

## A Systematic Review on the Impact of Facebook Usage on Academic Performance

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### ABSTRACT

#### Purpose:

The purpose of this review is to investigate the impact of Facebook usage on the academic performance of university students and how can these be assimilated in order to enhance students' academic performance.

#### Methodology:

Facebook has become an essential part of nearly every individual's daily life. Though it is beneficial for students in terms of connectivity such as exchanging information, socialization, and other constructive activities, the literature shows that Facebook has become dangerously addictive, causing disruption in routinely activities and academic goals of students. Papers were retrieved from academic databases and Google from 2011 to 2017. All studies that were included appraised critically by using Mixed Method Appraisal Tool. The results showed that both positive and negative impacts of using Facebook on the academic performance of university students.

#### Findings:

The results showed that both positive and negative impacts of using Facebook on the academic performance of university students.

#### Conclusion:

The conclusions propose that, despite the variance of findings, the overall outcome is negative when it comes to the use of Facebook in academic performance. Furthermore, it highlights the ways that how Facebook can help to enhance the academic performance of university students.

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## 1. Introduction

The institution of many Social Networking Sites (SNS) such as Facebook, Instagram and Twitter, etc, has attracted billions of users all over the world. SNS are rapidly becoming a fundamental part of the daily lives of its users (Sabir et al., 2013). Nielsen (2011) showed in his study that Facebook is the most widely held and popular social network site amongst students, which consist of a large and diverse group of the global population. In the present day and age, the adoption of social media technology has stretched across the globe like wildfire, incorporating itself into the lives of people belonging to different national, religious, racial and ethnic, cultural, social and socioeconomic backgrounds. It has become the primary means of communication for people as they consider technology as the mainstream of their existence. Variety of routines is involved with the help of internet in our daily lives. Social media has taken the world in the direction of a communication-rich society. A Systematic review will aim to address this issue in detail by identifying, critically evaluating and integrating the findings of all relevant works to address the research questions.

In the academic world, social media is viewed as a distraction and leads the student to procrastination in the fulfillment of their academic responsibilities. Some students, however, also claim that visiting social media sites during class time helps them deal with the boredom they experience in college. This study would provide information on the impact of Facebook to university students and how it can be managed in relation with their academics. In addition, the findings of the study are expected to contribute a little towards bridging the existing literature gap on understanding the impediments and blessing opportunities of Facebook in the academic environment. Based on the above qualifications, the researchers felt that their research topic warranted such a kind of review

A sufficient amount of research is available on the influence of the social networking site “Facebook” on the academic performance of students, but with conflicting outcomes. Majorly, how these outcomes can be used to advantageously to enhance the academic performance of university students remains unexplored. In such situations, it is not always clear what the overall picture is, or which results are most reliable and should be used as the basis for practice and policy decisions.

## 2. Literature Review

### 2.1. Social networking sites

Social-networking sites (SNs) are an online communication tool that permits people to interact with others in their network systems (Boyd & Ellison, 2008). Facebook, MySpace, Instagram, Cyworld, and Twitter are some of the SNs that allows users to connect with each other in multiple formats such as text, audio, and video. Among them, the most widely used and dominant social media platforms are Facebook. Social networking sites are social network services that focus on building online communities of people who share interests and/or activities, or who are interested in exploring the interests and activities of others.

### 2.2. Facebook

Facebook has gained the greatest popularity among the young adolescents and students. (Thuseethan, S., & Kuhanesan, S, 2014). It has 2.2 billion monthly active users (© Statista, January 2018), 76% of young adults and teenagers (aged 12 to 24) use Facebook daily. From the previous few years, Facebook is becoming an essential part of our daily lives. It has the most

active users all over the world so this is why Facebook is considered as the leader of social networking sites. Abdulahi, A., Samadi, B., & Gharleghi, B. (2014). Graduates of Harvard University, Mark Zuckerberg, Dustin Moskovitz, Eduardo Saverin and Chris Hughes founded Facebook back in 2004. At first, Facebook was open only to students at Harvard, and subsequently at elite universities- Princeton, Stanford, and Yale. Later on, in 2006, it was made open to the public. Anyone over 13 years of age and with a valid E-mail could access Facebook (Zaremohzzabieh et al., 2015). However, since its launch, this interface has extended across multiple college communities and then quickly incorporated a broader range of network connectivity of individuals and groups across the globe.

### **2.3. Academic Performance**

“Academic performance refers to how students deal with their studies and how they cope with or accomplish different tasks given to them by their teachers.” (Ali et.al, 2009).

Academic Performance is basically measured by the assessment which is apparent to be the main goal of any academic institution. The research claimed that academic institutions are recognized with the goal of giving the skills and knowledge to the individual whereas it has stated that academic performance is the outcome of education by which teachers, students, and organizations accomplish their goals concurrently. (Galiher, 2006; Darling, 2005).

### **2.4. Facebook usage and Students Academic Performance**

Ahsanul Haq, A., & Chand, S. (2012) examined that majority of people use Facebook for friendship purpose. Most students use it just to make new friends or stay in touch with the existing friends. At present, SNs is a primary mode of communication and pursuing information. Just like all other social networks, Facebook has a great impact on student's academic performance. According to Kabre, F., & Brown, U. J. (2011), they analyzed that with the advancement in technology, social networks become a part of persons daily lives especially Facebook has a huge impact on student's academic performance. Students have a tempting desire to connect with their friends due to easy 24 hours' access to each other's updates. Hence the use of Facebook has become a habit and necessity that affects the students' academic performance. Facebook addiction is seen to affect performance both positively and negatively for e.g it has been seen that Facebook has a negative effect on students grades that lead to poor academic success whereas Facebook also has positive effects such that Facebook can provide a platform for students to learn and share positive material with each other's which results in a better outcome for students. Today's Generation Y college students are exposed to all types of technologies in many aspects of their lives (Browning, Gerlich, & Westermann, 2011). On a daily basis, they use desktop computers, laptops, tablets and cell phones to actively engage in social networking activities such as text messaging, blogging, content sharing, online learning (Cassidy, Griffin, Manolovitz, Shen, & Turney, 2011). Thus, academic institutions and faculty are increasingly using social networking sites, such as Facebook and LinkedIn, to connect with current and potential students and to deliver instructional content. (Paul, Baker, Cochran, 2012)

Lau, W. W. (2017) stated that Facebook harmfully affected social and non-academic such as lacking experience and learning of practical affairs which negatively affects the student's classroom performance. Further Lau, W. W. (2017) added that spending too many hours on social media can cause anxiety among students. Singh, D. A, 2014 analyze that excess using social media among students could arouse their sexual behavior which can further affect their academic performance. Further, he added that right usage may bring some good results and improve

students' academic performance. The social media addiction is linked with disruption of academic performance, boredom, shortage of time for following hobbies such as making new friend zone, updating daily status, commenting on each other's profile and non-social behavior development. Thuseethan, S., and Kuhanesan, S. (2014) found the correlation between social media usage and academic performance. Most of the regular and frequent users received low grades, compared to rare facebook users.

