



## Students' Perceptions of Social Networks Platforms use in Higher Education: A Qualitative Research

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### ABSTRACT

The use of social networks platforms for interactions, cooperative learning, and knowledge sharing for sharing information to improve students' educational achievement seems to be one of the more widely examined topics in the Information Systems (IS) domain compared to the adoption of other technologies. However, as social networks platforms use distracts from studies and affects study habits, using social networks platforms can result in academic difficulties. Therefore, this research seeks to identify the interaction elements such as interaction with peers, cooperative learning and engagement for sharing information and perceptual elements such as perceived usefulness and perceived ease of use social networks platforms to improve educational achievement among students. This study is designed in accordance with the theory of constructivism. Qualitative research was applied to interviews conducted with a sample of 37 students. Data were analyzed using SPSS Statistics 20, and NVivo 11 was used for qualitative coding to investigate relationships between variables. The study found that interactions among students and interactions with lecturers enhance learning significantly. Additionally, the perceived overall benefits of using media platforms for learning and knowledge sharing that enhances satisfaction and affects educational achievement were high. Furthermore, the impact of social networks platforms use for education and knowledge sharing was also significant. Finally, the results indicate that students are satisfied with the use of media platforms as a means of learning and knowledge sharing. Findings show that using social networks platforms for learning and knowledge sharing should positively affected educational achievement of students.

**Key words:** Social networks platforms, Interactions, Cooperative Learning, Educational Achievement, Qualitative Survey.

### 1. INTRODUCTION

The rapid growth of social networks platforms highlights the need for more investigation of how to use these sites in

education. Moreover, the use of social networks platforms and its influence on the academic achievement of students in higher education institutions was a main concern of the current work. According to Akyildiz and Argan [1], social networks platforms are rarely used by students in education, especially when it comes to interactive and cooperative learning [2]. This explains the negative impact that social networks platforms have on students' educational achievement [3]. In the literature, several studies have yielded models and frameworks showing the negative influence of social networks platforms on certain aspects of education, such as student cooperative learning and students' educational achievement and knowledge sharing for sharing knowledge and information [3, 4]. Also, little qualitative research has been performed in the area of social networks platforms in Malaysian higher education [5, 6, 7]. Therefore, this article adds empirical evidence on students' educational achievement through social networks platforms use for interactions, cooperative learning, and knowledge sharing in higher education and contributes to the knowledge base of qualitative research publications, research designs, data collection techniques, and analytic approaches the contributions of this study can be summarized as follows:

- The results of this research demonstrate that the use of social networks platforms was motivated by knowledge sharing and learning.
- This research adds to the literature on the effects of social networks in cooperative learning on educational achievement.
- This research explored the elements of social networks platforms that impact educational achievement of students.
- This research investigated how social networks platforms can be used for educational purposes.
- The results of this research revealed that the interaction encouraged by social networks leads to learning and knowledge sharing, which in turn improves student satisfaction and academic achievement of students.

The current study is designed to explore the impact of social networks platforms use on students and their educational

achievement by investigating and discussing the different factors, either interactive or perceptual, that might explain the students' social interaction. More specifically, the contributions of this paper are both theoretical and practical. Regarding the former, this paper uses both the Technology Acceptance Model (TAM) and research constructivism theory when discussing the use of social networks platforms in cooperative learning and knowledge sharing. As to the latter, the outcomes of this research on how the use of social networks platforms impacts students' educational achievement might benefit decision-makers and leaders such as the heads of departments, faculties, and research management units in universities, as well as divisions of the Ministry of Higher Education. Therefore, it is highly recommended that students be encouraged to make use of social networks platforms in education as this facilitates interaction through collaboration and deliberation among stakeholders [8]. In detail, this paper aimed at identifying the different interactive and perceptual factors that play a role in cooperative learning. The investigation zooms in on the aspects of interactions, cooperative learning, and knowledge sharing in the light of previous relevant literature in Section. Section 3 showed the research methodology, Section 4 shown the results and discussions. Finally, discussion, implications and limitations with future work shown in Section 5.

## 2. OPERATIONAL DEFINITION OF VARIABLES FOR THIS RESEARCH

**Constructivism:** The central principles of this approach are that learners can only make sense of new situations in terms of their existing understanding. Learning involves an active process in which learners construct meaning by linking new ideas with their existing knowledge [9]. Also, Constructivists of different persuasion hold a commitment to the idea that the development of understanding requires active knowledge sharing on the part of the learner [10]. **Interactive with peer:** Interactivity is learning styles represent preferences for one mode of adaptation over others & Interactive learning is a pedagogical approach that incorporates social networking and urban computing among students [11]. **Interactive with supervisor or lecturers:** Interactivity is learning styles represent preferences for one mode of adaptation over others & Interactive learning is a pedagogical approach that incorporates social networking and urban computing with lecturers and supervisors [11]. **Cooperative learning:** Active cooperative learning is a situation in which two or more people learn or attempt to learn something together. Unlike individual learning, people engaged in active cooperative learning capitalize on one another resources and skills [11, 12, 13]. **Knowledge sharing:** The degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education [14,15]. **Technology Acceptance:** An information systems theory that models how users come to accept and use a technology [16]. **Perceived usefulness:** The extent to which a person believes that using the system will enhance his/her job

performance [17]. **Perceived ease of use:** The extent to which a person believes that using the system will be free of effort [17]. **Social networks platforms** is defined as forms of electronic communications (as Web sites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos) [18]. **Students Satisfaction:** Students are successful in the learning and are pleased with their experience [19]. **Educational achievement:** Educational achievement is the outcome of education the extent to which a student, teacher or institution has achieved their educational goals [20]. Educational achievement is as a demonstration of a student's level of competence and mastery of a subject through completion of multiple assessment tests of competence in a particular domain of education [21].

