students interaction with peers and between students and also the teacher interaction. Interaction is created like a critical aspect in the training process. It encourages students to have fun playing the class active collaborative learning [37], and also to create a sustained behavior participation in mastering activities the engagement [38]. The existence of these components is instrumental in improving collaborative learning and students' satisfaction.

### **3.3. 1. Interactivity with peers and teachers**

Traditional learning techniques can interrupt smooth interactions within the class [39]. Additionally, limited class time, rigid seating plans and students' reservations about speaking in class happen to be recognized as vital obstacles to high amounts of interaction [40]. However, advanced technologies have transformed how students and also the teacher interact within the class and it has provided new possibilities to boost interaction. Facilitating interaction is vital because it results in better and much more effective learning. Thus, it might be a vital source of success in education [41]. This idea has in the past been among the primary pedagogical issues within the class, specifically for bigger classes and technology-related courses. When interaction exists within the learning activity, students are not only seen more motivated to understand, but additionally more mindful, participative and more prone to exchanging ideas with other colleagues [42]. Consequently, interaction influences student learning final results [43].

### **3.3. 2. Engagement**

The engagement is dependent upon the interactions between the environment and also the individual, to ensure that social and academic interactions in class in order to modify students' awareness and engagement [44]. According to [45], engagement mediates the influence of curricular and training changes on student performance and accomplishments. Furthermore, as pointed out interactions between students along with the teacher (i.e. the social atmosphere) influences the engagement coded in the training experience.

### **3.3. 3. Social media to support collaborative learning (SSCL)**

Employing social media networking to aid collaborative learning (SSCL) is referred to as the computer network in education for encouraging the learners in mastering process and cooperates in groups through the group process, communication between students, coach, experts and place of work proprietors. The understanding and experience discussing is seen because the tools for understanding construction that is precise and matches the actual context in tangible existence [46].

### **3.3. 4. Perceived eases of use**

Perceived simplicity of use is related to the individual's thought that using the brand new technology requires less effort [47]. Perceived easy using social media is understood to be the extent that students think that using social media could be free from effort; the result of perceived ease of use of the social media on collaborative learning also perceived ease of use as you that a person thinks in the presence of an optimistic user performance relationship. The consumer perceives the system to become an ideal way of carrying out the duties [48].

### **3.3. 5. Perceived usefulness**

Perceived usefulness was understood to be "the degree that an individual thinks that utilizing a particular system would enhance his/her performance" [49]. Perceived usefulness of utilizing social media will boost their effectiveness within the class. Previous studies reveal that perceived usefulness helps in utilization of using social media on collaborative learning also perceived usefulness as you that a person thinks in the presence of an optimistic user-performance relationship. The consumer perceives the machine to become an ideal way of carrying out the duties [50].

### **3.3. 6. Student's satisfaction with collaborative learning**

Student's satisfaction with collaborative learning is definitely a result of the collaboration process and could be referred to mean the degree that students feel an optimistic connection to his very own collaborative learning encounters. students' satisfaction might have consequences on how students interact, for example whether everybody does his/her area of the work, whether group people can function with one another, whether group people stick to the job no fighting, no kidding around or an excessive amount of talking, and whether there's a great working atmosphere within the group [51].

