

UNIVERSITY OF EDUCATION, WINNEBA

USING THE VOICE THREAD PLATFORM TO IMPROVE THE PERFORMANCE OF  
STUDENTS IN ICT AT ENAS HYBRID SCHOOL

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USING THE VOICE THREAD PLATFORM TO IMPROVE THE PERFORMANCE OF  
STUDENTS IN ICT AT ENAS HYBRID SCHOOL

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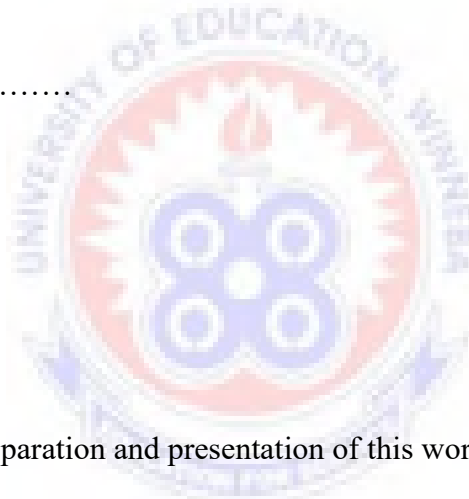
## DECLARATION

### Student's Declaration

I, **SYLVIA SENAM AKUVI YEGBLEMENAWO**, declare that this dissertation, except for quotations and references contained in the published works which have all been identified and duly acknowledged, is entirely my original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

Signature: .....

Date: .....



### Supervisor's Declaration

I hereby declare that the preparation and presentation of this work were supervised following the guidelines for supervision of the dissertation as laid down by the University of Education, Winneba.

Name of Supervisor: **DR. SAMUEL ADU GYAMFI**

Signature: .....

Date: .....

## **DEDICATION**

I dedicate this project work to my family and friends.



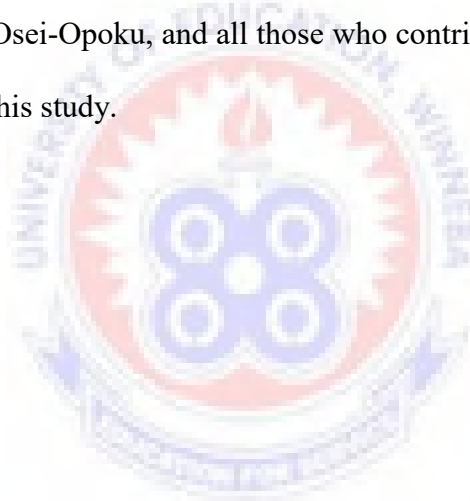
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## ABSTRACT

Technology has a great influence on the world, as everything is connected through the internet. Students have different learning skills hence, new technologies such as information systems on personal computers, phones, iPads, Tablets are widely used by students in various schools for study purposes. This study sought to examine the instructional strategies employed at Enas Hybrid School to teach ICT and introduce the Voice Thread platform to improve the performance of students. The Saunders onion theory played a greater role in the selection of appropriate methodology. The researcher used a questionnaire instrument in gathering data and further analyzed the collected data with the Statistical Package for Social Sciences (SPSS version 16). The introduction of the Voice Thread platform helps to broaden student's minds in solving complex issues during ICT lessons at Enas Hybrid School hence enhancing their performance. Voice Thread platform is considered as one of the effective alternatives to the traditional way of teaching since it offers students unlimited learning opportunities. The analysis of the data collected from students concluded that the traditional teaching strategies do not aid academic excellence among students but rather, e-learning platforms. Also, the study established that the Voice Thread platform makes learning materials readily available, allows teacher-student interaction, makes learning interesting and easy to understand, and also helps learners to study at their own pace which led to the improvement in their performance after using VT. Hence, the Voice Thread platform has a tremendous impact on the performance of students. This study recommended the use of Voice Thread platform to be used in other schools or by other subject teachers as the researcher believes it is one of the best methods to help enhance students' performance

## CHAPTER ONE

### INTRODUCTION

The digital age has inspired scholars and researchers to bring forth ways in which teachers can use new technologies to redefine teaching and learning in the education sector (Ware & Hellmich, 2014). Technology's place in education has been highly approved, is expected to be added to schools' operations (Fletcher, 2004; Act, 2001). E-Learning platforms enable communication and sharing information among teachers and students (Pratt & Palloff, 2003). According to Kingsley (2015), Voice Thread is a collaborative Web 2.0 tool that allows users to create, share, and comment on images, documents, and videos to communicate effectively. This chapter consists of the background of the study, problem statement, purpose of the study, research questions, significance of the study, limitations of the study, delimitation of the study, scope of the study, and the organization of the entire study.

#### 1.1 Background of the Study

Technology has a great influence on the world, as everything is connected through the internet. Current trends in education, emphasizes the importance of meeting the needs of all students (Capper & Frattura, 2009; Levy, 2008). According to Tu (2011) the U.S. News and World Report Education Global ranking, recorded two million people from more than 150 countries and over 25% of the top 100 U.S. universities and colleges are using Voice Thread for connection and collaboration. The American Association of School Libraries (2009) stated that Voice Thread is one of the best e-learning platforms for teaching and learning. Students have different learning skills hence, new technologies such as information systems on personal computers, phones, iPads, and tablets are widely used by students in various schools for study purposes. Students form habits of surfing the internet for information which helps

them improve upon their learning skills. It is important to acknowledge that students are already using technological tools. This creates amazing opportunities for teachers to integrate some forms of technology in and outside the classroom, to make learning much more effective.

The introduction of the Voice Thread platform helps to broaden student's minds in solving complex issues (Ching & Hsu, 2013). Voice Thread platform is considered as an effective alternative to the traditional way of teaching such that, it offers students unlimited learning opportunities. It also helps them to learn much more outside the classroom under the supervision of teachers and parents. This shows that learning is not limited to the classroom setting but goes beyond. This study was carried out at Enas Hybrid School, Dabaan Newsite situated in the city of Kumasi Metropolis in the Ashanti Region of Ghana.

Enas Hybrid School is a private international school in Ghana accredited by British Council which runs a Cambridge Educational System. The school instills good virtues, teaches, trains, and prepares students for higher educational institutions. As the motto of the school goes "We leave no child behind", students' education is a priority, and introducing Voice Thread platform is one of the best methods to enhance students' performance.

## **1.2 Statement of the Problem**

There is an exponential growth in e-learning which is helping students gain much insight into learning (Jiang & Ting, 2000). Despite the benefits of using the internet to enhance student learning, every year a large number of youth experience cyberattacks of all forms (Mitchell, Jones, Finkelhor & Wolak, 2014). Adolescents especially, reach a period where they seek attention and validation from their peers as much as strangers (Crosnoe, 2011; Eccles & Roeser, 2011). Hence, students get distracted while learning from search engines as they follow

malicious sites or get involved in cyber-predating or bullying resulting in poor performance in ICT at Enas Hybrid School since printed learning materials are not available. The main problem of this study is the poor performance of students in ICT at Enas Hybrid School.

### **1.3 Purpose of the Study**

ICT places an important role in the world since we are now in the digital era. Students are easily attracted to technological appliances and there is the need to guide them to follow educative platforms that will have a great impact on their educational growth. Helping them improve upon their performance is a priority. The use of technological tools in education adds more value to teaching and learning as compared to the previous traditional way of teaching. A technological tool is a significant motivational factor in the learning process of students. Technology improves access to information anywhere and anytime increasing interactivity between teachers and their students (Amin, 2013). Learning subjects like ICT in the new age is about collaborating with others, solving complex problems, critical thinking, and developing different forms of communication and leadership skills (Westhuizen, 2004). But Biggs (2003) raised a concern that engaging students in an appropriate learning activity should be critically analyzed to help them perform better.

At Enas Hybrid School, ICT course materials are not available. The researcher tried implementing the method of giving research works to students which resulted in issues like getting distracted by pop-ups on the internet, following malicious sites, being involved in cyber-bullying, and getting outmoded information on the internet.

The purpose of the study is to analyze how the introduction of the VT platform and the provision of well-designed study materials including varied trial exercises help improve the performance of students.

#### **1.4 Research Aims and Objectives**

The overall aim of the study is to examine the use of Voice Thread to improve performance in ICT at Enas Hybrid School. Specifically, the study seeks to:

1. Examine the instructional strategies employed at EHS to teach ICT
2. To introduce the Voice Thread platform to improve the performance of students in ICT.

#### **1.5 Research Questions**

1. What are the instructional strategies employed to teach ICT at EHS?
2. Will the introduction of the VT platform improve the performance of students?

#### **1.6 Limitations of the Study**

Every research faces challenges despite the numerous positive impact on students.

The study encountered some limitations of which are:

1. The cost involved in making questionnaires readily available.
2. Data collection was at a low pace, as students had to concentrate on their preparation towards the unit test of other subjects like Biology, Chemistry, Physics, and others.
3. The scheduled time for completion was very short.
4. ICT is an optional subject at levels (year 9 upward) at Enas Hybrid School and this gives students the room to prioritize and focus more on other subjects like Biology, Geography, Chemistry, and Physics.
5. Another outstanding factor was the perception students attached to answering questionnaires, as it was their first time answering a well-structured questionnaire even as they were properly educated on what the questionnaire was going to be used for.

#### **1.7 Delimitation of the Study**

This study was restricted to only upper-level students of Enas Hybrid School. Therefore, the conclusion and generalization would not apply to all students of other institutions. This means

that for a complete study, the views of other participants in other schools should have to be considered.

### **1.8 Scope of the Study**

The study was conducted at Enas Hybrid School to help improve the performance of students. 50 out of 300 students were used in this research. The researcher has an upper hand and direct information as an ICT teacher in Enas Hybrid School.