## 3. PREVIOUS RELEVANT LITERATURE

Social networks platforms definition has been constantly changing with potentially enhanced features to meet user demands and specifications. Conversely, social networks are particularly established to meet diverse niche markets to serve specific user's interest. Sites for social networks platforms have the function and capabilities of social networks platforms making it easier for its users to send mails, add friends, create personal profiles, be part of groups, develop applications, content, discover other users [22]. The current internet, sometimes called Web 2.0, allows for more interaction, collaboration and modification by its users [23] than its predecessor, web 1.0, which was more stagnant in character and less interactive. They consist of numerous and diverse items as listed in [23], such as active cooperative learning via Facebook, Blogs and YouTube. Through social networks platforms students can communicate, interactively, learning and knowledge sharing for sharing information in a social environment [24]. Higher education has drawn widespread attention from the research community on the implementation of social networks platforms curriculum for teaching and learning purposes. Active cooperative learning and motivating cognitive skills reflection and metacognition is a fundamental of social networks platforms for active cooperative learning in higher education [25]. Some studies have demonstrated how a higher level of learning was achieved as a result of using social networks platforms for student assignments [26]. They also mention that their learners preferred viewing to contributing, and thus a community, cooperative learning and knowledge sharing spirit must still be developed to achieve the goals of education. Therefore, the use of social networks platforms facilitates communication between instructors and students [27]. This is also supported by Fusch [28], who claimed that the use of social networks platforms in education equals the importance of learning objectives, and that they must be frequently used to increase the quality of interactive learning. This knowledge sharing results in improving students' awareness and knowledge sharing, and it is mostly dependent on the two aspects of the environment and individuals, as well as the knowledge sharing between them [29]. According to [30, 31] stated that the academic achievement in Malaysia

concluded that most students agree that the use of social networks platforms for learning has a positive impact on their academic achievement. Nonetheless, despite the positive influence of social networks platforms tools, a study of Twitter indicated that there might be a negative influence as well on student knowledge sharing and academic achievement [32]. These negative impacts were also reported by studies [33, 34] that found that the grade point average of students was negatively influenced by the time spent on Facebook. Other studies [35, 36] stated that the use of social networks platforms has become one of the basic parts of the educational environment. Most studies in the area of social networks platforms use highlighted the two aspects of learning environments and students' satisfaction [37]. In the same line of research, certain variables were identified as predictors of a user's satisfaction: perceived usefulness and perceived ease of use [27]. These two variables were also reported to have a positive influence on interactions among students, supervisors, and instructors apparent in certain areas like problem-solving abilities and consulting with experts [83, 39]. In their study, Pozzi, Ceregini, Ferlino, and Persico [40] concluded that the use of interactive with peer positively influenced cooperative learning and students' organizational matters. It was also reported that the use of social networks platforms facilitated cooperative learning, as the students engaged interactively in exchanging ideas [41]. Lariscy, Avery, Sweetser, and Howes [42] reinforced this idea in the context of using Facebook. Ainin, Naqshbandi, Mogavvemi, and Jaafar [43] and Al-Rahmi et al. [44] also highlighted the positive relation between Facebook usage and students' performance. Consequently, this research enriches the current literature on the use of social networks platforms for learning and knowledge sharing which is still emerging. It also contributes in practice by exploring the factors of social networks platforms use to affect the successful learning performance of research students for harnessing learning in the higher education context. The importance of this research linking social networks platforms with research students at universities in collaborating learning and knowledge sharing among students and faculty members and to obtain more knowledge and knowledge sharing requires more exploration of factors influencing users in such educational environments. Additionally, social networks platforms are growing remarkably which highlights the need for further investigation of the use of these sites for educational purposes. Moreover, this study contributes to the understanding of the effect of the use of social networks platforms on academic achievement through exploring interaction and perceptual elements which provide insights into social and interaction research students by discussing such existing factors in the context of social networks platforms use.

#### 4. RESEARCH METHODOLOGY

Regarding the employment of the qualitative approach in the IS field, the qualitative approach has gained interest and acceptance by IS researchers and has been employed significantly in the IS discipline [45, 46]. In the context of the

IS field, qualitative research “attempts to understand the complexities of the unstructured nature of information systems implementations”; this lack of structure is primarily due to “the complex interactions between social and technological factors within education” [47]. Based on earlier studies [7, 13, 48], discusses the methodology used in the current work. Interviews were held with 37 students from Universiti Teknologi Malaysia. The first part elicited the respondents' demographic information, such as their age, gender, country of origin, and program of study. The aim of this section is to enable the detection of any differences in responses based on these characteristics. Data collection was based on three aspects of the central issue: interactions, cooperative learning, and knowledge sharing. The influence of these aspects on the educational achievement of students was the main focus of this data collection. A survey of this research was used to collect data from students of different nationalities. It included 19 items designed to investigate the cooperative learning generated by the use of social networks platforms tools and its impact on students' educational achievement. The textual data were inter-rated using the NVivo program and a confusion matrix as recommended by Marques and McCall [49]. Inter-rater reliability was 86.4%, which is acceptable by normal standards [49]. The researchers discussed any differences and decided them by agreement. The second part was designed to elicit data on the subject of the research. This part contained subsections on students' thoughts on the use of social networks platforms. In particular, some items concerned the benefits to the students of using social networks platforms in terms of their interaction with their peers and instructors. Other items measured the relationship between the use of social networks platforms and other aspects like cooperative learning, students' educational achievement, students' resources and research skills, interactions with peers and lecturers, and knowledge sharing to sharing information and knowledge with the Malaysian higher education institution. Two software packages were used to analyze the data, IBM SPSS Statistics 20 and NVivo 11. This paper followed the exploratory research method in collecting and analyzing the data. That method is mainly used for data exploration to help develop new theories and understandings. Creswell and Clark [50] state that researchers resort to qualitative research when investigating something that needs more in-depth exploration. Leedy and Ormrod [51] add that this method is also used to investigate an issue from the perspective of individuals. The inductive approach of grounded theory was used to analyze the free-text survey questions [52]. The answers of these questions were analyzed into categories using a system of open coding associated with constructivism.

#### 5. RESULTS AND DISCUSSION

The results of a descriptive analysis and compared for construct validity of cooperative learning and knowledge sharing as a result of social networks platforms use and its influence on educational achievement of students. The major findings are presented below:

### 5.1 Demographic data of respondents

As mentioned above, the first part of the survey was designed to collect demographic data of participants, such as their countries of origin, level of education, and programs of study as shown in Table 1. The respondents shared the characteristic of using different tools of social networks platforms to achieve cooperative learning. There were 16 males (43.2%) and 21 female respondents (56.8%). Moreover, their age ranges are as follows: 4 respondents (10.8%) were 23–30 years old; 11 (29.7%) were 31–35 years old; and 22 (59.5%) were 36 years and above. In terms of nationality, 8 respondents (21.6%) were

African, 15 (40.6%) were Middle Eastern and the remaining 14 (37.8%) were Malaysian. The greatest numbers of respondents were from the Middle East, followed by Malaysia, and the least from Africa. This distribution resulted from the random selection of participants. About eleven (29.7%) of the participants were enrolled in master programs and 26 (70.3%) were enrolled in PhD programs. That is, the PhD students outnumbered the master’s students. This was because it was easier for the researchers to schedule interviews with PhD students in their offices, the library, or their labs, while master’s students were busy with classes.

