PSYCHOLOGICAL FACTORS AND EDUCATIONAL MEDIA RESOURCE UTILISATION AMONG PUBLIC JUNIOR SECONDARY SCHOOL TEACHERS IN OGUN STATE, NIGERIA

BY

Catherine Enobong Olaotan
MATRIC NO.: 84515
BA. (LIBRARY SCIENCE/HISTORY), (UNN), M.L.S, M.Phil (Ibadan)

A Thesis in the Department of School Library and Media Technology,
Submitted to the Faculty of Education in partial fulfilment of the requirements for the Degree of

DOCTOR OF PHILOSOPHY

of the

UNIVERSITY OF IBADAN

2023

CERTIFICATION

I hereby certify that this study was carried out by CATHERINE ENOBONG OLAOTAN in the Department of School Library and Media Technology, University of Ibadan, Ibadan Nigeria.

……

Supervisor

S. O. Akande,

B.Sc. (Ed), (Ilorin) M.L.S, Ph.D (Ibadan),

Associate Professor, Department Of School Library and Media Technology,

University of Ibadan, Nigeria.

DEDICATION

To Almighty God and to my Mother, Late Madam Felicitas Akon Micheal-Eyo.

ACKNOWLEDGEMENTS

I am eternally grateful to Almighty God, the Initiator and Sustainer of this programme to Him alone be all the glory for the enablement given me to complete this programme

My Sincere gratitude goes to my indefatigable and caring supervisor Dr S.O Akande who gave me the impetus and backing that I needed and painstakingly guided me through the study. He did not only stand up as a supervisor but as a guardian, marshalling every stage of the thesis and encouraging me to give my best, Thank you so much, sir.

I am highly grateful to the Head of Department, Professor Abel Olusegun Egunjobi, the immediate past Acting Head of Department, Dr Kolawole. A. Aramide. To the postgraduate coordinator of the department, Dr Alice. A. Bamigbola, I say thank you ma for your untiring and kind support to me.

I am deeply grateful to all other distinguished lecturers in the Department whose unquantifiable inputs have contributed to the success of this thesis. They include Drs Ibitayo Adebayo, I A Adigun, Funmi Olajide-Williams, and Mr A Ajayi. To the Non-teaching staff of the Department, Mr Emmanuel Oni, Mr S.O Omisakin, Mrs I.O Afolabi, Mrs Victoria, I. Emafidon and a host of others 'God bless you' all for your administrative supports and for providing a conducive environment for students to thrive.

I am sincerely indebted to Professor Oluwole of the Department of Counselling and Human Development, Faculty of Education, Dr N. O Omilani and Dr Salami. My profound gratitude goes to Dr Ogochukwu and Engr Stepp Sheed and family who gave me shelter and unwavering love, support and prayers that accompanied me throughout my years of study at the University of Ibadan.

I am grateful to all the distinguished lecturers of the Department of Science and Technology Education and other Lecturers in the Faculty of Education University of Ibadan, for their scholarly support and constructive contributions, especially during my seminars, and presentations, they assisted me tremendously in the success of this study.

My profound grateful goes to my amiable colleagues, Dr Mrs F.T Olanrewaju, Dr G.O Onifade, Dr G.O Oyewole and Dr R.A Egunjobi, who were pillars of encouragement to me. Mention must be made of the spiritual support and love I received from my pastors, Rev. Canon and Mrs S.O Ogunbajo, Rev Canon and Mrs M. Attoe, Rev. Canon and Mrs, T.D. Adumati, and Rev. Canon and Mrs E. Ogidan . Thank you so much sirs for your prayers always.

This thesis is a reality today also because of the prayers, support, secretarial and administrative assistance given to me by my confidential secretary and young Assistant Librarian, Mrs Mary Ilekukpe Ileso and Ochuwa Hope Itsede. Both of you have shown me love that I can only pray for God to reward you abundantly, thank you so much.

Finally, the overwhelming support and love I enjoyed from my family, Mr Olusegun Olaotan and my children: Emmanuel, Susanah and John Olaotan are unquantifiable. Their constant moral support and understanding gave me the impetus to complete this study. Their loving encouragement, patience and understanding made the burden easy for me. I cannot forget my husband's words to me, when on so many occasions, I became weary and discouraged: "No success without perseverance." Thank you so much, my cheerleader, God bless you.

ABSTRACT

Utilisation of Educational Media Resource (UEMR) is important for the teaching and learning process because it enhances learning in and out of classroom situations. Students learn abstract, new, and novel concepts more easily when presented in both verbal and visual form, which helps them recall what they have learned. However, many secondary school teachers in Ogun state are not using media resources to complement their teaching activities. Previous studies on UEMR focussed largely on teachers' competence and school factors without adequate consideration of the psychological factors. This study was, therefore, carried out to examine psychological factors (Personality Factors–PFs, consisting of Big 5 factors, Critical Thinking Ability - CTA and Teacher Attitudes towards UEMR) among public junior secondary school teachers in Ogun state, Nigeria. The study was premised on the Information Utilisation Theory, while the mixed methods design was adopted which consisted of survey and phenomenological approach. The multi-stage sampling procedure was used. Ogun state was stratified into four ethnic-political zones (Remo, Ijebu, Yewa and Egba). From each stratum, eight Local Governments Area (LGAs) were randomly selected. The probability proportionate to size sampling technique was used to select 28 public junior secondary schools across the LGAs. A total sample of 1170 Junior School teachers were drawn using Yamene's formula. The instruments used were Personality Factors (r=0.81), Critical Thinking Ability (r=0.83), Teachers' Attitude to UEMR (r=0.80) and UEMR (r=0.99) scales. In-depth interviews were conducted with 14 most experienced teachers, while unstructured interviews were conducted with 15 students. The quantitative data were analysed using descriptive statistics, Pearson product moment correlation and Multiple regression at 0.05 level of significance, while qualitative data were thematically analysed.

The majority (60.0%) of the teachers were female and 67.8% had bachelor's degree. The resources optimally used by the teachers includes: audio ($\bar{X}$ =2.84); realia ($\bar{X}$ =2.81); computer packed instruction ($\bar{X}$ =2.81); visual resources ($\bar{X}$ =2.73) and audio-visual ($\bar{X}$ =2.69) against the threshold of 2.50. The teachers' CTA ($\bar{X}$ =2.95) and attitude to UEMR ($\bar{X}$ =3.00) were high against the 2.50 threshold. The PFs (r=0.50); CTA (r=0.53) and teachers' attitude to UEMR (r=0.47) had significant relationships with UEMR. There was a significant joint contribution of all the variables on UEMR ($F_{(3,1081)}$=179.32; Adj. R^2 =0.36) accounting for 36.0% of its variance. The PFs (β=0.23), CTA (β=0.30) and teachers' attitude to UEMR (β=0.37) made significant relative contribution to UEMR. Science teachers used educational media more than other subject teachers. Computer, mobile phone and chart were mostly used. Students complained that their teachers only used educational media resources for lesson introduction.