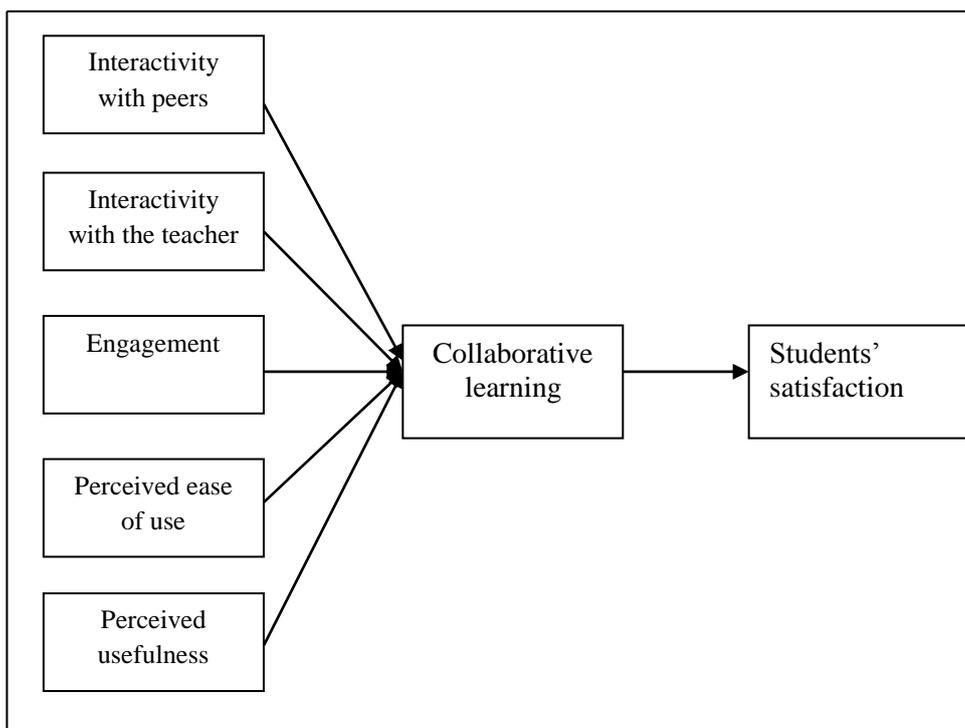


Fig.1. Conceptual framework

#### IV. RESULTS AND DISCUSSION

To analysis the instruments, the researcher employ the use of exploratory instruments analysis including interactivity with peers, interactivity with the teachers, engagement, perceived ease of use , Perceived usefulness, collaborative learning and students' satisfaction of using social media for collaborative learning in higher education.

##### 4.1. Demographic data

The respondents in this study according to their genders, are 41 male (32.3%) and 93 female participants (67.7%). From the participants, female participants are more than male participants. This isn't deliberate but due to the distribution of questionnaire. Participants' age ranges of the 36 participants (27.1%) is between 18- 20, 82 participants (61.2%) between 21-24 years of age, 14 participants (10.1%) between 25-30 years and a pair of participants (1.5%) or even more than 30 years.

##### 4.2. Reliability of the Variables

In the analysis done the final questionnaire, for the effectiveness of the research, alpha Cronbach value was calculated to make sure stability coefficient alpha from the total amount of the questionnaires was established, and also the stability coefficient for the sentences from the questionnaire (. 780). Table 2: implies that all of the variables had high reliability (a lot more than 79%) which reflects the effective from the data collected.

Table 1 Reliability Statistics

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | No of Items |
|------------------|--|-------------|
| 0.790            | .780   | 7           |

##### 4.3. Correlation Matrix

The letters INT-P stand for interactivity with peers, letters INT-T stand for interactivity with the teachers, letters ENG engagement, letters PEU perceived ease of use , letters PU Perceived

usefulness, letters CL collaborative learning and letters SS students' satisfaction of using social media for collaborative learning in higher education.

**Table 2** Correlation Matrix

|       | INT-P  | INT-T  | ENG    | PEU    | PU     | CL   | SS |
|-------|--------|--------|--------|--------|--------|------|----|
| INT-P | 1      |        |        |        |        |      |    |
| INT-T | .463** | 1      |        |        |        |      |    |
| ENG   | .439** | .542** | 1      |        |        |      |    |
| PEU   | .460** | .428** | .514** | 1      |        |      |    |
| PU    | -.007- | .150*  | .020   | .000   | 1      |      |    |
| CL    | .044   | .029   | .004   | -.045- | .283** | 1    |    |
| SS    | .366** | .347** | .396** | .392** | -.032- | .055 | 1  |

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

The result of Pearson correlation shows that there is statistically significant positive relationship between interactivity with the teachers and interactivity with peers ( $r = 0.463$ ,  $P < 0.01$ ). Results demonstrate that relationship between these two construct is moderate and interactivity with the teachers and interactivity with peer's combination contributing moderately towards students' satisfaction. Engagement correlation results with interactivity with peers ( $r = 0.439$ ,  $P < 0.01$ ) demonstrate weak positive relationship, while engagement results with interactivity with the teachers ( $r = 0.542$ ,  $P < 0.01$ ) demonstrate moderate positive relationship showing that these two construct are contributing moderately towards student satisfaction.

