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# Impact of Social Networking Media Usage on the Academic Performance of Students of the Redeemer's University

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**ABSTRACT:-**Online social networking has taken the centre stage among the many services offered by the Internet. Young people and students of higher institutions in particular have taken keen interest in interactions on the social media. In view of perceived decline in students' academic performances, pundits have suggested that unbridled indulgences in social media could have a major role in their poor performances. In this study, we investigate the impact of the social media networking on the academic performances of students of the Redeemer's University. A sample of 200 students were drawn across departments on proportional basis. A structured questionnaire was administered, processed and analysed. From the results, it was discovered that only the size of friendship on the social media has significant impacts on students' performances. Factors such as daily time spent and hourly time spent on social media have no significant effect on the students' academic performance.

Keywords:-Social networking sites, Academic performance, Education, Chatting, Study time, Media usage.

#### I. INTRODUCTION

Online social networking is by all means one of the most popular services accessed on the Internet. Facebook, for instance, 1.79 billion active users on a monthly basis worldwide, 4.5 billion likes are generated on a daily basis and 1.18 billion logons are experienced daily, thus creating a web inside a web[1]. Undergraduates from ages 15 to 24 being youthful and adventurous, are the most active users of social networking media. Given their devotion to the interactions on the social media, many people have wondered as to the effect of social media usage on students' academic performances. The goal of this research is to investigate the impacts of social networking media usage on students' academic performances in the Redeemer's University.

A social network website allows a user to (1) create a user profile and set up an account to create a digital representation of himself (2) select other members of the site as contacts or connections, and (3) communicate and engage with these users by creating a social graph, which includes: the information a social network collects about a user, and contact information, location, associations, personal information, work history, personal preferences, who you are friends with, and so on. A social network can be used for a myriad of purposes. The use of the social network media and the Internet as a tool for education has been acknowledged by authors (Lau, 2016). For example, in the university, students and faculty members have increasinglyadopted various social media tools such as Facebook and Twitter topromote teaching and learning both inside and outside the classroom. The educational benefits associated with the use of social media technologies are said to include: (a)enhanced communication between students and instructors, (b)increased opportunities for networking or collaborations amongstudents, (c) rapid sharing of resources, (d) access to course materialsby students after class, (e) provision of an alternative platformto the official learning management systems, and (f) exposureof students to technologies and skills that may improve their employment success [2].

The Internet is a very essential part of modern day life affecting various aspects such as shopping, travelling, electronic mails and education. Though activities on the Internet can span a wide range of viable activities, the sad thing is that a very large number of people (majority of youths and teenagers, which make the student population) use it for just social networking.

According to some previous research, it has been estimated that more than 90% of undergraduates use social networks[3]. Some of the factors that have promoted the fast development of social networking has been hardware development by producing small communication devices, which can be used for accessing social networks anytime, anywhere. These devices include pocket computers, laptops, iPads and smartphones of various sizes.

Education is a very essential part of an individuals' life. For youths, education should be more important than anything, unfortunately, this is not the case. Today's youth would rather spend more time on a social network site engaging in unproductive actions than involve themselves with productive tasks [3]. Providing ubiquitous facility for social networking can be a straight invitation of addiction to any teenagers and even an adults, as academic satisfaction is not enough for those students who suffer from social isolation. Social networks could seize the total attention and concentration of the students and divert them towards non-educational, unethical and inappropriate actions. The major problem with social media usage is that more than necessary time is spent on social networking sites. Some of the time could have been used for more productive tasks, in particular, studying.

## II. LITERATURE REVIEW

A number of social networking sites are available on the Internet. The most popular among them include Facebook, Twitter, WhatsApp and Skype.

Facebook was launchedin February 2004 and has since experienced tremendous growth in its user base and applications, it has been used for both business connections and leisure. It has some 1.79 billion active users on a monthly basis worldwide, 4.5 billion likes are generated on a daily basis and 1.18 billion logons are experienced daily. In addition, for every second, five new profiles are created daily and 300 million photos are uploadedon daily basis. The average time spent per Facebook visit is 20 minutes; about 510 comments are posted every minutes, and 50% of youths of ages 18-24 go on Facebook when they wake up[1].

According to Smith (2016), the statistics of WhatsApp gathered since its inception in 2009, are staggering. These include:990 million users base as at January, 2016, approximately 1 million new users register daily, about 30 billion messages are sent via WhatsApp daily, 32% of millennials use WhatsApp globally and 70% of WhatsApp users use it daily. Twitters is also very popular among social network users. As at April 2016, Twitter had about 310 million users, the total number of Twitter registered users was 13 billion and daily active Twitter users has reached 100 million. There are at least 208 followers (on average) for every twitter user while 34% of active Twitter users log on more than once a day [4]. Skype was launched in 2003 and bought by Microsoft in 2011 [4]. Some of its usage statistics include:300 million user base, users spend a total of 3 billion minutes per day on Skype. About 2 trillion minutes have been spent on Skype video calls as at February 2016 and the number of downloads of Skype total at 750 million.