Kabre, F., & Brown, U. J. (2011) found that corroborating the work on the impact of social media on academic performance whereas participants who accessed Facebook one or more times during the study period had lower grade point averages. Furthermore, Junco (2011) added that sharing links and checking up with friends on Facebook more often predicted higher college grades; making status updates more often predicted lower grades, and that overall GPA dropped 12 points for every 93 min above the average of 106 min per day spent on Facebook

## 2.5. Objective

The objectives of this review are to find out how Facebook influences the academic performance of university students and can it be used to enhance their academic performance.

## 2.6. Research questions

The objective of the review is to answer the following research question:

1. How does the usage of Facebook affect the academic performance of university students can Facebook be used to enhance their academic performance?

## 2.7. Research Gaps

The effect of social networking site- Facebook usage on the academic performance of university students has attracted growing scholarly attention (Pasek, J., & Hargittai, E., 2009, Kirschner, P. A., & Karpinski, A. C., 2010, Junco, R., 2012), yet the nature of this relationship remains argumentative and the outcomes of this impact are still indistinct. This review aims to fill this gap.

Research is absent on the notion that in the light of using Facebook purely as a social networking site, can it also be utilized as a teaching and learning tool so that the academic performance of university students can be taken enhanced? This review purposes to fill this gap and provides knowledge to university students regarding Facebook usage in a constructive way which can lead them to greater academic realization.

# 3. Methodology

## 3.1. Review method

Systematic research review was conducted in order to find answers to the formulated research questions, because,

*“It is a review of a clearly formulated question that uses systematic and explicit methods to identify, select, and critically appraise relevant research, and to collect and analyze data from the studies that are included in the review. Statistical methods (meta-analysis) may or may not be used to analyze and summarize the results of the included studies” (Cochrane Collaboration, 2014).*

Guided by the time-honored method of systematic review (Cochrane Collaboration, 2011), the

review was undertaken in distinctive stages: the development of review protocol, the identification of inclusion and exclusion criteria, a search for relevant studies, critical appraisal, data extraction, and synthesis.

## **3.2. Study Design**

### **3.2.1 Protocol development**

The researchers developed a protocol for the systematic review by following the guidelines, procedures, and policies of the Cochrane Handbook for Systematic Reviews of Interventions (2011), and Akhlaq et al. (2016). This protocol identified the research questions, search strategy, inclusion, exclusion and quality appraisal criteria, data extraction, and methods of synthesis.

### **3.2.2. Inclusion and exclusion criteria**

This is the eligibility criteria for selecting studies

### **3.2.3. Eligible studies**

The present review will focus on the study of papers that are either published in peer-reviewed scientific journals or published in conference proceedings that have gone through a peer-review process; hence the researchers' decision to leave aside other important publication sources such as books, articles or other unpublished works. Earlier literature review's studies were based on akin judgments (Gonzalez et al. 2013).

The searches were not constrained by language but only by date of publication, which was from 2004 up till 2018. February 2004 was taken as the starting date of search because Facebook was launched on February 4, 2004 (Zaremohzzabieh et al., 2014) and April 2018 was the ending date of the search. Furthermore, papers which not in English were translated into English. To conclude, the researchers searched literature up to April 2018 for research investigating the outcomes associated impact of Facebook usage on academic performance.

We wanted to understand if university student's academic performance is impaired by their spending time on the social networking site- Facebook, and if so, then what are the observed consequences? Two reviewers independently searched academic databases for published qualitative, quantitative and mixed-method studies. Studies that included: The terms-

- Impact of Facebook usage on students' academic performance,
- Impact on Facebook usage on students' academic achievement
- Impact on Facebook usage on students' university grades, GPA

### **3.2.4. Eligible respondents and academic settings**

Studies that were conducted on university students or students enrolled in higher education/ tertiary education institutions.

### **3.2.5. Eligible interventions**

The researchers wanted to identify appropriate interventions for concerned stakeholders from eligible studies that will enable educators and administrative committees of academic institutions, institutional policy makers, students, families of students and all concerned stakeholders to take

the necessary steps that will help to reduce the negative effects of these outcomes on students and hence enhance the academic performance of the students.

### **3.2.6. Outcome measures**

The researchers wanted to identify and pinpoint the outcomes of Facebook usage, such as lower exam scores (Ravizza et al., 2014), loneliness, depression, anxiety (Vallerand et al., 2003), low family relationships (Alavi et al., 2011), improve cognitive and social competencies, develop a positive attitude towards learning (Kirschner & Karpinski, 2010; Pasek & Hargittai, 2009; Ross et al., 2009; Selwyn, 2009) and obtain knowledge (Yu, Tian, Vogel, & Chi-Wai Kwok, 2010). Outcomes associated with the positive/ negative impact of Facebook usage on university students' academic performance will be documented and propositions on how the academic performance of students can be improved in the face of adverse outcomes will be presented.

### **3.2.7. Data sources and search strategy**

The search approach involved searching of electronic databases and hand searching of conference proceedings. The following electronic databases were searched:

- ACM Digital Library
- IEEE Xplore
- ISI Web of Science
- Science Direct – Elsevier
- SpringerLink
- Scopus
- PUBMED
- In addition, all related conference proceedings for research papers were hand-searched from:
  - ICRIIS
  - AMCIS

### **3.2.8. Method of data extraction**

This section specifies methods of data extraction from studies and other sources, both the two reviewers independently collected, reviewed, analyzed, journal papers and other resources, and synthesized findings systematically to conduct the review.