**Table 1:** Demographic Data of Respondents

Demographic Variables Category	Sample (n = 37)		Demographic Variables Category	Sample (n = 37)	
	Frequency	Percent		Frequency	Percent
<b>Gender</b>			<b>Program of Study PhD</b>		
Male	16	43.2	Master’s	26	70.3
Female	21	56.8	Total	11	29.7
Total	37	100.0		37	100.0
<b>Origin</b>			<b>Age</b>		
Malaysia	14	37.8	23–30	4	10.8
Middle East	15	40.6	31–35	11	29.7
Africa	8	21.6	36 and above	22	59.5
Total	37	100.0	Total	37	100.0

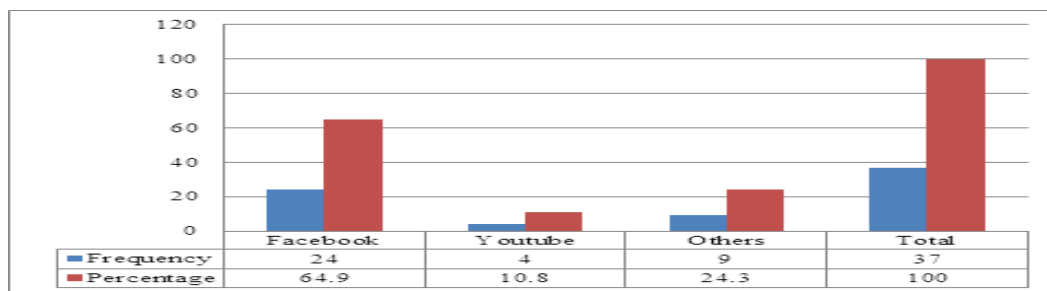
### 5.2 Using social networks platforms

This part of the questionnaire includes three main questions concerning the use of social networks platforms and its influence on students’ educational achievement through cooperative learning. The subjects of the questions are as follows: the use of social networks platforms for interactions among students, interactions with lecturers, and knowledge sharing with peers to enhance students’ educational achievement. The results are shown in the following sections.

#### 5.2.1 Using social networks platforms for interactions among students

Results showed that there are many social networks platforms tools used for interactions among students, such as LinkedIn,

Facebook, Twitter, LinkedIn, Mendeley, Blogs, and YouTube, as illustrated clearly in Figure 1. It may be observed that Facebook was the highest-used among the tools of social networks platforms, used by 24 (64.9%) of all the participants, followed by LinkedIn, Twitter, blogger sites, forums, wiki, email, and WhatsApp, reported by 24.3% of the participants. The other four participants (10.8%) reported that they use YouTube as their preferred social networks platforms. Thus, the common social networks platforms tool to use for interactions among students to enhance cooperative learning is Facebook, which makes it easy to find information.



**Figure 1:** Social networks platforms use for interactions among students

The basis of using social networks platforms to determine where the students learn social networks platforms, the place that students use social networks platforms, the purposes of using social networks platforms, the best tools of social networks platforms used for education, the best tools of social networks platforms used for sharing knowledge and information, the best tools of social networks platforms used

for discussing, the best tools of social networks platforms used for publishing sources, the motivation of using social networks platforms and the rate of using social networks platforms for learning and knowledge sharing have been identified as the interaction, cooperative learning with knowledge sharing and perceptual factors perceive ease of use, perceived usefulness relevant to use social networks platforms in higher education.

### 5.2.2 Using social networks platforms for students' interactions with lecturers

Figure 2 below shows the use of social networks platforms tools for the purpose of interaction with lecturers through Facebook, YouTube, Email, Blog, and LinkedIn. The majority of respondents used Facebook, followed by blogs, YouTube, LinkedIn, and email: 23 (62.2%), 7 (18.9%), 3 (8.1%), 3 (8.1%), and 1 (2.7%) respectively.

The tools of social networks platforms they most used in learning and knowledge sharing that influenced their educational achievement as follows: Facebook, blogs, YouTube, LinkedIn, and email. One of the major findings of the current research is that Facebook was reported as the dominant social network platform tool used by these respondents for learning and knowledge sharing.

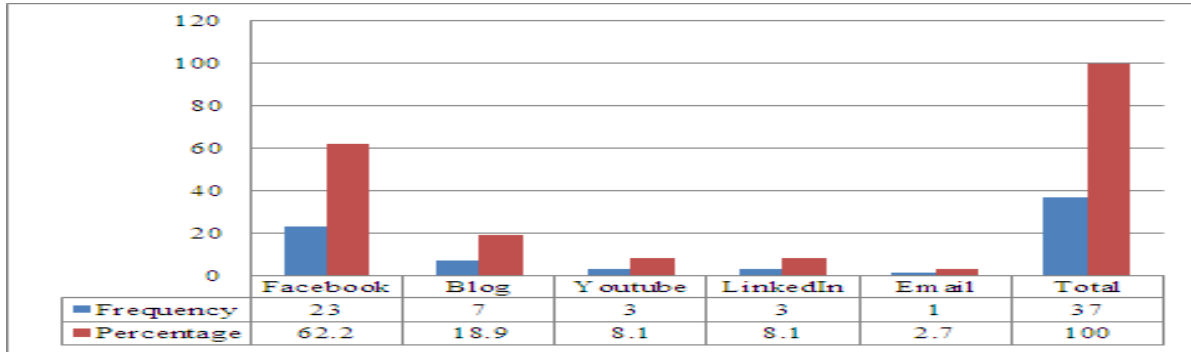


Figure 2: Social networks platforms use for interaction with lecturers

The significant proportions of the respondents are using social networks platforms for research and educational purposes such as information sharing and searching for knowledge from lecturers or supervisors. It was found that the best tools of social networks platforms used for active cooperative learning are Facebook followed by Blog and YouTube.

### 5.2.3 Using social networks platforms for students' knowledge sharing with peers

In terms of knowledge sharing, the respondents identified several social networks platforms tools as highly involved, such as Facebook, Research Gate and Skype. As shown in Figure 3, both Research Gate and Skype were two tools identified by students for their roles in facilitating knowledge

sharing, with six (16.2%) reported that they mostly use Mendeley for the purpose of knowledge sharing, three (8.1%) mentioned YouTube, and five (13.5%) used Wiki for the same purpose. while one (2.7%) respondent for each tool, the remaining two students (5.4%) reported that they rarely or never used social networks platforms tools for the purpose of knowledge sharing. These data confirm that students mentioned both Facebook and Mendeley as the most-used social networks platforms tools for knowledge sharing that influence their educational achievement. The respondents identified six social networks platforms tools as those they most often used to effect knowledge sharing.