Personality factors, critical thinking ability and teachers' attitude to educational media resources influenced educational media resources utilisation among public junior secondary school teachers in Ogun state, Nigeria. These factors should be considered to improve media resource utilisation among teachers.

Keywords: Educational media resource utilisation, Junior secondary school teachers, Teaching and learning resources

Word Count: 499

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background to the study

The appropriate utilisation of educational media resources for instructional purposes is a crucial aspect of secondary school education that requires a considerable amount of focus. The importance of educational media resources' utilisation in the classroom cannot be underscored because students learn through hearing, seeing, and doing. The implication here is that for more knowledge to be internalised, other learners' senses must be stimulated. In teaching and learning, the various senses which include: hearing, seeing, touch, and smell can be stimulated through the utilisation of educational media resources. It has been emphasised in the literature that without the utilisation of educational media resources, effective teaching cannot be fully performed because these resources foster closer and more effective connection between educators and learners. The utilisation of educational media resources effectively will help students retain their knowledge better, develop new abilities, and participate more actively in class because they make learning entertaining and relevant. Furthermore, educational media resources are tools used by qualified teachers to convey information, support skills development, increase knowledge, and enhance students' comprehension.

Nwabunwanne, Olibie and Ezenwanne (2015), pointed out that they promote learning beyond the capabilities of teachers depending on the creativity and resourcefulness on the part of the teachers. They reduce teachers' labour and increase the usefulness and productivity of instruction, arousing students' interest, especially when using still and moving images. Similarly, Ogunjobi and Oyewusi (2016) asserted that educational media resources help in gaining and holding the attention of learners, promoting permanent learning, aiding the truth of the situation, stimulating self-action, clarifying intangible information by means of diagrams, continuity of thought through a video presentation, enhancement of vocabulary development through audio tapes, sound recording. They promote values, skills, attitudes, and virtues in the absence of a real teacher, thereby saving teacher's time and reinforcing verbal and visual messages. However, multidimensional educational media resources can be broadly categorised into five categories: audio, visual, audio-visual, realia, and computer packed educational media resources. Similarly, Ashaver and Igyuve (2013) as cited in Milosevic (2017) divided educational media resources into five type which include electronic/projected Media such as: radio, TV, tape recorder,

laptops, multimedia projector, Internet and electronic board, and audio media, including audio tapes, CDs as well as Radio. While non-projected media includes: charts, magnetic board, blackboard, model, and still picture cards. Print media, such as encyclopaedias, dictionaries, handbooks, atlases, maps, and textbooks in various disciplines. Likewise, media that appeal to both the aural and visual senses are known as audio-visual resources, examples are television, video motion pictures, television, videotape recording, and computer. Although, these materials provide a variety of examples, the ones that are most directly applicable to secondary school education and that are most readily available to teachers were chosen for this study. They consist of real objects, audio, visual, and audio-visual materials, as well as media with computer support for training. In a more precise term, utilising educational media resources, whether they are created by teachers or purchased by the school administration, involves making use of resources to use in the teaching-learning process. Additionally, utilisation of educational media resources has been discovered to support effective and meaningful learning as well as the flow of instruction, and comprehension of the content of instruction. The usage of educational media resources has undoubtedly altered secondary school methods of instruction and learning while elevating them to a vital part of curriculum.

Likewise, Obunadike (2008) concluded that teachers' use of media resources and their auxiliary technologies for practical instruction of vocational subjects in the classroom. This has helped students retain the content they had learned and actively engage in the tasks and experiences that made up their classroom experiences. Ude and Ezugwu (2019) recommended the usage of educational media resources since; they support curriculum implementation and help students grasp its content. Egunjobi (2012) and Ogunwuyi (2018), mentioned several conditions for educational media resources to be used successfully utilised in secondary schools. The preparation and availability of all educational media resources required for presenting a particular lesson, the learners' readiness through the introduction of lesson content, the purpose and expectations of learners in the lesson, and the matching of each step of lesson presentation with the proper educational media resources during the process of lesson delivery are a few examples.

Regarding the purpose of use of educational media resources by teachers, Bello (2021) claims that teachers do use educational media to uncover and better explain topics intended to facilitate instruction. This view is supported by Ritakumari (2019) who suggested that educational media resources might be utilised as programmes that are specially created and used for educational reasons, such as the production of lesson notes,

the introduction of lesson subjects, additional reading, and provision of tasks to students. While, Jato (2014) affirmed that the main reasons why teachers utilise educational media resources in the classroom are to deliver lessons, explain difficult topics, facilitate class discussions, and encourage general reading. The majority of teachers in Nigeria's public and private schools utilise educational media resources to read and prepare test questions. Oyedipe (2019), noted that educational media resources have been utilised to accomplish a range of teaching and learning goals aimed at effective teaching strategy. To construct concepts, teachers must employ a variety of educational media resources as a supplement to their numerous teaching approaches.

Studies have revealed that the types of educational media resources used by teachers in the secondary schools are: television, radio, smartphones, the internet, computers, video players, and movies. Although teachers often utilise other recognised educational media resources, the aforementioned educational media were the most widely used. Sheed (2019) found that the usage of cell phones, television, and the internet to obtain current information was ranked among the educational media resources utilised in secondary schools. While the frequency of use of these educational media was found to be abysmally low. In different educational institutions, Olaojo (2013) looked at how frequently media were used. He further, mentioned that many educational media resources have been used effectively and valued as a superior method of information transfer to in-depth teacher explanations.

More knowledge can be promoted than with chalkboard and chat when using educational media tools in the classroom. Similarly, Ogunwuyi (2018) observed that realia (the real objects/specimens) were commonly used in educational media resources in schools. This is so because teachers do readily obtain genuine objects/specimens, which are constantly readily available and accessible. Whenever teaching was taking place, the use of improvised educational media resources completed with particular exercises was always important. The use of actual items or specimens improves the relevance, reality, and concreteness of the educational content and to close the knowledge gap between theory and practice. Due to their applicability to certain educational activities and suitability for classroom instruction, majority of the teachers regularly used realia (the real objects/specimens) to improve student engagement during teaching and learning.

Natoli and Hunt (2019) stated that teachers who regularly and often use educational media resources, such as audio and visual resources, have demonstrated to be more effective at their task. The teaching and learning processes in secondary schools are,

however, being hampered by the underutilisation of educational media resources. As an illustration, the government of Ogun State had made efforts at providing instructional media resources such as animations, print resources, audio resources, graphics, visuals, and audio-visual. In addition, the Ogun State Teaching Service Commission (2016) organised an in-service training programme for teachers with the theme "Teach right": improving teacher's professional competencies of Ogun State public secondary school teachers." The programme, which was conducted in collaboration with the United States government, aimed to close the digital divide between teachers and the accessible digital resources, awareness, and usage (Ogun State Teaching Service Commission, 2016).