### **1.9 Organization of the Study**

This study has been organized into detailed chapters. Chapter 1, consists of the introduction, which takes care of the background of the study, statement of the problem, purpose of study, research question, the significance of the study, limitations of the study, delimitation of the study, scope of study and the organization of the entire study. Chapter 2, presents the literature reviews on using the Voice Thread platform to improve the performance of students. Chapter 3, presents a detailed methodology adopted and implementation design to boost student's performance in ICT using the Saunders Onion methodology as a guide. Chapter 4, also presents the result analysis from the findings of the administered questionnaire. Chapter 5, consists of a summary, conclusion, and recommendations made.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter discusses the benefits of ICT, reasons for introducing the e-learning platform, research works on the benefits of using the Voice Thread platform, and how it enhances the performance of students during ICT lessons, Suggestions, Summary, and Conclusion.

#### 2.2 Benefit of ICT to the world

Shad & Munir (2011), evaluated the impact of ICT in the lives of students and stated ICT is an essential subject in the world today as everything is connected through the internet of things. Bakhsh, Mahmood & Sangi (2016) also elaborated on the fact that ICT is a Living standard in the world today. ICT, therefore, equips students with foreknowledge and critical thinking skills to solve and face challenges.

#### 2.3 Reasons for introducing E-learning Platform

Young & Bruce (2011) suggested that communication between students and teachers can improve performance. Goktas & Yildirim (2009) added that structuring quality teaching and learning processes are an important factor to consider and ways of providing quality education should be reviewed constantly. Parents all over would want their wards in high performing schools. Therefore, it is necessary to adopt strategies that will enable students to perform massively. Teachers should be able to revise and improve teacher-made tests always based on test statistics and item analysis. Prensky (2001) advised that to achieve academic excellence, teaching must be transformed to suit students' learning skills in the 21<sup>st</sup> Century. Oblinger (2006) added that students of the new age are critical thinkers and prefer much more interactive platforms which are an e-learning platform. Hence, two main approaches identified by (Stes, Gijbels & Van, 2008) stated that the Teacher-Student focus platform helps improve the



performance of students. *Teacher Focus* is an approach in which the teacher is primarily concerned with the organization, presentation, and testing of content to make students acquire information. With *Student Focus*, the teacher is primarily concerned with supporting student learning, so that they acquire or develop concepts. For the scope of this study, adapting to the Student Focus approach will improve both student learning processes and outcomes.

The researcher found out from other researchers that the search engine was not the best solution because it exposes students to malicious sites and there is a need for teachers to use e-learning technologies like voice Thread platform instead (Winner & Sandy, 2016). Research by (Majdalawi, Almarabeh, & Mohammad, 2014) stated tremendous significant progress in learning rate using e-learning platforms exceeding 35% of those who prefer other mediums. The e-learning environment systems appeared in education recently endorsed by (UNESCO, 2015). To build student knowledge and skills, e-learning is a key solution that helps improve their performance (Myers & Beach, 2004). E-learning education is growing in popularity as it is used all over the world. (Allen & Seaman, 2011). It is one of the emerging technologies which has been easily adopted by schools all over the world enhancing learning experience (Lord & Volery, 2000). The former chairman and chief executive officer (CEO) of Apple Computer Inc. (Sculley, 2017), stated that an e-learning based platform allows individual learning, participation which enhances the learning process much more and performing better. Weller (1988) also suggested that e-learning platforms should be used to enhance performance learning outcomes. Hence, a focus on the best e-learning platform which enhances the performance of students was considered (VT).

#### **2.4 Research works on the benefits of using Voice Thread platform**

We are living in a constantly evolving digital world. The digital age has changed the way students communicate, share ideas, seek help, access information, and learn. Students are now

part of the technology population and are always eager to use laptops or mobile phones in learning. Since improving student's performance is the focus of every teacher, (Garrison, Anderson, & Archer, 2001) suggested that the Voice Thread platform can help improve students learning and performance. In an annual report by the New Media Consortium and the Consortium for School Networking, Voice Thread was listed as one of the best e-learning platforms to choose because it provides a collaborative learning environment (Johnson, Levine, Smith & Smythe, 2009). An open forum discussion on the impact of performance in ICT, Voice thread platform was recommended since it helps impact positive learning values on the performance of students in this digital errand. According to Kingsley (2015), Voice Thread is an e-learning platform that allows users to create, share, and comment on images, documents, and videos. Voice Thread ensures instant feedback from teachers to students (Pratt & Palloff, 2003).

## **2.5 How Voice Thread (VT) platform enhances the performance of students during ICT lessons.**

VT serves as an open forum for students to learn more in ICT. Voice Thread is used to Communicate, Collaborate, and Connect. Thus it has outstanding features which are as follows;

1. Compatibility: VT is used on any computer device and web browser, iPad, iPhone, or iPod touch and any operating system.
2. Integration: a lot of learning materials.
3. Accessibility: Readily available at all times and accessed anywhere even with low network connection areas.
4. Analytics: Easy to Track and monitor users.
5. Custom Homepage: Customized settings to suit students' levels.
6. Digital library: Online library for students.

7. Security: Keeps data secure and free from malicious sites.

To measure the performance of students, (Stiggins, 1992) stated that teachers should know the strength and weaknesses of various assessment methods to choose appropriate formats to enhance performance. Airasian (1994) concluded that test items should match with course objectives and instruction to ensure content validity, reflect an adequate sampling of instructional materials to improve test reliability and tap higher-order thinking skills. Hence the Roles of assessment on Voice Thread serves as a medium for constant practice “*Practice they say makes one perfect in the long-run*”.

Assessment on VT varies and under serious supervision because the progress of students is monitored by the teacher. The performance report constantly gives student’s instant feedback. it also helps students practice over and over and hence mastering every topic. Feedback from students is used to determine the assessment type to use to help the students perform massively. The researcher in this study found out that Voice Thread is a secured, age-appropriate collaborative virtual classroom for all students and teachers. Using VT is safe because strangers cannot interact with students unless they seek authorization from the teacher. Students focus solely on learning materials uploaded which helps them perform better.

In line with the statement above, the researcher’s opinion is that using the Voice Thread Platform plays an important role in education. The role of Voice thread simply stands to help improve the performance of students. Hence the researcher’s opinion and observation how VT platform enhances performance are listed below;

1. It is easy to access resources hence students stay focus and learn much more.

2. Students are safe from malicious sites because well-organized materials like learning guides, notes, or exercises are provided. With constant revision guide practice, students gain foreknowledge on how to solve problems which enhances their performance.
3. It strengthens the learning connection between Teachers and students even at home since it feels like the traditional classroom setting.
4. It enhances the effectiveness of the learning process as it helps teachers expand the scope of teaching.
5. Voice Thread is very helpful as it enhances student's concentration and activeness in class.
6. It is very easy to use as it is a self-contained resource room.

VT is indeed a resourceful e-learning platform for students of Enas Hybrid School.

### **2.6 Saunders's Onion Theory**

A model developed by Saunders et al in 2007 carefully examined different layers representing the various stages through which every researcher must study to choose appropriate methods.

This theory facilitated the researcher's choice of methodology.

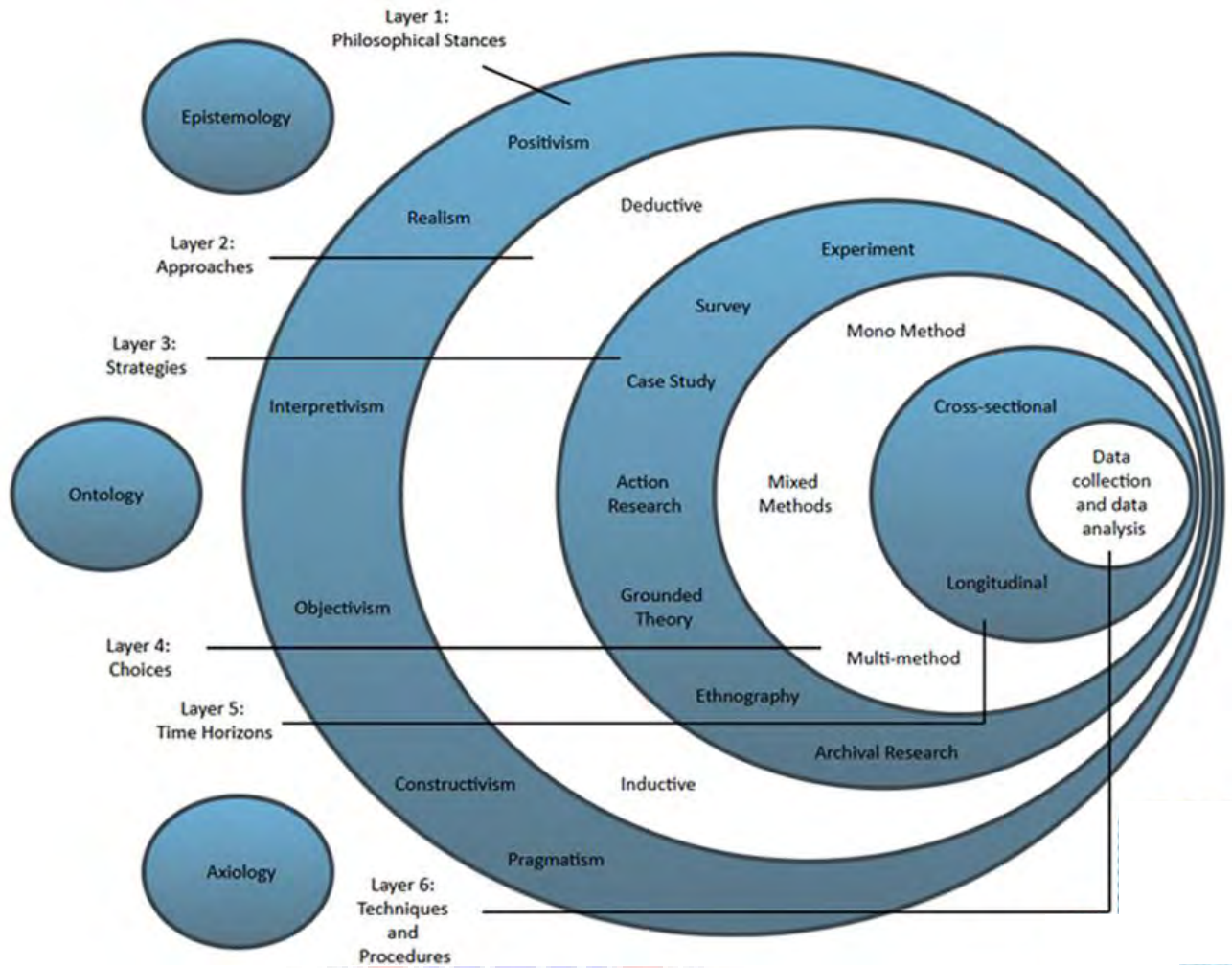


Figure 1: Saunders's Onion theory

In the onion theory, there are three philosophies namely *Ontology*, *Epistemology*, *Axiology*.

