

Research Article

Effect of Social Media on Students' Academic Performance in Ahmadu Bello University Zaria: Social Media and Its Impact

Micah Godwin Munang* 

Computer Science, Ahmadu Bello University Zaria, Kaduna, Nigeria

Abstract

Social media is a web-based service that gives individual the opportunity to create either a public or semi-public profile within a bounded system, furthermore it's add a list of others with which they share a connection, view their list of connections and those made within the system. Therefore, this study is aim at examining the impact of use of social networking on students' academic performance in Ahmadu Bello University Zaria. There is an increase of in used of social networking and some of the teachers in the department are raising the concern that when lectures is going some students are involved in social networking or sleeping. The teachers can't verify their claim, because some student will argue that they are using the softcopy of the materials in the phones. The second hypothesis of the teachers concerning those sleeping during the lectures must have been spend time during the night socializing and so does not have enough rest. The necessity to carry out a research in that area to check mates the heavy users of social media, the time of day spend socializing and the purpose of the of social media of each students. In other to measure social media platforms a questionnaire was developed based on past literatures. The independent variables includes: time appropriateness, time duration, Nature of Usage and type of social networking, while the dependent variable is student CGPA. The sample of 130 students from Department of computer science was selected using convenient sampling method. The data collected was analyzed using description means python programming. Thus considering the abnormal use of Social networking platforms by students, it is expedient that Ahmadu Bello University educate their students to positively use these platforms for educational purposes which will eventually result in a positive impact on their academic performance.

Keywords

Social Media, Knowledge Discovery, Grade Point Average (GPA), Heavy-Users, Decision Tree Algorithm, Correlation Function, Educational Data Mining

1. Introduction

Research from the field of data mining has admirably produced various technique, tools and algorithm for managing

huge amount of data to answer real-world troubles. These social network data mining provide a scope to modify educa-

*Corresponding author: micahmunang@gmail.com (Micah Godwin Munang)

Received: 28 April 2024; **Accepted:** 19 July 2024; **Published:** 20 November 2024



Copyright: © The Author(s), 2024. Published by Science Publishing Group. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

tion system as student play a crucial role eventually to make an impact on nation economic growth. Data mining which is also known as Knowledge discovery, is the process in which the extracted useful information from the large set of data collected. The use of social media among students has reached high levels and has affected their study time, poor grammar and wrong spellings when socializing on social media as well as diverting their attention from their studies [1]. Students spend much of their study time on social networks than in their academic undertakings and it has affected their Grade Point Average (GPA). Higher institution is a place of laying a good foundation and also make student have a zeal in their academic since at this stage they have what is called emotional capacity (youthful exuberant). But it is unfortunate that student are gradually reducing in their performance irrespective of the facility provided by the department. The University, Ahmadu Bello University Zaria has the need to increase student's performance. This is because every institution desire that their student do exceptionally well when expose to the outside world. The problem does not start from the university but student has been expose to different factors that has a very significant effect on their academic. Such as social media and silent effect of Information Communication Technology.

2. Manuscript Formatting

2.1. Literature Review

Social Networking: is web-based services that gives individual the opportunity to create either a public or semi-public profile within a bounded system, add a list of others to with which they shared a connection to view and transverse their list of connection and those made by others within the system. Today's world is a global village. Most people are connected to one another in this vast network generated by the Internet. This electronic independence is inherently dependent upon the Internet. It illuminates the lives of millions of people by spreading knowledge internationally, thereby making people global citizens [12]. In the past, the communicating and free sharing of thoughts among people were restricted by long distance, nationality and/or religion. But now, even these barriers cannot stop the flow of information and knowledge. The new world of social networking allows free sharing of thoughts. Online social networks are created by websites such as Facebook, Twitter, Whatsapp which has emerged as a giant in this social world [13]. So how do these networks affect education? How do they influence the lives of students? Humans are social animals. People always like to remain in some group or another, and prefer to follow what this group does. All of the traditions and cultures are the product of this group-oriented facet of human nature. A well-known American psychologist, Abraham Maslow, stated in his "Theory of Motivation" that the social need of human beings is the third most important requirement after physical and safety needs — the third tier in his hierarchy of needs. Even the self-esteem

comes after 7 this social dependence. This is the main reason billions of people use social networking to stay connected, make friends and satisfy their social needs. As of 2015 the world's largest social networking company, Facebook, has 1.49 billion active users, and the number of users is increasing every day [14]. One of the most interesting things to look at is the increasing number of student users on such social networking sites. As per the survey conducted by Pew Research Center, 72 percent of high school and 78 percent of college students spend time on Facebook, Twitter, Instagram, etc. These numbers indicate how much the student community is involved in this virtual world of social networking. Actually, many reasons exist that explain why students love to spend time socializing. Firstly, social networks provide them the freedom to do whatever they want — to upload what they want and talk to whom they want. They like to make new friends and comment on the lives of different people. Students can create other online identities that the real world does not allow. The freedom it gives them to act just by sitting in front of a computer enthalls them, and they then demand for more freedom. Never before has it been so easy for young minds to create a digital image of their actions through such a spontaneous medium. Though this research work is centered on what social media is, its merits and demerits to students (young adults) especially those in higher institutions-within a campus, adolescents and teens are not to be placed too far away from this study because they equally have access to the internet and social media almost as adults do and so cannot be exempted from it following effect weather good of bad (Main Text Paragraphs).