This was done to make sure that state teachers effectively instruct their students using technology. Despite the government's efforts to improve teachers' ability to use educational media resources, the teachers in Ogun state Secondary Schools are still underutilising educational media resources in the instructional process. These claims have been strongly supported in recent years by several authors such as: Nwosu, Chukuwdi, and Monday (2017) and Okueso, Osikomaiya, Osijo, Omotayo, and Arowolo (2018) who mentioned that in recent years, post-primary school learners' academic achievement in Ogun state has declined recently from its former high level. However, as much as the utilisation of educational media resources have been established to have a positive influence on ensuring and encouraging classroom practices and the learning process, much still needs to be desired about its utilisation despite the immense benefits accruable from it. In a similar vein, Dube (2020) found that teachers used educational media resources at a low rate. This scenario could be ascribed to psychological factors, such as personality traits, anxiety, emotional intelligence, critical thinking ability and teacher's attitude toward educational media utilisation. This study, on the other hand, looked at how personality factors, critical thinking ability, and attitude toward educational media resources could predict educational media resources utilisation by Ogun State secondary school teachers. As a result, this study assumes that these constructs are relevant to teachers' successful use of educational media resources and should be critically and practically explored.

From the standpoint of human nature, the current study looked at personality factors as one of the elements that could influence teachers' use of educational media resources. The study, according to Dwan and Ownsworth (2017), depended on the big five personality factors: openness to experience, conscientiousness, extraversion, agreeableness and neuroticism. Personality has been defined as man's biological and cultural blueprinting, a unique combination of heredity and environment. It entails the unique traits or disposition

that makes one to think, act, feel and react in a particular manner (Bello, 2021). Personality deals with the distinctiveness of individuals. It involves an individual's psychological characteristics which subsequently reflect in the behavioural pattern of the individual**.** According to Bello (2021), "personality is a distinctive pattern of actions of a person, which is composed of problem-solving, mental skills, interests, attitudes, disposition, cognition, feelings, values, and behaviour as well as moral and interpersonal relationship." Furthermore, it is exhibited by a person's distinctive thoughts, feelings, or behavioural pattern. The "big five personality factors" concentrate on five essential elements of personality. It outlines five main characteristics that best represent the variations in personality traits that exist between individuals. They are more effective at giving the most pertinent details about personality traits.

The big five personality traits of openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism or mood stability are usually used to group together the majority of the research on personality that is now available. A person's genetics appear to account for around half of the variance rather than their environment, and these elements are frequently consistent across time (Ackerman, 2019). The investigation and study of personality in psychology often make use of the five major dimensions known as the "Big Five." These elements have been measured and used to further understand individual personality characteristics since the late 20th century. The abbreviation "OCEAN" is frequently used to recall these five traits, which stand for openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism

The five major personality traits that make up human nature are known as the "Big Five." The terms "five-factor model" is occasionally used synonymously with the big five in modern usage. The big five personality traits are therefore regarded in this study as constituting the conceptions of personality components and one of the independent variables. The big five personality trait openness, conscientiousness, extraversion, agreeableness, and neuroticism will be examined in relation to how teachers in secondary schools in Ogun State use educational media resources. In the five-factor model, openness to new experiences ranks as the first personality trait. One may claim that openness is favourably linked to enjoying art, different ideas, and democratic freedom while negatively linked to dictatorship, prejudice, and other forms of intolerance. Extremely communicative people are good at perceiving others' feelings, enjoy originality and uniqueness, and are drawn to other highly open people (Njoku, 2020). Similarly, to that, they exhibits a

propensity to engage in novel activities. A person who is open to new experiences is receptive to unusual ideas and points of view, especially ones that run counter to their preconceptions. They enjoy participating in artistic and cultural pursuits, visiting plays, galleries, and libraries, listening to music, and visiting new locations. They are more open to unfamiliar customs and cultures. Furthermore, it can be noted that the dissemination of new technology in classroom activities, for instance, can increase the likelihood of learning new things for open individuals compared to those who stick to their same, comfortable surroundings (Afhami and Mohammadi-Zarghan, 2018).

Conscientiousness ranks as the second personality characteristic of the Big Five personality component used in the current research. According to Robertson-kraft and Duckworth (2014), a person's conscientiousness is based on how many goals they have and how well they are pursued. He went on to discuss the two extremes of the spontaneous person and the conscientious person, who both seek fewer points but do it in more transparent, regulated, and structured ways. Furthermore, Dwan and Ownsworth (2017) revealed that conscientious individuals are mindful of their actions as well as the effects of their behaviour comparing to less conscientious people. They have a sense of obligation to other people and normally take care to complete the tasks that have been given to them. Teachers with high levels of conscientiousness will act in a more goal-oriented manner. They have the drive to accomplish their lofty goals that they set. With regards to this research, a conscientious teacher is assumed as being curious to know, learn and use the available and related educational media resources to facilitate his teaching activities bearing in mind the failure in the academic achievement of students and the need to bolster teaching with appropriate educational media. A conscientious teacher will have a lesson note prepared to infuse appropriate educational media resources that will make the students learn better.

In this study, extraversion ranks as the third personality characteristic of the Big Five personal factor. On the Big-Five personality model, extraversion personality is another characteristic that includes traits like being friendly, able to build close relationships with others quickly, and their outgoing nature facilitates productive team building (Fang et al., 2015). Extroverts, according to Costa and McCrae (2017), are gregarious, forceful, activity-oriented individuals and excitement seekers. Although Mount and Barrick (2017) claim that extraversion is most frequently characterised as a person's level of sociability, gregariousness, talkativeness, assertiveness, adventure, activeness,

energy, as well as ambition. On an introversion-extraversion continuum, this personality attribute is assessed. However, participants who with higher on the extroversion scale are prone to actively seek out social engagement chances, according to survey data (Benischek, Martin and Glaser, 2019). According to the research by Harrison, Thurgood, Boivie, and Pfarrer (2019), people with high levels of extroversion always assume top positions in the workplace. They also exhibit traits like assertive personality, desire, activity, and pleasure seeking (Colbert, Barrick and Bradley, 2014). Against this backdrop, this personality trait when considered in the technological diffusion indicates that extraversion can influence the way teachers perceive, adopt and utilize educational media resources. Extraverted personalities are open-minded, sociable, assertive, and affectionate. The significance of this personality trait to this study is that extraverted teachers can adjust to novel technologies since they have traits that make them open to innovation and challenges.

