

**SUCCESS FACTORS FOR USING ONLINE DATA CAPTURE TOOLS IN THE
KENYA PRIVATE UNIVERSITIES: CASE STUDY OF GREYSA UNIVERSITY**

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ICT-G-4-0344-17

**A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF COMPUTING
AND INFOMARTICS IN PARTIAL FULFILLMENT OF THE REQUIREMENT
FOR THE AWARD OF THE DEGREE OF BACHELOR OF SCIENCE IN
COMPUTER SCIENCE OF GREYSA UNIVERSITY.**

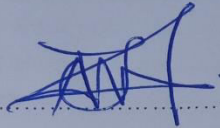
NOVEMBER 2021

DECLARATION

DECLARATION

This project is my original work and has not been presented for any Degree award in any other university.

Signature.....



Date.....


6/12/2021

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ICT-G-4-0344-17

This project has been submitted for examination with my approval as the University supervisor.

Signature.....



Date.....

6/12/21

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SCHOOL OF COMPUTING

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OPERATIONAL DEFINITIONS

Search engine- an information retrieval system-based web site that helps users to retrieve any information from huge internet database and it is a kind of tool that crawls in the web according to user direction and it will record everywhere it has been and everything user look for.

ABSTRACT

Today, the internet has become an essential part of the student life that gives an advantage to get flexible access to not only learning but also better communication between students and teachers and more importantly computer-based support learning. Several surveys conducted on internet use find out that internet usage is more prevalent among younger and more educated people. Students use the internet as a powerful tool to obtain information therefore, internet has been shown to influence academic performance especially among higher learning students. According to a study conducted by Bashir, Mahmood, & Shafique, (2016), approximately 83% of students use internet to get their required information. Most information was course related such as reading course work and accomplishment of information and research needs. Various researches have indicated a positive relationship between the use of internet and academic performance. The aim of this study is to determine how online educational research has affected students in the education sector specifically Gretsia University. A descriptive cross-sectional study. Simple random method will be employed in selecting participants to represent the target population. Data will be collected using semi-structured questionnaires which will be administered to students in Gretsia University. Data will be analyzed using SPSS. The findings will help institution, the students and staff fraternity, in coming up with possible ways to improve the learning activities in the university.

CHAPTER ONE: INTRODUCTION

1.1 Background Information

Advancement in technology has contributed significantly to various changes in various fields. The academic field being one of them. Use of online services is on the trend. Research findings indicate that most of the students use technology for course related reading and research needs. Internet users prefer search engines to access required information from the internet because search engines are open for public use with billions of web sites. The university students are among the individuals who make large percentage of the Internet users. They access the internet handles through the University Library's Digital Lab Unit, personal computers and laptops as well as the hand gadgets such as smart phones. A large number of the students have learnt to use the Internet tools by themselves, or relying on assistance from friends without attending any formal training programs. Ease of work and time saving are some of the major reasons associated with Internet use among university students. Google and yahoo are among the leading search engines that are used by students in conducting their academic activities.

According to Rashid, & Asghar, (2016), use of internet is beneficial in various ways in the academic setting. It is an easier way of providing global sources of information as well as discussing and sharing experiences amongst researchers. This has led to some of the educators to advocate for integration of technology into the learning process including research activities. The reason behind educators advocating for the use of technology in academic research activities is that it improves learning preparing students to effectively fit into the current workplaces where most activities are conducted online. Therefore, it has been observed that use of internet is widely applied in higher educational institutions.

This in turn has helped students to carry out substantial research work effectively with ease.

According to research conducted by Li et al., (2015), Use of internet among the students is due to gratifying factors such as perceived self-efficacy, outcome anticipations, and perceived support which enhance social ties. According to Rashid, & Asghar, (2016), students are involved in use of internet activities in course related reading and research needs, due to its user friendly and time saving.

1.2 Problem Statement

The importance of information is increasing in the information age that we are living in with internet becoming the major information resource for people with rapidly increasing number of documents. This situation makes finding information on the internet without web search engines impossible. This is the exact condition amongst university students. Research results indicate that Google is the most widely used search engine by university students. The number of universities students who use the online resources in conducting their researches is even suspected to rise with time. Some of the factors, which influence students in their preference of a search engine, include homepage style, result page style, number of retrieved results, number of retrieved relevant results, popularity of search engines, and easy user interface.