### **3.2.9. Quality Assessment Tool**

The Mixed Methods Appraisal Tool (MMAT) – Version 2011 (Pluye et al. 2013) was used as a tool for Quality Assessment of eligible studies. The MMAT has been designed for the appraisal stage of complex systematic literature reviews that include qualitative, quantitative and mixed methods studies (mixed studies reviews). The MMAT permits to concomitantly appraise and describe the methodological quality for three methodological domains: mixed, qualitative and quantitative (subdivided into three sub-domains: randomized controlled, nonrandomized, and descriptive). The MMAT allows the appraisal of most common types of study methodology and design.

## 4. RESULTS

### 4.1. Final Study selection and respondent characteristics

“Impact of Facebook usage on students’ academic performance” yielded 174 results. “Impact on Facebook usage on students’ academic achievement” yielded 179, and results. Impact on Facebook usage on students’ university grades, GPA” yielded 203 results, as shown in Table 1. The searches yielded a total of 556 results; after removing all results other than those to be included as mentioned in the inclusion criteria above, 61 results remained. After de-duplication, screening of titles and abstracts as per criteria was done which yielded an aggregate of 49 articles and 5 proceedings remained. 24 studies and 2 proceedings that were focused on respondents other than from universities/ HEI/ tertiary education institutes, were excluded. Finally, 25 articles and 3 conference abstracts satisfied our inclusion criteria. The study selection procedure is shown in the PRISMA flow diagram.

**TABLE.1. Keywords**

NO.	Keywords used for searches	Search Results
1.	Impact of Facebook usage on students’ academic performance	174
2.	Impact of Facebook usage on students’ academic achievement	179
3.	Impact of Facebook usage on students’ university grades, GPA	203

#### Source: Author’s own elaboration

A quantitative approach (mainly surveys and secondary sources) was employed in 19 published studies and 3 conference papers, whereas, a qualitative approach was employed in 4 published studies and 1 conference paper. Mixed methods were employed in 2 published studies. The studies that best fitted our research criteria and were included in our review are listed in Table 2. Based on their methodological approach, the selected studies are categorically summarized in Table 3. The respondents were university/ HEI students only. Papers focusing on primary or secondary school students or teachers were excluded.

**TABLE.2**

S.NO	TITLE	Countries	OBJECTIVES
1	A study on the negative effects of social networking sites such as Facebook among Asia pacific university scholars in Malaysia.	Malaysia	Quantitative study of the effects of Facebook on Malaysian university scholars.
2	The impact of Facebook and others social networks usage on academic performance and social life among medical students at Khartoum university.	University of Khartoum, Sudan	The <i>impact of. Facebook and others social networks sage on academic performance and social life among medical students using Random Sampling Technique.</i>

3	The relationship between time spent on facebook and cumulative grade point average (CGPA) among third year Biomedical Science students in Faculty Health Sciences, UKM	Malaysia	To determine quantitatively the relationship between time spent on Facebook and the Cumulative Grade Point Average (CGPA) of third year Biomedical Science students in the Faculty Health Sciences, Universiti Kebangsaan, Malaysia
4	Exploring the views of students on the use of Facebook in university teaching and learning.	UK	Study quantitatively explores students' current academic uses of Facebook and their views on using Facebook within university modules.
5	The influence of personality and Facebook use on student academic performance	USA	This Mixed Method study investigates the influence of personality variables as measured by the Five-Factor Model (FFM) on Facebook use and the influence of Facebook use on student academic performance
6	Relationship between Facebook usage and the student engagement of Sri Lankan management undergraduates.	Sri Lanka	Quantitative study done to examine the relationship between Facebook usage and student engagement in academics.
7	The influence of Facebook usage on the academic performance and the quality of life of college students.	USA	This research study examines the impact of Facebook usage on the academic performance and the quality of life of college students. Quantitative Method was used.
8	Effects of English usage on Facebook and personality traits on achievement of students learning English as a foreign language. <b>(Kao, P. C., &amp; Craigie, P., 2014).</b>	Taiwan	Quantitative method used to explore the impact of English usage on Facebook (EUF) and the Big Five personality traits of 164 Taiwanese university students on their level of achievement in learning English as a foreign language (EFL).
9	Impact of facebook usage on academic grades: A case study.	King Saud University (KSA)	This paper raises the question about the potential impact of Facebook usage upon undergraduate students time, and ultimately their academic performance, usually measured by Grade Point Average (GPA). Qualitative Methodology was used.
10	Facebook® and academic performance.	USA	A descriptive and exploratory survey study involving Facebook use, often carried out simultaneously with other study activities, and its relation to academic performance as measured by self-reported Grade Point Average (GPA) and hours spent studying per week.
11	Facebook Addiction: A study of big-five factors and academic performance amongst students of IUB	Bahawalpur, Pakistan.	This study investigates the effect of personality variables on face book addiction and if it has any negative effect on the student academic performance. Quantitative Method, Questionnaires were used.

12	The relationship between time spent on Facebook and cumulative grade point average (CGPA) among third year Biomedical Science students in Faculty Health Sciences, UKM	Malaysia	This Quantitative study was carried out with the aim of examining the impact of between time spent on Facebook on students' academic performance in Malaysia.
13	Facebook use and academic performance among college students: A mixed-methods study with a multi- ethnic sample.	Southern California, USA.	This paper uses a mixed-methods approach to examine the relation between online academic disclosure, Facebook and academic performance.
14	Social networking in Bangladesh: Boon or curse for academic engagement?	Bangladesh	To Qualitatively investigate whether there is any relationship between students' academic performance and their SNS usage. The study chose Facebook as a representative of SNSs because this is the most popular platform
15	The relationship between Facebook practice and academic performance of university students.	Ethiopia	This study examined the relationship between Facebook practices on academic performance of students using cross-sectional survey.
16	Facebook and academic performance: Reconciling a media sensation with data.	Chicago, USA	Quantitative Method
17	Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance	Northeastern United States	This research was carried out to o examine the relationship among multiple measures of frequency of Facebook use, participation in Facebook activities, and time spent preparing for class and actual overall GPA.A survey questionnaire method was used to gather data.
18	Impact of cognitive absorption on Facebook on students' achievement. Sana Rouis, Ph.D.	Tunisia	This study uses the flow theory to gauge the impact of Facebook usage on Tunisian students' achievements. A Quantitative study.
19	Facebook Usage for Educational Purposes.	Malaysia	This study investigates the influence of Facebook on students' attitude towards learning with the purpose of identifying the reasons that contribute to the impact of Facebook towards education among undergraduate students and the relationship between the use of Facebook and the academic performance. The research method applied is quantitative by using a survey for 30 undergraduates from different study programs.