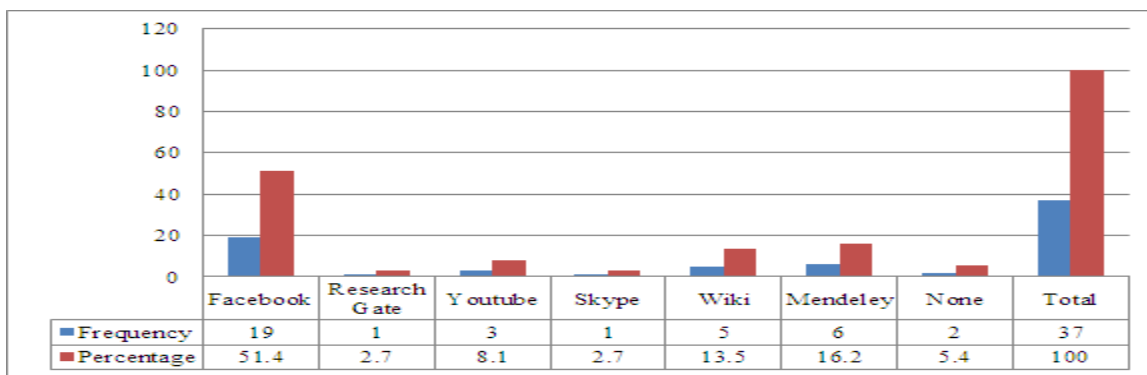


Figure 3: Social networks platforms use for knowledge sharing

The best tools of social networks platforms used for knowledge sharing among students for sharing knowledge and information are Facebook, Research Gate, YouTube, Mendeley and Wiki; the best tools of social networks platforms used for discussion is Skype; and the best tools of social networks platforms used for publishing sources is Wiki. Thus, the motivation of using social networks platforms is that

social networks platforms make it easy to obtain knowledge and information.

### 5.3 The Technology Acceptance Model and Overall Benefits of Social networks platforms Use

This part illustrated the influence of social networks platforms, its perceived usefulness, and its impact on the different groups

of users, including lecturers, peers, supervisors, and students. The results are reported in the sections below.

**5.3.1 Perceived usefulness of social networks platforms**

Table 2 on the perceived benefits of social networks platforms show that 30 participants (81.1% of the sample) reported that the use of social networks platforms helps them in sharing knowledge. Two participants (5.4%) stated that the use of social networks platforms made it easy for them to share information. The use of social networks platforms was also reported to be helpful in increasing educational achievement

(4.5%), facilitates interaction (2.7%), flexibility of discussion (2.7%), and remote communications (2.7%). From these data, it noticed that sharing knowledge was the most reported outcome or benefit of using the various tools of social networks platforms to create an environment of cooperative learning and influencing students’ educational achievement. Other benefits can be summarized as the exchange of information, increases in performance, interaction enhancement, flexibility of discussion, and remote communications among both lecturers and students.

**Table 2:** Perceived Usefulness of Social networks platforms

Perceived Usefulness	Frequency	Percentage
Increase knowledge sharing	30	81.1
Enhance exchange of information	2	5.4
Increase educational achievement	2	5.4
Facilitates interaction	1	2.7
Flexibility of discussion	1	2.7
Remote communication	1	2.7
<b>Total</b>	<b>37</b>	<b>100.0</b>

According to interviews with students the reason for this result can be that the research students do not have enough experience. In addition, some respondents have suggestions to make on usefulness of social networks platforms for active learning and knowledge sharing (research groups and peers or with lecturers and supervisors) for research purpose or for education purpose. However, some of respondents say it should be used for uploading published papers, for creation of awareness between students, for sharing of resources and information and discussion forum. Some respondents also suggested it should be used for creating special groups for active cooperative learning and knowledge sharing, and used for education purposes and for research purposes while affecting active cooperative learning and knowledge sharing, censoring of materials uploaded and easy access to material.

**5.3.2 Perceived ease of social networks platforms use**

Regarding the perceived ease of using social networks platforms tools shows that 18 participants (48.8% of the sample) reported that the use of social networks platforms ease

to helps them in facilitate discussions. Also, shows that four (10.8%) of the students indicated that perceived ease has an influence on their educational achievement through cooperative learning. Six respondents (16.2%) stated that this ease increase interactive. The percentages of respondents mentioning its impact on the exchange of information, students’ communication with peers, and students’ ability to share knowledge were (8.1%), (2.7%), and (8.1%), respectively. Only two participants (5.4%) stated that ease of using social networks platforms does not have an impact on cooperative leaning and hence no influence on their educational achievement. These data indicate that the majority of the students think that ease of use has impact on cooperative learning and can increase students’ educational achievement. Statistics also show that this variable positively influences other areas, such as interactions between research students and their lecturers and supervisors, the exchange of information, cooperative learning, and knowledge sharing between research students and their lecturers and supervisors.

**Table 3:** Perceived Ease of Use of Social networks platforms

Perceived Ease of Use	Frequency	Percentage
Facilitate discussions	18	48.8
Enhance cooperative learning	4	10.8
Increase interactive	6	16.2
Exchange of information	3	8.1
Students’ communication with peers	1	2.7
Share knowledge	3	8.1
No benefits	2	5.4
<b>Total</b>	<b>37</b>	<b>100.0</b>

The effect of perceived ease of use social networks platforms via students for learning and knowledge sharing to affect educational achievement of students has been proven. This research may refer to research students’ belief that using social

networks platforms would bring positive consequences by ease of use. Thus, perceived ease of use of social networks platforms increases satisfaction of students will affect the knowledge sharing and educational achievement. However,

some of respondents say it should easy to use for facilitate discussions, enhance cooperative learning, increase interaction, exchange of information, students' communication with peers and share knowledge.

**5.3.3 Perceived overall benefits of using social networks platforms**

Table 4 illustrates the responses of students related to their benefits from using different tools of social networks platforms in their knowledge sharing and interaction with their supervisors and instructors to create a better environment for cooperative learning. Twenty-seven (73%) of the students agree that the use of social networks platforms brings many benefits and encourages cooperative learning, leading to better knowledge sharing among themselves and their lecturers.

**Table 4:** Perceived Overall Benefits of Using Social networks platforms

Perceived Benefits	Frequency	Percentage
Increase knowledge	27	73.0
Facilitate interaction	3	8.1
Facilitate discussion	4	10.7
Affect research skills	1	2.7
Know experts	2	5.4
<b>Total</b>	<b>37</b>	<b>100.0</b>

The effect of interaction among students with active cooperative learning to affect learning performance of research students through using social networks platforms in this study may refer to students' and researchers' belief that using social networks platforms would bring positive consequences by cooperative learning. Thus, active cooperative learning increases interaction with research group members and influences learning performance of research students by using social networks platforms. The results suggest that interaction on using social networks platforms may increase knowledge, facilitate interaction, facilitate discussion, affect research skills and know experts will also influence learning performance of students.