1.3 Objectives

1.3.1 General Objective

To find out the success factors of online data capture tools specifically Grets University.

1.3.2 Specific Objective

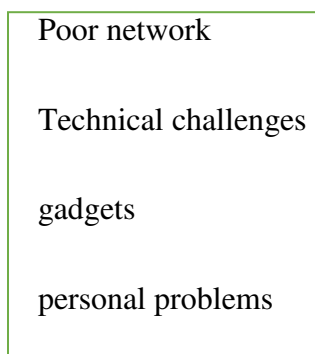
1. To investigate why students have been currently using online educational research in their assignments.
2. To find out how has this research affected students in terms of their competency and commitment to studies.
3. To ascertain the success factors of online data capture tools.

1.4 Research Questions

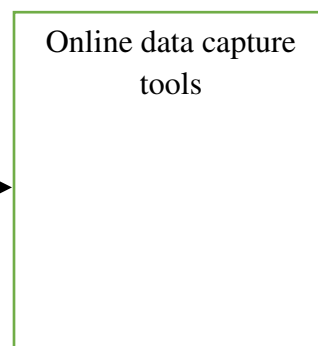
1. Why is there rise in online educational research?
2. How has this online educational research affected students' competency and commitment to studies?
3. Which factors affect online data capture tools?

1.5 Conceptual Framework

Independent Variables



Dependent variable



CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

There is a rise in usage of on-line academic search among University students. This has semiconductor diode several to several researchers as well as I raise many queries. Some queries asked tend to answer whether or not this analysis have an effect on student learning habits and their competence at school.

The academic landscape in education sector has been comprehensively remodeled by the recent advances in info and Communication Technologies (ICTs). Consequently, the teaching and learning processes at the side of academic programmers and pedagogy of instruction are being restructured, reformed to satisfy the expectations of an entire new breed of scholars getting into the colleges. ICT applications in education sector will greatly enhance the standard of education (Feng et al., 2019). The learners, through varied ICT applications, will management the content, time and pace of learning. it's additionally one in all the best recent advancement within the world of knowledge technology and has become a helpful instrument that has fostered the method of constructing the planet a world village.

Internet has become Associate in Nursing integral a part of school life and its usage is approaching 100% among student. A survey of the undergrad on the employment of web conducted in University of the Punjab, Lahore, Asian country indicated that the majority of the scholars use this technology for course connected reading and analysis wants (Moreno et al., 2019). Simple work and time saving ar the explanations of web use among university students are among the factors that were related to the employment of web among university students. Google as a pursuit engine Associate in Nursing Yahoo

as an email service are the foremost widespread sites employed by the scholars. It absolutely was suggested that the university authorities ought to organize coaching programs for the scholars on web use.

This is a universal undeniable fact that the employment of web incorporates a nice impact on the student's tutorial carrier. The employment of web has become a very widespread in several areas yet as in education in recent years. Consequently, web access in faculties has inflated greatly over the last twenty years. As this study has shown, additional students are counting on the web for his or her tutorial wants than the other areas. Excluding physical phenomenon of studies, to create their business life, students use the web as a hub to hold out social activities.

According to Rashid, & Asghar, (2016) web could be a utile tool with various potentials. Through the employment of the web students are ready to communicate with alternative students abroad and so share every other's concepts, knowledge, experiences, and cultures. It enhances skills and capabilities of scholars that assist them in studies and in business life.

It has been a trend in lately that students have adopted to use search engines to assist them with their assignment and residential works. This trend is chop-chop increasing from day to day. in line with analysis conducted by Li et al., (2015), Use of web among the scholars is thanks to gratifying factors like perceived self-efficacy, outcome anticipations, and perceived support that enhance social ties. In line with Rashid, & Asghar, (2016), student are concerned in use of web activities in course connected reading and analysis wants, thanks to its user friendly and time saving.