20	Social Media and Academic Performance: Does The Intensity of Facebook Activity Relate to Good Grades?	Germany	To analyze the relation of academic performance to social media especially Facebook activity and a person's social network position using Qualitative Methodology.
21	Influence of Facebook in academic performance of Sri Lankan university students.	Sri Lanka	This paper examines the usage of Facebook among university students and its influence in their academic performance quantitatively.
22	Pattern of Facebook usage and its impact on academic performance of university students: a gender based comparison.	Pakistan	This paper explores the popularity and usage pattern of the Facebook among the University students and its impact on Academic Performance of University Students using a self-administered questionnaire.
23	A survey on Facebook and Academic Performance in Nigeria Universities.	Nigeria	To find how pervasive the use of Facebook by University students plays a role in their academic success. A Quantitative study.
24	Self-Regulation of Facebook Usage and Academic Performance of Students in Kenyan Universities.	Kenya	To investigate the influence of self-regulation of Facebook usage on academic performance among university students in Kenya. A Quantitative study
25	No A 4 U: The relationship between multitasking and academic performance	USA	To identify the effects of the usage of Facebook in class on the student's academic performance, driven by quantitative method.
<b>CONFERENCE PAPERS</b>			
26	A Study on the Impact of Facebook Usage on Student's Social Capital and Academic Performance	USA	The study tested the dual effect of the usage of Facebook on social capital and academic performance of the students. Quantitative methodology was used
27	The impact of Facebook usage on academic performance.	Malaysia	To examine quantitatively how spending time on Facebook affect students' academic performance. It explores behavioral factors affecting students utilizing Facebook.
28	Impact of Facebook intensity on academic grades of private university students	Pakistan	This study aimed at quantitatively studying impact of Facebook usage intensity on academic grades of the private university students.

**TABLE.3: Summary of Articles assessed on the basis of methods used in data collection**

Types of studies	# of studies	data collection methods
Quantitative studies	22	Questionnaire or surveys, databases,

<b>Qualitative Studies</b>	<b>4</b>	Interviews, document analysis, focus groups, direct observation, group discussion,
<b>Mixed Method Studied</b>	<b>2</b>	Interviews, discussions, meetings, focus groups, databases, close-ended/structured questionnaire surveys, and literature reviews.

**Source: Author's own elaboration**

#### 4.2. Quality assessment

S. N. Z and M. A. D. independently assessed the quality of included studies. Any disagreements with respect to the quality of studies could be resolved through discussion by a third reviewer such as a colleague, if necessary. For every study, an overall quality score was calculated using the MMAT. The overall score was represented using the following descriptors: \*, \*\*, \*\*\*, \*\*\*\*. For qualitative and quantitative studies, all four criteria needed to be met to get the highest score. The score can also be expressed as the number of criteria met divided by 4 to obtain a percentage score (scores varying from 25% (\*) i.e. one criterion met to 100% (\*\*\*\*) indicating that all criteria were met). For mixed method studies, the overall quality score is the lowest score of the study components —qualitative and quantitative, i.e. it cannot exceed the quality of its weakest component. Conference papers were not included in the appraisal.

The quality score of quantitative studies was the highest among all types of methods, followed by qualitative studies and mixed methods studies (see Table 4).

**TABLE.4. Study designs and methodological scores of 27 studies.**

<b>Number of studies and methodological appraisal scores</b>				
<b>STUDY DESIGN</b>	<b>25% (*)</b>	<b>50% (**)</b>	<b>75% (***)</b>	<b>100% (****)</b>
<b>Quantitative (19)</b>		<b>2</b>	<b>12</b>	<b>5</b>
<b>Mixed methods (2)</b>			<b>2</b>	
<b>Qualitative (4)</b>			<b>2</b>	<b>2</b>

**Source: Author's own elaboration**

#### 4.3. Facebook Usage and Students 'academic performance

The statistic that Facebook is a highly addictive and very intense time consuming social networking site cannot be disclaimed (Zaremohzzabieh et al., 2014). Time spent on social networking on Facebook substitutes time that could be spent on other essential responsibilities, which are neglected because of lack of time for fulfilling them (Ryan, T., Chester, A., Reece, J., & Xenos, S., 2014). Teenagers, adolescent adults and students are shown by previous literature to be the greatest segment of the population using Facebook addictively and being affected by it greatly (Kuss, D.J., &Griffiths, M. D, 2011). This review attempted to find answers to the following Research Question:

Research Question: How does the usage of Facebook affect the academic performance of

university students and can Facebook be used to improve the academic performance of students?

#### 4.4. Addressing Research Question

Similar to all other social networking sites, Facebook also exerts a large influence on students' academic performance (Rouis et al., 2011, Junco, R. 2012, Ainin, S., Naqshbandi, M. M., Moghavvemi, S., & Jaafar, N. I., 2015). However, there is great controversy as to the dynamics and outcomes of this influence, as shown from this review of literature and our review findings will try to resolve this controversy.