**5.4 Use of Social networks platforms Tools to Affect Students' Educational achievement**

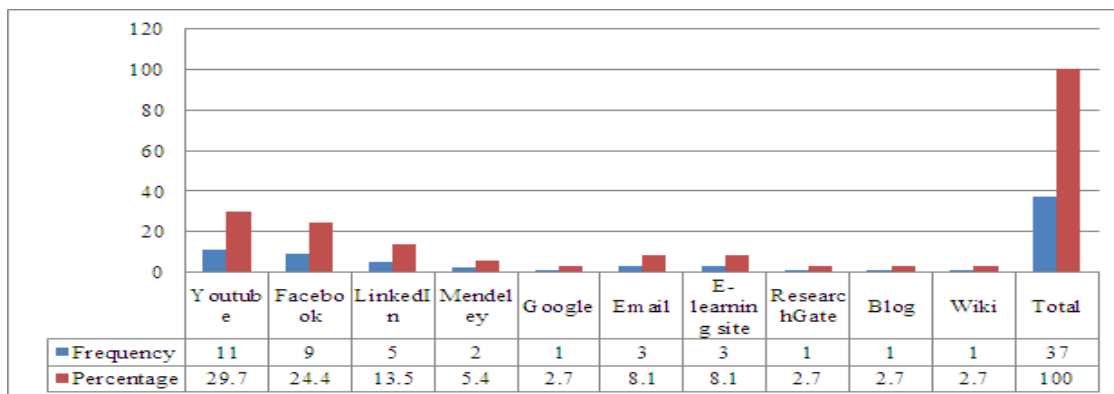
This section provides the analysis and the findings of the three main questions concerning the relation between social networks platforms and the enhancement of students'

Three (8.1%) agree that social networks platforms use benefits them in terms of interaction with peers and knowledge sharing with peers to share information and knowledge, while four (10.8%) viewed these tools as helpful for discussions, and one (2.7%) said that this technology is helpful when it comes to research skills and thereby leads to better educational achievement. Two others (5.4%) mentioned that these tools help them in locating and communicating with experts in their own fields. Social networks platforms used for learning and knowledge sharing facilitate discussion and information share. Students were of the opinion that these two areas enhanced their educational achievement.

educational achievement. The first question concerned the relation between social networks platforms and educational purposes, the second that between social networks platforms and cooperative learning, and the third social networks platforms and students' educational achievement.

**5.4.1 Tools of social networks platforms used for learning purposes**

Figure 4 illustrates the students' responses on the relation between social networks platforms and learning purposes. It further shows that nine (24.4%) of the respondents use Facebook for cooperative learning and eleven respondents (29.7%) say they use YouTube as the best tool to learning purposes. As for LinkedIn, Mendeley, Google, email, E-learning site, ResearchGate, blogs, and Wiki, and the percentages of students who used them were 13.5%, 5.4%, 2.7%, 8.1%, 8.1%, 2.7%, 2.7%, 8.1%, and 2.7%, respectively. Hence, these results show that the majority of respondents ranked YouTube and Facebook first and second, respectively, in enhancing educational purposes.



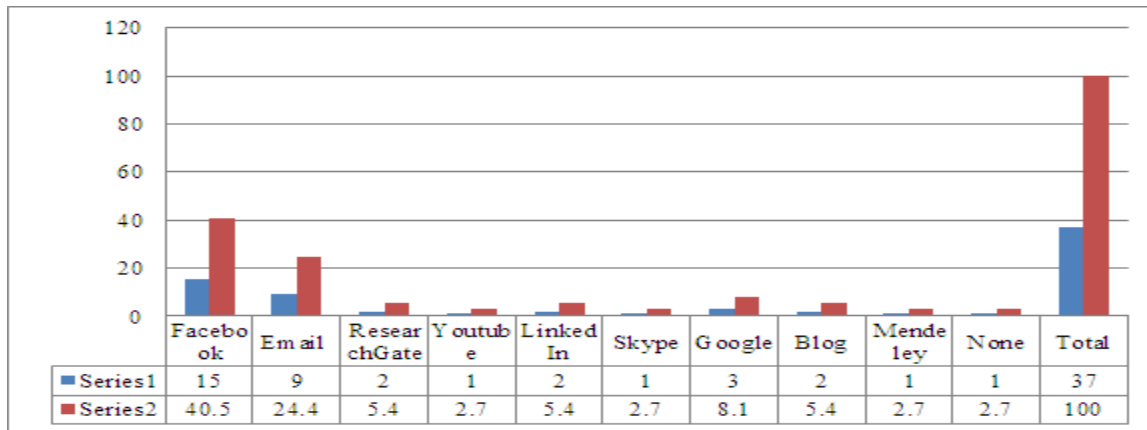
**Figure 4:** Tools of social networks platforms used for learning purposes

Students’ belief that using social networks platforms would bring positive consequences for learning and knowledge sharing increase and affect educational achievement of students.

**5.4.2 Tools of social networks platforms used for cooperative learning**

Figure 5 presents the results of using the various tools of social networks platforms for the purpose of cooperative learning. 15 (40.5%), confirmed that they use Facebook as their preferred tool of social networks platforms and believe that it plays a

very important role in achieving cooperative learning, and 9 (24.4%) confirmed that they use email for cooperative learning. Two other participants (5.4%) named Research Gate and LinkedIn (5.4%). Moreover, (2.7%) for each one YouTube, Mendeley and Skype confirmed that they use for cooperative learning. Two (5.4%) of the participants reported that they mainly use blogs for cooperative learning while one (8.1%) mentioned Google as having a great influence on cooperative learning.



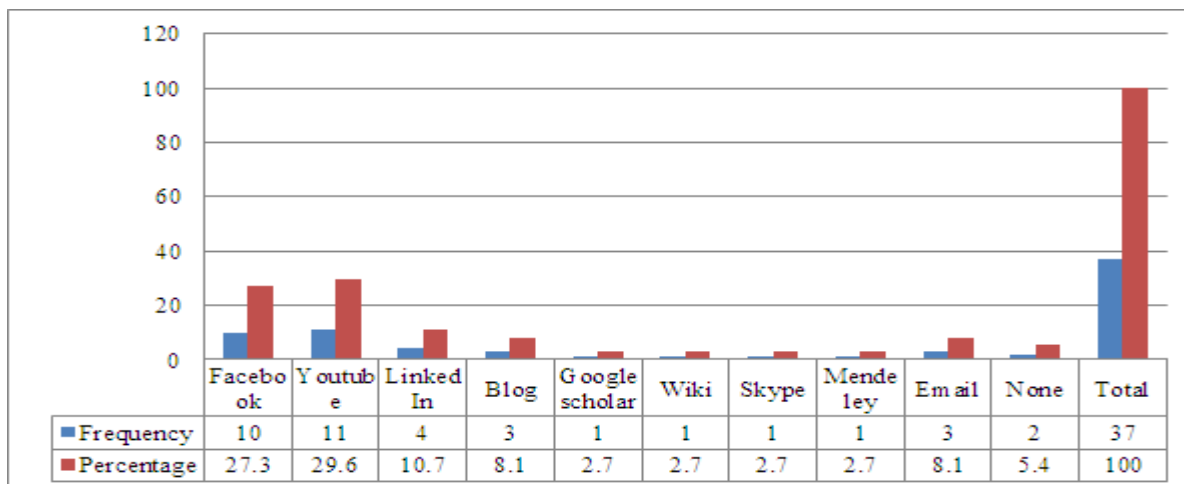
**Figure 5:** Tools of social networks platforms used for cooperative learning

The effects of social networks platforms use would bring positive consequences to increase cooperative learning that will affect the academic achievement of students.