2.2. A Student

A student or pupil is a learner, or someone who attends an educational institution. In its widest use, student is used for anyone who is learning, including mid-career adults who are taking vocational education or returning to university. When speaking about learning outside an institution, "student" is also used to refer to someone who is learning a topic or who is "a student of" a certain topic or person. In Nigeria, education is classified into four system known as 6-3-3-4 system of education. It implies six years in primary school, three years in junior secondary, three years in senior secondary and four years in the university. However, the number of years to be spent in university is mostly determined by the course of study. Some courses have longer study length than others. Those in primary school are often referred to as pupils. Those in university as well as those in secondary school are being referred to as Pok ánon.

2.3. The Positive Effect of Social Networking to Student on Campus

1. Technological literacy-All social media relies on advanced information and communication technologies that

seamlessly work to build and support technological literacy.

2. Knowledge-it gives students the benefit of being exposed to technology and can be connected to a broader base of opinions and world views through global connections.

3. Bringing new people together- Everyone can find new friends and communicate to their loved ones all over the world.

4. Improves business- For those students into business, it's a means for them to advertise and enhance their business.

5. A Detriment to studies: While grades did improve for light users, the grades of students who are heavy users of social media tend to suffer.

6. Possible negative effects on college admission: mostly in the United States 35% of admissions officers scan prospective students' social media and report discovering information that affects their admissions decision.

7. Lack of Privacy: Users, especially the young, amateurs, are often too open and public with personal information when online. Most don't read privacy policies and may be unaware that their information may be used by third parties, like advertisers, insurance companies, and the IRS. 21% of teens believe it is safe and harmless to post personal information, including photos.

8. Security attacks such as hacking, identity theft, scams, and viruses are common online. 68% of users share their real birth date, 63% share the name of their high school, 18% share their phone number, and 12% share a pet's name: This information might be used in identity theft.

9. Sexual predators find, stalk, and assault victims through social media. Sexting (texting sexual content) can be a big problem. When teens post sexy photos or comments online, it can lead to criminal charges and child pornography. 88% of "private" sexual images posted to social media are stolen and publicly posted on porn sites without the subject's knowledge. Security attacks such as hacking, identity theft, and viruses and exposure to phishing scams are common via social media.

10. Social Detriments: Cyber-bullying (the use of electronic communication to bully someone, usually by sending intimidating or threatening messages) is commonplace online, because of emotional trauma, and sometimes even leads to suicide. 49.5% of students reported victimization by bullying online and 33.7% admitted to online bullying. A 2012 study found that at least 800,000 minors had been harassed on Facebook. Middle school children who experienced cyberbullying were almost twice as likely to try to kill themselves. Extensive online engagement is correlated with personality and brain disorders like poor social skills, narcissistic tendencies, a need for instant gratification, and addictive behaviors and other emotional distress like depression, anxiety, and loneliness [15].

11. Less time for face-to-face interaction with loved ones. 47% of 18-34- year-old users reported using social media or texting during meals. Children at higher risk for depression, low self-esteem, and eating disorders and more prone to feeling isolated and disconnected (especially youth with dis-

abilities).

12. Misinformation: Enables the spread of false rumors and unreliable information: 49.1% of users have read false news on social media.

13. A Waste of Time: When alerted to a new post or tweet, it takes about 20 to 25 minutes for the average user to return to their original task. 30% of the time it takes two hours for the user to return to their original task.

14. It might make you spend more money: using social media in Nigeria requires the use of data and so money is used to purchase this mobile data which is in turn used to watch videos on YouTube, receive messages, see new posts, etc. 11 New research suggests that heavy social media use might be correlated to lower self-control.

15. It hurts your self-esteem: When two German universities joined forces to investigate social networking, researchers discovered that one in three people surveyed felt worse ("lonely, frustrated or angry") after spending time on Facebook, often due to perceived inadequacies when comparing themselves to friends. It messes with one's ability to think independently. It affects real-life conversations. It reduces one's ability to communicate with others around them.

2.4. Academic Performance

The ability of a student to excel in all the course he/she offered in the institution and developed good standing in the outside world to combat a real-world problem with regard to what he/she has learned. The performance of student solidly depends on the study load, time management and attitude of student toward the course he is given in the university.