*Ontology* helps with a reflection on how society influences daily activities. It talks about objectivism, constructivism, and pragmatism.

*Epistemology* also mostly used for scientific research purposes because it helps in finding information with proof backing claims. It also talks about Positivism, critical realism, and interpretivism.

*Axiology* also deals with opinions having a great impact on the collection and analysis of every research. Here it teaches researchers that data collected should not be manipulated under any circumstance. Every opinion is equally important which helps researchers to reflect much

during analysis layers. The Saunders theory consists of helpful layers. The first layer consists of the structure, guidance, and possible limitation to follow when making decisions. It discusses the perfect way of gathering and analyzing data collected to come up with concrete analysis results. Six (6) concrete approaches are outlined namely Objectivism, Constructivism, Positivism, Realism, Interpretivism, Pragmatism.

*Objectivism* talks about how some students would gladly answer questionnaires and others see it as a frustrating process. This means different social events may have an impact or influence on the social life of a student.

*Constructivism* also talks about how students are responsible for creating social phenomena. For example, laws made by people to put a stop to crimes, these very people are the ones who commit crimes. In other words, the actions of students can influence research results.

*Positivism* is a component of research that researchers can undergo to find the same outcome as others. Here, attention focuses on the quantitative results at the end and the statistical analysis.

*Realism* states that findings cannot depict reality unless there is a continuous gathering of data hence revise theories to suit the analysis results. Often allows researchers to use different types of research methods.

*Interpretivism* explains how people participate in the social and cultural life especially gaining their understanding of their actions and others'. This helps researchers understand how cultural background influences decisions. It also throws more light on cultural existence and constant change.

*Pragmatism* also helps researchers judge a topic from people's views. These views often use to create a practical approach in every research. Every researcher needs to be mindful of this theory and base in it the find solutions to problems.

The second layer consists of Deductive and inductive. This layer helps a researcher discover the aims and limitations of research hence the best research method to use.

*Deductive* helps in finding answers to the research questions leading to gathering data and review other theories. *Inductive* teaches researchers how to implement their theory from the scratch. That is *observation, description, analysis*, and then implementing its theory in the end.

The third layer consists of Experiment, Survey, Case study, Action research, Grounded theory, Ethnography, Archival research strategies.

*Experiment* deals with scientific experimental designs are used hence complex in structure. It makes it difficult for other researchers to replicate research ideas. Here, tests designed are for targeted a group of people who have not affected by the phenomenon. The data gathered analyzed statistically. *A survey* is also a strategy often linked with the deductive approach. It is an economical research strategy. It allows researchers to gather huge data to answers questions like who, what, where, when, and how. Data gathered through this method are reliable.

*A case study* helps researchers study patterns of one or more people and use the results gather to draw a clear conclusion. This strategy aligns a few ways of gathering data: Check the peoples' behavior, consider their environment or background, interview them to know more, and crosscheck records about them. *Action research* is the method that helps researchers to find solutions to problems or an issue. The following steps highlighted under this strategy: Have an objective in mind, identify the problem, and find solutions to deal with the problem.

*The grounded theory* strategy talks about predicting and explaining the results after using the inductive methods. Data mostly collected through observation then predicting strategies and theories appropriate for research. Finally, the predictions are tested. *Ethnography* deals with researching a whole community or situation. This method is time-consuming because it takes time to gather the desired results. *Archival research* deals with the use of the archive documents and existing information, which allows researchers to explore and explain the changes happening over a long period. It could be possible that the archive information may have faults leading to unsatisfied results.

The Fourth layer helps researchers discover the ways to use quantitative and qualitative methods for research purposes. Quantitative research helps to consider the quantity and measurements. Whereas qualitative research allows you to discover personal interpretations, descriptions, and opinions. Three types of methods are outlined; Mono, Mixed, Multi.

Mono-method throws light on gathering only one type of information from either qualitative and quantitative, especially on the opposing views. Mixed-methods allow the use of both qualitative and quantitative methods for the study purposes to gather and analyze data. It is possible to find and fill the gaps in the data easily.

Multi-methods help the use of qualitative as well as a quantitative method. However, the focus is on one source only. That is analyzing both types of data gathered, but with the same point of view.

The Fifth layer has two-time horizon methods; the cross-sectional conducted within a short period and the longitudinal that conducted within a long period. *In Cross-sectional*, both qualitative and quantitative methods are used. This helps observe the behavior of a group of people or a targeted population at a point in time. Whereas the *longitudinal* method also allows the use of qualitative and quantitative research methods but studies behaviors and events over a longer time.



The final layer gives researchers ideas on data collection and analysis. Here, decisions normally based on the best data collection method. The researcher has to determine the questionnaire content type and sample groups to use. Keeping in mind the philosophical stands, strategies, choices, and time-horizons, the desired result attained.

Hence, with the knowledge from (Saunders. M., 2019) this chapter presents the methodology that was adopted to improve the performance of ICT students at Enas Hybrid School.

Voice Thread platform was the appropriate technique found essential to help improve the performance of ICT students in Enas Hybrid School as the world today is all about e-learning. The method was chosen after a critical analysis of other e-learning platforms to achieve the desired study objectives.

The methodology adopted consists of the research design, population, sampling techniques, data collection instrument, intervention designs, and implementation.

## **2.7 Summary of Literature Review**

This literature review discussed related literature on the topic under study. The works of other researchers about the problem under discussion were presented to add up to the knowledge that already existed.

Voice Thread is a collaborative Web 2.0 tool allowing users to create, share, and comment on images, documents, and videos. This study discovered from other researchers that Voice Thread is secure, age-appropriate learning verified by students and all teachers. It is also a safer environment that supports the learning process. The learning process becomes to improve and desired students' performance results are achieved. Hence, lots of literature reviews agree to the introduction of the Voice Thread platform since it has a significant impact on the

performance of students. An overview of how varied tests available on Voice Thread enhances the performance of students was discussed.

## **2.8 Conclusion**

The above literature notifies that using the Voice Thread Platform to improve the Performance of Students at Enas Hybrid School is the best way. Therefore, there was a need to integrate the Voice Thread Platform in ICT lessons to enhance the performance of students of Enas Hybrid School.

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter presents thoroughly the methods and processes that were adopted in conducting the study. A brief overview of the study area is provided in the initial stage of the chapter. This is followed by an outline of the research design, the sampling procedure, and the data collection instruments that were used in collecting primary data for the study. Subsequently, the approaches that were used in organizing and analyzing the data collected are presented.

#### 3.2 Research Design

According to Saunders (2019), the first philosophy highlighted that Axiology deals with opinions having a great impact on the collection and analysis of every research, and data should not be manipulated. Hence, the researcher focused on this to achieve the desired result.

The first layer gave the researcher an insight view of the structure, guidance, and possible limitations to follow when making decisions. Six (6) concrete approaches outlined but the researcher chose Positivism;

“which is a component of research that researchers can undergo to find the same outcome as others. Here, attention focuses on the quantitative results at the end and the statistical analysis”.

The second layer also gave the researcher an idea of how to achieve aims using the Deductive approach “which helps in finding answers to the research questions leading to gathering data and reviewing of other theories”.

The third layer stated that approaches like the Survey, Case study, Action research was appropriate for this research. The survey allows researchers to gather huge data to provide answers to questions like who, what, where, when, and how. Data gathered through this method

are reliable. A case study helps researchers study patterns of one or more people and use the results gathered to draw a clear conclusion and Action research is the method that helps researchers to find solutions to problems or an issue. Hence, as the researcher's strategy to gather and study patterns of people to solve the problem of average performance, a survey, a case study on students of Enas Hybrid School, and action research conducted brought about the choice of Voice Thread platform to enhance performance students of Enas Hybrid School. In the research, the problem of average performance due to the unavailability of printed materials for ICT lessons and the fear following malicious sites or getting involved in cyberbullying attacks identified and solved using the Voice Thread platform. The fourth layer also draws the researcher's attention to quantitative research, which focuses on the quantity and measurements. Mono-method throws more light on how to gather only one type of information, especially on the opposing views. Hence, research design based on the quantitative method as the research involved numeric data of opposing views. The fifth layer also helped the researcher to use a Cross-sectional method to observe the behavior of a targeted population in a short period.

### **3.3 Population Sample and Analysis**

The sixth layer highlighted strategies to use in collecting data. Hence, looking through the strategies the population and sampling techniques chosen was targeted population sample considering views from other researchers:

1. Simplify the research: it will be easier to study a group sample of a population than to study the entire population.
2. Save time: Studying an entire population can be time-consuming, especially considering the limited time available for the research.
3. Minimizing cost: Preparing questionnaires to collect data from the students could be very costly, hence a few classes deemed convenient for this study.