In [5], an exploratory research study was conducted that drew a random sample of 48 males and females and administered a student perception questionnaire on how social media usage affects University students. 35% if the participants were undergraduates and 65% were graduate students of the Johnson and Wales University. In the research, an anonymous questionnaire was administered to collect data from the respondents. 60% of the participants favoured Facebook, 22% Skype, 10% use Twitters and 8% had a preference for Myspace. 45% of the sample disclosed that they spent 6-8 hours per day to check a social media site, 23% spent more than 8 hours, 20% spent 2-4 hours and only 12% spent less than 2 hours. The ratio of participants who post or respond to messages during School hours was 64%; 15% rarely used social media during School hours while 21% were not sure if they would like to use it. In the same vein, 90% of the respondents said that they post or respond while completing homework, 8% would never use social media while doing homework while 2% were not sure. In terms of the benefits of social media, 20% agreed that social media help with School assignments; 25% agreed that social media helps to make new friends and 55% just used social media for fun. The research also revealed that College students were likely to be affected by social media, which they find attractive; and it not only makes available to College students another world to make friends but also provides a good way to release pressure. The research also indicates that an approach is needed to better balance the relationship between social media and academic study.

In [6] aninvestigation of the impact of social media on the academic performance of the students of the University of Abuja was conducted. Outcomes from this research showed that a great deal of students in the University of Abuja are aware of social media, often online, and, due to the frequency of time spent on social media, experiencing setbacks in academic performance. The study recommended creating a balance between times spent onlineand that spent on academic activities.

In the research of [7], a survey of students' use of social networking sites and how it affects them was undertaken. It aimed at examining the part which the consistent use of social media played on the academic performance of the students of the sample institutions. The results showed that the students use social networking sites mostly for keeping in touch, although, a majority indicated that they used them mostly for academic activities.

Are search that analysed the application of social media amongst students of Kaduna Polytechnic was conducted in [8]. The study showed that students regard social media as an efficient platform for accomplishing academic excellence on one hand, and social media have an effect on students' study patterns on the other hand.

Social networking has been viewed as type of social capital whose maintenance is at the cost of the individual. "These networks are made up of verydiverse ties (family, work,etc) whose maintenance is a cost for theindividual and potentially can generate a return"[9],[10]. According to [11], social networking also portends certain economic values. They opined that "from an economic point of view, one of the reasons whypersonal ties are decisive is that they provide opportunities foradvantageous access to privileged information flows and resources."

#### III. METHODOLOGY

This section highlights the research methodologies adopted in this research.

#### A. Data Collection

For the purpose of the study, the questionnaire method of data gathering was adopted. A questionnaire was designed and administered to 200 respondents, with a return percentage of 90% (180 of 200). The sampling was done across all departments in the University by proportional allocation, that is, the questionnaires were shared across the various Colleges based on their respective populations. The gender split of the valid responses were 85 males and 95 females. The social medium that came uppermost in the minds of the respondents are Facebook (83), Whatsapp (29), BBM (26), Instagram (14), Twitter (13), Skype (1) and LinkedIn (1).

## **B.** Data Analysis

- (1) Descriptive statistical analysis involving frequency counts, cross tabulations and tests of significance were performed. Tests of independence were carried out between pairs of variables to study the effect of social media on academic performanceusing Chi-square tests. The formulated hypotheses were of the format:
- $H_0$ : Variable A is independent of variable B, that is, there is no association between them.
- $H_1$ : Variable A and variable B are not independent, there is an association between them.
- (2) Multinomial Logistic Regression: The research adopted multinomial logistic regression on some categorical/nominal variables CGPA and Study Habit being taken as dependent variables. Multinomial logistic regression is the linear regression analysis to carry out when the dependent variable is nominal with more than two levels. Consequently, it is an extension of logistic regression, which analyses dichotomous (binary) dependents. In line with all linear regressions, the multinomial regression is a predictive analysis used to describe data and to explain the relationship between one dependent nominal variable and one or more independent variables. It assumes that data are case specific. The general model of the regression is given as:

$$Score(X_i, K) = B_k.X_i$$
 (1)

where  $X_i$  is the vector of explanatory variables describing observation i, and  $B_k$  is the vector of weights. At the core of the multinomial regression analysis is the task estimating the k-l log odds of each category. In the event of k=l categories with the last category as reference, for example, multinomial regression estimates l-l=l0 multiple linear regression function defined as:

$$logit(y = 1) = log\left(\frac{p(y = 1)}{1 - (p = 1)}\right) = \beta_0 + \beta_1 \cdot x_{i2} + \beta_2 \cdot x_{i2} + \dots + \beta_p \cdot x_{in} fori = 1 \dots n.$$

$$logit(y = 2) = log\left(\frac{p(y = 2)}{1 - (p = 2)}\right) = \beta_0 + \beta_1 \cdot x_{i2} + \beta_2 \cdot x_{i2} + \dots + \beta_p \cdot x_{in} fori = 1 \dots n.$$
(2)

The Statistical Package for Social Scientists(SPSS) was employed as the analysis tool in this research. SPSS enables the data capture, coding, transformation and analysis of the data.