2.5. Educational Data Mining

These concern with developing methods that discover knowledge from data originating from educational environment using different algorithm such as Decision tree, Neural network, Naïve Bayes, K-nearest neighbors. The discovered knowledge can be used for prediction and detection of abnormal values in the result of student. If the University could identify the factors for low performance earlier and is able to predict student behaviors, this knowledge can help them in taking pro-active actions so as to improve the performance of such student. This could include identifying the 12 dropouts and student who needs special attention and allow the teachers to provide appropriate advising/counselling. The management can bring in better policy and strategies to enhance the performance. This will help in producing skillful workforce and hence sustainable growth for the country. The advanced and improved usage of social media platforms such as Facebook has become a worldwide phenomenon for quite some time. Though it all started has been a hobby for several computer literate's individual has changed to become a social norm and existence-style for students around the world. Students and teenagers have especially recognized these social media

platforms to be able to contact their peers, share information, reinvent their personals and showcase their social live. Facebook users often experience poor academic performance. Also Karpinski stated that social media has a negative association with students' academic performance which is much greater than the advantages derived through the use of social media platforms [2]. People around the globe have been addicted to the internet which has given rise to more students using social media more often than before. The Nalwa & Anand advised and recommended that those who are addicted users love to use the internet to set back their personal and professional responsibilities in which the final outcome is poor academic performance [3]. It was highlighted in the finding of Karpinski that social media platforms (Facebook, WhatsApp etc) users usually devote lesser time to their studies as compared to nonusers did and subsequently has lower GPAs. It was also mentioned by Karpinski, and Duberstein, that among the major distraction of current generation that social media platform (such Facebook, WhatsApp etc.) remains a major distraction [2]. There is a correlation between academic performance and the dependency on social media platforms [4]. Researchers have conducted different studies to find out the influence of social platforms users, for instance a study on "impact of Facebook on undergraduates' academic performance", stated that social platforms have negative impact on students. According to the outcome, students' academic performance is affected the more they use Facebook. Social platforms are mainly used by students for socializing activities rather than academic purpose [5]. In addition, that majority of students feel that social platforms have positive impact on academic growth. It was also observed by Young that students are more dependent on internet to access information that pertain their academic life as well as entertainment. Additionally, Young said that internet, though take a lot of time, and have less impact on studies. It was observed by Wang that impact of social platforms rest on the degree of usage [6]. Jeong observed that internet addiction is significantly and negatively related to students' academic growth, as well as emotional attributes the negative influence of internet is only on excessive users and not on all users [7]. The social platforms which are being used today with great desire and enthusiasm have altered the way of using internets in this modern age by defining online tools and utilities which allow users for communication, participation and collaboration of information online [7]. Today's young generation, especially teens and youth are using technology through innovative ways due to which they are referred to as millennial and have changed the way they think, work and communicate even though they are in formative years of their life. Today's youth because of social platforms have become technology addicts and are quite withdrawn. Data mining will help discover correlation and connection within large data sets use of social media on student performance. These often include numerous entries with multiple variables and even contain mixed structure and nonstructural data. Because of the

size and complexity of these data sets. Any valuable correlation within them would have gone unnoticed if not for the tireless algorithm analysis performance with data mining tools.

Even if others would say it makes learning easier, the best scholars the world have ever produced came to be in the olden days when such technologies were not in existence. All things are legitimate (permissible and are free to do anything we please), but not all things are helpful (expedient, profitable and wholesome). All things are legitimate but not all things are constructive (to character). Most times on social media one comes across posts of immoral contents you never had the intention of seeing and student ought to be pure in mind fix their hearts on things profitable and to flee from all appearances of things that affect your performance (distraction). In as much as the social media has allowed student enjoy things like communicating with family and friends home and abroad, information at the fingertips, it is also a medium where links leading to sites with pornographic contents are shared as written above, as youths unknowingly click these links, they become trapped in this web and subsequently they find it difficult to break away. Social media is used by some students as an escape from lectures, assignments and studying forfeiting the main aim of going to the university in the first place. It has become a friend to sluggards and lazy students who have failed to understand the reason for them being in university. Most of people have failed to realize that this is the preparatory stage of lives and so ought to make use of every opportunity, to walk wisely because the days are evil if the final work succeeded in finding out the major factor that contribution to student decrease in performance, then measure will be taken to improve and check it.

3. Research Design and Methodology

3.1. Introduction

This part elaborates the research and how it was performed. It covers the details of the research design, methodology for collecting the data, and population. The purpose of the study is to examine the effect of social media on the performance of the students in the university. The performance of student will be measure through their grade points. The instrument of data collection for the study is the online survey which the link was distributed among the students. The area of study is Ahmadu Bello University Zaria, Kaduna state Nigeria. The research is limited to only undergraduate students. The purposive sampling was used to select Ahmadu Bello University undergraduate students and simple random sampling was used to select the 130 students that form the sample size for the study during 2017 to 2018 academic session. This study is focus on exploratory work to find out the impacts of social media sites on the student performance. An exploratory study is a way of gathering information by means of direct observation or experience. It is used to answer empirical questions, which must

be exactly defined and answerable with data. Independent Variables: is that which influence the dependent variables (Time spent on social media, addiction to social media, heavy study-load, purpose for social media) Dependent Variables: is the feature that give output with independent variables. (Student academic performance which is the CGPA).