Out of the total population of 300 students in Enas Hybrid School in Ghana, 50 students were the targeted population for this research. Selecting the best sampling method is very necessary. Among all the sampling methods, purposive sampling was ideal. This method of sampling was convenient in this study as it allowed the researcher to collect data easily. In sampling, researchers select some cases to examine in detail then use what has been learned from them to understand a much larger set of cases (Neuman, 2014). But findings of this research are only applicable to students for the 2019 academic year in Enas Hybrid School in Kumasi Ghana and cannot be generalized to other groups of students in other high schools in Ghana or elsewhere as the education system might not be the same and applicable.

### ***3.3.1 Integration of Voice Thread platform***

After critically analyzing the literature review of the American Association of School Libraries (2009), the Voice Thread platform is one of the best. Most students already had email addresses so helping them sign-up or enrolling onto Voice Threads was quite easy. They enjoyed how it worked and used the platform often and could access other resources of other courses as well. From the findings, the use of Voice Thread helped stimulate, sustain, and arouse the interest of students in ICT lessons.

## **3.4 Data collection instruments**

Here, data were collected using questionnaires, formative, and summative assessments.

### ***3.4.1 Questionnaire***

A valid and reliable instrument is very important in data collection. A closed-ended questionnaire is used to limit the number of possible responses specified (Slavin, 2007).

A closed-ended questionnaire was designed in this research and used to collect data from students of Enas Hybrid School. The researcher selected a sample of respondents from a large population before administering questionnaires about their attitude, values, habits, ideas, demographics, feelings, opinions and perceptions (McMillan & Schumacher, 2006).

The questions must be clear and easy to understand. Hence, the layout of the questionnaire thoroughly structured for easy reading and answering. It was developed in an interactive style which means students felt as if someone was talking to them (Kumar, 2006). The closed-ended questionnaires then shared with students to provide answers by ticking the right answer to their choice. Throughout this study, the identity of the students was protected, according to Creswell (2014) who stated that every other researcher should avoid disclosing information about participants as it may hurt the participants' feelings and that every researcher should respect the privacy of participants by stating their anonymity, their roles and the incidents in the research projects.

A researcher proposed 14 principles to follow when preparing questionnaires. The principles were carefully followed and used in designing the questionnaire. These are

- 1) Make sure the questionnaire items match your research objectives.
- 2) Understand your research participants.
- 3) Use natural and familiar language.
- 4) Write items should be clear, precise, and relatively short.
- 5) Not using leading or loaded questions.
- 6) Avoid double-barrelled questions.
- 7) Avoid double negatives.
- 8) Determine whether an open-ended or closed-ended question is needed.
- 9) Use mutually exclusive and exhaustive response categories for closed-ended questions.
- 10) Consider the different types of response categories available for closed-ended questions.
- 11) Use multiple items to measure abstract constructs.
- 12) Consider using multiple methods for measuring abstract constructs.
- 13) Use extreme caution if you reverse the wording in some items to help prevent response sets in multi-scales.

14) Developing a questionnaire that is properly organized and easy for participants to use.

(Johnson & Christensen, 2014).

Taking the above into consideration and elaborating on the views from other researchers on the advantages of questionnaires, the researcher considered it as a flexible way of gathering data. A feedback analysis was conducted after the introduction of the Voice Thread platform. The students were giving numbers on sheets of papers at the end of ICT lessons to keep track of student's views.

### ***3.4.2 Formative and Summative Assessment***

Unit test, Classwork, and exercise of all forms is a type of assessment that contributes to formative assessment and was adopted as it is an essential tool of knowing how well students are performing now comparing to previous findings, how best they understood the concepts, how Voice Thread is influencing them positively. To see the effectiveness or difference of varied educational assessment methods. Classroom assessment includes theory and practical aspects mostly. When using paper-pencil tests and performance measures, teachers need to be aware of the strengths and weaknesses of various assessment methods and choose appropriate formats to assess different achievement targets (Stiggins, 1992).

With this, a teacher should be able to revise and improve teacher-made tests based on item analysis to suit learning skills. Pahad (1997) pointed out that teachers should use assessment to find out what the student knows and what they can do, otherwise assessment will not serve any purpose in educating the student.

With the use of the Pre Unit test, class test, and exercise on the Voice Thread platform, the researcher developed a firm basis of assessment and a traditional examination, which forms the summative assessment. Several test forms (unit test, project, and practical test) introduced at the end of every lesson or topic measures the performance of students, which helped to increase the academic performance of the students as they interacted with the teacher frequently on

topics treated on Voice Thread platform even in their various homes. There were discussions about topics and ideas shared on them.

### **3.5 Intervention Design and Implementation**

This aspect of the study presents the actual measures taken to improve upon the performance of students in Enas Hybrid School. After taking into consideration the views of existing literature on the problem, the researcher thought of varied interventional strategies and their implementation which contributed to greatly overcoming the challenges.

#### ***3.5.1 Pre-Intervention & Intervention***

Before the intervention, the researcher observed that majority of students in Enas Hybrid School could not grasp the concept in ICT lessons, which resulted in average performance during topics like web authoring and designing, python programming, networking, and security.

Varied exercises and assignments given to the students in class showed no significant change in their performance before the introduction of VT. A survey conducted on students revealed that students could not remember or understand the concepts of ICT after a few hours spent in the classroom. Hence, taking the views of students into consideration, quizzes, projects, classwork, unit test, homework and practical test of all forms uploaded unto Voice Thread Platform and the students practice on their own but under the supervision of their parents. As a teacher who teaches ICT at Enas Hybrid School, some challenges that affected students' performance in ICT were evident, so helping them improve upon their performance would enable them to achieve academic excellence and become great leaders soon.

The researcher proposed the following intervention designs and mechanisms that could improve the performance of students. These are;

- Integration of Voice Thread platform.



- The uploading of enough and well-designed materials and use of enough tests on Voice Thread Platform (classwork, unit test, homework, project, practical, brain teaser, etc.) to enable them to practice while in their various homes.
- A trip organized to enlighten students on the importance of ICT concepts.

### **3.6 Intervention Implementation**

The following are how the above interventions were implemented to solve the problem of average performance.

#### ***3.6.1 The uploading of enough and well-designed materials and use of enough test on Voice Thread Platform***

Since ICT as a course entails a lot of concepts and students need to grasp these concepts to achieve their educational goal. In the modern classroom setting, the researcher uses discussions method in the class and gives well-designed notes or resources on the platform to aid much more understanding. Varied forms of exercises given to students to enhance their critical thinking skills. Enough classwork, unit test, homework, project, practical, brainteaser given in class to assess their progress. These tests also help students apply all that they learn on the Voice Thread Platform in solving problems.

Usually, at the end of each lesson, the researcher gives the students exercises and homework or grouped the students into groups of 3 and gave them projects according to the topic treated. During technical topics such as python programming language, which consist of the theory and practical aspect, a self-designed material uploaded in advance, which serves as a guide. The topic mostly explained in an audio or video format with the teacher's voice embed in it on Voice Threads, which makes students feel they are still in the classroom. Students add up comments and even audio recordings to the uploaded voice thread in a form of discussions. With the flow of communication, they often followed the steps by themselves on the platform so during practical aspects in class. The practical work in class enables them to think out of the

box. Hence, explore how best the problem given to them should be solved. And at the end of each topic, a unit test was given to them to assess their knowledge. End of term Examination was also conducted. The Voice Thread platform served as a guide or resource bank to the students and the researcher for effective teaching and learning process outside the classroom.

### ***3.6.2 A trip organized to enlighten students on the importance of ICT concepts.***

As an intrinsic motivation towards the learning of ICT, the researcher organized a trip to Kumasi Hive based on how important learning ICT is to the world today. As videos of great programmers, web designers, lab assistants, video game inventors, photo editors, and stories about great technology entrepreneurs like Mack Zuckerberg, Steve Jobs, Bill Gates, Ted Dabney, and their likes were projected, it inspired them greatly. An instructor took them through Application designed and Scratch Programming which gave them an overview of great things they could do.

### **3.7 Post Intervention Implementation**

After the implementation of Voice Thread, the researcher administered the second part of the questionnaire to ascertain the students' impression and whether it has been of help as far as their interest and performance in ICT is concerned. The researcher also conducted a summative assessment (Test) to evaluate the students' performance after using the VT platform.

### **3.8 Data Analysis**

To make the presentation of the findings comprehensive and readable, the collected data was organized into tables according to the two research questions for easy interpretation and analysis of results with the aid of a powerful statistical tool, SPSS. This helped to make meaningful conclusions for the study.

## **CHAPTER FOUR**

### **RESULTS OF THE STUDY**

#### **4.1 Introduction**

The researcher undertook a study on how Voice Thread could help improve student's performance in ICT lessons at Enas Hybrid School. 50 students were sampled to participate in the study. This chapter presents the analysis of the primary data collected from students. Three main sections were used in this analysis. The first section was about the background information of the Students, the second section presented data on the instructional strategies employed by the teacher in teaching (Pre- Intervention) and the third section presented data on the introduction of Voice Thread platform (Post-Intervention).

#### **4.2. Background Information of Respondents.**

This section of the chapter presented data on the background information of the students for the research, which includes the gender of the Respondents, Age of respondents, and Level of Respondents. The results are presented in Table 1.

##### ***4.2.1 Gender of Respondents***

The results from the study showed that 30 students, representing 60% were males compared to 20, representing 40% who were females. The results showed that the majority of the respondents were males due to the sampling method used, implying that there more males in the chosen classes.

##### ***4.2.2 Age of Respondents***

From the results on the ages of students, it was found out that 9 (18%) were 10 years, 10 (20%) of them were 12 years, 13 (26%) of them were 13 years whilst the remaining 18 (36%) were 14 years.