#### 4.5. Negative Effects of Facebook Usage on academic performance and Outcomes

A study by Abdulahi et al., (2014) shows that in terms of frequency of use, participation in activities and time spent preparing for class, Facebook negatively impacts the academic performance of students of Asia Pacific University. The impact of Facebook on academic performance brought to light major concern that health is also affected by it. Initially, a social network site was only a medium of connectivity among users, but regrettably it has now become a dangerous addiction. The outcome of this study is perfectly supported by more studies included in the literature review on academic performance. For example, in a study done in Khartoum University by A'lam Elhuda, D. & Dimetry, D. A. (2014), results validated that the predominance of negative effect of using Facebook on academic performance is high (98.8%), especially in females, and users spend very little or practically no time on real life social activities and sport exercises because of being involved in it. This is supported by a study from Nigeria (N. E. Moss, 2012) which showed that 28% of users agreed that there was a negative influence of Facebook usage on their personal academic performance. Also, Aljabry et al., (2017) showed that Facebook usage in terms of duration of time spent on it and using Facebook during lectures, negatively affected the academic grades and social life of students. Also, according to Glass et al., (2013), in his study using sample of 255 freshmen and junior college students of a private university in northeast USA, the duration of time that students spent on using Facebook was seen to be negatively associated to students' self-reported academic performance. These empirical results support the conclusions of Vanden Boogart (2006), Karpinski and Duberstein (2009), Kirschner and Karpinski (2010) and Junco (2012) and are conflicting with the results by Kolek and Saunders (2008) and Pasek et al., (2009). The empirical results in the study by Glass et al., (2013) suggest that additional research is necessary to validate these results and also to find out how Facebook usage affects academic performance, which was the aim of this review.

According to *Ketari and Khanum (2013)*, in their study on 100 female students from the department of Information Technology (IT) in the College of Computer and Information Sciences at King Saud University (KSU), Facebook usage has a negative influence on the academic grades (measured by Grade Point Average- GPA) of students. Merely 28% of the respondents spent their free time on scholastics, 94% of the respondents thought that their GPA could be improved if extra time was available.

Reynol Junco (2012) in his study titled, "Too much face and not enough books: The relationship between multiple indices of Facebook use and academic performance", found that that time spent

on Facebook and checking Facebook were negatively related to overall GPA, and time spent on Facebook is slightly negatively related to time spent studying. Also, the time spent on Facebook strongly negatively predicted overall GPA, while weakly related to time spent preparing for class, which indicates that there may be a negative impact on academic performance (GPA) of students who use Facebook in certain ways. As time spent on Facebook increases, the academic performance of students is realized to decline. This links fittingly with findings from Kirschner and Karpinski (2010), which concludes after evaluating the relations between Facebook usage and academic performance on 219 university pupils, Facebook users had lower GPA scores and spent a smaller amount of time on studies than Facebook non- users. 74% of students who reported influence of Fb usage on their lives, said that it had a negative impact, namely procrastination, distraction, and poor time-management. A clarification for this might be that students who used the internet to study could have been diverted from studies by parallel involvement in Fb, suggesting that this type of multitasking is detrimental to studying and hence academic performance may suffer. Skeira, (2015), in a study using business and economics German students who went to a German university in early 2012, found out that Facebook activities during class i.e; multitasking associates negatively with academic performance.

Consistent with findings by the studies above, an investigation by Thuseethan & Kuhanesan (2014), on 250 students from five different universities of Sri Lanka shows that time and frequency of using Facebook predicted academic performance. Most of the heavy or frequent users received low grades, compared to light or infrequent users who received high grades. It was consistent with the outcomes by Ahsan ul Haq & Sohail Chand (2012) who established adverse impact of Facebook usage on students' academic achievement and it appear to effect more adversely the academic performance of male students as paralleled with female students. These findings can be justified by the fact that males spend more time in sports and other extra-curricular activities, socialization with friends and adding to that, Facebook usage makes it more difficult for them to give their Grade A performance with regards to academics. Students who have a low frequency of Facebook usage show limited negative effects of Facebook on their academic performances (Wanjohil et al, 2015). This indicates that, the more a student self regulates the usage of Facebook, the better his academic performance and vice versa. It means that self - regulation is the key to academic success (Karimi , 2012). This finding is supported by Rouis *et al.* (2011) who established that high self-regulation reduces frequency and duration of Facebook usage and relates positively with academic performance. Contrastingly, Junco (2012) showed a negative relationship among frequencies of Facebook usage with time spent preparing for class and overall Grade Point Average (GPA). According to Jones *et. al.*, (2007), proved that students who do not regulate Facebook usage are will miss lectures and discussions if they are on Facebook in class, and this could affect their grades unfavorably. Likewise, O'Brien (2011) warned students from using Facebook and other SNS during class, as it is a great source of distraction from studies. According to Junco and Cotten (2012), using Facebook or texting while trying to do homework stresses the student's mental aptitude for cognitive processing and prevents additional learning. Giving attention to Facebook or texting during studying reduces processing abilities of an individual, because dynamisms focused on accessing these technologies cannot be focused on understanding study material.

#### **4.6. No Impact of Facebook usage on academic performance**

Mahmood & Umer Farooq, 2014, in their study conducted on students of the department of Management Sciences, in Islamia University (IUB), Bahawalpur, Pakistan, found no relationship between students' academic performance and Facebook usage.

Kabre and Brown, (2011) investigated the extent of impact Facebook exerts on the precursors of quality of life of college students and their academic performance. They took perception of Facebook and number of hours spent on it as predictors of quality of life and academic performance of college students. The findings showed that self-efficacy and smoking behavior were predictors of academic performance, but the number of hours per week spent on Facebook did not predict academic performance or quality of life.

Using self-reported GPA for academic performance, Michikyan, Subrahmanyam & Dennis, (2015), in their study conducted on a multi-ethnic sample of college students, revealed an inverse relationship between Facebook activity level and academic performance and also showed no significant relationship found between time spent on Facebook and academic performance. This advocates that academic performance is better predicted by online activities than the amount of time spent on Fb, since activities show more behavioral and cognitive engagement. Also, time spent on Facebook may not be a correct gauge of use as those students who are seen “on-line” most of the time, may not be actively using the site all of the time. Alternatively, the number of posts they make or online activities are a better indicative of the amount of their actual involvement on Facebook (Junco et al., 2010).