3.2. Methodology Overview

The survey uses an evaluation question that is written in English language because instructions in ABU Zaria are based on the English language which all the students understand and can answer the questions asked without any difficulties.

Nonetheless, according to Saunders, Likert scale is the utmost suitable rating to be used in designing the research questionnaires [8]. A scale of 1-3 will used to finger out respondent pact to questions enquired. This scale is best suitable since it gives respondents the assertion for strong pact or not.

This study will analyze the data collected through quantitative analysis. Because statistical analysis gives the scholar the chance to get expressive information through mean output. Percentage will help to survey if the mean is in line with the view [8]. To analyze the data the descriptive statistics of questionnaire will be acquired from python in order to find out the normality of the questionnaire based on skewness and kurtosis statistics.

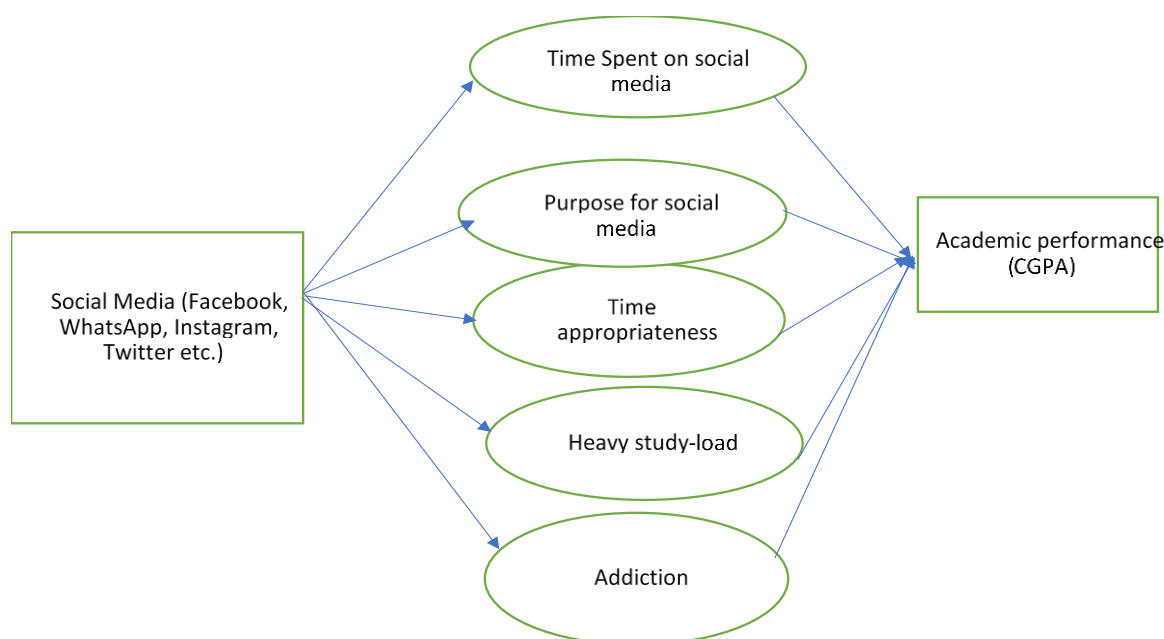


Figure 1. Entity Relation Model of features.

3.3. Important Factors on Predicting Student's Performance

There are two main factors in predicting the student's performance; these are the attributes and its prediction method. The first step will be focused on the important attributes used

in predicting student performance and the second step will be focus on the prediction algorithm used.

1) Attributes: An intensive review was conducted to identify the important attributes in predicting student's academic performance. Five attributes were selected for the mining process based on the literature review done on previous work as shown on table 1.

Table 1. Result Accuracy Using Decision Tree Method (A Review on Predicting Student's Performance Using Data Mining Techniques, 2013 [11]).

Variables	Description	Possible values
Level	Student level	100L-600L
Gender	Student Gender	Female, Male
Age	Age range	18-21, 22-25, 26-29, 30 and above

Variables	Description	Possible values
CGPA	Student CGPA	0.0-5.0
Social networking	Type of social networking	Facebook whatsapp, instagram, etc
Purpose	Purpose for social media	Chatting, News, Fun, Sharing
Time spent	Duration doing social media	<30 min, 1hr, 2hrs, 3hrs, 4hrs, 5hrs and above
CA Test	Average CA test	High, low, average
Heavy study-load	Student work load in semester	Yes, No
Time appropriate	Time for social media	Day, Night, both

The first attribute was the General Average of the student. Reports that high school GPA adequately predicts success in future courses [9].