The fourth key trait examined in this study is agreeableness. According to Njoku (2020), the degree of a person's sensitivity and openness to others is what determines how agreeable they are. Agreeable people are viewed as friendly, upbeat, and caring persons who are warm, kind, and cooperative, whereas those who are disagreeable are viewed as distrustful, calculating, and self-centred. Highly agreeable people generally manage their own as well as others' frustration during social situations and work to uphold peace in their interpersonal connections. High-scoring agreeableness individuals are affable and cooperative. They are generally seen as more personable by their friends and co-workers. Individuals who have positive interpersonal ties and are more compassionate are more likely to be motivated to help others in need. The same goes for agreeable individuals who dislike conflict, disagreement, and other combative circumstances. They act as the group's "peacemaker," attempting to calm and appease others. This implies that secondary school teachers with agreeable personalities are amiable and cooperative and keen to use media resources in lessons for improved teaching effectiveness.

Diener, Lucas and Cumming ((2019) maintain that teachers who scored highly on the agreeableness scale were less likely to be frightened by the use of new technologies. According to this study, a teacher with an agreeable personality would be more likely to persuade students to embrace and use educational media resources tools than would a teacher with a less appealing personality. This study also makes the premise those teachers who have agreeable personality traits will cope with their co-workers more easily. They will be able to work fluidly with specialists to create educational media resources that can be integrated into the curriculum and instructional delivery. A variable in this study is

neuroticism, the fifth of the "Big Five" personality traits. According to Mount and Barrick (2002), referenced in Njoku (2020), neuroticism refers to how emotionally, insecurely, nervously, terrified, and apprehensive a person is. People with neuroses are poor socializers who struggle to keep relationships going. This supports Robert's (2018) claim that neurotic people are unlikely to form associations that last for a lengthy period and require commitment, interpersonal abilities, and confidence in other people. Neuroticism as an adjective, defines people who are extremely uneasy, dissatisfied, and uptight. Neuroticism can cause a person to cope less successfully with everyday challenges.

Conversely, individuals are easily overwhelmed by people and might even become agitated if things are not carried out as planned. Fear, guilt, rage, shame, discomfort, anxiety, and melancholy are examples of neurotic emotions. Given all that has been mentioned so far, one may presume that the importance of this personality trait to this study is that a teacher with this trait may perceive hostile and mentally exhausting situations, including nervousness, fidgeting, worrying, and insecurity, when confronted with novel difficulties like the use of educational media resources during lessons. This type of teacher is unlikely to use educational media resources tools in the classroom. Thus, as a personality trait, neuroticism does not support active teaching and learning. As the study's first independent variable, the "Big Five personality factors" will be used. The standard Big Five Inventory of John and Srivastava (1999) will be adopted to determine each of the constructs in the variable (openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism). This 44-item inventory was divided into five sections, each corresponding to one of the Big Five's five personality factors.

The second independent variable of this research is critical thinking which is seen as the objective analysis of facts to form a judgment and it forms the second construct in this study. Omotosho (2021) defines critical thinking as skill which involves making objective assessment, judgement and drawing conclusions from ideas, information and data. The ability to think critically is a commonly acknowledged educational objective needed in institutions of learning especially by undergraduate in the universities (Hitchcock, 2018). Its implementation as a learning objective has been advocated on the grounds of respecting students' autonomy and preparing them for achievement in life as well as for democratic societies. Same could be said of teachers too, who definitely needs critical thinking to develop a good perception of a phenomenon.

In teaching and learning, the importance of cultivating the ability to think critically is recognized long time ago. The skills required for student teachers in colleges of education should include critical thinking. Critical thinking is essential to professional teachers to be able to prepare their lesson notes, effectively. All teachers definitely need critical thinking ability to develop a good lesson strategy especially at the planning stage. Critical thinking is very crucial to teachers in the secondary school level of education. The teaching strategy consist of three stages; namely the planning stage, the execution stage and the reflective stage. At the planning stage, while preparing the lesson note, the teacher introduces a topic; at this point, critical thinking would assist the teacher to choose an appropriate and suitable educational media resources for instruction.

In both teaching and research, having the capacity for critical thought is essential. Based on the agreed concept of critical thinking provided by the Delphi Report, the California Critical Thinking Disposition Inventory (CCTDI) measures a person's tendency to think critically. The Delphi descriptive phrases were categorised into seven attribute scales using item analysis and component analysis approaches. These constructs included open-mindedness, analyticity, cognitive maturity, truth-seeking, systematicity, inquisitiveness, and conversance. The Delphi Report served as the foundation for the initial characterization of seven critical thinking dispositional features, which are now measured by the CCTDI. The seven characteristics scale includes; systematicity, analyticity, inquisitiveness, conversance, maturity, scepticism and open-mindedness (Facione 2020). Critical thinking, according to Zhou, Hang, and Tain, is a purposeful, personality assessment that produces insight, analysis, assessment, and conclusion in addition to a description of the conceptual, scientific, evidence, and social considerations that support that judgement (Zhou, Hang & Tain, 2013 as cited in Unamba, Ugochukwu & Udeji, 2020).

Inquisitiveness focuses on the thirst for knowledge and a drive to study regardless of a concept's practical use that is not immediately obvious. It might be appropriate for a curious teacher to concur with statements such as "No matter the topic, I am eager to know more about it" and "Become familiar with the entire process, because you never know when it might be useful, while conversance is seen as a motivation component of the Critical Thinking Disposition. It measures the desire of a teacher for learning whenever the application of the knowledge is inconclusive and essential for teachers to expand their knowledge in their field of practice. An inquisitive teacher will readily welcome and utilise educational media resources in the classroom to discover their worth and advantage. In the

same vein, a teacher who is conversant with educational media resources would always utilize them during class without inhibitions (Facione 2020).

Systematicity refers to be well-planned, ordered, persistent, and attentive in your research. The systematic teacher would agree with "I usually focus on the question before I attempt to answer it," but argue that "my concern is that I'm often distracted." A teacher with a critical thinking disposition of systematicity will most likely utilize educational media resources frequently while teaching to give a logical and ordered teaching plan. Analyticity entails using reasoning and proof for problem-solving, predicting prospective theoretical or feasible challenges as well as continual sensitivity to necessity to take action. An analytical teacher would be troubled whenever individuals use flimsy justifications to support excellent suggestions. A teacher with critical thinking of analyticity will likely use educational media resources often while teaching to deliver a reasonable and logical lesson strategy (Unamba, Ugochukwu & Udeji, 2020)

Maturity focuses on the trait of being prudent in one's judgment. The critical thinking mature person confronts challenges, inquiry, and makes decisions knowing that certain challenges are inherently not well organised, others call for a number of realistic alternative, assessments also should always be carried out on the basis of criteria, circumstances, and data that leave room for uncertainty. Cognitive growth or maturity appears to assist genuine and good ethical decision-making, especially in complicated scenarios and time-constrained Situation. Similarly, maturity is regarded as critical to the development of a skilled teacher. The CTD personality aspect called scepticism measures a person's ability for making wise and reflective decisions. Scepticism frequently leads to introspective thinking and empirical fact examination. Particularly during time-constrained or short instructional times, this tendency has special implications for making moral choices (Facione, 2020). A mature teacher with critical thinking skills would make smart decisions about the type of educational media materials to use at any given time. A teacher with a sceptical critical thinking disposition, on the other hand, might be reluctant to utilize educational media resources in class. Before utilizing any media resources for instruction, he would first evaluate their effectiveness.