Correlation of Perceived ease of use with interactivity with peers ( $r = .460$ ,  $P < 0.01$ ) and interactivity with the teachers ( $r = 0.428$ ,  $P < 0.01$ ) demonstrate weak positive relationship, while Perceived ease of use relationship with engagement ( $r = 0.514$ ,  $P < 0.01$ ) demonstrate moderate relationship. Purified usefulness is negatively correlated with interactivity with peers ( $r = -0.007$ ,  $P < 0.05$ ) demonstrate that this significantly weak relationship contributing negatively towards student satisfaction. While purified usefulness correlation with interactivity with the teachers ( $r = .150$ ,  $P < 0.01$ ), engagement ( $r = 0.020$ ,  $P < 0.05$ ) and perceived ease of use ( $r = 0.000$ ,  $P < 0.05$ ) demonstrating very weak relationship. Similarly, construct of collaborative learning correlation results with interactivity with peers ( $r = .044$ ,  $P < 0.10$ ), interactivity with the teachers ( $r = .029$ ,  $P < 0.10$ ) and engagement ( $r = 0.004$ ,  $P < 0.10$ ) demonstrate weak positive non-significant relationship. While collaborative learning is negatively correlated with perceived ease of use ( $r = -.045$ ,  $P < 0.10$ ) and significantly positively correlated with purified usefulness ( $r = .0283$ ,  $P < 0.05$ ). These results highlight that collaborative learning only relationship with purified usefulness is contributing towards student satisfaction.

While the dependent variable i.e. Student Satisfaction has negative correlation with purified usefulness ( $r = -.032$ ,  $P < 0.10$ ) and very weak positive correlation with collaborative learning. These results shows that construct of purified usefulness and collaborative learning are not contributing sufficiently towards student's satisfaction. Correlation results of satisfaction with interactivity with peers ( $r = 0.366$ ,  $P < 0.01$ ); interactivity with the teachers ( $r = 0.347$ ,  $P < 0.01$ ); engagement ( $r = 0.396$ ,  $P < 0.01$ ) and perceived ease of use ( $r = 0.392$ ,  $P < 0.01$ ) demonstrate weak positive relationships.

#### 4.4. Discussion

In line with the outcome of this study to understand students' satisfaction of social media in higher education, the following have been discovered: To acquire a general satisfaction of social media along with a high number when it comes to satisfaction of students since it encourages and facilitates student utilization of social media for collaborative learning, and boost the education and experience with a student. In terms of satisfaction with interaction with peers on social media and acquired a higher percentage when it comes to satisfaction for University students since it influences it to be simple for student to go over questions along with other students through social

media, whether from house or lectures or perhaps in the library. Also causes it to be easy that i can share the data and access simple to the learning society. In terms of satisfaction with interaction using the instructors of utilizing social media and acquired a typical percentage when it comes to satisfaction for University students since it provides those more understanding form instructors, and academic achievement in greater education.

In terms of satisfaction engagement of utilizing social media and acquired a higher percentage when it comes to satisfaction for University students to engagement within the class. Since the social media provides sufficient content and social media provides up-to-date content. However, students recommended provide helpful content that matches their demands more to match we've got the technology. also the satisfaction with perceived simplicity of use of utilizing social media and acquired a higher percentage when it comes to satisfaction for University students since it is it causes it to be a helpful learning tool, enhance student with other people effectiveness, and contents are informative. For the perceived usefulness of utilizing social media and acquired a minimal percentage when it comes to satisfaction for university students. However, students recommended that they're getting difficulty, within the weakness from the Internet in housing and never within the labs and also the library, so the whole process of using social media for collaborative learning no stable. Finally, satisfaction with collaborative learning of social media and acquired a minimal percentage when it comes to satisfaction for university students. Since it helps make the students feel confident enough to presenting the social media contents for collaborative learning , as well as the student no feel operating social media functions within the class, Which, for insufficient experience with a student. It's recommended give students courses in social media in the universities.