Chowdhury, M. & Arshad. A (2016) determined that the students' level of engagement with Facebook did not affect their academic results. The reason for this insignificant relation between academic results and academic engagement through SNSs may be due to the non-diversified course curriculum, the traditional way of delivering lectures and evaluating, limited study materials, non-receptiveness to technology-based learning etc. The researchers suggest to use Facebook as an educational tool because of its popularity amongst students. This is in congruence with study by Rouis. S. (2012) on 161 Tunisian students, who demonstrated that Facebook usage does not have any significant impact on students' academic performance and their satisfaction with their family, while it decreases their actual satisfaction with their friends. However, a high level of student satisfaction with his family enhances his academic performance, these interrelationships are reduced by the student's importance his university and also by his multitasking capabilities. Students who love their university and are masters at multi-tasking may show a positive effect of Facebook usage on their academics, as they can self-regulate their Facebook activity and use it as only for leisure. Conversely, students who do not have these abilities do not show any significant effect. Previous studies (Gloub and Miloloza, 2010) showed that multitasking activities not only disturb study times but also it decreases the brain's ability to efficiently retrieve info. These findings support the conclusions of Jayarathna & Fernando, (2014) in the Sri Lankan context.

Kolek and Saunders (2008) demonstrated no relationship between Facebook use and academic performance. Critically assessing the negative relationship between Facebook usage and academic performance in light of the astonishing and uncorroborated news information that Facebook usage drops academic performance, Pasek et al. (2009) conducted three separate studies on a cross-sectional sample of 1060 first-year students at a University in Illinois. They could not find any negative relationship between GPAs and the use of Facebook in any one of the three works, thereby refuting the claims of negativity by social media reports. In fact, Facebook usage was seen to be higher in students with higher grades.

Negussie & Ketema, (2014) demonstrated that there is no strong relationship between time spent

on Facebook with students' GPA. This result is in validation with the findings of study (Ahmed and Qazi, 2011) conducted in Pakistan on 1000 students of 6 universities, showing no significant relationship between time spent on social networking sites and student's GPA. Lubis et al. (2012), in a cross-sectional study, found similar findings among students' Cumulative Grade Point Average (CGPA) and the time spent on Facebook of third-year Biomedical Science students in the Faculty Health Sciences, Universiti Kebangsaan Malaysia. They found no significant differences between or between races. It can be established that CGPA achievement is not associated with time spent on Facebook. These are supported by studies by Moon (2011), on 400 undergraduate students, through a Web-based survey, which showed no relationship between Facebook usage (hours spent on the site) and academic performance (GPA) of students. Rehman et al. (2016) also found that addiction of SNS especially Facebook has no impact on student achievement.

#### **4.7. Positive Effects of Facebook Usage on academic performance and Outcomes**

In addition to papers showing negative or no impact of Facebook on academic performance (Lubis et al., 2012, *Ketari and Khanum, 2013*), other studies gave results that showed that Facebook usage can also positively impact scholastics of university students which can aid them to enhance their academic performance (Thuseethan, S.1, Kuhanesan, S, 2014). Moghavvemi, Sulaiman, Aziz, & Wai, (2017), showed that passing time, relaxation and entertainment are the main motives of using Facebook for Malaysian students, socializing and social information is not, and they may or may communicate with others on Facebook. It was also established that Facebook usage positively impacts academic performance.

In a study by Wang, (2018), show that GPAs of frequent Facebook users are not affected. In fact, students with high GPAs have smaller Facebook sessions and short Facebook usage often follows work. This means that potentially problematic Facebook use occurs when students want to splurge in leisure time not during studies.

In a study on 164 Taiwanese university students, Kao, & Craigie, (2014), investigated the effect of English usage on Facebook (EUF) and the Big Five personality traits on their level of academic achievement in learning English as a foreign language (EFL). Their results suggest that students with greater degree of extraversion were involved in more EUF and performed well in EFL learning. Earlier scholars have shown that extraverted people have a larger number of Facebook friends (Ong et al., 2011) and spend more time on it (Wilson, Fornasier, & White, 2010). These results support our findings that, extraverts use English more often on Facebook and their level of achievement in EFL was greater.

Yoke & Kamaludin (2016), explored the reasons for students' using Facebook and also if Facebook affects their Grade Point Average (GPA), based on their own perceptions. Results show that Facebook promotes collaboration and cooperation in learning to enrich learning outcomes.

Overall, results were positive as the greatest number of respondents showed that they used Facebook remain updated about latest news and information. This shows that respondents accepted Facebook as a good scholastic tool which keeps them updated for taking part in class discussions.

Shah et al, (2012) investigated the effects of Facebook usage on social capital and academic

performance of students. They showed that a *rich use* of Facebook improves the academic performance and rich use of Facebook improves student's social capital in terms of number and quality of connections, relationships and interactions. Theoretically, this study examines effect of social media on two aspects (social capital and academic performance). Students believed that Facebook seems to help them in above-mentioned means and therefore its heavy usage is justified.

#### **4.8. Facebook as a teaching and learning tool - to enhance academic performance?**

A significant outcome from studies investigated in this review is that Facebook, in addition to playing the role of a major SNS in university students' lives, can be utilized as a teaching and learning tool, where students help each other from educational perspective. Predominantly, if we contemplate the generation who was born into a world of social media technology, there is a fluid interchange between digital and physical experiences. For this generation, SNS is a primary approach of communication, knowledge and information attainment and most probably a fundamental element of their individuality and community development.

Though the topic which brings together all the papers examined is the impact of Facebook on academic performance and/or its potential to improve the academic work environment, other topics of great interest emerge in the papers under study. Some of these topics are positive towards the utilization of Facebook as a teaching instrument; for instance, a majority of studies highlight the advantages of Facebook as a space for collaboration, joint work and interaction. Another positive effect would be the improved satisfaction levels that the users of this technology can reach, the increased motivation on the part of students which results from working with a well-known and user-friendly tool, the engagement or dedication focused on studying that is likely to grow thanks to the use of Facebook, and the possibility to make friends or maintain friendships which contribute to improve the study or work environment. Other findings were that there are numerous positive usages of Facebook still employed. There are many positive usages of Facebook among university students which help them to increase their academic performance (Thuseethan, S.1, Kuhanesan, S, 2014). Today social network sites are ruining the future and career of students. Social network sites were only an electronic connection between users, but unfortunately it has now become an addiction for students. On the other hand, González, M. R., Gasco, J., & Llopis, J. (2016) stated that Facebook has some positive aspect too. It can be used as a teaching gadget. For case, a majority of researchers focused on the benefits of Facebook as a space for cooperation, teamwork, and communication. Further, they added that Facebook improved satisfaction level in students that can motivate them they are a part of the user-friendly tool. Somehow Facebook increased their dedication towards studies. This study has explored interpretations on the use of Facebook in an academic context, finding, as with several previous studies, that the picture is far from clear and there is still a considerable amount of diversity among findings. The social interaction with the existing friends is found the most common use of the Facebook among students (Kabre, 2011).