Studies all over the world such as United States, Australia, Finland, Singapore and Canada have incorporated the principles of critical thinking. When it involves higher learning, Eskja and Edi's (2018) research on the subject of critical thinking proved comprehensive. The study looked at how universities might help young people develop

their ability to think critically. According to the study, critical thinking should be incorporated into classroom instruction to encourage learners to understand societal challenges that are prevalent in today's society. According to the study, young people are frequently observed in audiences who understand and argue various social issues based only on their own opinions or experiences rather than on the evidence or arguments presented. It suggested that teachers should cultivate an attitude of critical thinking to comprehend and recognise events present in contemporary culture. In Nigeria, studies based on critical thinking have been carried out across a variety of academic fields. A survey of public opinion on Nigerian institutions of higher learning's lack of emphasis on reasoning and critical thinking Nigeria was undertaken by Emeka and Chukwudi (2018) the argument made in the report was that individuals with superior thinking skills are the ones who decide what constitutes a sustainable future and an acceptable standard of living in the contemporary world. According to their analysis, Nigeria's current socio-political, economic, and technical predicament is the outcome of a mental redundancy caused by a severe lack of reasoning as well as the ability to think critically.

Emphasis on the weak education system in Nigeria, which has neglected the development of reflective and critical reasoning abilities both theoretically and practically, is largely to blame for the lack of critical thinking ability among teachers. In addition to personality variables, this study assumed that teachers' use or lack of use of educational media resources may also be influenced by their critical thinking skills and attitudes toward using them. Rodriguez-Brito, Ramrez-Daz, Ramos-Real, and Perez (2018) affirmed that one psychological element that is utilised to predict technological advancement is attitude. According to psychological professionals, attitude is the innate inclination to see the world in a particular manner. They also incorporate evaluations of people, issues, things as well as occasions. The evaluations take place regularly either positive or negative. A set of thoughts, convictions, and acts about a certain thing, individual as well as occurrence is referred to as an attitude (Cherry, 2022). Thoughts and behaviours can be strongly influenced by attitudes, which are frequently the product of experience or upbringing.

Though enduring, opinions are malleable as well. As a trained propensity to view things in a particular light, attitudes are what psychologists refer to as studying people, issues, objects, or occurrences. Although rarely unclear, these evaluations are usually either positive or negative. According to their social environment, as well as the truth of their past and present behaviour and circumstances, people acquire attitudes, behaviours, and beliefs

(DeMarree, 2017). The word "attitude" refers to a person's conditioned tendency for positive or negative response to a thing, circumstances, and ideas and also to other individuals. It is considered to be a view that individuals hold corresponding to how they feel and what they think which occasionally manifests in behaviour (Joseph, 2013). In addition Joseph (2013) claimed that since views, actions, and feelings are all intertwined, people's attitudes affect how they behave towards things, situations, and other people. As opposed to this, Han and Carpenter (2014) asserted that attitudes are made up of the behavioural, affective, and cognitive responses people exhibit onto a given thing or environment on the basis of their emotions or interests. Similarly, Syyeda (2016) observed that, attitude is multifaceted and considered as emotion, cognition, and behaviour.

According to the theory of planned behaviour (Ajzen, 1991), which significantly affected the attitude field, the performance of a behaviour is caused by such close determinants as values, emotions, purposes, arbitrary standards, and senses of authority. The theory of planned behaviour states that perceptions of behaviour control, subjective standards, and attitudes all affect intentions, which in turn affect behaviour. Giving to this hypothesis, an individual's purpose is the best indicator of their behaviour when they have time to plan how they will act. In other words, to anticipate what individuals will do taking the example of educational media resource utilisation by teachers in class, we can define the following factors as the intended behaviour in class. Attitudes towards education media resources in general, as well as the application of educational media resources, can be either negative or positive in this instance. Subjective standards, which include both how much the individual values these standards and how they are viewed by others, can also be thought of as social pressure. Administrators, co-workers, and learners all have standards for how teachers should conduct their lessons, therefore all three groups have important subjective norms. The capacity of an individual to successfully carry out a specific activity in their situation is defined as perceived behavioural control. Thus, it covers both self-efficacies concerning the utilisation of educational media resources as well as external elements such as classroom surroundings and time.

Long-Crowell (2021) contends that when the three conditions turn out to be more favourable, the probability of intention and deed taking place rises. As an outcome, this research thinks that teachers' opinions on the utilisation of educational media sources in the classroom are pertinent to figuring out the psychological factors that affect that use. The employment of instructional materials by college teachers and teachers in the context of

this study is a well-established fact to be influenced by the attitude of teachers. The available research suggests that a teacher with a positive outlook will hold positive views and opinions regarding using educational media resources to aid the delivery of instructional process. Additionally, a teacher with a positive affective attitude will be more inclined to employ educational media resources since they will be able to perceive the positive effects of their proper use.

Unlike, when an attitude is negative, the behavioural component of that attitude will have a detrimental impact on how teachers use educational media resources in the classroom. The third independent variable in this study which is teachers' attitude regarding using educational media resources in the classroom is based on the premise that understanding the human factor influencing the utilisation and non utilisation of educational media resources is crucial. The introduction of education technology has transformed the dynamics of education and has influenced the educational system and the way teachers carry out their tasks over the previous two decades. The quick rise and development of information technology have provided a better pattern for investigating a new teaching paradigm. The use of multimedia to provide an environment for teaching and imparting skills has a distinct advantage. As a result, technology is increasingly vital in the teaching and learning processes (Mukherjee, 2018).

However, educational media resources usage has not been maximally achieved in Ogun State Secondary Schools as both teachers and students have not adequately utilise the available educational media resources. (Tella, Toyobo, Adika, and Adeyinka, 2007; Adegbore and Salaam, 2012; Ogunniyi, Lawal and Sheji, 2018). However, literature such as Milosevic (2017); Mndzebele, Dludlu, and Mndebele (2018); Alvarado and Aragon (2020) and Dube (2020) have revealed that educational media resources are popularly used among schools in the developed nations with their antecedent importance. Few local studies available on the use of educational media resources looked at utility and usability perceptions. Generally speaking previous studies reviewed has shown little emphasis on how psychological factors could predict the utilisation of educational media resources by secondary school teachers especially in Ogun state, Nigeria.