### 4.2.3 Level of Respondents

The levels of student were also analyzed in *table 1*, it was discovered that 17 (39%) of the students were in Year Six (Class 6), 14 (26%) of them were in Year Seven (Class 7), 9 (17%) of students in Year Eight (Class 8) and 10 (18%) were in Year 9 (Class 9). This showed that majority of the sampled population were mostly students in year 6.

*Table 1: Background information of students*

Variable	Category	Frequency	Percentage (%)
	Male	30	60.0
	Female	20	40.0
	10 years	9	18.0
	12 years	10	20.0
	13 years	13	26.0
	14 years	18	36.0
	Year 6	17	39.0
	Year 7	14	26.0
	Year 8	9	17.0
	Year 9	10	18.0
	<b>Total</b>	<b>50</b>	<b>100</b>

Source: Field Data, 2019

### 4.3 The instructional strategies employed.

This section focused on analyzing the data on the existing teaching strategies that are used in Enas Hybrid School. In this sense, the study ascertained the type of methods used by the teacher during ICT lessons, whether the strategies involved the students, Respondents' views on the methods, and so on.

*Table 2: The teacher use varied teaching methods during ICT lessons*

Respondents' views on teachers use varied teaching methods during ICT lessons?	Do the methods help you to understand the topic?		Total
	Yes	No	
Yes	16(32%)	34(68%)	<b>50(100%)</b>
No	34(68%)	16(32%)	<b>50(100%)</b>
<b>Total</b>	<b>50(100%)</b>	<b>50(100%)</b>	

Table 2 indicated that, out of the 50 students, 34 (68%) stated that their teacher does not use varied teaching method, it was established further that 34 (68%) of respondents indicated that they were not fully satisfied with the teaching methods employed by their teacher, coupled with the fact that understanding lessons were not up to their expectation. 16 (32%) of respondents indicated that they had the view that their teacher varied the method of teaching and was able to understand lessons taught. This means the majority of the respondents had difficulty in understanding the lessons taught due to the strategies adopted by their teacher.

*Table 3: Instructional strategies or methods used.*

<b>Instructional Strategies</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Project-Based	25	50
Lecture Method	35	70
Discussion	22	48

Table 3 investigated the teaching pedagogy employed by the teacher to teach ICT. It indicated that students made multiple entries on the instructional strategies. Those who chose the project based method were 25 (50%), it was further established that 35 (70%) of respondents indicated that the teacher used the lecture method and 22 (48%) of respondents indicated that discussion method was used. The majority of the students indicated that the lecture method was mostly used.

*Table 4: Respondents' involvement in the teaching and learning of ICT.*

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	38	76
No	12	24
<b>Total</b>	<b>50</b>	<b>100.0</b>

Source: Field Data, 2019;

Table 4 indicated that, out of the 50 respondents, 38 (76%) were involved in the teaching and learning process in ICT and 12 (24%) of respondents indicated that they were not involved. This means the majority of the respondents were involved in the teaching and learning process.

*Table 5: Respondents view about the methods used by their teacher.*

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Interesting	5	10
Boring	21	42
Prefer not to say	24	48
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 5 investigated to ascertain whether the learners had an interest in the method used in teaching by the teacher, the results showed that, out of the 50 respondents, 5 (10%) find the teaching method interesting, it was established further that 21 (41%) of respondents found the teaching methods employed boring. 24 (48%) of respondents preferred not to share their opinions. This means the majority of the respondents did not want to express their concerns.

*Table 6: Is the Online Application method of instruction preferable to the traditional way of teaching?*

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	50	100
No	0	0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 6 indicates the response from the respondent whether the Online Application method of instruction was preferable as compared to the traditional way of teaching. The table indicated that, out of the 50 respondents, 50 (100%) indicated that they prefer the online application method to the traditional way of teaching and none of the students indicated a no response. This means the respondents unanimously agreed that they preferred the online application method to be the preferable method of instruction.

#### 4.4. Introduction of Voice Thread platform.

This section of the study presented the data on the introduction and use of Voice Thread among students. Given this, the study investigated the use of Voice Thread, how helpful the platform is, how it has aided or improved performance of students in ICT, and Students' general impression on Voice Thread.

##### 4.4.1. Use of Voice Thread.

Table 7: Voice Thread Usage by Respondents.

Have you used Voice Thread before	Do you have a Voice Thread account	
	Yes	No
Yes	50(100%)	0(0%)
No	0(0%)	0(0%)
<b>Total</b>	<b>50(100%)</b>	<b>0(0%)</b>

Table 7 indicates if respondents have ever used Voice Thread and/or have a Voice Thread user account. Out of the 50 respondents, 50 (100%) attested to the fact they have used the Voice Thread platform before. It was further revealed that they had a Voice Thread platform user account. Hence, all students use Voice Thread and have accounts created.

Table 8: How helpful is Voice Thread to respondents' studies?

Response	Frequency	Percentage (%)
It makes Learning Materials readily available	48	96
It allows Teacher-Student interactions	41	82
It makes learning interesting and easy to understand	50	100
It helps to study at your own pace	50	100

Table 8 indicated that 48 (96%) are of the view that VT makes learning materials accessible, 41 (82%) agreed that it allows Teacher-Student interaction, it was further established that, 50 (100%) attested to the fact that it makes learning interesting and easy to understand. 50 (100%)

again indicated that VT helps them to study at their own pace. This means the majority of the respondents agreed that the Voice Thread platform makes learning materials readily available, allows teacher-student interaction, makes learning interesting, and easy to understand hence study at their own pace.

*Table 9: Has there been an improvement in your performance after using Voice Thread*

<b>Response</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Yes	50	100
No	0	0
<b>Total</b>	<b>50</b>	<b>100.0</b>

Table 9 indicated that 50 (100%) of students indicated that there has been an improvement in their performance after using VT. This means the majority agreed that Voice Thread has helped improve their performance in ICT.

*Table 10: Respondents likelihood to recommend or rate Voice Thread*

	<i>Very High</i>	<i>High</i>	<i>Low</i>	<i>Very low</i>	<i>Not at All</i>	<b>Total</b>
How likely are you to recommend Voce Thread to a friend in another school	38(76%)	12(24%)	0(0%)	0(0%)	0(0%)	50(100%)
How do you rate the use of the Voice Thread Platform?	48(96%)	2(4%)	0(0%)	0(0%)	0(0%)	50(100%)

Table 10 indicated that 38 (76%) and 12 (24%) of the students chose Very high and High responses respectively, to recommend Voice Thread platform to their friends in other schools, In the same vein, 48 (96%) and 2 (4%) rated the use of Voice Thread Platform Very high and High responses respectively. This means all of the respondents attested to the fact that Voice Thread is highly recommendable and hence, highly rated.



*Table 11 Pre Intervention Test Results.*

	<b>0-49%</b>	<b>50-59%</b>	<b>60-69%</b>	<b>70-79%</b>	<b>80-100%</b>	<b>Total</b>
Year 6	12 (48%)	8 (32%)	5 (20%)	0 (0%)	0 (0%)	25 (100%)
Year 7	10 (35.7%)	15 (53.6%)	3 (10.7%)	0 (0%)	0 (0%)	28 (100%)
Year 8	12 (52.1%)	5 (21.7%)	4 (17.4%)	2 (8.7%)	0 (0%)	23 (100%)

Table 11 indicated the previous test results before the introduction of Voice Thread of Year 6, 7, and 8 students. In Year 6 class, 12 (48%) represents those who scored 0-49%, 8 (32%) represents those who scored 50-59%, and 5 (20%) represents those who scored 60-69%. In Year 7 class, 10 (35.7%) represents those who scored 0-49%, 15 (53.6%) represents those who scored 50-59% and 3 (10.7%) of represents those who scored 60-69%. In Year 8 class, 12 (52.1%) represents those who scored 0-49%, 5 (21.7%) represents those who scored 50-59%, 4 (17.4%) of represents those who scored 60-69% and 2 (8.7%) of represents those who scored 70-79%. These indicated that respondents' performance was very poor.

*Table 12 Post-Intervention Test Results.*

	<b>0-49%</b>	<b>50-59%</b>	<b>60-69%</b>	<b>70-79%</b>	<b>80-100%</b>	<b>Total</b>
Year 6	0 (0%)	0 (0%)	5 (20%)	8 (32%)	12 (48%)	25 (100%)
Year 7	0 (0%)	0 (0%)	3 (10.7%)	15 (53.6%)	10 (35.7%)	28 (100%)
Year 8	0 (0%)	0 (0%)	4 (17.4%)	7 (30.4%)	12 (52.1%)	23 (100%)

Table 12 indicated the current test results (after the introduction of Voice Thread) of Year 6, 7, and 8 students. In Year 6 class, 5 (20%) represents those who scored 60-69%, 8 (32%) represents those who scored 70-79%, and 12 (48%) represents those who scored 80-100%. In

Year 7 class, 3 (10.7%) represents those who scored 60-69%, 15 (53.6%) represents those who scored 70-79% and 10 (35.7%) of represents those who scored 80-100%. In Year 8 class, 4 (17.4%) represents those who scored 60-69%, 7 (30.4%) represents those who scored 70-79%, and 12 (52.1%) represents those who scored 80-100%. These indicated that the performance of students improved significantly after the introduction and implementation of the Voice Thread platform.



## CHAPTER FIVE

### SUMMARY, CONCLUSION, AND RECOMMENDATIONS

#### 5.1 Introduction

In Chapter 1, Voice Thread platform was considered as an effective alternative to the traditional way of teaching and a solution to pandemic relief which offers students with unlimited learning experience hence performing better. Chapters 2 focuses on uses of ICT, benefits of voice Thread, the works that have been done using Voice Thread platform to improve students' performance in ICT lessons, and how other researchers discussed how it was used. Chapter 3 presents the methodology that was adopted to improve the performance of ICT students in Enas Hybrid School. Voice Thread platform was the technique found essential to improve the performance of ICT students in Enas Hybrid School as the world today is connected through the internet of things. Chapter 4 presents an analysis from findings gotten from an administered questionnaire.