# IV. RESULTS

## A. Descriptive Analysis

The following presents the basic descriptive analysis of the study.

1) Total Social Media Awareness

Table 1 presents the total social media awareness by the respondents.

Table 1 Total Social Media Awareness

| Social Media | Frequency | Percentage |
|--------------|-----------|------------|
| WhatsApp     | 169       | 94         |
| Facebook     | 165       | 92         |
| BBM          | 154       | 86         |
| Twitters     | 144       | 80         |
| Instagram    | 131       | 73         |
| Skype        | 117       | 65         |
| WeChat       | 51        | 28         |
| LinkedIn     | 51        | 28         |
| 2Go          | 45        | 25         |
| Imo          | 27        | 15         |
| Total        | 180       | 100        |

## 2) Social Media Ever Used

Table 2 presents the response on social media ever used.

Table 2Social Media Ever Used

| Social Media | Frequency | Percentage |
|--------------|-----------|------------|
| Facebook     | 143       | 79         |
| WhatsApp     | 129       | 72         |
| Twitters     | 120       | 67         |
| BBM          | 117       | 65         |
| Skype        | 84        | 47         |
| Instagram    | 48        | 27         |
| 2Go          | 33        | 18         |
| LinkedIn     | 13        | 7          |
| WeChat       | 9         | 5          |
| Imo          | 6         | 3          |
| Total        | 180       | 100        |

# 3) Social Media Used Nowadays

Table 3 shows the frequency count of the social media used nowadays.

 Table 3Social Media Used Nowadays

| Social Media | Frequency | Percentage |
|--------------|-----------|------------|
| WhatsApp     | 134       | 74         |
| BBM          | 103       | 57         |
| Facebook     | 94        | 52         |
| Instagram    | 89        | 49         |
| Twitters     | 58        | 32         |
| Skype        | 41        | 23         |
| Imo          | 12        | 7          |
| LinkedIn     | 9         | 5          |
| WeChat       | 5         | 3          |
| 2Go          | 4         | 2          |
| Total        | 180       | 100        |

#### 4) Chat Partners

Table 4 shows the frequency count of the partners with whom students chat.

Table 4Person with whom student chats

| Chat Partners    | Frequency | Percent |
|------------------|-----------|---------|
| Parents          | 3         | 2       |
| Siblings         | 18        | 9       |
| Friends          | 107       | 54      |
| Boy/Girl friends | 32        | 16      |
| Colleagues       | 30        | 15      |
| Spouse           | 3         | 2       |
| Others           | 7         | 4       |
| Total            | 200       | 100     |

5) Whether students have enough time to study nowadays

The responses to the question of whether students give enough time to their studies nowadays is presented in Table 5.

**Table 5**Do students give enough time to their studies nowadays?

| Responses     |           | Frequency | Percent | Valid Percent | <b>Cumulative Percent</b> |
|---------------|-----------|-----------|---------|---------------|---------------------------|
| Valid         | Yes       | 35        | 19.4    | 21.2          | 21.2                      |
| vanu          | No        | 87        | 48.3    | 52.7          | 73.9                      |
|               | Can't say | 43        | 23.9    | 26.1          | 100.0                     |
|               | Total     | 165       | 91.7    | 100.0         |                           |
| Missing Syste | m         | 15        | 8.3     |               |                           |
| Total         |           | 180       | 100.0   |               |                           |

6) Whether social media usage compete with students study time

The responses obtained when students were asked if social media usage compete with their study time is presented in Table 6.

**Table 6**Can social media usage compete with student study time?

| Responses  | l .       | Frequency | Percent | Valid Percent | <b>Cumulative Percent</b> |
|------------|-----------|-----------|---------|---------------|---------------------------|
|            | Yes       | 99        | 55.0    | 73.9          | 73.9                      |
| Valid      | No        | 9         | 5.0     | 6.7           | 80.6                      |
|            | Can't say | 26        | 14.4    | 19.4          | 100.0                     |
|            | Total     | 134       | 74.4    | 100.0         |                           |
| Missing Sy | vstem     | 46        | 25.6    |               |                           |
| Total      |           | 180       | 100.0   |               |                           |

7) Extent of agreement with the question that "too many activities prevent students from concentrating on their studies"

Table 7 presents the responses obtained when students were asked the question whether they agree with the fact that too many activities prevent students from concentrating on their studies.