The next attribute is the student demographic. Student demographic includes gender. The reason why most of the researchers used student's gender is because they have different styles of female and male students in their learning process. Study done by Meit found that most of female students have various positive learning styles and behaviors compared to male students [10]. Female students are more discipline and dutiful in their studies, self-directed, always preserved and focused. Thus, it is proven that gender is one of

important attributes influencing student's performance.

There are also several researchers in another study who have used psychometric factor to predict student's performance. A psychometric factor is identified as student interest in studies, its rating in their study behavior, engage time in studying, family support, community involvement, parent educational background and family size. It helps the lecturer to evaluate students' achievement based on their personal interest and behavior. Table 1 summarizes the actual parameters and its corresponding categorical numerical value that is used in predicting student academic performance.

Table 2. Parameters used for student performance prediction.

Method	Attributes	Accuracy	Authors
Decision Tree	CGPA	91%	Jishanet et al
	Psychometric factors	65%	Gray et al (2014)
	Extra-Curricular Activities	73%	Mishrat et al (2014)
	Student Demographic	65%	Rameshet et al (2013)

The table above are categorical data that are used for implementing supervised learning algorithm for the research. Decision Tree is a method of implementing a supervised learning where each node is used for taking decision. The end nodes of the trees in decision tree learning, also known as leaves, contain the class labels of a classification problem. Each non-leaf node is associated with a Boolean condition involving feature values. The scikit-learn implementation uses Gini impurity and entropy as information metrics. These metrics measure the probability that an item is misclassified. In the non-leaf nodes, the seen conditions printed as the top line. If the condition is true, then go to the left child; otherwise, go to the right. When its reach a leaf node, the class with highest value, as given in the bottom line, wins.

One of the first steps in data analysis is visualization. Even

when looking at a table of values, it can form a mental image of what the data might look like when graphed. Data visualization calls for the conception and analysis of the visual representation of information, signifying data that has been abstracted in some formal pattern, including properties or quantities for units of measurements of the data.

4. Data Analysis and Presentation

This chapter describes the analysis of data followed by a discussion of the research findings. The findings relate to the research questions that guided the study. Data were analyzed to identify, describe and explore the relationship between CGPA, and time people spent doing social media. This anal-

ysis was as a result of data gathered from the 130 respondents that participated in the survey.

4.1. Methods of Data Analysis and Presentation of Data

Descriptive statistical analysis was used to identify frequencies and percentages to answer all of the questions in the questionnaire. Not all respondents answered all of the questions therefore percentages reported correspond to the total number of students answering the individual questions. The datasets are import in the python IDE for the analysis of the data. This done with help of module called pandas.

4.2. Discussion of Findings

The discussion of the research is the basis for the conclusion that is arrived. It has help to answer the hypothesis that heavy user of social media can slightly affect the academic of student.

Demographic Relationships and Study Variables

Demographic data are data that reveal the scope and the limit of the research work so that conclusion cannot be made outside the university.

a. Department: The sample population was pick at random from all ABU students. And 30% was from the faculty of physical science, to be precise from computer science department.

b. Level: The level of each student was indicated to show that he/she is an undergraduate student.

c. Gender: The result of female and male that participated in the survey within the sample population. These is to check the effect of social media on the both the gender. The number of the female that respond to the survey is 39 and the number of the male that respond to the survey is 91. The graph below was plotted with python programming language that has some module for this work as module was imported for that plot.

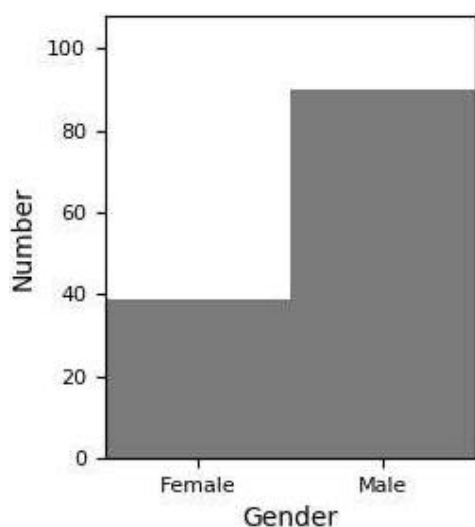


Figure 2. Relation between male and female student and their use of social media.

c). Age: The age in the survey is to help remove inappropriate fill of form by people and check whether there is an age bracket that is affected by social media in the university setting. The survey finally shows that student at the age bracket between 18 to 21 use social media the more these decrease as they age increase.