**5.4.3 Tools of social networks platforms used to enhance students’ educational achievement**

Figure 6 illustrates the students’ perspectives on the use of social networks platforms and their influence on their educational achievement. Eleven (29.6%) of the students reported that they believe that the use of YouTube influences their educational achievement, while ten (27.3%) agree that Facebook as a tool of social networks platforms has a positive impact on their educational achievement. Among the other tools of social networks platforms, four (10.8%) of the

respondents chose LinkedIn, three (8.1%) reported the use of blogs, one (2.7%) mentioned using wiki, one (2.7%) mentioned using Google Scholar, and one each (2.7%) mentioned using Skype and (2.7%) Mendeley to improve their educational achievement. Additionally, three (8.1%) of the respondents mentioned that the use of email enhances their educational achievement. The rest of the respondents (5.4%) stated that they do not use social networks platforms and do not think that they enhance their educational achievement. From these results, it may be noticed that YouTube and Facebook are the most used social networks platforms in facilitating learning and knowledge sharing that will affect the academic achievement of students.



**Figure 6:** Tools of social networks platforms used to enhance students’ educational achievement



### 5.5 Impact of Social networks platforms (Positive or Negative)

This section provides the statistics regarding the impact of social networks platforms on three topics, cooperative learning, knowledge sharing, and students' educational achievement.

#### 5.5.1 Impact of social networks platforms on cooperative learning

In this subsection, the impact of social networks platforms on cooperative learning was assessed using three main questions. These questions were designed to identify any negative or positive impacts of this technology on students' educational achievement. These three questions were focused on the negative or positive influences of various social networks

platforms tools on research skills, the exchange of information, and active cooperative learning in the context of higher education. Figure 7 illustrates these statistics and shows how these variables are influenced by social networks platforms from the students' perspective. Thirty-four (91.9%) of the respondents indicate that their educational achievement is positively influenced by social networks platforms. On the other hand, three (8.1%) reported almost the opposite, saying that social networks platforms do not influence their knowledge sharing or research skills. All in all, from the interviews it may be noticed that the majority of the students are of the opinion that their educational achievement is positively influenced by the cooperative learning motivated by the use of social networks platforms.

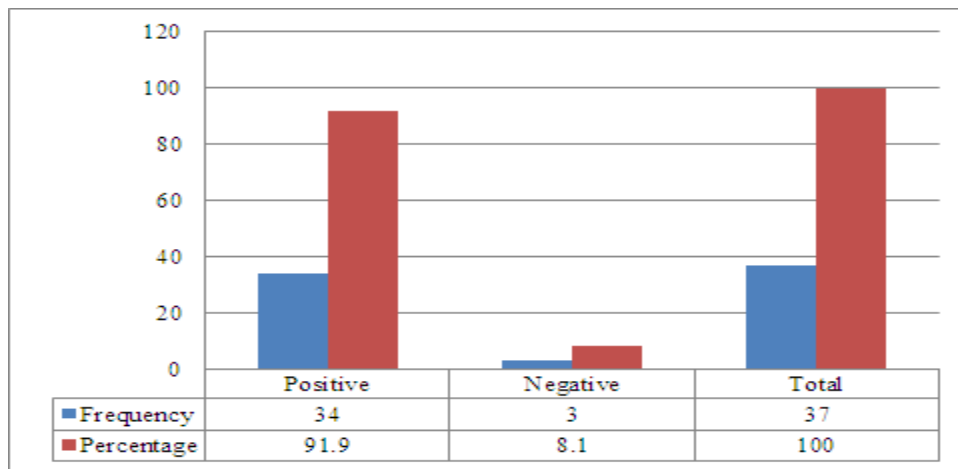


Figure 7: Impact of social networks platforms on cooperative learning

#### 5.5.2 Impact of social networks platforms on knowledge sharing

In this subsection, the influence of social networks platforms on knowledge sharing is assessed. Figure 8 shows the responses of the students on how they think that social networks platforms influences their knowledge sharing and whether it leads to better educational achievement. The figure

shows that 36 (97.3%) of the respondents reported that social networks platforms influenced their performance while just 1 (2.7%) reported that social networks platforms do not influence their educational achievement. Overall, during the interviews it seems that most students agree that their knowledge sharing is enhanced by the use of social networks platforms, leading to better educational achievement.

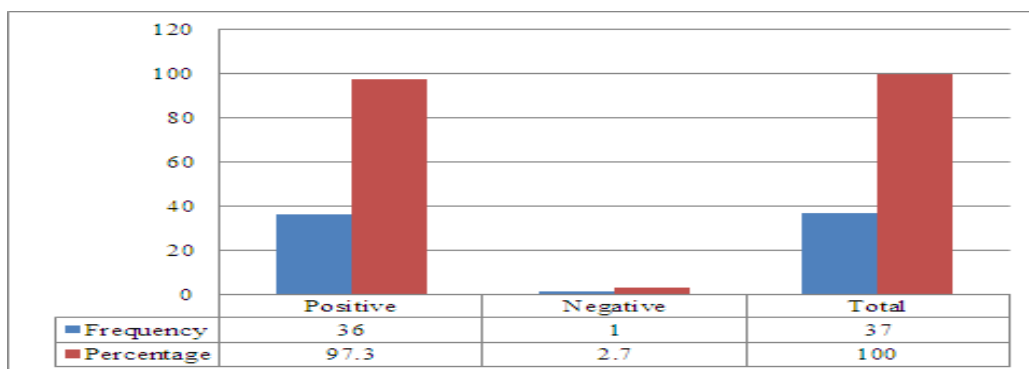


Figure 8: Impact of social networks platforms on knowledge sharing

### 5.5.3 Positive impact of social networks platforms on students’ educational achievement

This subsection concerns the positive influence of social networks platforms on educational achievement and cooperative learning. Table 5 reflects the students’ perspectives: 17 (45.9%) of the respondents reported that the use of social networks platforms are helpful in improving research skills for students as well as in facilitating the gathering of information, leading to better educational

achievement, while 9 (24.3%) of the respondents reported that social networks platforms are helpful for knowledge sharing. Other areas identified by students included staying up to date 5.4%, providing an alternative to face-to-face discussions 2.7%, connecting students 5.4%, easy accessing information 5.4%, facilitate interacting with others 2.7%, affect performance 2.7%, free and fast 2.7%, and affect research 2.7%.