#### **4.5 Future Works**

Future studies should find alternative methods of collecting information (e.g., increase of population and many universities). More studies to measurement factors have an effect with collaborative learning to improve students' satisfaction and academic performance for them, time spent on social media use per day, also the multitasking perceptions. And determining the most accurate ways to collect these data will enhance the validity of future studies findings.

### **V. CONCLUSION**

The primary motivation of this study was to determine the nature of the relationship between student' satisfaction and using social media through collaborative learning ,relates to other key factors, such as interactive with peers, interactive with teachers, engagement, perceived ease of use and perceived usefulness, that also seem to influence collaborative learning .The results provide strong support for our proposed framework and they reveal that the high level of interactive, engagement of using social media due perceived ease of use, but perceived usefulness need more motivation to use social media in the class among students for collaborative learning.

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### **APPENDIX: Using social media for collaborative learning**

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Interactivity with peers (INT-P)

INT-P1      Using the social media in class facilitates interaction with peers.

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|        |   |
|--------|---|
| INT-P2 | Using the social media in class gives me the opportunity to discuss with peers. |
| INT-P3 | Using the social media in class facilitates dialog with peers.                  |
| INT-P4 | Using the social media in class allows the exchange of information with peers.  |

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Interactivity with teachers (INT-T)

|        |   |
|--------|---|
| INT-T1 | Using the social media in class facilitates interaction with the teacher.             |
| INT-T2 | Using the social media in class gives me the opportunity to discuss with the teacher. |
| INT-T3 | Using the social media in class facilitates dialog with the teacher.                  |
| INT-T4 | Using the social media in class allows the exchange of information with the teacher.  |

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Engagement (ENG)

|       |  |
|-------|--|
| ENG 1 | By using the social media this class has favored my personal relationships with my peers and teachers. |
| ENG 2 | By using the social media In this class, my peer and faculty interactions made me feel valuable.       |
| ENG 3 | By using the social media I felt that my opinions have been taken into account in this class.          |

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Using social media perceived ease of use (PEU)

|       |   |
|-------|---|
| PEU 1 | I feel that using of social media will be easy.                             |
| PEU 2 | I feel that using social media will be easy to incorporate in my classroom. |
| PEU 3 | I feel that using social media makes it easy to reach peers.                |
| PEU 4 | I feel that using social media makes it easy to reach teachers.             |

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Using social media perceived usefulness. (PU)

|      |  |
|------|--|
| PU 1 | I believe that using social media is a useful learning tool.                                       |
| PU 2 | I feel that using social media will help me to learn more about my class.                          |
| PU 3 | I believe that using social media enhance my effectiveness.  |
| PU 4 | I believe that using social media will improve students' satisfaction with collaborative learning. |

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Using social media for collaborative learning (CL)

|      |  |
|------|--|
| CL 1 | I felt that using social media for collaborative learning in my group was effective.                                     |
| CL 2 | I was able to develop research skills through peer collaboration.  |
| CL 3 | I was able to develop new skills and knowledge from other members in my group.   |
| CL 4 | Collaborative learning experience in the social media environment is better than in a face-to-face learning environment. |

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Students' Satisfaction (SS)

|      |  |
|------|--|
| SS 1 | I really like working in collaborative group with my teammates.                          |
| SS 2 | Interacting with the other members can increase my motivation to learn.                  |
| SS 3 | I have benefited from interacting with my teammates.                                     |
| SS 4 | I enjoy the experience of collaborative learning with my teammates.                      |
| SS 5 | Satisfaction that working together can help me gains a deeper understanding in my study. |
| SS6  | I feel satisfaction with peers and teachers interaction within the group.                |
| SS 7 | Overall, I am satisfaction with collaborative learning                                   |

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