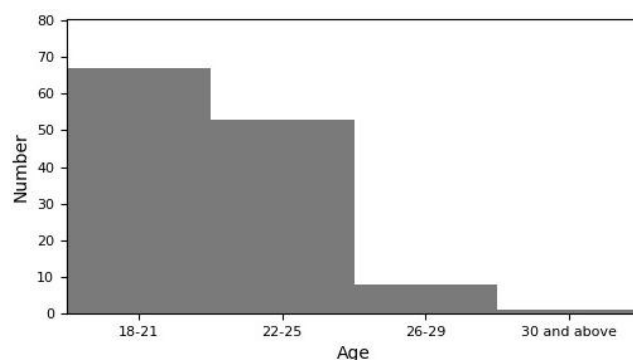


Figure 3. The relationship social networking in with age among students.

d). Cumulative Grade Point Assessment (CGPA) and Time spent on social media

The CGPA is a dependent variable that is used to plot against Time spent on social media as the independent variable. The result shows a negative correlation using python module in seaborn. The code for the plotting of the correlation was done with python programming. These make it easier because of the standard IDE called Anaconda suitable for data analysis.

A Decision model in machine learning technique was used to train the model to view the accuracy of the training data. This shows an efficient algorithm was used to test the data.

Given n-independent variable random variable $x_1, x_2, x_3, \dots, x_n$ average entropy with all N variable is giving by Entropy (root Node) = -probability (positive) log (probability (positive) probability (negative) log probability (negative).

Information gain for each x will be = entropy (s) – probability (positive)-probability (negative) entropy (negative).

For this research the independent variable used are x_1 = heavy study load, x_2 = Addiction, x_3 = purpose for social media, x_4 = Time spent socializing. While the dependent variables is y = CGPA.

Table 3. Decision Tree table for calculating entropy.

Attributes	Heavy STL	Addiction	Time spent	Decision
CA test	High	Yes	High	P
CA test	Normal	No	Low	N
CA test	Normal	Yes	High	P

Attributes	Heavy STL	Addiction	Time spent	Decision
CA test	Normal	Yes	Low	P
CA test	High	No	High	P
CA test	High	No	Low	P

The analysis of the survey shows that there is a low negative correlation between the time student spent doing social media and the cumulative grade point (CGPA). Among the students. This means, the more time the student spent time doing social media the lesser the CGPA. Irrespective of the purpose the student used for.

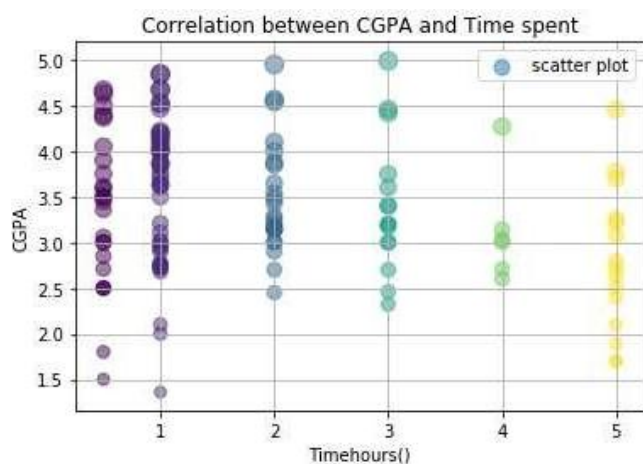


Figure 4. Scatter plot of CGPA and Time.

The plot of the graph of Cumulative Grade Point Assessment against Time spent on social media, display will python program. This plot was used directly from the data collected from the survey. The data point has a negative correlation of -0.25732. This means that as the CGPA increase the time spent on social media increase. This is agree with the standard correlation that negative number means inversely proportional between two variable, while positive number means directly proportion between two variable. If the number is close to 0.7 to 1 then it is highly positive correlation, and 0.3 to 0.1 has low positive correlation between two variables. The negative number from -0.7 to -1 is highly negative correlation and -0.1 to -0.3 is low negative correlation. This is easily done by calling a method in python inside pandas. The correlation function is used to analyses the target variable and the features.

```
In [32]: 1 df.corr()
Out[32]:
```

	CGPA	Time(hours)
CGPA	1.00000	-0.25732
Time(hours)	-0.25732	1.00000

Figure 5. Correlation between CGPA and Time (Hours)

The visualization of the data point in linear regression with CGPA plot against Time spent on social media. The slant slope of the line display below shows the linear regression, as the CGPA decrease the time spent on social media increase. One reason is that vast majority of online data are of questionable reliability. It is quite possible for student not having formed yet a stable character to be encounter information not only unreliable but often hazardous for their psyche for example pornography which can affect concentration in class and during reading. The time student supposed to spend reading his/her book is used in social media which has little impact in their academic.

```
In [27]: 1 sns.regplot(df["Time(hours)"], df["CGPA"])
Out[27]: <matplotlib.axes._subplots.AxesSubplot at 0x599a5fb0b8>
```

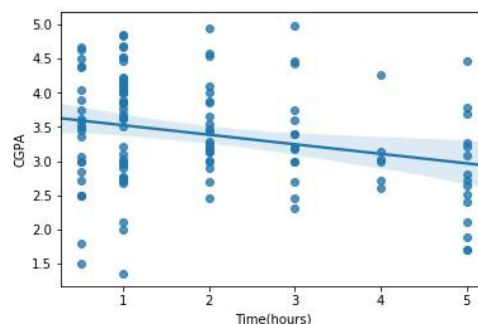


Figure 6. Regression plot of CGPA against Time (hrs).