#### 5.2 Summary of Major Findings

This study examined the use of Voice Thread Platform to Improve the Performance of Students in ICT in Enas Hybrid School, with emphasis on probing the instructional strategies employed by the teacher in teaching ICT and Introducing an E-Learning platform (Voice Thread) to improve performance in ICT.

It was found from the results that the teacher used a conventional teaching methods to teach ICT lessons which made it difficult for the learners to fully understand the lessons taught. As all the data indicated that the project-based method was 25 (50%), it was further established that 35 (70%) of respondents said that the teacher used the lecture method and 22 (48%) of respondents indicated that the discussion method was used. The data further showed that the teacher didn't vary their pedagogy of lesson delivery which hindered the easy understanding

of lessons. The results again showed that, out of the 50 respondents, 5(10%) find the teaching method interesting, 21(41%) of respondents found the teaching methods employed boring and 24(48%) of respondents preferred not to share their opinions. This means only a handful of learners (5%) found lessons interesting, a clear indication of an inappropriate method of teaching. With regards to the preferred teaching method, the data indicated that, out of the 50 respondents, 50(100%) unanimously prefer the online application method to the traditional way of teaching.

The study also investigated the use of Voice Thread, how helpful the platform is, how it has aided or improved performance of students in ICT, and Students' general impression on Voice Thread. With the above in mind, the findings indicated that all students use Voice Thread and have accounts created. Section C of the questionnaire, therefore, brought up the following findings: The majority of the respondents agreed that Voice Thread platform makes learning materials readily available, allows teacher-student interaction, makes learning interesting and easy to understand, and also study at their own pace. Also, 100% of students indicated that there has been improvement in their performance after using the VT.

The Post Intervention results which are the Current End of term Examination indicated that, in Year 6 class, 5 (20%) represents those who scored 60-69%, 8 (32%) represents those who scored 70-79%, and 12 (48%) represents those who scored 80-100%. In Year 7 class, 3 (10.7%) represents those who scored 60-69%, 15 (53.6%) represents those who scored 70-79% and 10 (35.7%) of represents those who scored 80-100%. In Year 8 class, 4 (17.4%) represents those who scored 60-69%, 7 (30.4%) represents those who scored 70-79%, and 12 (52.1%) represents those who scored 80-100%. These indicated that the performance of students improved significantly after the introduction and implementation of the Voice Thread platform.

This enhanced a true reflection on the information that the researcher was seeking since all respondents have had an encounter with VT.

### **5.3 Conclusion**

This study has refuted the misconception that Students of Enas Hybrid School have over the study of ICT, that ICT was difficult, this is because course materials were previously not readily available for them to master the topics. With the fear of falling victims to cyberattacks, they were discouraged from researching on the internet on their own, which affected their academic performance greatly. The researcher in this study found out that Voice Thread is a secure, age-appropriate, and collaborative space for all students and teachers. Also, strangers can never interact with students via VT unless they are given explicit permission by the teacher, thus making it safer compared to other e-learning platforms.

The study further concluded that traditional teaching strategies do not aid academic excellence among students but rather, e-learning platforms. Also, the study established that Voice Thread platform makes learning materials readily available, allows teacher-student interaction, makes learning interesting and easy to understand, and also helps learners to study at their own pace which led to the improvement in their performance after using VT.

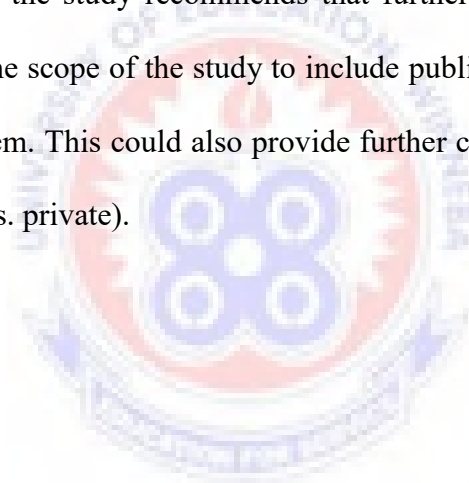
The post-intervention test results for all the classes indicated that none of the students in the classes scored less than 60% of the test. In Year 8 class, 4 (17.4%) represents those who scored 60-69%, 7 (30.4%) represents those who scored 70-79% and 12 (52.1%) of represents those who scored 80-100% and same results were replicated in the Year 6 and Year 7 classes as well. These indicated that the performance of students improved significantly after the introduction and implementation of the Voice Thread platform.

### **5.4 Recommendations**

The following are some recommendations and suggestions for the findings of this research work. The introduction of the Voice Thread platform has been useful and should be

implemented in other schools or by other subject teachers as the researcher believes it is among the best methods to help enhance the performance of students. The researcher hopes that the findings of this study will assist other teachers to introduce Voice Thread platform to help improve the academic standard of the school. Hence, this research will serve as an essential source of reference to future researchers who will be researching this problem and its relative studies.

Lastly, the study was conducted in the Kumasi metropolis using Enas Hybrid School. This made it impossible for the researcher to generalize the results of the study to other schools and the country as a whole. Also, the results of the study were based on students in private not public schools. Given this, the study recommends that further studies be conducted at the national level broadening the scope of the study to include public schools which will provide a clear picture of the problem. This could also provide further comparative insights based on the type of school (public vs. private).



## APPENDIX A

### REFERENCES

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## APPENDIX B

### QUESTIONNAIRE FOR STUDENTS

This research is part of a larger final year project, by a student of the University of Education Winneba, who is working on a project titled: **‘Using Voice Thread Platform to Improve the Performance of Students in ICT at Enas Hybrid School’**, in partial fulfillment of a Degree. You are assured that all information provided in the course of this study will be treated confidential and will not be disclosed to any third party, but rather used for academic purposes only. Hence, the successful completion of the study is dependent on your accurate responses. Thank you.

**Instructions:** Please tick the applicable option(s). You are encouraged to tick multiple responses where applicable.

**Instructions:** *Please read the questionnaire carefully and tick the appropriate response for each of the questions.*

#### SECTION A: Background information

1. **Gender:** Male [  ] Female [  ]
2. **Age (years):** 10 [  ] 12 [  ] 13 [  ] 14 [  ] 15 [  ] 16 [  ]
3. **Level :** Year 6 [  ] Year7 [  ] Year 8 [  ] Year 9 [  ]

#### SECTION B: The instructional strategies employed.

4. Does your teacher use varied teaching methods during ICT lessons?  
Yes [  ] No [  ]
5. If yes, do they help you to understand the topic?  
Yes [  ] No [  ]
6. What are some of these instructional strategies or methods used?  
Project-Based [  ] Lecture Method [  ] Discussion [  ]
7. Does your teacher involve you in the teaching and learning process in ICT lessons?

Yes [ ]            No [ ]

8. What can you say about the methods used?

Interesting [ ]            Boring [ ]            Prefer not to say [ ]

9. How do you want the instructional strategies of learning ICT to?

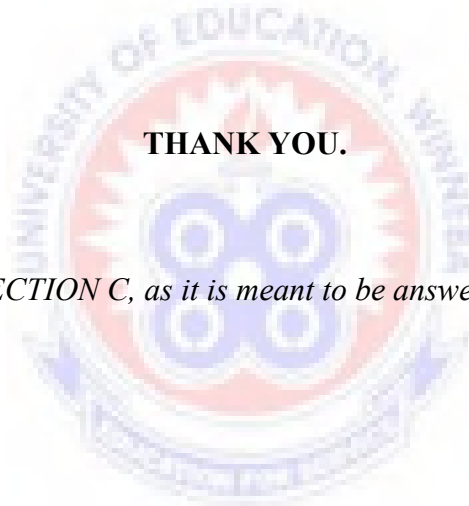
Project Based [ ]            Lecture Method [ ]            Online Application Based [ ]

10. Do you think that the Online Application way of instruction is superior to the traditional way of teaching?

Yes [ ]            No [ ]

**THANK YOU.**

*(Please, **Do not** answer SECTION C, as it is meant to be answered on some other day)*



**SECTION C: Introduction of Voice Thread platform**

11. Have you used Voice Thread before? Yes [ ] No [ ]

12. Do you have a Voice Thread account? Yes [ ] No [ ]

13. (a) Do you find Voice Thread helpful in your Studies? Yes [ ] No [ ]

(b) If “Yes”, how helpful is it? (*Tick all applicable*)

i. It makes Learning Materials readily available [ ]

ii. It allows Teacher –Learner interactions [ ]

iii. It makes learning interesting and easy to understand [ ]

iv. It helps to study at your own pace [ ]

14. Has there been an improvement in your performance after using Voice Thread?

Yes [ ] No [ ]

15. How likely are you to recommend Voce Thread to a friend in another school?

Very High [ ] High [ ] Low [ ] Very Low [ ] Not at all [ ]

16. How do you rate the use of the Voice Thread Platform?

Very High [ ] High [ ] Low [ ] Very Low [ ] Not at all [ ]

**THANK YOU**

APPENDIX C

POST INTERVENTION TESTS



# ENAS Hybrid School

Term 1 2019

## Examination Paper

<b>Subject</b>	<b>INFORMATION COMMUNICATION &amp; TECHNOLOGY PAPER 1-THEORY</b>
<b>Date</b>	.....2019
<b>Duration</b>	1 HOUR: 30 MINUTES
<b>Class</b>	YEAR 6
<b>Name</b>	

### Instructions:

Write your **name** in the Space provided.

Write in blue pen.

You may use an HB pencil for any diagrams, graphs or rough working.