1.2 Statement of the problem

The utilisation of educational media resources in the classroom brings about good learning outcomes since educational media resources can enhance teaching effectiveness and improve academic performance. However, literature has shown a low usage of

educational media resources by teachers which has led to low teaching effectiveness and poor academic achievement among secondary school students in Ogun state, Nigeria. Research has found an important relationship between educational media resource utilisation and students' academic performance. Based on this, Ogun state Teaching Service Commission (2016) organised an in-service training for teachers tagged "Teach right: developing educator's professional competencies of Ogun State public secondary school teachers". This was done to ensure that teachers in the state efficiently employ the use of technology in the training of their students. Despite this, there is still underutilisation of digital instructional resources by teachers in Ogun state despite the government intervention. Perhaps, there is every likelihood that low personality factors, low critical thinking ability and negative attitude towards educational media resources utilisation may have an impact on teachers' teaching effectiveness.

Therefore, there is a need to investigate how these psychological factors (personality factors, critical thinking and attitude towards educational media utilisation) could predict secondary schools teachers in Ogun state, Nigeria, to use digital resources. Since previous studies on the utilisation of educational media resources among teachers in Ogun state have not been premised on psychological factors, this study is considering how psychological factors such as personality factors, critical thinking and attitude of teachers could predict educational media resource utilisation by teachers in Ogun state secondary schools. Since extant researches on the utilisation of educational media resources among teachers in Ogun state have not been premised on psychological factors, this study is considering how psychological factors such as personality factors, critical thinking and attitude of teachers could predict educational media resources utilisation by secondary school teachers in Ogun state.

1.3 Objectives of the study

The main objective of the study is to investigate personality factors, critical thinking and attitude of teachers as predictors of educational media resources' utilisation by secondary school teachers in Ogun State, Nigeria.

The specific objectives are to:

1. identify the personality factors that affect the use of educational media resources' by secondary school teachers in Ogun State, Nigeria;
2. establish the critical thinking level of secondary school teachers in Ogun State, Nigeria;
3. ascertain the attitude of secondary school teachers towards educational media resources' utilisation in Ogun State, Nigeria;
4. find out the pattern of use (type, purpose and frequency) of educational media resources' utilised by teachers in secondary schools in Ogun State, Nigeria;
5. ascertain the relationship between each of personality factors, critical thinking level, teachers' attitude towards educational media and educational media resources' utilisation among secondary school teachers in Ogun State, Nigeria;
6. find out the joint contributions of Ogun State secondary school teachers' personality factors, critical thinking and attitude towards educational media resources' utilisation to educational media resources' utilisation as well as the relative contribution of the independent measures listed.

1.4 Research questions

The following research questions were answered in the study:

1. What are the personality factors that affect the use of educational media resources by secondary school teachers in Ogun State, Nigeria?
2. What is the critical thinking level of secondary school teachers in Ogun State, Nigeria?
3. What is the attitude of secondary school teachers in Ogun State, Nigeria towards educational media resources' utilisation?

4. What is the pattern of use (type, purpose and frequency) of educational media resources by teachers in secondary schools in Ogun State, Nigeria?

5. What is the joint contribution of secondary school teachers' personality factors, critical thinking and attitude towards educational media utilisation to educational media resources utilisation in Ogun State, Nigeria?

6. What are the relative contributions of secondary school teachers' personality factors, critical thinking and attitude towards educational media utilisation to Educational media resources utilisation in Ogun State, Nigeria?

1.5 Hypotheses

The following null hypotheses were tested at a 0.05 level of significance:

1. There is no significant relationship between the Ogun State teachers' personality factors and their utilisation of educational media resources.
2. There is no significant relationship between the critical thinking of Ogun State secondary school teachers and their utilisation of educational media resources.
3. There is no significant relationship between the Ogun State secondary school teachers' attitude towards educational media resources utilisation and their utilisation of educational media resources.

1.6 Significance of the study

The growing body of research on how secondary school teachers' use educational media resources makes this study relevant. The study will investigate how personality factors, critical thinking, and attitude towards educational media predict the use of educational media resources in secondary schools in Ogun state, Nigeria. The findings will be used to identify problems that may arise and make recommendations to motivate teachers to use educational media resources more efficiently in the classroom.

Given that learning involves a procedure in which understanding, abilities, behavioural patterns, information, concepts, and values are gained, preserved, and utilised, the simplest way to accomplish this is via the utilisation of educational media resources, which would allow students to absorb and apply the knowledge gained effectively so as to advance their performance in all areas of study. Students will be able to handle, perceive, or experience materials during the learning and instruction method, thanks to the use of

educational media tools. The research increases teachers' performance and efficacy in the classroom. A teacher can use alternate channels of communication to condense knowledge and make it more memorable for his students by utilising educational media tools. Additionally, since they encourage students to want to learn more, it gives teachers access to utilise an interesting media for information delivery. The student's interests and curiosities are further stimulated by offering possibilities for independent research and consultation. Therefore, a teacher who uses educational media resources to help with his/her his teaching will encourage learners to think independently and creatively in addition to their ability to be plausible, spontaneous and eager to learn. Additionally, this study will enhance the way secondary school teachers provide their services.

This study would serve as a guide to schools that have not adopted educational media resources, and a guide to schools that have currently adopted them and are aiming at maintaining the standards attained in the utilisation of educational media resources. This study will recommend to the school authorities that teachers should be trained and retrained via seminars and conferences regarding best ways of utilising educational media materials, and ways to create their own and obtain the materials within. The research findings would thus help federal, state and private owners of schools in Nigeria to understand the inherent benefits of educational media resource utilisation. It would be a catalyst for other schools' promotion of educational media resource utilisation.

This study would be beneficial to the Ogun state Teaching Service Commission because it would give them information on how to adequately and constantly organise seminars and workshops on attributes of personality factors, critical thinking and attitudes of teachers as predictors of educational media resources utilisation that could promote educational media resources utilisation by the secondary schools' teachers. It would also promote the need to evaluate personality factors resident in secondary school teachers which would aid the utilisation of educational media resources.

The study's findings would aid curriculum planners in properly positioning educational media tools during curriculum development. It would reveal to them the subject contents of focus and not only make teachers competent in the utilisation of educational media materials but also encourage methods that make it possible to include educational media tools to enhance the learning method in consonant with the set goals and objectives. Also the Ministry of Education would be encouraged by the outcome of this study to make sure that educational media resources are procured and provided to every school. The

outcome would be really helpful in making sure the learners are given an excellent educational experience. The research findings would enable them to peruse the recommendations for further education plans regarding educational media resources availability and utilisation in Secondary Schools.