According to Emeka, U. J., & Nyeche, O. S. (2016), Matthew and Schrum (2003) within the report of their own study on high speed web use and tutorial gratification among school students in America indicated that correlation exist between students perception of your time exploitation the web for tutorial functions. Similarly, the correlation between the student's perception that their effort ends up in sensible grades and their perception of web helps with tutorial work is weak however statistically vital. the web is extremely helpful in getting info for analysis. Muniandy (2010) explored that just about half-hour students have sensible web usage skills. principally students use their own laptop computer and private computers. Students use web services at web cafes, university or outside the university. The study shows that the employment of web for learning is slightly varied. Nearly five hundredth students haven't use web for communication with their academics. 94.6% student's are sensible web info user however ne'er up load any info to the web. The study shows that Google and yahoo are the favorite programmer for looking academic material however the employment of educational knowledge bases like proudest, library internet resources and university electronic resources is extremely low. All students understand that they will use web any time and principally students admit that the standard of their work is improved; data is up dated and inflated thanks to usage of web.

2.2 Summary

Nowadays web is extremely effective and widespread tool employed by the scholars for education yet as type of alternative functions as well as diversion. web provides Associate in Nursing interactive setting for sharing yet as seeing of knowledge on a good, diverge and type of subjects. Consequently, it's become extremely popular among the

coed community; and it's additionally employed by them to supplement their studies. Therefore, it's clear that web incorporates a key role in human life. thus we'd like to get plenty of necessary info concerning web concerning relations with alternative variables particularly in academic contexts that ar necessary for young generations.

There is a rise rate within the range of university students particularly in camera universities that use search engines to help them do their assignments and residential works. This trend is increasing from day to day and can[it'll} reach some extent wherever even the library will become obsolete supply of knowledge.

Students that use search engines in their studies appear to pass extremely, this is often in line with Emeka, U. J., & Nyeche, O. S. (2016), Matthew and Schrum (2003) within the report of their own study on high speed web use and tutorial gratification among school students in America indicated that correlation exist between students perception of your time exploitation the web for tutorial functions.

CHAPTER THREE: METHODOLOGY

3.1 Study Design

A cross sectional study design was employed among students in Gretsia University.

3.2 Study Area

This research was conducted in Gretsia University.

3.3 Study Population

The research was conducted in Gretsia University among 41 students. This study population was chosen because:

- The participants were available in school carrying out their various academic functions.
- The participants were engaged in frequent use of internet services when executing academic duties and research activities.

3.3.1 Inclusion Criteria

All the participants were:

1. Students of Gretsia University.
2. Students who have used internet in their school work research activities.
3. Those students who consented to participate in the study.
4. Students who were available at school during the study period.

3.3.2 Exclusion Criteria

All of the following were ineligible to participate in this study:

1. Individuals who were not Gretsia students.

2. Students who had not used internet services in conducting their school work and research activities.
3. Non-consented students.
4. Students who were not in the school during the entire period of study.

3.4 Sampling

3.4.1 Sampling Method

Simple random sampling method was employed in selecting the participants for the study. It was a basic sampling technique where a group of subjects were selected from a larger population. Each subject was entirely chosen by chance and each member of the population had an equal chance of being included in the sample. A sample of 41 respondents were selected randomly from a population of about 100 Students who had used internet to do research activities.

3.4.2 Sample Size Determination

Sample size was calculated using the following Cochran's formula

The formula for sample size determination is:

$$n = \frac{z^2 pq}{e^2}$$

Where:

n=the desired sample size (N≥10,000)

z=the standard normal deviation set as 1.96 which corresponds to 95% confidence interval.

P=the portion of the target population estimated to have the characteristic of interest.

e=the degree of accuracy desired set at 0.005 at 95% confidence interval.

$$q=1 - p$$

$$n = \frac{1.96^2 \times 0.1 \times (1-0.1)}{(0.05)(0.05)}$$

$$=138$$

Since the population is < 10,000 a correlational factor (nf) will be applied.

$$nf = \frac{n}{1+n/N}$$

Where:

nf =computed sample size when the target is < 10,000

N=total target population

n=the desired sample size

Therefore:

- a. Sample size for the students will be:

$$nf = \frac{138}{1+138/100}$$

$$=41$$

3.5 Research Instrument

This refers to the devices that are used to collect data about the variable(s) under study. A semi structured questionnaire was used to collect quantitative data from the students in

Gretsa university on how online educational research had affected them in the education sector. The study tool was to meet the following criteria:

Practicability- this concerned its cost and appropriateness for the study population in terms of length of time required to administer the tool, physical/mental stamina required to complete the subjects, special training required to administer or score the instruments.

Reliability-refers to consistency, stability and repeatability of a data collection instrument. Does not respond to chance factor or environmental conditions; it will have consistent results if repeated over time on the same person or if used by two different investigators on the same subject.