**Table 6**Extent of Agreement - Too many activities prevent students from concentrating on their studies

| Response  | es                   | Frequency | Percent | Valid Percent | Cumulative Percent |
|-----------|----------------------|-----------|---------|---------------|--------------------|
|           | Strongly<br>disagree | 3         | 1.7     | 1.8           | 1.8                |
| Valid     | Slightly<br>disagree | 17        | 9.4     | 10.4          | 12.3               |
|           | Neither              | 17        | 9.4     | 10.4          | 22.7               |
|           | Slightly agree       | 58        | 32.2    | 35.6          | 58.3               |
|           | Strongly agree       | 68        | 37.8    | 41.7          | 100.0              |
|           | Total                | 163       | 90.6    | 100.0         |                    |
| Missing S | System               | 17        | 9.4     |               |                    |
| Total     |                      | 180       | 100.0   |               |                    |

## **B.** Testsof Independence

Six hypotheses on tests of independence were formulated and tested in this study. These are presented in this section.

1) CGPA and Frequency of use of Social Media

**Hypothesis 1**: There is no relationship between the frequency of use of social media and students' CGPA. The null hypothesis and the alternatives are stated below:

 $H_0$ : CGPA is independent of frequency of use of social media

 $H_1$ : There is an association between CGPA and frequency of use of social media

The crosstabulation and the hypothesis test results are presented in Tables 8 and 9 respectively.

Table 7Crosstabulation of Student CGPA vs Frequency of Communicating using Social Media

|                    |           |               | Frequency of communicating using social media |            |        |  |
|--------------------|-----------|---------------|---|------------|--------|--|
|                    |           |               | Everyday                                      | Less often | Total  |  |
| 1.50-2.49          |           | Count         | 4   | 1          | 5      |  |
|                    | 1.30-2.49 | % within CGPA | 80.0%   | 20.0%      | 100.0% |  |
|                    | 2.50-3.49 | Count         | 22  | 13         | 35     |  |
| CGPA this semester |           | % within CGPA | 62.9%   | 37.1%      | 100.0% |  |
| COFA this semester | 3.50-4.49 | Count         | 44  | 12         | 56     |  |
|                    |           | % within CGPA | 78.6%   | 21.4%      | 100.0% |  |
|                    | 4.5-5.0   | Count         | 20  | 12         | 32     |  |
|                    | 4.5-5.0   | % within CGPA | 62.5%   | 37.5%      | 100.0% |  |
| Total              |           | Count         | 90  | 38         | 128    |  |
| Total              |           | % within CGPA | 70.3%   | 29.7%      | 100.0% |  |

Table 8Chi-Square: Student CGPA vs Frequency of Communicating using Social Media

|                              | Value  | df | Asymp. Sig. (2-sided) |
|------------------------------|--------|----|-----------------------|
| Pearson Chi-Square           | 3.922ª | 3  | .270                  |
| Likelihood Ratio             | 3.981  | 3  | .264                  |
| Linear-by-Linear Association | .041   | 1  | .840                  |
| N of Valid Cases             | 128    |    |                       |

# 2) CGPA and Action taken when Students Receive a Message on Social Media Platform

**Hypothesis 2**: There is no relationship between action taken when a message comes in on social media and student's CGPA. The null hypothesis and the alternatives are stated below:

 $H_0$ : CGPA is independent of Reaction to Message Reception

 $H_1$ : There is an association between CGPA and reaction to message reception

The action taken when respondent receives a message and CGPA were crosstabulated and the result is shown in Table 10. Table 11 contains the result of the test of hypothesis.

Table 9Crosstabulation of Student CGPA vs Action taken when a message comes in

|                              | Action taken when a message comes in |               |                     |                      |                        |                    |        |
|------------------------------|--------------------------------------|---------------|---------------------|----------------------|------------------------|--------------------|--------|
|                              |                                      |               | Read<br>immediately | Read and reply later | Ignore and check later | Check occasionally | Total  |
|                              | 1.50-2.49                            | Count         | 3                   | 1                    | 1                      | 0                  | 5      |
|                              | 1.30-2.49                            | % within CGPA | 60.0%               | 20.0%                | 20.0%                  | 0.0%               | 100.0% |
|                              | 2.50-3.49                            | Count         | 10                  | 16                   | 6                      | 2                  | 34     |
| CGPA this semester 3.50-4.49 | % within CGPA                        | 29.4%         | 47.1%               | 17.6%                | 5.9%                   | 100.0%             |        |
|                              | Count                                | 14            | 29                  | 10                   | 3                      | 56                 |        |
|                              | 3.30-4.49                            | % within CGPA | 25.0%               | 51.8%                | 17.9%                  | 5.4%               | 100.0% |
|                              | 4.5-5.0                              | Count         | 17                  | 8                    | 2                      | 4                  | 31     |
|                              | 4.5-5.0                              | % within CGPA | 54.8%               | 25.8%                | 6.5%                   | 12.9%              | 100.0% |
| Total                        |                                      | Count         | 44                  | 54                   | 19                     | 9                  | 126    |
| Total                        |                                      | % within CGPA | 34.9%               | 42.9%                | 15.1%                  | 7.1%               | 100.0% |

Table 10Chi-Square:CGPAvs Action taken when a message comes in

|                              | Value               | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square           | 14.359 <sup>a</sup> | 9  | .110                  |
| Likelihood Ratio             | 14.795              | 9  | .097                  |
| Linear-by-Linear Association | .210                | 1  | .647                  |
| N of Valid Cases             | 126                 |    |                       |

## 3) CGPA against Chat Duration (Per Hour)

**Hypothesis 3:** There is no relationship between the time spent on social media in a typical hour and student's CGPA. The null hypothesis and the alternatives are stated below:

 $H_0$ : CGPA is independent of Time spent chatting in a typical hour of the day

H<sub>1</sub>: There is an association between CGPA and Time spent chatting in a typical hour of the day.