Findings from this study would afford the state government the reasons why the supply, availability and accessibility of educational media resources are not the only ways to facilitate educational media resources utilisation but also that factors relating to personality factors, Critical thinking, and attitude of teachers as predictors of educational media resources utilisation in secondary schools should be given adequate attention. They should sponsor seminars and workshops on the development of necessary psychological and personality attributes in the teachers that could constantly facilitate educational media resources utilisation in secondary schools. It would be important for researchers and students in the area of educational media resources utilisation to learn from and use the outcomes of the present research, the contributions of personality factors, critical thinking, and the attitude of teachers toward instructional digital materials usage as predictors of instructional digital resources utilisation in secondary schools. They would also gain from the uniqueness of the new scale on media resource utilisation, personality factors, critical thinking, and the attitude of teachers to educational media and would be adopted and developed by the researcher which would assist other researchers who wish to conduct research similar to this study. The findings could also be used to make a case for further research in the area of study. It serves as source of referencing for intellectuals working in research domain.

The outcome of the current study would extend the frontiers of knowledge on factors that could determine educational media resource utilisation among secondary school teachers. It would contribute to the body of knowledge in librarianship sector, in the area of educational media study and educational media resources development in general thereby benefiting incoming students and faculty members. The conceptual model would equally be useful to carry out other research that has to do with educational media resources development and utilisation. The study would contribute to the growing literature in the study area. Library and information science students would benefit from the literatures reviewed and the study's conceptual model, especially in the area of educational media resource utilisation. Finally, this study is also significant to the general public. This is due to the fact that when teachers bolster their instruction using educational media tools and the

students learn successfully, the information gained will have a positive impact on the society.

1.7 Scope of the study

This study focused on personality factors, critical thinking and attitude towards educational media resources as predictors of educational media resources utilisation by secondary school teachers in Ogun state. The variables of focus are teachers' personality factors, critical thinking and attitude to educational media resources utilisation as independent variables while educational media resources utilisation is the dependent variable. The schools that were considered in this study were clustered into the four regions that make up the state. These are Remo, Ijebu, Yewa and Egba popularly referred to as RIYE. The geographical location of the study covers the whole of Ogun state with the selected schools from the four socio-political regions as the representation of the entire region. The respondents consist of JSS 1- III teachers and students from the selected junior secondary schools in Ogun State, Nigeria. The junior secondary school education is the basic foundation for secondary school education in Nigeria, which further higher education are built upon.

In this study, educational media resources were categorised into five. These are audio resources, visual resources, audio-visual resources, realia and computer-packed instructional educational media resources. Personality factors that may influence or impede teachers' usage of educational media resources are openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. For critical thinking constructs, three attributes was considered, including the following systematic and analyticity, inquisitiveness and conversance, and maturity and scepticism. The components of attitudes are positive attitude and negative attitude.

1.8 Operational definition of terms

The definition of a term, word, or phrase used in the research is covered in this section. The terms listed below are defined here:

Attitude of teachers regarding the use of educational media resources: Regarding the usage of multimedia learning resources, secondary school teachers' attitudes refer to their beliefs, emotions, values, and dispositions. This refers to the attitude and propensity of

secondary school teachers in Ogun State to use educational multimedia devices in their instructional classes.

Critical thinking: To reach a consensus among high school educators in Ogun State over the usage of educational digital resources in the classroom, this is described as the act of objectively analysing data.

Educational media resources: These are media resources for education that are based on information and communication technology, such as audio resources like - radio, audiotapes, telephone, CD (Compact Disk), audio-print / audio tapes (including written documents), visual silent (aerial visibility), Movies frames (slides), audio-visual projection, film frames (slides (voiced), visual motion (silent film), audio-visual motion (silent motion film, video/VCD, TV), realia (specimen, models, real objects), Computer e.g. CAI – Computer Assisted Instructional, Computer-assisted learning, CMI – Computer Managed Instructional, Humans and its environment that is made for educational purposes in a secondary school in Ogun State, Nigeria.

Educational media resources utilisation: This refers to the daily, weekly, bi-monthly and monthly application of educational media resources for effective instructional delivery by secondary school teachers in Ogun State, Nigeria.

Personality factors: This relied on the Dwan and Ownsworth (2017) "big five" personality qualities of conscientiousness, extraversion, agreeableness, and neuroticism.

Psychological factors: In this research, psychological factors consist of the personality factors of teachers, inclination to think critically and approach of teachers to educational media resources utilisation.

Agreeableness: Secondary school teachers who exhibit this psychological trait have a temperamental tendency agreeable to be open to using educational media resources in their teachings.

Conscientiousness: Secondary school teachers' trait of being painstaking and alert to the use of educational media resources for teaching.

Extraversion: This refers to secondary school teachers' enthusiastic disposition and concern with the usage of educational media resources for teaching.

Neuroticism: The emotional stability of secondary school teachers when it comes to using teaching materials from the media in the classroom.

Openness to experience: The willingness of teachers in secondary schools to practice and use educational media resources for teaching.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual review

2.1.1 Educational media resources in secondary schools

Haddud, Dugger, and Gill (2016) defined educational media resources as any material that facilitates communication with a broad audience. He further claims that educational technology refers to as teaching materials, instructional resources, or school library media resources in some literature. These resources are crucial because the medium via which a message is conveyed affects the message. A form of visual media is, for instance, television. Viewers frequently experience emotions while seeing words and images together. When seeing a news story on television, viewers are significantly more likely to retain the specifics. However, readers of the newspaper might simply remember how a news piece made them feel and not the specifics of the event. Information technology advances led to a number of changes in daily living and communication methods after the Internet was first introduced in the late 20th century. Communication methods founded on technical techniques quickly replaced interpersonal interaction. At the core of these new dissemination channels are educational media tools.

Tolorunleke and Nwosu (2017) examined educational media resources tools as a way to convey instructions to students in a way that engages their senses of touch, sight, hearing, and feeling in order to bring about the behavioural changes they want to see. Resources from educational media have changed how people collaborate, communicate, work, learn, and engage. Educational media resources may be used more readily than other instructional frameworks due to how user-friendly and adaptable they are. Additionally, educational media resources are helpful to institutions because of their qualities, including helping students' learning processes, boosting blended learning experiences, and assisting teachers in their teaching and evaluation processes (Öztürk and Talas, 2019).