Validity- ability of the tool to gather data that is required to gather. The greater the validity of an instrument, the more the confidence you can have that the tool will obtain data that will answer the research questions or test the research hypothesis.

3.6 Pre-Test

A small version of a proposed study was conducted to refine the methodology which suited the study. It involved going through the entire research procedure with a small sample. Using the same respondents and setting as the main study. 8 questionnaires were used to pretest to determine whether the proposed study is feasible, identify any problems with the research design to ensure that items in the data collection are stated clearly and have the same meaning to all research respondents. Pre-test also helped to identify the study limitation, bias other miscellaneous factors to be encountered during the study period. It also helped to know the best questions to use and which to modify.

3.7 Data Collection Process

Data was collected using semi-structured questionnaires which were self-administered to respondents by the researcher. Researcher was there as the respondent filled the questionnaire to make any clarification and also ensure that the questionnaires were filled appropriately. Collected data was cleaned by going through all filled questionnaires to find out whether they are filled correctly which denotes proper understanding of the questions. All questionnaires were assigned with serial numbers to ensure correct questionnaires are filled. All data collected was saved in the computer for analysis through SPSS and writing a project which was published.

3.8 Data analysis and presentation

Questionnaires used for the study either in pretest or actual study was counter checked after typing with the help of researcher. Editing and typing errors was minimized. All pages in the questionnaires were checked for respondent to give full information. Questionnaires were registered with serial numbers to avoid losing some. Analysis of the data involved SPSS Statistics Grad Pack 20.0 (2008), scientific calculator Casio 82ms and other necessary tools.

3.9 Limitations of the Study

This study was targeting students in Gretsia University. The information obtained therefore was not be used to generalize what is on the ground because these students were just an example of reachable sample population representing many students on how online educational research affected them academically.

Financial insufficiency was also one of the limiting factor.

3.10 Selection of A Research Assistant

Research assistant was beneficial for the gross study period, they facilitated easy data collection, minimizing the errors and getting into contact with the right target population in their practical placement in respective clinical areas. Research assistance underwent a three-day training to familiarize them with the equipment used in the entire study and other relevant aspect of the study.

3.11 Minimization of Errors And Bias

The potential error and biases was minimized through pretesting of the questionnaires and any errors corrected before the actual data collection process. Questionnaires were edited for completeness and accuracy before releasing them to the researcher for respondent to feed in data. Training the researcher assistant to ensure they were familiar with study aspects and research instruments. Respondents were educated to ensure data given is accurate without influence. The participants were made educated on the importance of completely filling in the questionnaires appropriately to ensure completeness.

3.12 Ethical Considerations

I sought ethical approval from the director of research through a formal request. Another formal letter request was directed to the Director to be given permission for data collection among the students in the institution. The nature, purpose, advantages and disadvantages of the study was expounded to the respondent before taking part in the study. Informed consent was obtained from all the participants after explanation of all information about the study. Questions pertaining to the study were explained to understanding. The participants were not forced

in any way to participate in the study. Privacy and confidentiality was ensured as respondent's names were not part of the questionnaire, only signature were required. Questionnaires were only identified through the serial numbers.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

Introduction

This chapter presents data analysis and interpretation. The main objective of this study was to find out how online educational research has affected students in the education sector specifically Grets University. Population of study were the Grets University students.

Place of residence

School Hostels	16
Academic Hostels	3
Rentals	22

Table 1.1: place of residence

The table above shows that many students resided from outside the school. 54% rented houses, 7% lived in academic hostels and only 39% were school based.

Knowledge of online data capture tools

Yes	38
No	3

Table 1.2 knowledge of online data capture tools

Only 3 students never had knowledge of online data capture tools which represented 7% of the entire study population. 93% which was 38 students were aware. A pie chart presentation of the same is:

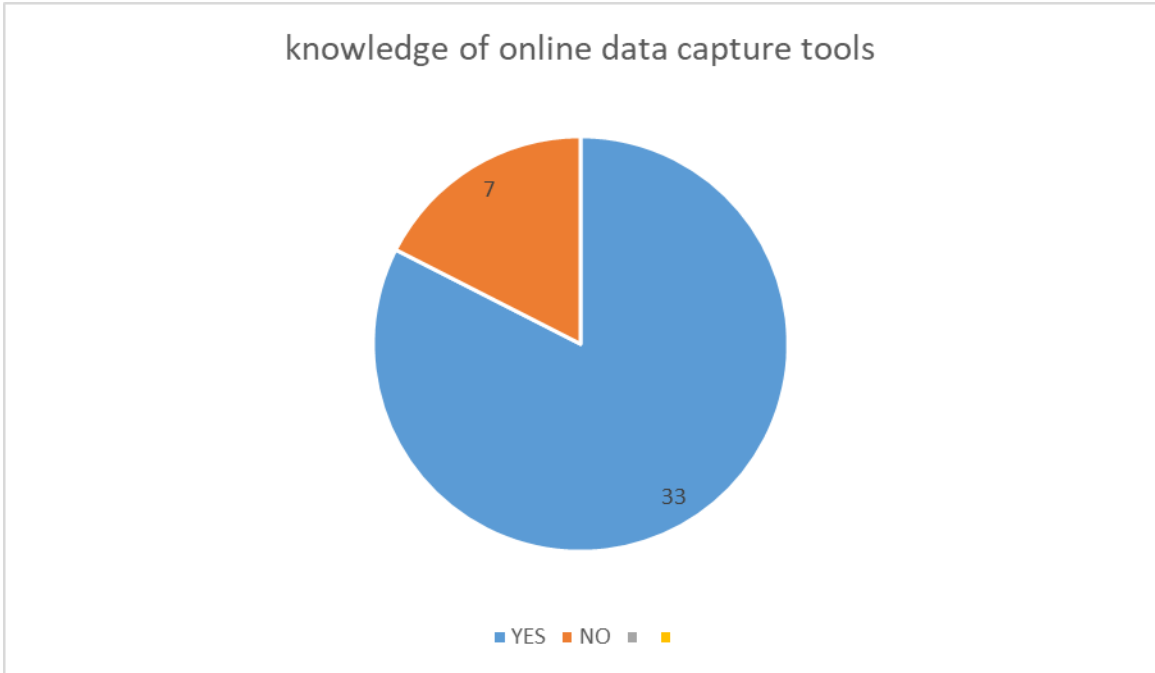


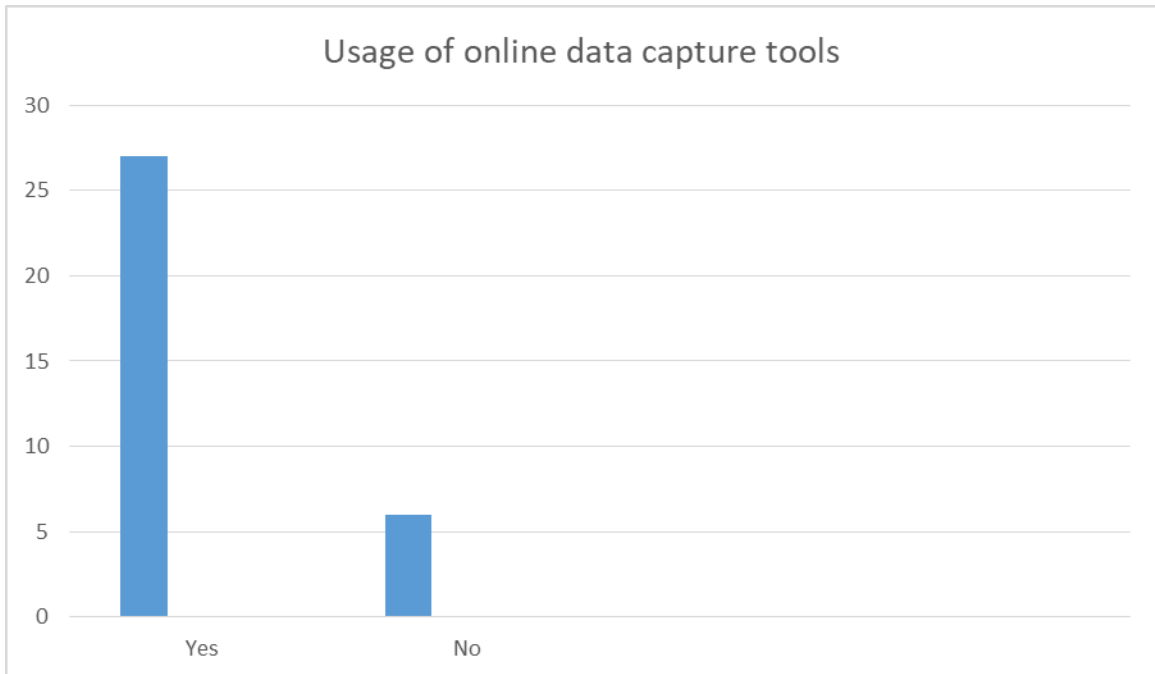
Chart 1.1 knowledge of online data capture tools