Do not use Erasable pen, staples, paper clips, glue or correction fluid.

Answer **all** questions.

At the end of the examination, fasten all your work securely together.

The number of marks is given in brackets [ ] at the end of each question or part question.

FOR EXAMINER'S USE ONLY	
Page	Mark
1	
2	
3	
4	
5	
6	
7	
8	
<b>Total</b>	

**Section A (This section is worth 60 marks)**

1. List **Four (4)** other ways people could use to share their ideas or information.

- I. ....
- II. ....
- III. ....
- IV. ....

[4]

A great way to share ideas of a topic and to present information to people is using Multimedia presentation.

2. List five places where multimedia presentations are often used.

- I. ....
- II. ....
- III. ....
- IV. ....
- V. ....

[5]

3. List three (3) things a button in a multimedia presentation can do.

- i. ....  
.....
- ii. ....  
.....
- iii. ....  
.....

[3]

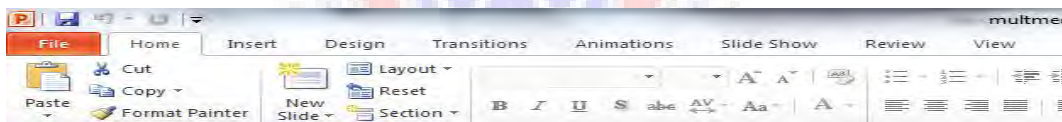
4. List three (4) things that can be added to a multimedia presentation.

- I. ....
  - II. ....
  - III. ....
  - IV. ....
- [3]

5. What is the first thing you need to do when you want to write an interactive story? (Tick the appropriate box)

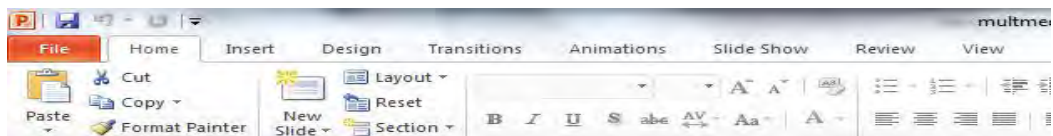
- i. Plan it all on Paper First
  - ii. Choose what colour buttons you want to use.
  - iii. Decide who will eat the main course
- [1]

6. a) Esraa wants to create a multimedia page. Circle the area in the picture she will have to click to add a background picture to his presentation.



[1]

b. If she wants to add a picture to the presentation which part of the picture will he need to click?



[1]



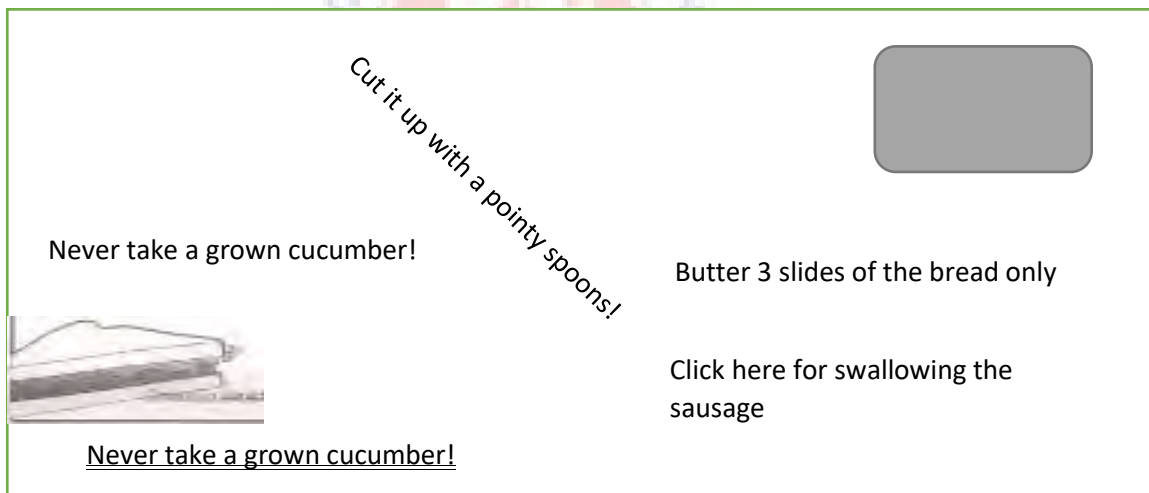
7. Sounds are very helpful when creating multimedia presentations. You can add sounds from a computer file or create your own sound and add it to your presentation.

Click the screen that appears when you want to record a new sound



[1]

8. It is important to think of the design for your multimedia presentation. This is because a bad design may not make your presentation exciting as how you want it to be. Look at the page design below very carefully, there are certain things wrong with this type of design.



- a. Write down four things that could be done to improve on this page.

- i. ....  
.....  
.....  
.....
- ii. ....  
.....  
.....  
.....

iii. ....  
.....  
.....  
.....

iv. ....  
.....  
.....  
.....

[4]

9. Explain what the following are used for in a Multimedia presentation.

a. Animation:.....  
.....  
.....[1]

b. Transition:.....  
.....  
.....[1]

10. Use the words to complete the sentences about creating sounds.

You can ..... your recording as a .....

To play your sound you can ..... on it

in Windows .....

save  
Explorer  
sound file  
double-click

[4]

11. We usually say Multimedia presentations are very interactive.

a. In Multimedia Presentation, being interactive means?

.....  
.....  
.....[1]

b. One of the things that make presentations interactive is buttons. List two buttons you can use and what it does.

i. ....  
.....  
.....

ii. ....  
.....  
.....

[2]

12. Simone wants to design a PowerPoint presentation about her family. She has so many videos of her family she would want to share on her presentation. Briefly describe to Simone how she would attach a video of her family on the PowerPoint presentation.

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....  
..... [3]

13. List three (3) things that spreadsheets be used for.

a. ....

b. ....

c. ....

[3]

14. Yasha is planning of organizing a surprise birthday party for her favourite teacher & fun-packed activity right after exams. She is inviting all her friends in Year 6 from school and her neighbourhoods as well, She has made a list of those she is inviting using a spreadsheet. She has also decided to use a spreadsheet to prepare a budget for the event.

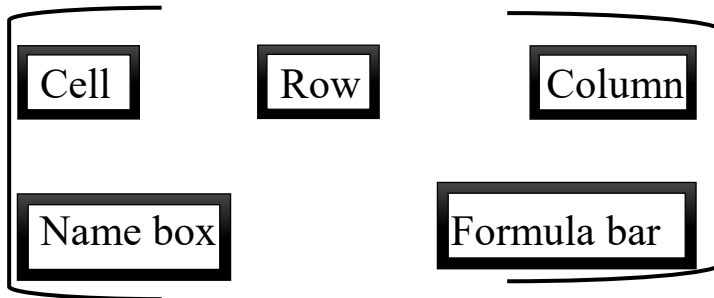
a. State two reasons why Yasha wants to use the spreadsheet to help her plan her event.

i. ....  
.....  
.....  
.....

ii. ....  
.....  
.....  
.....

[2]

15. Identify the parts of the spreadsheet below by filling in the boxes using the names in the big bracket below.



**NB: [ USE THE ABOVE TO FILL THE BOXES BELOW ]**

a.

[5]

b. Look at the spreadsheet above and state which cell is currently selected.

..... [1]

16. List four (4) **types of data** that a cell in a spreadsheet can contain.

- i. ....
- ii. ....
- iii. ....
- iv. .... [4]

17. Mr. Kodua always buys his Groceries on Saturdays. He has made a spreadsheet that helps him to do his weekend shopping.

	A	B	C	D	E	F
1	<b>MR. KODUA'S SHOPPING LIST</b>					
2						
3	<b>Items</b>	<b>cost per item £</b>	<b>No of items</b>	<b>Amount £</b>		
4	Motorbike fuel	£1.70	1	£1.70		
5	Game pad	£6.00	5	£30.00		
6	Gym Maintenance kit	£5.00	1	£5.00		
7	Affordable gifts	£2.00	3	£6.00		
8	Mango Juice	£0.99	3	£2.97		
9	Pottatoes	£0.45	10	£4.50		
10	Maize bag	£0.84	1	£0.84		
11	Carrots	£0.20	5	£1.00		
12	Aubergine	£0.40	4	£1.60		
13						
14		<b>TOTAL</b>		<b>£53.61</b>		
15						

i. What data types can the following cells contain?

[NB: Write 'text', 'number' or 'formula' next to them by looking at the spreadsheet above]

D14 A6.....

.....

C3..... D5.....

.....

C8..... B5.....

.....

[3]

ii. Write the formula in the following cells [ look at Mr. Kodua's Spreadsheet above and answer the questions below]

Example: D4 =B4\*C4

- a. D5 .....
- b. D7 .....
- c. D9 .....
- d. D14 .....

[4]

iii. Mr. Kodua's money has reduced due to some investment he made, so he decides to reduce the number of gamepads to 3.

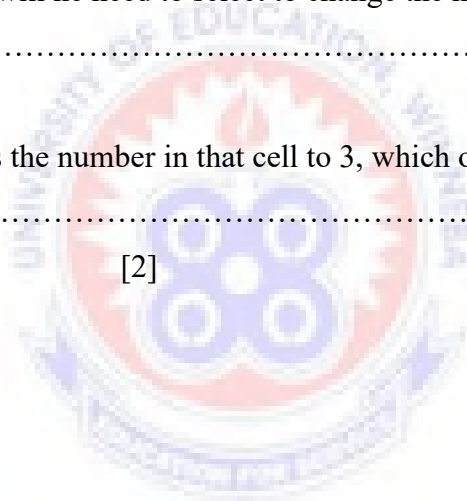
a. Which cell will he need to select to change the number?

..... [1]

b. If he changes the number in that cell to 3, which other cells will change?

Cells ..... Will change.