The research results by Mouri and Arshad, (2016), show that Facebook can be used for at least 21 academic tasks and that these can be grouped into six major factors which relate to 'outside academic information', 'communication with related parties for studies', 'sharing academic ideas, news and experiences', 'social and cultural improvement through communication', 'non-academic engagement' and 'latest information about higher studies' respectively. Studentssaid that their online socializing did not lessen their study time, instead it kept them updated with the

latest study related knowledge, sharing courses, class schedules etc. On this basis, the authors recommend to use Facebook as a study tool due to its popularity, to devise ways of effectively using it in the educational system. Moghavvemi, Sulaiman, Aziz, & Wai, (2017) and Yoke & Kamaludin (2016) in their studies both advocated the usage of Facebook as a learning and teaching tool for enhancing academic performance of university students.

Facebook is a global gateway to the world, and is a means of communication with people worldwide. In countries such as China, France, Germany Japan, Taiwan, etc. where the English is considered a foreign language, people converse with people across the globe in English and take advantage of the many utilities of Facebook to practice their English skills. In a Taiwanese study (KAO and CRAIGIE, 2014), English usage on Facebook (EUF) gave English as a foreign language (EFL) learners opportunities to connect with a large number of English speakers globally, which would not be available generally. Most important finding in this study is that EUF was a strong predictor of students' EFL achievement, highlighting the benefits of using Facebook to assist EFL learning. Thus Facebook is seen to enhance the academic performance of Taiwanese students. This is in line with Bosch (2009), who showed that in spite of university course sites, most students use Facebook to participate in discussions groups because Facebook has the capacity to be used as an educational tool for work or group discussions. As per Stutzman (2008), North Carolina students favored having academic discussions on Facebook, rather than their usual course management system.

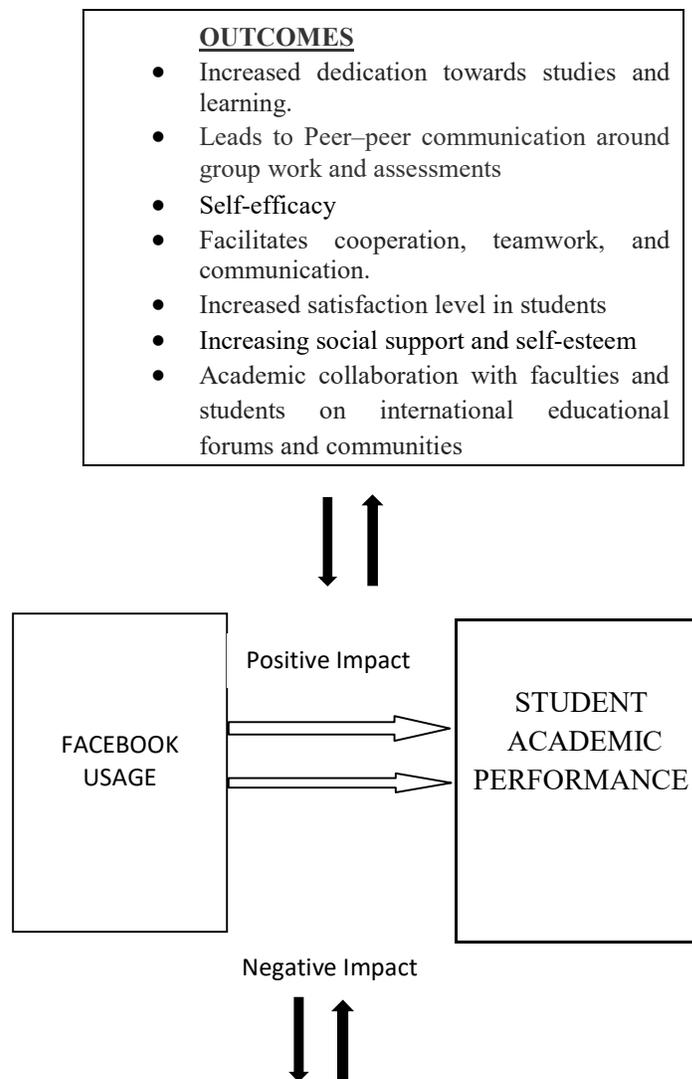
## 5. Discussion

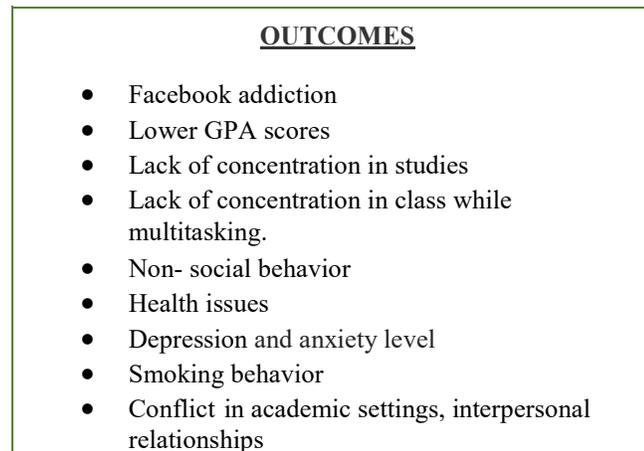
The proliferation of social networking sites has increased tremendously in the past few years, with a momentous increase in membership levels as seen in the case of Facebook, especially at the student level. It has become highly addictive and is causing disruption in daily routine activities of life (Zaremohzzabieh et al., 2014), such as studying, spending time with family and friends, sporting, sleeping, etc.