Usage of online data capture tools

Yes	27
No	6

Table 1.3 usage of online data capture tools

Among 33 students who have knowledge of online data capture tools, 82% had used them while 18% never used them.

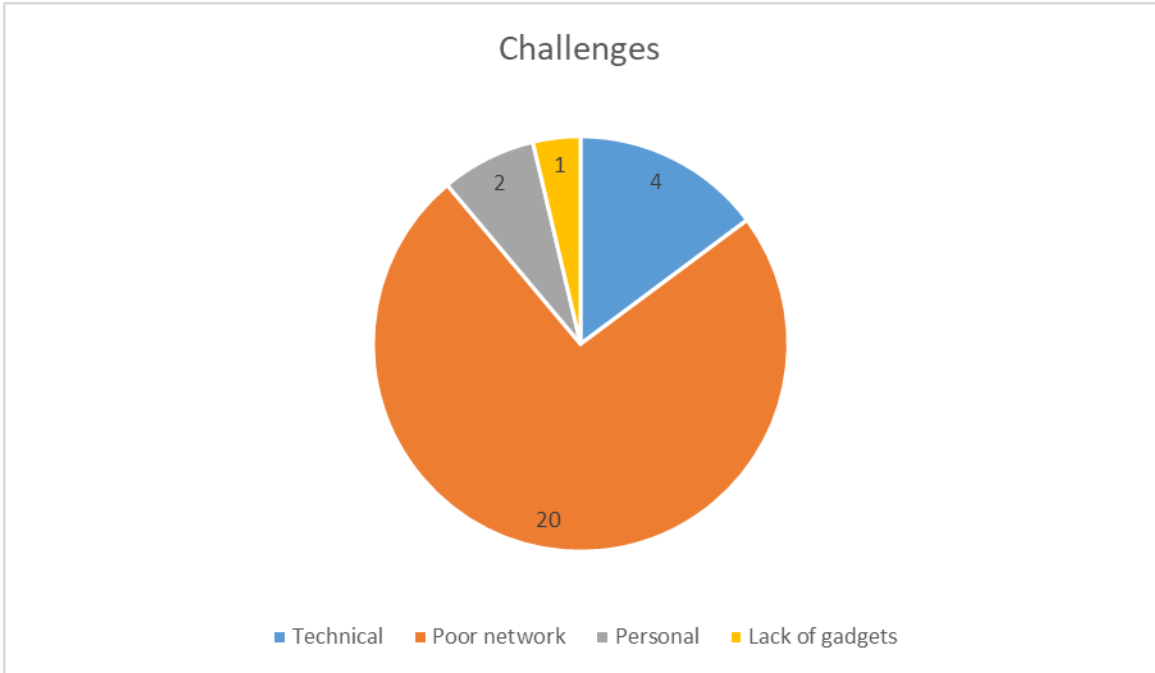


Challenges using online data capture tools

Technical challenges	4
Poor network	20
Personal challenges	2
Lack of gadgets	1

Table 1.4 Challenges encountered

The table above clearly shows that poor network is the main challenge that students encounter during the usage of online data capture tools. A pie chart presentation of the same is as follows:



The students also suggested that the quality of network should be improved since it drags them behind during the period when they use the data capture tools.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The main objective of this study was to ascertain the success factors of online data capture tools. The research was conducted in Grets University among the students who were in school bearing in mind that a small portion of students were present due to the pandemic Corona Virus.

5.2 Summary

From the research, there are a number of factors that make the use of online data capture tools to be less effective. One of the major factor was poor network. In the school, the network is always poor and that affects the students in conducting online research that now makes the data capturing difficult. Other factors that made it not to be effective is lack of gadgets; some students do not possess a laptop nor a smart phone too enable them conduct the online research. Personal problems also made it difficult to capture data from online, students do not know how to use the gadgets they have to do so. Technical problem also affected the process in that you may find someone is using a certain site but a technical error comes that affect the capturing of data.