**Table 5:** Positive Impact of Social networks platforms for Students’ Educational achievement

Items	Frequency	Percentage
Affect students’ research skills	17	45.9
Share knowledge	9	24.4
Stay up to date	2	5.4
Alternative to face-to-face	1	2.7
Connect students	2	5.4
Easy access to information	2	5.4
Facilitate interaction	1	2.7
Affect performance	1	2.7
Free and fast	1	2.7
Affect research	1	2.7
<b>Total</b>	<b>37</b>	<b>100.0</b>

These results highlight that the majority of students agree that the use of social networks platforms has a positive influence on educational achievement by enhancing knowledge sharing and improving the research skills of research students. Also, the results suggest that using social networks platforms may affect students’ research skills, share knowledge, stay up to date, alternative to face-to-face, connect students, easy access to information, facilitate interaction, affect performance, free and fast affect research.

### 5.5.4 Negative impact of social networks platforms on students’ educational achievement

In this subsection, the negative impact of social networks platforms use on educational achievement is assessed by

examining the two aspects of cooperative learning and knowledge sharing. Table 6 indicates the students’ perspectives in this regard. It shows that 19 (51.4%) of the participants’ report that the use of social networks platforms wastes the time of students. One (2.7%) said that this technology might violate the privacy of the users. Other participants identified several negative sides of using social networks platforms, such as negative activities 2 (5.4%), improper use 1 (2.7%), and limited knowledge 2 (5.4%). Eleven respondents (29.7%) were of the opinion that the tools of social networks platforms do not have any negative impact on their educational achievement. Based on these statistics and information, it is clear that students should strive to manage their time using social networks platforms within the education environment.

**Table 6:** Negative Impact of Social networks platforms on Students’ Educational achievement

Items	Frequency	Percentage
Waste time	19	51.4
Affect privacy	1	2.7
Undecided	1	2.7
Negative activity	2	5.4
Limited knowledge	2	5.4
Improper use	1	2.7
No negative	11	29.7
<b>Total</b>	<b>37</b>	<b>100.0</b>

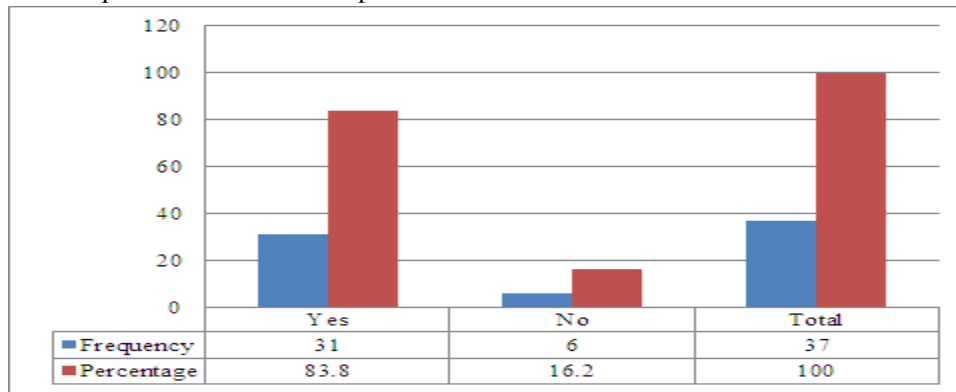
These results highlight that the half of students noted a negative impact of social networks platforms for waste time if they use it alone. Nevertheless, if they using social networks platforms for cooperative learning will be changed to positive impact on their educational achievement.

### 5.5.5 Satisfaction with social networks platforms use for cooperative learning and knowledge sharing

Another main goal of the study was to uncover the relation between the satisfactions of using social networks platforms and cooperative learning as well as knowledge sharing in higher education. Figure 9 illustrates the respondents’

responses in this regard. It shows that the majority of respondents (31, 83.8%) reported their satisfaction in using the various social networks platforms tools for cooperative

learning and knowledge sharing. On the other hand, just six (16.2%) reported the opposite, saying that they are not satisfied with the use of social networks platforms.



**Figure 9:** Satisfaction with social networks platforms use for cooperative learning and knowledge sharing

During the interviews we noted students' satisfaction when they use social networks platforms for learning and knowledge sharing that will affect the academic achievement of students.

### 5.6 Suggestions for using social networks platforms

The respondents of the current study suggested a number of ways in which social networks platforms can be used in a helpful way within the educational environment to enhance cooperative learning and a sense of knowledge sharing among the different users of this technology, which are shown in

Table 7: One participant (2.7%) upload published, 4.5% creating special groups, 2.7% assessing easy materials, 4.5% educational purposes, 2.7% creating awareness, 10.8% affect cooperative learning, 10.8% censor materials uploaded. Also, 2.7% share resources, 5.4% for research purposes, 2.7% discussion forum, and 18 (48.7%) of the respondents did not have suggestions for making use of social networks platforms so as to enhance cooperative learning among the various users of these tools.

**Table 7:** Suggestions for Using Social networks platforms for Educational Purposes

Suggestions	Frequency	Percentage
Upload Published	1	2.7
Create special groups	2	5.4
Assess easy material	1	2.7
For educational purposes	2	5.4
Create awareness	1	2.7
Affect cooperative learning	4	10.8
Censor materials uploaded	4	10.8
Share resources	1	2.7
For research purposes	2	5.4
Discussion forum	1	2.7
No suggestions	18	48.7
<b>Total</b>	<b>37</b>	<b>100.0</b>

These results highlight some suggestions from students on social networks platforms use such as: upload published, create special groups, assess easy material, for educational purposes, create awareness, affect cooperative learning, censor materials uploaded, share resources, for research purposes, and discussion forum. Therefore, in this research we suggest creating dedicated groups for cooperative learning and knowledge sharing, using social networks platforms for education purposes for improved educational achievement, censoring the materials uploaded, encouraging students and lecturers to use social networks platforms for educational purposes, and encouraging students through their departments to use social networks platforms to create cooperative learning

in which ideas are exchanged and knowledge sharing takes place enhancing educational achievement.

### 6. THEORETICAL IMPLICATIONS OF THIS RESEARCH

The current work applies the theory of constructivism to the main objective of the research, the use of social networks platforms within the educational environment to assist in cooperative learning and lead students to a better educational achievement. This study shows that social networks platforms have a positive influence on cooperative learning within higher education. The contribution of the current work is not only restricted to the use of constructivism in investigating the

use of social networks platforms, but also offers insights into this field of research and adds to the body of knowledge. Moreover, the use of the Technology Acceptance Model (TAM) [16, 17] with constructivism [9, 10] may be considered a strong contribution in that they are rarely combined to study the impact of social networks platforms on education and on cooperative learning in particular.