The crosstabulation of CGPA against chat duration in a typical hour is shown in Table 12 and the hypothesis test result is presented in 4.13.

Table 11: Crosstabulation of Student CGPA vs Time spent Chatting in a typical hour of the day

|                    |            |               | Time spent             | Time spent chatting in a typical hour of the day |                      |        |  |  |
|--------------------|------------|---------------|------------------------|--|----------------------|--------|--|--|
|                    |            |               | Less than 5<br>minutes | Between 10 to 30 minutes                         | More than 30 minutes | Total  |  |  |
| CGPA this semester | 1.50-2.49  | Count         | 0                      | 2  | 3                    | 5      |  |  |
| semester           |            | % within CGPA | 0.0%                   | 40.0%  | 60.0%                | 100.0% |  |  |
|                    | 2.50-3.49  | Count         | 10                     | 17   | 8                    | 35     |  |  |
|                    |            | % within CGPA | 28.6%                  | 48.6%  | 22.9%                | 100.0% |  |  |
|                    | 3.50-4.49  | Count         | 12                     | 27   | 17                   | 56     |  |  |
|                    |            | % within CGPA | 21.4%                  | 48.2%  | 30.4%                | 100.0% |  |  |
|                    | 4.5-5.0    | Count         | 9                      | 12   | 11                   | 32     |  |  |
|                    |            | % within CGPA | 28.1%                  | 37.5%  | 34.4%                | 100.0% |  |  |
| Total              | otal Count |               | 31                     | 58   | 39                   | 128    |  |  |
|                    |            | % within CGPA | 24.2%                  | 45.3%  | 30.5%                | 100.0% |  |  |

Table 12: Chi-Square: CGPA vs Time spent Chatting in a typical hour of the day

|                              | Value              | df | Asymp. Sig. (2-sided) |
|------------------------------|--------------------|----|-----------------------|
| Pearson Chi-Square           | 4.772 <sup>a</sup> | 6  | .573                  |
| Likelihood Ratio             | 5.728              | 6  | .454                  |
| Linear-by-Linear Association | .030               | 1  | .862                  |
| N of Valid Cases             | 128                |    |                       |

## 4) CGPA against Chat Duration (Per Day)

**Hypothesis 4:** There is no relationship between the time spent on social media in a day and student's CGPA. The null hypothesis and the alternatives are stated below:

 $H_0$ : CGPA is independent of Time spent chatting in a day

 $H_1$ : There is an association between CGPA and Time spent chatting in a day.

The crosstabulation of CGPA and time spent on social media per day is presented in Table 14 and the hypothesis test result is shown in Table 15.

Table 13Crosstabulation of Student CGPA vs Time used to chat in a typical 24-hour day

|           |           |               | Time spent chatti   | 24-hour day |                      |        |
|-----------|-----------|---------------|---------------------|-------------|----------------------|--------|
|           |           |               | Less than 1<br>hour | 2-3 hours   | More than<br>4 hours | Total  |
|           | 1.50-2.49 | Count         | 2                   | 2           | 1                    | 5      |
|           | 1.30-2.49 | % within CGPA | 40.0%               | 40.0%       | 20.0%                | 100.0% |
|           | 2.50-3.49 | Count         | 14                  | 16          | 5                    | 35     |
| CGPA this | 2.30-3.49 | % within CGPA | 40.0%               | 45.7%       | 14.3%                | 100.0% |
| semester  | 3.50-4.49 | Count         | 21                  | 20          | 15                   | 56     |
|           | 3.30-4.49 | % within CGPA | 37.5%               | 35.7%       | 26.8%                | 100.0% |
|           | 4.5-5.0   | Count         | 13                  | 14          | 5                    | 32     |
|           | 4.3-3.0   | % within CGPA | 40.6%               | 43.8%       | 15.6%                | 100.0% |
| Total     |           | Count         | 50                  | 52          | 26                   | 128    |
|           |           | % within CGPA | 39.1%               | 40.6%       | 20.3%                | 100.0% |

Table 1: 5Chi-Square: Student CGPA vs Time used to chat in a typical 24-hour day

|                              | Value  | df | Asymp. Sig. (2-sided) |
|------------------------------|--------|----|-----------------------|
| Pearson Chi-Square           | 2.824ª | 6  | .831                  |
| Likelihood Ratio             | 2.825  | 6  | .830                  |
| Linear-by-Linear Association | .007   | 1  | .935                  |
| N of Valid Cases             | 128    |    |                       |

## 5) 4.2.5CGPA against Range of Friends across Social Media

**Hypothesis 5:** There is no relationship between the number of friends on social media and student's CGPA. The null hypothesis and the alternatives are stated below:

 $H_0$ : CGPA is independent of Number of friends across social media

 $H_1$ : There is an association between CGPA and Number of friends across social media.