[2]



**END OF PAPER**



# ENAS Hybrid School

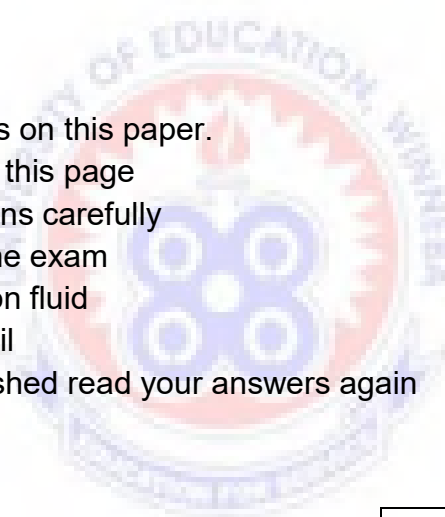
**Term 1 2019**

## **Examination Paper**

<b>Subject</b>	I.C.T.
<b>Paper</b>	Paper 1 (Theory)
<b>Date</b>	December, 2019
<b>Duration</b>	1 HOUR 15 MINS
<b>Class</b>	YEAR 7
<b>Name</b>	

### **Instructions:**

- ✓ Answer all questions on this paper.
- ✓ Write your name on this page
- ✓ Read all the questions carefully
- ✓ Do not talk during the exam
- ✓ Do not use correction fluid
- ✓ Do not write in pencil
- ✓ When you have finished read your answers again



Mark	
------	--



**Section 1 (This section is 60 marks in all)**

For each of the questions in the table tick whether they are true or false.

Question/Statement	True	False
1. A multimedia presentation cannot play sounds		
2. Using pictures in the presentation makes understanding easier.		
3. A multimedia presentation is <b>not</b> good for playing videos.		
4. The internet helps us to research information		
5. Using the internet for your research presentation makes it bias.		
6. Skipping is a way of taking points of information from the internet		
7. Factual information can be a bias information		
8. A tertiary source does not provide direct or accurate evidence about an event		
9. Most articles are secondary sources		
10. CD-ROM is an acronym which stands for "Compact Disc Read-Only Memory".		
11. The up half of the first page is referred to as " <b>above the fold</b> "		
12. The reporter's opinions should not appear in the article - only the facts.		
13. The <b>nut graph</b> is the paragraph that contains the core information about the story and tells the reader why the story is important.		

[13]

14. All of the following is an advantage of MS Publisher over word processors except?

- a. Headers and footers are available
- b. Font can be changed easily
- c. Page colour could be applied

- d. Pictures can be moved without affecting the text
15. Which of the following is the head of a newspaper team?
- a. Subeditor
  - b. Photographer
  - c. Reporter
  - d. Instructor
16. Which of the following is not part of the newspaper team?
- a. Sub-editor
  - b. Reporter
  - c. Graphic artist
  - d. Instructor
17. What is the second step when searching on a CD-ROM?
- a. You enter the words for which you want to search.
  - b. Selecting the FIND option from the menu at the top of the screen.
  - c. To look through the User's Guide
  - d. You scan a list of titles.
18. The Negative Operator in the example  
Men's shoes -trainers -boots -dance  
will.....
- a. Includes other words in your search result
  - b. Disregard trainer, boots and dance in your search result
  - c. Comprise trainer, boots, and dance in your search result
  - d. Add relevant searches to your results.
19. Using the wildcard operator (\*) For example, amusement \* will return  
pages.....
- a. deemed relevant
  - b. with *amusement* and any other term(s)
  - c. with *amusement* only
  - d. with interesting facts
20. **Paid advertisements** are scattered throughout the paper except on
- a. The hook
  - b. Back page
  - c. Frontpage
  - d. Middle page

**Answer all questions**

21. PowerPoint Presentation software has animations and transitions. What is the difference between them?

Transition: .....

Animation: .....

[2]

22. Kumi will like to design a multimedia presentation about his school's I.C.T. department. He is new to presentations and would like to add slides to his presentation. Describe the three different ways of adding a slide.

i. ....

.....

ii. ....

.....

iii. ....

.....

[3]

23. A PowerPoint is an application used by computer systems to create a multimedia presentation. What is a multimedia presentation?

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

[1]

24. A website is said to be an example of a multimedia presentation.

List three (3) different reasons why.

i. ....

.....

ii. ....

.....

iii. ....

.....

[3]

25. A multimedia presentation has buttons or hyperlinks. Give **three** things that a button on a multimedia presentation can do.

- i. ....  
.....
- ii. ....  
.....
- iii. ....  
.....

[3]

26. Francis has been given an assignment at school to research on a topic and uses his findings to design a multimedia presentation he will use in school.

a. Briefly describe how to add a solid background colour option to his multimedia presentation.

- .....
- .....
- .....

[1]

27. Computers help us in many ways through their functions. Differentiate between Hardware and Software of a computer:

i. The hardware of a computer:

- .....
- .....
- .....

The software of a Computer:

- .....
- .....
- .....

[2]

28. Computer software can be divided into two. Explain the two different types of computer software with 2 examples each.

a. ....  
.....  
.....

b. ....  
.....  
.....

[2]

29. Differentiate between **primary, secondary and tertiary** sources of information

a. ....  
.....  
.....

b. ....  
.....  
.....

c. ....  
.....  
.....

[3]

30. List 2 examples each of the following sources of information (**primary, secondary and tertiary**)

PRIMARY	SECONDARY	TERTIARY
1.	1.	1.
2.	2.	2.

[3]

31. Computer applications have helped us in a lot of ways. Control applications have been developed to perform most functions which sometimes ago were to be done by humans manually.

Explain with any **three (3)** control applications that have been developed to help humans in our daily life activities and state how these have helped.

i. ....  
.....  
.....

ii. ....  
.....  
.....

iii. ....  
.....  
.....

[3]

32. What Refining Searches?

.....  
.....

[1]

33. Explain what the **XOR Operator** does

.....  
.....

[1]

34. Explain any three (3) ways of refining a search.

i. ....  
.....  
.....  
.....

ii. ....  
.....  
.....  
.....

iii. ....  
.....  
.....  
.....

[3]

35. What is a **keyword search**?

.....  
.....  
.....[1]

36. Explain what bias information and reliable information is and state an example of that situation under each.

a. Bias information is

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

b. Reliable information is

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

[2]

37. What will make a website or information on a website valid or Reliable?  
State three(3) and briefly explain why you choose that (**each**)

- i. ....  
.....  
.....  
.....
- ii. ....  
.....  
.....  
.....
- iii. ....  
.....  
.....  
.....

[6]



**END OF SECTION 1**





# ENAS Hybrid School

**Term 1 2019**

## **Examination Paper**

<b>Subject</b>	I.C.T.
<b>Paper</b>	Paper 1 (Theory)
<b>Date</b>	December 2019
<b>Duration</b>	1 HOUR 40 MINS
<b>Class</b>	YEAR 8
<b>Name</b>	

### **Instructions:**

- ✓ Answer all questions on this paper.
- ✓ Write your name on this page
- ✓ Read all the questions carefully
- ✓ Do not talk during the exam
- ✓ Do not use correction fluid
- ✓ Do not write in pencil
- ✓ When you have finished read your answers again

Mark	
------	--

**Section 1 (This section is 60 marks in all)**

1. Differentiate between Data and Information

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

[2]

2. List an example each from the three sources of information.

- i. Primary: .....
- ii. Secondary: .....
- iii. Tertiary: .....

[3]

3. State the difference between bias and reliable information.

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

[2]

4. List and briefly explain 3 ways of Testing for a Valid Information.

- a. ....  
.....  
.....
  
- b. ....  
.....  
.....  
.....

c. ....  
.....  
.....  
.....

[6]

5. Sometimes using devices can endanger our lives due to our unethical behaviours.

State and explain four factors that make devices unsafe

a. ....  
.....  
.....  
.....  
.....

b. ....  
.....  
.....  
.....  
.....

c. ....  
.....  
.....  
.....  
.....

d. ....  
.....  
.....  
.....  
.....  
.....

[8]

6. State and explain four ways we can protect ourselves physically while using devices according to your answers above.

a. ....  
.....  
.....  
.....

b. ....  
.....  
.....  
.....

c. ....  
.....  
.....  
.....

d. ....  
.....  
.....  
.....

[8]

7. State and explain two (2) Environmental hazards that cause electronic devices to be unsafe

a. ....  
.....  
.....  
.....  
.....

b. ....  
.....  
.....  
.....  
.....

[4]

8. State and explain three (3) main hazards of using devices at workplaces on health and two(2) ways under each of the hazards be stating what **can be done to ease it**

a. ....  
.....  
.....  
.....  
.....

TWO WAYS TO ALLEVIATE

i. ....  
.....

ii. ....  
.....

b. ....  
.....  
.....  
.....  
.....

TWO WAYS TO ALLEVIATE

i. ....  
.....

ii. ....  
.....

c. ....  
.....  
.....  
.....  
.....

TWO WAYS TO ALLEVIATE

i. ....  
.....

ii. ....  
.....

[9]

9. State and explain 4 things that can happen when personal information gets into the wrong hands

a. ....  
.....  
.....

.....  
.....

b. ....  
.....  
.....  
.....  
.....

c. ....  
.....  
.....  
.....  
.....

d. ....  
.....  
.....  
.....  
.....

[4]

10. Explain what is meant by personal data

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

[2]

11. Explain why personal data should be confidential and protected.

.....  
.....

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

[3]

12. State and explain 3 how personal information can fall into wrong hands.

a. ....  
.....  
.....  
.....  
.....

b. ....  
.....  
.....  
.....  
.....



c. ....  
.....  
.....  
.....  
.....

[6]

13. State any three (3) ways on how to prevent Personal information from getting into the wrong hands.

a. ....  
.....



b. ....

.....

c. ....

.....