A scatter plot shows the relationship between two variables in a Cartesian coordinate system. The position of each data point is determined by the values of these two variables. The scatter plot can provide hints for any correlation between the variables under study. An upward trending pattern suggests positive correlation or negative correlation. In this case the target feature is CGPA and the independent variable is time spent on social media by student in a day. This also affirm the statement above that student CGPA has slight negative correlation with time spent on social media.

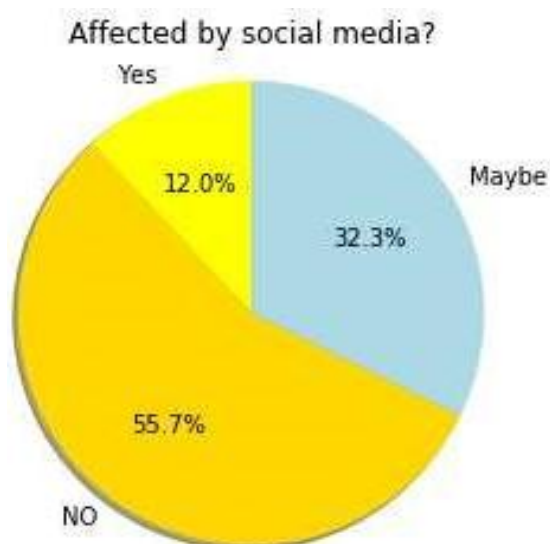


Figure 7. Pie chart visualization of student affected by social media.

The result of the response affirm that social media do affect their academic performance below is the pie chart description of the analysis with python module. This show that many students are yet to find out what actually limiting their progress in the academic world.

Table 3. Heavy study-load in a semester?

Response	Number	Percentage %
Yes	94	72.3%
No	36	27.7%
Total	130	100%

The result of the response of the student to how they always have a heavy study load in every semester. 72% said their workload is much and 27.7% and it gives a good insight why the performance of many students is average in a semester. Most student has a heavy study-load and are able to manage it efficiently. Heavy study load can result from sleep problem and other psychological issues.

Table 4. Continuous Assessment in a semester.

Response	Number	Percentage %
High	21	16.1
Average	108	83.0
Low	1	0.9
Total	130	100%

Majority of the student response that they have average mark in their CA test. This actually is part of the assessment of the final result of the student at the end of every semester. From the above responses one can also figure out why Continuous assessment for student is very low, although there may be another factor that is responsible for that.

Table 5. Time of social media in a day.

Response	Number	Percentage %
Daytime	14	10.7
Night	48	36.9
Both	68	52.3
Total	130	100

The response of student that are involved in social media every time is also at an alarming rate. Over 50% of the sample population are always on social media. Lack of quietness in student during lecture is not only that student make noise with their colleague physically but chatting during lectures can be another emerging problem. The paper strongly argue that lecturer use wisdom on checkmating the used of phone for reading slide during lectures.

Table 6. Purpose for Social media usage.

Responses	Number	Percentage %
Chatting	110	84.6%
Sharing Info	72	55.3%
News	81	62.3%
Fun	68	52.3%

The response of student for purpose of social media is show in Table 6. Most of the students used it for chatting. It is not only the time spent on social media that is the problem but also the content of the social media can have an adverse effect on student behavior toward his academic.

Table 7. Type of social media used.

Responses	Number of students	Percentage %
Facebook	105 out 130	80.7
WhatsApp	122 out 130	93.8
Instagram	32 out 130	24.6

Responses	Number of students	Percentage %
Twitter	40 out 130	30.7

These question is aimed to find the number of student that are using Facebook, WhatsApp, Instagram, Twitter and so on.

In this chapter, data analysis methods, were used study results and a discussion of the findings have been presented. Findings from this study have been found to be consistent with the findings of several related studies on effect of social media on academic performance. In addition, the impact of various demographic data on social media, has been explored.

Data findings were described as correlations to the study variables and presented as tabulations. In the next chapter, the implications of the findings for silent effect of social media student performance research will be discussed. The limitations to this study will also be presented.

5. Summary, Conclusion and Recommendation

The aim of the project is to give an insight the situation of student that are heavy users of social media. The research has successfully shown the relationship between features concern with heavy users of social media and academic performance in Ahmadu Bello University. This was successful with some modules in python used in data analysis.