The numbers of friends connected to across all social media is investigated against the academic performance of students. The results are presented in Tables16 and 17.

Table 14Crosstabulation of Student's CGPA vs Range of friends across social media

|          |       |           |               | Ra      |          |               |               |       |        |
|----------|-------|-----------|---------------|---------|----------|---------------|---------------|-------|--------|
|          |       |           | below 250     | 251-500 | 501-1000 | 1001-<br>1500 | Above<br>1500 | Total |        |
|          |       | 1.50-2.49 | Count         | 0       | 0        | 2             | 3             | 0     | 5      |
|          |       | 1.30-2.49 | % within CGPA | 0.0%    | 0.0%     | 40.0%         | 60.0%         | 0.0%  | 100.0% |
|          | 2     | 2.50.2.40 | Count         | 4       | 11       | 7             | 3             | 10    | 35     |
| CGPA     | this  | 2.50-3.49 | % within CGPA | 11.4%   | 31.4%    | 20.0%         | 8.6%          | 28.6% | 100.0% |
| semester |       | 3.50-4.49 | Count         | 9       | 13       | 13            | 7             | 9     | 51     |
|          |       | 3.30-4.49 | % within CGPA | 17.6%   | 25.5%    | 25.5%         | 13.7%         | 17.6% | 100.0% |
|          |       | 4.5-5.0   | Count         | 12      | 4        | 6             | 4             | 4     | 30     |
|          |       | 4.3-3.0   | % within CGPA | 40.0%   | 13.3%    | 20.0%         | 13.3%         | 13.3% | 100.0% |
|          |       | Count     | 25            | 28      | 28       | 17            | 23            | 121   |        |
| Total    | Total |           | % within CGPA | 20.7%   | 23.1%    | 23.1%         | 14.0%         | 19.0% | 100.0% |

Table 15: Chi-Square: Student's CGPA vs Range of friends across social media

|                              | Value               | df | Asymp. Sig. (2-sided) |
|------------------------------|---------------------|----|-----------------------|
| Pearson Chi-Square           | 24.178 <sup>a</sup> | 12 | .019                  |
| Likelihood Ratio             | 23.006              | 12 | .028                  |
| Linear-by-Linear Association | 4.764               | 1  | .029                  |
| N of Valid Cases             | 121                 |    |                       |
|                              |                     |    |                       |

## 6) Time Spent Studying against Time Spent on Social Media (Per Day)

Hypothesis 6: There is no relationship between the time spent studying and time spent on social media. The null hypothesis and the alternatives are stated below:

 $H_0$ : Time spent studying is independent of Time spent on social media

 $H_1$ : There is an association between Time spend studying and Time spent on social media.

The crosstabulation of daily study time requirements when school is in session against time used to chat in a typical 24-hour day and the result of the test of hypothesis is shown Table 18 and 19 respectively.

**Table 18**Crosstabulation of Daily study time requirement when School is in session vs Time used in chatting in a typical 24-hour day

|                               |             | a typicai 24-i                        |              |                      |       |        |
|-------------------------------|-------------|---------------------------------------|--------------|----------------------|-------|--------|
|                               |             |                                       | Time used to |                      |       |        |
|                               |             | Less than 1<br>hour                   | 2-3 hours    | More than 4<br>hours | Total |        |
|                               | Less than 1 | Count                                 | 10           | 12                   | 5     | 27     |
| Daily study                   | hour        | % within Daily study time requirement | 37.0%        | 44.4%                | 18.5% | 100.0% |
| time                          | 2-3 hours   | Count                                 | 32           | 40                   | 18    | 90     |
| requirement<br>when School is |             | % within Daily study time requirement | 35.6%        | 44.4%                | 20.0% | 100.0% |
| in session                    | More than 4 | Count                                 | 20           | 16                   | 9     | 45     |
|                               | hours       | % within Daily study time requirement | 44.4%        | 35.6%                | 20.0% | 100.0% |
| Total                         |             | Count                                 | 62           | 68                   | 32    | 162    |
|                               |             | % within Daily study time requirement | 38.3%        | 42.0%                | 19.8% | 100.0% |

**Table 16**Chi-Square: Daily study time requirement when School is in session vs Time used in chatting in a typical 24-hour day.

| typicai 24-iloui day         |                    |    |                       |  |  |  |
|------------------------------|--------------------|----|-----------------------|--|--|--|
|                              | Value              | df | Asymp. Sig. (2-sided) |  |  |  |
| Pearson Chi-Square           | 1.269 <sup>a</sup> | 4  | .867                  |  |  |  |
| Likelihood Ratio             | 1.273              | 4  | .866                  |  |  |  |
| Linear-by-Linear Association | .185               | 1  | .667                  |  |  |  |
| N of Valid Cases             | 162                |    |                       |  |  |  |

#### C. Multinomial Logistic Regression Analysis

The result of the multinomial regression analysis of CGPA on time spent daily on social media is presented in Table 20. The result of the multinomial regression of the most recent CGPA as dependent variable and time spent on social media per hour as independent variable is presented in Table 21. The result of the multinomial regression of the most recent CGPA as dependent variable and range of friends across social media as independent variable is presented in Table 22.