The influence of Facebook usage on academic performance cannot be overstated. While reviewing papers to investigate the impact of Facebook usage on university students' academic performance, a total of 25 articles and 4 conference papers met the eligibility criteria of the review and were included in it. Negative as well as positive outcomes were identified. Even though there is an obvious numerical strength of papers from the United States due to the dominance of this country in most academic capacities, Table 2 reveals the great interest raised by this topic amongst researchers from all over the world. The literature regarding the impact of Facebook on academic performance of students and on its potential as a tool to improve the academic performance is quite contemporary. In effect, papers on this subject were first published in 2010. Work on this topic has been published in journals belonging to diverse areas such as Education, Psychology, Anthropology, Linguistics and Mass Media.

As per the current systematic review, majority of the included papers confirm the previous research findings which show a negative relationship between Facebook usage and the student academic performance. It means that as per our overall conclusive findings, Facebook usage has a negative impact on university students' academic performance. Gender differences were found with respect to Facebook usage and academic performance (Kabre and Brown, 2011). Females were seen to have higher GPAs than males while males spent more time on sports than females, and as well as SNSs and hence had little time to focus on studying. Despite this negativity nevertheless, researches have shown that students cannot quit using Facebook because it is the best and easiest way of keeping in touch with friends, family, and peers (Facebook, 2010).

However, if students are able to self-regulate their Facebook usage (Rouis et al., 2011), then they might be able to focus on their studies and keep up their grades. According to Wanjohi et al, 2015, the more one self-regulates, the greater the probability of bettering one's academic performance. It is therefore very important that students embrace self-regulation as a way of instituting balance between face book usage and academics. Karpinski and Duberstein (2009) and O'Brien (2011) proved that long hours spent on Facebook decreased students' studying hours. Jones et al., (2007) showed that students who do not regulate their usage will miss important classes and discussions if they use Facebook during lecture, this will influence their grades unfavorably. Correspondingly, O'Brien (2011) advised students to avoid using Facebook and other SNSs while they were in class, because of the distraction they cause from studies. Also, over usage of Facebook makes students disregard offline responsibilities, relationships, and other activities (Zaremohzzabieh et al., 2014). According to Griffiths (2005) and Brown (1993), it also is a source of conflict among academic settings, interpersonal relationships, and other activities. Longer usage of Facebook has caused depression and anxiety level among students (Rosen et al., 2013, Zaremohzzabieh et al., 2014). These results overall conclude that, despite Facebook's possibly destructive effects, Facebook is, as proclaimed by Facebook itself, still the best way for students to "keep up with friends, upload an unlimited number of photos, share links and videos, and learn more about the people they meet" (Facebook, 2010).



**Fig.1. Conceptual Map****Source: Author's own elaboration****5.1. Strengths and Limitations**

Systematic review was done according to the Cochrane Systematic Review Method, which is considered as a very robust and validated method on systematic reviews. The *methodological* quality of all selected studies was evaluated by the *Mixed Methods Appraisal Tool*(MMAT), which has been content validated via feedback from professionals and through workshops; pilot tested for reliability and its usage acknowledged worldwide. Since studies were selected according to a predefined criterion so study selection bias might not be there.

The researchers may have found other relevant literature by including other databases and search engines but due to time limitations, the research was time-bound. Since no funding was provided, there were cost constraints, being a student it was not possible to carry out the research on a large scale.

**5.2. Recommendation and Implications**

Since Facebook has become an indispensable social networking technology for people from all demographics generally, and it has become a major part of their daily routines, especially of young adults and students who are actually becoming addicted to it which causes disruption in their daily life activities (Griffiths, 2005), ignorance of offline responsibilities, relationships, hence it is vital for Universities to appoint counsellors to provide small group or individual counselling for students to deal with their Facebook addiction.

University management should develop programs and conduct workshops for generating awareness and dealing with the disruptive and destructive effects of overuse of Facebook on academics and other daily routines, this will help students in understanding and dealing with their academic failures. Interventional plans are necessary for universities to reduce the influence this SNS will have on the overall academic experience and GPAs of forthcoming generations. An example of an intervention is for universities to offer training programs to their students in order to enrich their knowledge by outlining both negative and positive aspects and how to deal with these outcomes.

As in all activities of life, self-control and moderation in technology usage are the keys to

preparing students for success in the contemporary world, it is therefore imperative that universities should institute strategies to help students attain balance between social networking sites usage and academics and hence, excel in academics, which is every university's primary mandate. Universities are reservoirs of our human capital, they should integrate time management skills into their curriculum so as to help students successfully deal with university life and the life beyond it.

College is a period of transition, the settlement in college life requires the development of a concrete system of support networks. Students usually focus on online social networking sites such as Facebook for academic and adjustment purposes. Educationalists and other student support services such as student coordinators can use these online sites to lessen various transitional as well as educational anxieties and assist students facing challenges in these areas during their adjustment period. As pupils' online social networks include people from their offline lives (Subrahmanyam et al., 2008), a study by Syed et al., (2011). shows family members, friends, educators, associates, mentors and peers may possibly use social media to support academic success and consequently lead to complete performance and productivity in academics.

Promotion of using the social network of Facebook for academic purposes and scientific researches should be done in higher education institutes and universities. Educators should comprehend how students use social media technologies and then integrate them into students' lives from a scholastic dimension (Kelm 2011).

## 6. Conclusion

This review was conducted in order to establish the relationship between academic performance of university students and their Facebook usage. The aim was to systematically review the impact of Facebook usage on academic performance of university students, its associated outcomes, and to assess its potential as a tool to improve the scholastic perspective of a student's life. Additional topics of great interest surfaced from the papers that were reviewed and assessed. The contradiction among findings necessitated an overall investigation. The papers were classified into three groups based on whether Facebook usage exerted a negative effect on the academic environment, or a positive one or no effect meaning that the conclusions are vague or inadequately defined. Also the fact that in addition to being utilized as a social networking site, Facebook can also be used as a teaching and learning tool to enhance the academic performance of students, also came to light. In our opinion, this is the most significant contribution made by this study, and although papers were contradictory, most of them conclude that Facebook impacts negatively on academic performance

Although most university students have addictive tendencies towards Facebook, self-regulation and moderation in Facebook usage, prioritization of activities, focused usage of Facebook for educational purposes is a precursor to improved performance in academics.

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