The research work reveals that there is a negative correlation between heavy users of social media and their academic performance. One of the variables consider was the purpose for which student use the social media. Majority of the response as shown in the previous chapter in pie chat shows that student used it for chatting with their friends not for academic purposes. The used for smartphone is misused by many students. In fact some students are yet understand the cause of their poor performance because of the response based on their view about social media. This, make difficult to be discipline in their used of social networking. Social media is not bad in itself the misused of it has done a great havoc in academic performance of student. It just like given a gun to civilian for protection. The time student use on social media if it will be equally maximizing the output will not be the same. Attention has shifted from visible friends to invisible friends, while important ventures like study are affected in the process.

The Institution should be deliberate to put in consideration how student should be enlightened on silent effect of social media on their academic performance as many affirm that it actually does affect their performance while others does not. Every student must be asking to fill a survey that will be created online so that student can fill. Ahamdu Bello University Zaria should support awareness –raising campaign design to improve the knowledge of their student about effect of ICT. They should also mandate ISP to implement mobile parental

control measures on their network.

5.1. Conclusion

The effect of heavy users of social media has a slightly impact on academic performance. Although there may be other features that are related to student that effect academic performance.

The research work has low responses compared to the population of the student on the campus that involved in social media and how many have been affected already with it. This low response was due to the fact student are reserved when it come to the matter of CGPA. The second factor was that the question was administered online shared within different WhatsApp group, yet student are reluctant to it. The study can only be used within the scope of Abu Zaria as every institution has a way of exposing their student to free internet.

5.2. Recommendation for Further Research

The institution should do their best to mine the data for department on their CGPA and make a survey for individual that is on social media as this will get reliable and adequate data that will help in finding the silent distraction of ICT in a community of student. If the University want to improve the quality of graduate, then it must check the result of student from 30 years back and the present student result for the same department.

Abbreviations

CGPA	Cumulative Grade Point Average
ICT	Information and Communication Technology
CA	Continues Assessment
IDE	Integrated Development Environment
STL	Study –Load

Author Contributions

Micah Godwin Munang is the sole author. The author read and approved the final manuscript.

Conflicts of Interest

The authors declare no conflicts of interest.

References

- [1] Nicole, E. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143-1168. <https://doi.org/10.1111/j.1083-6101.2007.00367.x>

- [2] Karpinski, A., & Duberstein, A. (2009). A description of Facebook use and academic performance. *Computers in Human Behavior*, 25(2), 570-575. <https://doi.org/10.1016/j.chb.2008.12.020>
- [3] Nalwa, K., & Anand, A. P. (2003). Internet addiction in students: A cause of concern. *CyberPsychology & Behavior*, 6(6), 653-656. <https://doi.org/10.1089/109493103322725441>
- [4] Kubey, Lavin, and Barrows (2001). *Internet use and collegiate academic performance decrements: Early findings*. J. Commun. 51(2): 366-382.
- [5] Oye, N. D., Salleh, M., & Iahad, N. A. (2012). E-learning methodologies and tools. *International Journal of Advanced Computer Science and Applications*, 3(2), 48-52.
- [6] Wang, Q. (2011). Using online shared workspaces to support group collaborative learning. *Computers & Education*, 57(1), 203-210. <https://doi.org/10.1016/j.compedu.2010.12.012>
- [7] Jeong, H. (2005). An investigation of student achievement and satisfaction in different learning environments. *Educational Technology Research and Development*, 53(2), 45-55. <https://doi.org/10.1007/BF02504828>
- [8] Saunders, M., Lewis, P., & Thornhill, A. (2007). Research Methods for Business Students (4th ed.). Harlow, England: Pearson Education.
- [9] Brown, R. (1966). *Social Psychology*. New York, NY: Free Press.
- [10] Meit, M., Hoxworth, L., & Hays, S. (2007). *Assessment of rural health issues: Developing a model to enhance rural health care services*. *Journal of Rural Health*, 23(3), 200-208.
- [11] Ndaku, A. J. (2013). *Impact of Social Media on the Students' Academic Performance in Ghana*. *Networking* 18, (5) pp. 6, 275-285.
- [12] Castells, M. (2010). *The Rise of the Network Society* (2nd ed.). Chichester, UK: Wiley-Blackwell, pp. 407-411.
- [13] Montojo, J., and Wilson, G. (2009). *Practical Programming: An Introduction to Computer Science Using Python*. The Pragmatic Bookshelf, Raleigh.
- [14] Junco, R. (2012). The relationship between frequency of Facebook use, participation in Facebook activities, and student engagement. *Computers & Education*, 58(1), 162-171.
- [15] Heiberger, G., & Harper, R. (2008). Have you Facebooked Astin lately? Using technology to increase student involvement. *New Directions for Student Services*, 124, 19-35.