Table 20Model Fitting: CGPA vs Time spent on Social Media Daily

| Model          | Model Fitting Criteria | Likelihood Ratio Tests |    |      |  |
|----------------|------------------------|------------------------|----|------|--|
| Wodel          | -2 Log Likelihood      | Chi-Square             | df | Sig. |  |
| Intercept Only | 63.398                 |                        |    |      |  |
| Final          | 43.119                 | 20.279                 | 15 | .161 |  |

Table 21Model Fitting: CGPA vsTime spent on social media per hour

| Model          | Model Fitting Criteria | 5     |   | sts  |
|----------------|------------------------|-------|---|------|
|                | -2 Log Likelihood      |       |   | Sig. |
| Intercept Only | 25.920                 |       |   |      |
| Final          | 21.940                 | 3.981 | 3 | .264 |

Table 22Model Fitting: CGPA vs Range of friends across social media

|                | Model Fitting Criteria | Likelihood Ratio Tests |    |      |  |
|----------------|------------------------|------------------------|----|------|--|
| Model          | -2 Log Likelihood      | Chi-Square             | df | Sig. |  |
| Intercept Only | 60.546                 |                        |    |      |  |
| Final          | 37.539                 | 23.006                 | 12 | .028 |  |

#### V. DISCUSSIONS

Students who took part in the study demonstrated a deep awareness of an array of social media as reflected in Table 1. 94% were aware of Whatsapp, 92% of Facebook and 86% of BBM. Others include Twitters (80%), Instagram (73%) and Skype (65%). The awareness of WeChat, LinkedIn, 2Go and Imo came distant 28%, 28%, 25% and 15% respectively. When asked about social media networks ever used (Table 2), Facebook came first (75%), followed by Whatsapp (72%), Twitter (67%) and BBM (65%). These were followed by Skype, Instagram, 2Go, LinkedIn, WeChat and Imo at 47%, 27%, 7%, 5% and 3% respectively. From Table 3 participants in the survey claim to be using Whatsapp (74%), BBM (57%) and Facebook (52%) actively nowadays. Twitter, Skype, Imo, LinkedIn, WeChat and 2Go ranked lower in terms of usage nowadays with 32%, 23%, 7%, 5%, 3% and 2% respectively.

From Table 4, participants usually chat with Friends (54%), Boy/Girl Friends (16%) and Colleagues (15%). Siblings, Parents and Spouses come lower in the rank making 9%, and 2% respectively. Asked whether students do devote enough time to their studies nowadays, 21% answered Yes, 53% said No while 26% did not give their opinion (Table 5). According to Table 6, 74% of the respondents agree that social media usage would compete with students' study time, 7% disagrees while 19% were neutral. Asked whether too many activities can prevent students from concentrating on their studies, most respondents agree strongly (42%), 36% slightly disagrees, 10% slightly disagrees, 2% slightly disagrees while 10% stayed neutral (Table 7). From table 8, on the average, 70% of respondents use social media everyday while the rest use it less often. Among those whose CGPA falls within the 4.5-5.0 bracket, 63% of them use social media everyday while others use it less often. Within those whose CGPA ranges from 3.50 and 4.49, 79% use the social media everyday while among those whose performance are from 2.5 - 3.49, 63% use the social media daily. In the same vein, among the low performers of CGPA below 2.50, 80% use the social media daily. We would have expected that if frequency of usage of social media have complete negative impacts on academic performance, then those who perform better academically should use it less often but that was not the case from our results. From Table 9, the Pvalue for both Pearson Chi-square (0.270) and Likelihood ratio (0.264) show that the test is not significant at 95% level of confidence. This implies that the null hypothesis cannot be rejected, and as such the alternative is rejected. In other words, based on the survey results, there is no association between students' CGPA and frequency of use of social media.

Table 10 shows that 35% of respondents claim to read messages immediately they receive it, 43% read and reply later, 15% ignore message when they come in and check later while 7% only check occasionally. Among those whose CGPA is below 2.50, 60% claim to read their messages immediately, while 29% those whose CGPA are between 2.50 - 3.50 read their messages immediately. Only 25% of those whose CGPA are within 3.50 - 4.49 read their messages immediately while 55% of those with CGPA of 4.5 and higher read their messages immediately. From Table 11, the  $P_{value}$  for both Pearson Chi-square (0.110) and Likelihood ratio (0.097) show that the test is not significant. This implies that the null hypothesis cannot be rejected, that is, there is no association between students CGPA and students' reaction to message reception.