### 6.1 Practical implications of this research

This section presents three major practical contributions of the current work that are recommended to help in field work and assist the users of the different tools of social networks platforms. First, the idea of the positive influence on educational outcomes in cooperative learning and educational achievement is likely to motivate students to use social networks platforms. The use of various social networks platforms tools, such as Facebook, blogs, and YouTube, can greatly benefit students. Second, instructors and supervisors can provide students with the help they need so as to improve their educational achievement through the use of social networks platforms in cooperative learning. Third, institutions of higher education have the responsibility to encourage students to use social networks platforms for educational purposes and not just to instruct them to do so. That can be done through workshops to raise awareness of the various benefits of such usage. Upon doing so, tertiary educational institution will have the advantage of making use of social networks platforms for learning and knowledge sharing. With the availability of resources, this has the benefit of raising the satisfaction of students, which would be positively reflected in their educational achievement. This is extremely important for research students who are always in need of resources and can make use of cooperative learning to reach better outcomes and improve their educational achievement.

### 6.2 Limitations of this research

Although the current work obtained interesting results, it still has limitations in some areas. First, the current study had a limited sample size taken from one population at one public university, and thus the findings might not apply to other. The main aim of this paper was to investigate the use of social networks platforms in cooperative learning and explore how this knowledge sharing affects the students' educational achievement in higher education. Moreover, the current study is also limited in the range of issues studied; some factors were only examined to determine their influence on students' educational achievement, while other essential factors such as enjoyment, motivation, and service quality were ignored.

### 6.3 Recommendations to improve students' educational achievement

Using social networks platforms tools in education to enhance cooperative learning and positively influence students' perceptions has several benefits in education. In this section, we present several recommendations regarding cooperative learning involving the use of social networks platforms tools in education, and especially in higher education:

- Providing the opportunity for research students at universities to use social networks platforms tools to

better establish a cooperative learning environment and enhance their educational achievement.

- Encouraging students in general to use social networks platforms tools for learning.
- Monitoring the time spent by students in activities, which their faculty members are recommended to perform.
- Raising awareness of these social networks platforms tools in cooperative learning inside universities. We recommend that this be carried out through training sessions, seminars, and courses for both students and instructors. In this way, students as well as instructors can gain better understanding the benefits of using social networks platforms to affect educational achievement.
- Using and applying the model of earlier studies [5, 13, 27, 30] by using a variety of social networks platforms tools to achieve cooperative learning within educational institutions. This can enhance students' educational achievement and encourage a better interaction among students and instructors.

### 6.4 Future Research

The limitations of the current study open the door for future research to fill in the gaps. First, regarding the targeted sample of the current study, we recommend that future studies expand the range of data collection to include other universities or private educational institutions of higher education. Regarding the factors examined, future research can build on the current study by investigating more factors since there are many factors influencing cooperative learning that have an impact on educational achievement. The current study suggests certain factors like enjoyment and motivation. We suggest the following recommendations for future research:

Examining the satisfaction among lectures and instructors of using different tools of social networks platforms and determining its impact on cooperative learning and performance.

- Examining the role of satisfaction among students of using social networks platforms tools and its influence on cooperative learning and activities and their performance.
- Investigating the different ways in which students can utilize social networks platforms to enhance cooperative learning and increase their performance.
- Explore the effectiveness of different tools of social networks platforms in cooperative learning and how they contribute to knowledge sharing among their users.
- Examining the effectiveness of using this technology in developing countries and its role in cooperative learning.

### 6.5 Conclusion

The current research highlights the major finding that social networks platforms are used within universities and by university tertiary students to facilitate their studies. This

technology is used for both educational and non-educational purposes by these students. Therefore, the current research identifies thirteen tools of social networks platforms that can be used in an educational environment [6, 30, 53, 54]. Based on tools of using social networks platforms for learning and knowledge sharing most respondents say Facebook, LinkedIn, Twitter, researchgate and forum are used for learning and knowledge sharing but Facebook is used most often to affect the learning and educational achievement. Also based on tools of using social networks platforms for sharing information between research students most respondents said Wiki and YouTube were used to share information which affects the learning performance of research students. Consequently, the motivations of using social networks platforms the most respondents said that social networks platforms were an easy to get knowledge and information from others researchers and peers, thus having an increase educational achievement of students. Finally, based on the rate of using social networks platforms by research students most respondents said intermediate and then excellent but the lowest level say social networks platforms isn't used for active cooperative learning among research students with lecturers and supervisors in Malaysian higher education. The major findings can be summarized by the observation that social networks platforms facilitate cooperative learning and knowledge sharing, which enhances the share of knowledge among the different users of these tools. In addition, usefulness and ease of use were the most significant characteristics of social networks platforms encouraging users to use them for the different purposes of interactions, cooperative learning, and knowledge sharing. All of these benefits were noticed and reported to increase the students' educational achievement. Moreover, from the interviews with students using social networks platforms include how they learned to use social networks platforms we found most of them learned through friends and websites. This indicates that educational institutions have others channels that can assist in training and encouraging research students and researchers to use these tools for active cooperative learning and knowledge sharing. Additionally, the usage of social networks platforms by students is based on places such as home, labs, library, campus or hostel which indicates that research students are familiar with using social networks platforms for active cooperative learning that will affect learning performance of students. In terms of the purposes for using social networks platforms most respondents said that they used social networks platforms for research purposes, library use assistance, educational purposes, for information sharing and searching for knowledge but the use of social networks platforms for information sharing is highest. This indicates that social networks platforms affect the learning performance of students. Furthermore, the most important theoretical contribution of this study is constructivism theory on the use of social networks platforms for active cooperative learning through interaction with research group member and peers, lecturers or supervisors and knowledge sharing. This study provides empirical evidence of how to use social networks platforms for active cooperative learning through interaction and knowledge sharing to use social networks

platforms for active cooperative learning that can affect the learning performance of research students in Malaysian higher education. Moreover, another important theoretical contribution of this study is extension of the body of knowledge on social networks platforms use for active cooperative learning and knowledge sharing. This study provides empirical evidence of use of social networks platforms for active learning and knowledge sharing through perceived usefulness and the perceived ease of use of social networks platforms for active cooperative learning that can improve learning performance of research students in Malaysian higher education. This is a substantial theoretical contribution to previous Technology Acceptance Model (TAM) with constructivism theory studies which did not consider the influence of using social networks platforms for active cooperative learning and knowledge sharing.

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