5.3 Conclusion

The factors that affect the success of online data capture tools are:

- i. Poor network
- ii. Technical challenges
- iii. Personal challenges
- iv. Lack of gadgets

These factors make it difficult for the students to conduct their studies online.

5.3 Recommendations for policy

- a) The issue of the poor network in the school should be addressed with an immediate effect to encounter the problem.
- b) Technical challenges; the sites should minimize the ads on their pages to smoothen the process of capturing data..
- c) The students should engage themselves in the technological world to enable them know and be conversant with how online staff works.
- d) The parents should make sure their children possess gadgets to enable them be conversant with online data capture tools. Also students should use HELB money to purchase the gadgets.

5.4 Recommendation for further research

For proper determine how each of the factors listed above specifically affect the data capture tools, I recommend for further research to be conducted.

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APPENDIX 1.2: PARTICIPANT CONSENT FORM

RESEARCH TOPIC: TO INVESTIGATE THE SUCCESS FACTORS FOR USING ONLINE DATA CAPTURE TOOLS IN THE KENYA PRIVATE UNIVERSITIES: CASE STUDY OF GRE TSA UNIVERSITY

RESEARCHER: OMBATI JOSPHAT ISANDA

SUPERVISOR: Philip Bittok

Dear Respondent,

I am Josphat Ombati, a student from Grets a University requesting your participation in the

above mentioned study. This study is research towards partial fulfillment of the requirements for the award of bachelor Degree in computer science in Grets a University in the school of computing and informatics. You are being requested to provide information regarding your knowledge on online data capture tools. The completion of the questionnaire will take approximately 30-40 minutes. Your participation in this study is purely voluntary. You are free to withdraw from the study at any time without any penalty being incurred. There is no monetary compensation for responding nor is there any known or expected risks. The information you provide will help the researcher to ascertain on the level of awareness on success factors of online data capture tools. Your responses will remain confidential and anonymous. Data from this research will remain under lock and reported only as a collective combined total. You are therefore asked not to write your name nor your contact details, your signature is all that is needed. If you

agree to participate in this project, please answer the questions as honestly as possible. By signing this form, I willingly agree to participate in the study by completing the questionnaire having a clear understanding of the stated terms and conditions.

RESPONDENT: DATE.....SIGNATURE.....

RESEARCHER: DATE.....SIGNATURE.....

TOPIC: KNOWLEDGE OF ONLINE DATA CAPTURE TOOLS IN GREYSA
UNIVERSITY

Instructions

- i. Answer all the questions in both part 1 and 2.
- ii. Tick appropriately within the brackets or write your responses in spaces provided.
- iii. Do not write your name anywhere on the sheet.

PART 1 socio demographic data

1. Gender : Male [] Female []

2. Age in years?.....

PART 2

1. Where do you stay?

a. School hostels

b. Academic hostels

c. Rentals

2. Are you aware of online data capture tools?

a. Yes

b. No

3. Have you ever used one?

a. Yes

b. No

4. If yes:

i. Did it help you? How?

.....
.....
.....
.....

ii. Did you experience any challenges using it?

a) Yes

b) No

iii. Which of these challenges did you experience?

a. Technical challenges

b. Poor network

c. Personal challenges

d. Lack of gadgets

e. Others

(specify)

.....
.....
.....
.....

5. What improvement would you like to be done so that others can have a god time in using data capture tools?

.....

6. According to the experience you got, how does online data capture tools affect the students' behavior on learning?

a) Makes them lazy

b) Makes them sharp

7. In a scale of 1-3, 1 being most likely and 3 being less likely: how likely are to recommend a student to use online databases in their school work?

a) 1

b) 2

c) 3

APPENDIX 1.3: RESEARCH BUDGET

ITEMS	Cost in Kshs
Laptop	45000
Data analysis	18000
Transport	6500
Making copies, binding and submission	2000
Stationary	6000
Miscellaneous expenses	5000
Total	76000

APPENDIX 1.4: Work plan

Activities	October 2020				November 2020				December 2020				January 2021	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2
Proposal writing														
Pilot study														
Data collection														
Data analysis														
Report writing														
Final draft														
Final														