From Table 12, those that spend Less than 5 minutes, Between 10 to 30 minutes and More than 30 minutes constitute 24%, 45% and 31% respectively. From Table 13, the  $P_{value}$  for both Pearson Chi-square (0.573) and Likelihood ratio (0.454), shows that the test is not significant. This implies that the null hypothesis cannot be rejected, that is, there is no association (based on the survey) between students CGPA and duration of chats (per hour). From Table 14, 39% of respondents are engaged in social media for Less than 1 hour, 41% for 2-3 hours while 20% use it more More than 4 hours in a typical day. Across academic performance classifications, we have a fairly even distribution of 40%, 38%, 41% and 39% for CGPA's of 1.50-2.49, 2.50-3.49, 3.50-4.49 and 4.5-5.0 respectively. From Table 15, the Pvalue, for both Pearson Chisquare (0.831) and Likelihood ratio (0.830) show that the test is not significant. This implies that the null hypothesis cannot be rejected, that is, there is no association (based on the survey) between students CGPA and duration of chats (per day). From Table 16, 21% of respondents have 1 - 250 friends, 23% have 251-500 friends, 23% connect to 501 - 1000, 14% have 1001 - 1500 while 19% have above 1500. Across CGPA classifications, 4% of respondents make CGPA of 1.50 -2.49, 29% of them make 2.50 - 3.49, 42% records CGPA of 3.50 - 4.49 while those who make CGPA of 4.5 - 5.0 constitute 25%. We observe that those with better CGPA generally have fewer number of friendship associations across all platforms. Based on the results, as in Table 17, it is observed that the  $P_{value}$ , for the Pearson Chi-Square (0.019) and Likelihood ratio (0.028), is significant at the 95% level of confidence. This implies that there is an association between range of friends and the students' academic performance. This implies that the null hypothesis is therefore rejected and the alternative is upheld. A possible reason why the number of friends can affect academic performance may have to do with the fact that a large friendship base would necessary require spending significant amount of time to attend to messages and if most of them are not academic related, then students would be much distracted from their studies. From Table 18 we can observe that those who spend more time studying spend less time on social media and vice versa. However, from Table 19, the Pvalue for both Pearson Chi-square (0.867) and Likelihood ratio (0.866) show that the test is not significant. This implies that the null

hypothesis cannot be rejected, that is, there is no association (based on the survey) between students daily study time and daily chat duration.

The multinomial regression of CGPA on time spent daily on social media (Table 20) was not significant ( $P_{value}$  0.161). This implies that time spent daily on social media has not (so far) affected the students' academic performance based on the survey conducted in Redeemer's University. The test of independence using Chi-Square (section 4.2.4) also agrees with this result. The multinomial regression of CGPA on time spent per hour on social media (Table 21) was not significant ( $P_{value}$  0.264). This implies that time spent per hour on social media has not affected the students' academic performance based on the survey conducted within Redeemer's University. The test of independence using Chi-Square (Section 4.2.3) also reflected this result. The multinomial regression of CGPA on range of friends (Table 22) was significant at the 95% level of confidence ( $P_{value}$  0.028). This implies that the number of friends a student has effects on his academic performance. This could also be interpreted using the test of independence presented in section 4.2.5, that the more the number of friends, the lower the academic performance. This could be due to the fact that those with a larger friends base tend to concentrate more (not necessarily spend more time) on social media to the detriment of their studies.

#### VI. CONCLUSION

This studyinvestigates the effects of social media usage on academic performance of students in the Redeemer's University. A review of related literature on social media was undertaken. Questionnaires were designed to elicit information from students on their awareness and usage of social media. 200 questionnaires were administered across various departments on proportional allocation basis, that is, departments with more students got more questionnaires. The completed questionnaires were coded, captured and analysed. The results of the analysis were presented and discussed.

The study shows that based on two independent variables of daily time spent and hourly time spent, social media has no significant effects on the academic performance of Redeemer's University students. This result is in line with the findings of [7].On the other hand, this study establishes the fact that the range of friends across various social media have a significant effect on their academic performances. We can therefore conclude that social media usage has no very evident effect on the academic performance of Redeemer's University students. However, there may exist other factors that affect students' academic performance, which are yet to be investigated. In terms of number of friends, students should endeavour to link more with friends that can keep their social media interactions to mostly academic discussions. This might be able to make positive impacts on their academic performance. This recommendation is strengthened by the fact that about 70% of chat partners are made up of friends and colleagues. The study reveals that WhatsApp, BBM and Facebook were the topmost among the social media networks that participants regularly used nowadays. In future research, we would like to correlate students' performances with their academic records. Rather than asking for their CGPA and taking their responses at face value, we would like to match the survey data with their academic records in order to authenticate students' true academic performances.

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