Presently, it is practically impossible to educate without using technology or approaches like flipped classrooms or games, which may help create new situations that support and aid various activities as well as the dissemination of information outside the classroom. In this new era of educational media resources, informal learning occurs outside of traditional educational settings, and the use of educational media is progressively

increasing relevance, transforming education into a means for societal, institutional, and individual development. (Alvarado 2020). Because of this, these new situations mandate that teachers become educational media resources resource designers, which calls for them to assess and oversee numerous kinds of resources and technological innovations. Online tools are, infact, becoming more accessible due to the financial interests of developers, rising institutional concessions as well as emerging atmosphere of career advancement networking (European Commission, 2019). Videos, other educational media tools, complete lesson plans, classroom activities, educational animations, games, or simulations can all be found on platforms that are hosted by public institutions or teacher networks (Napal and Zudaire, 2019).

All physical resources that a teacher may use to carry out, facilitate, and educate regarding classroom goals are included in educational media resources. They are regarded as a collection of knowledge made up of both printed and unprinted materials. It may also include non-print resources like television, radio, music recordings, projectors, slides, overheads, and video-tape orfilm, and also more recent tools and devices like computers, DVDs, CD-ROMs, the Internet, and interactive video conferencing. Printed/Traditional Resources: This may include printed/traditional resources like journals, real objects, chalkboards, handouts, charts, newspapers, magazine pictures, textbooks, laboratory equipment, posters, and bulletins. All of these tools are used by qualified teachers to impart information, speed up the acquisition of skills and knowledge, and deepen students' comprehension. They also promote learning beyond the capabilities of teachers depending on the creativity and resourcefulness on the part of the teachers (Nwabunwanne, 2009).

Based on their content, social media platforms are presently divided into a number of sub-categories. Social media can be collaborative and expressive, to name just two instances. Social networking platforms such as Facebook, Twitter, and Instagram are examples of expressive social media, where users post content to express their feelings, opinions, and mental states. On the other hand, collaborative social media refers to social networking sites where users circulate their expertise in an attempt to educate one another about a particular topic. Users of this type of social media platform can post new content and engage with already published content. These websites also allow for the sharing and possession of information. Wikipedia is the best-known illustration of this platform. Additionally, students engaged actively in social media environments, created and shared

information with their peers, organised information they acquired as well as the developed creative thinking abilities (Alwagait, Shahzad, and Alim, 2015; Cakr and Korucu, 2015).

The issue of availability and accessibility, several kinds of research have been conducted showing that educational media resource utilisation depends so much on these two factors. Dankaro, 2012; Taiwo, 2008; Olaojo, 2013). Educational media resources made readily available and accessible in Secondary Schools are essential for good academic performance in schools. ACRL (2018) opined that educational media resources can now be conveyed online, via streaming media servers, within social networks, and digital satellite systems and a host of swiftly budding machinery and platforms are using library resources via the largely portable handheld devices through a diversity of alluring interfaces. Previously, media librarians were able to major in a streamlined collection of set-ups. It is suggested that schools must broaden the range of their educational media resource expansion activities, bearing in mind all evolving and emerging multimedia and digital formats, together with analogue layouts, as they expand.

We expect positive outcomes from educational media resources, such as improved memory. Ogunjobi and Oyewusi, (2016) contends that educational media tools reduce the amount of work required of teachers while enhancing the effectiveness and efficiency of instruction and raising student attention, especially when still and moving visuals are present. They support capturing and holding learners' attention, encouraging long-term learning, enhancing the reality of experience, encouraging self-activity, clarifying raw data through diagrams, maintaining thought through a video presentation, and developing vocabulary through audio tapes and sound recordings. Additionally, they learn values, abilities, attitudes, and virtues without a real teacher, which saves time and reinforces verbal and visual teachings (Aleburu, and Egunjobi, in Effiong 2019).

Oduma (2014) argued that teachers should be advocates for practical new media technology, expanding their expertise to include intellectual considerations, licencing challenges, and a wide range of digital distribution methods and formats. This position emphasized the importance of educational media resources in schools. While maintaining support for current formats, teachers must consider regardless of whether newly emerging formats meet the current and future curricular and subject matter demands of their institution. Equally, libraries must move more quickly than in the past to integrate new styles and systems into their collections to meet the current and innovative educational and instructional expectations and needs of both teachers and students.

The transition from Web 1.0 to Web 2.0 technologies is apparently the most significant advancement in online technology over the past few years. People can now participate in the production of material rather than being passive consumers of it thanks to the options provided by this new technological infrastructure. As a result, the interconnectivity, engaging, and participative capabilities of the Internet has grown substantially. In addition to the Web, social media platforms have gained popularity among the intended audience. They can influence bigger populations, in particular, thanks to content-sharing networks. Alvarez and Valencia came to the conclusion that web-based applications such as media platforms, social networks, blogs, microblogs, and simulation applications are used to interact with the target population. (Álvarez, Valencia, 2016).

Past researchers have found that presentations using PowerPoint provide value for education, according to a Taiwanese survey of award-winning teachers, the most popular educational media resources resource is PowerPoint (Chalin, 2006). Harknett and Cobane, (2017) reported that PowerPoint-based lectures were more engaging than conventional lectures, according to several studies conducted in the late 1990s. According to Lowry (2019) students who received instruction using PowerPoint-based lectures outperformed students who received instruction using conventional lectures on assessments (52 per cent versus 44 per cent). According to Corbeil, (2017) language teachers are increasingly utilising PowerPoint presentations to teach grammar, colour matching, formatting, font modification, highlighting, animation styles, and custom animations were used to increase the visibility of grammar standards. Furthermore, the study found that PowerPoint-based learning resources were more well-received by students and were seen as superior to textbooks as teaching tools.

2.1.2 Educational media resources utilisation by secondary school teachers

Utilising educational media resources is putting them to use in learning and teaching activities, whether they were created by teachers or purchased by the school authorities. It is claimed that using educational media resources helps students learn more effectively and meaningfully while also improving the flow of instruction and their engagement with the material being covered. Throughout secondary school, the use of educational media resources had irrevocably changed teaching and learning processes, making them a crucial component of instruction delivery. It has been discovered that giving

teachers access to and using tools or equipment for practical education of vocational subjects in schools enables teachers to actively engage in and retain learning content (Obunadike, 2008). By applying technology in their classes pupils are inspired and engrossed in the educational activity; self-efficacy and self-worth can be raised. When presenting material for the learning process, there might be a few difficulties. There are many restrictions placed on teachers, such as boring instructional methods and uninteresting media. The best method of getting around the issue is the employment of the appropriate technological devices as a teaching tool. A video-teacherial is among the most widely utilised types of media to effectively impart lessons and involve pupils in the learning process (Pebriani, 2017). By watching an educational video, students can visualise information from the real world and the pertinent setting. In their study regarding the delivery of instruction using videos, Choi and Johnson (2010) found that using video effectively motivates students. The study found that learners' motivation to pay attention was noticeably different between traditional text-based instruction and video-based teaching. Additionally, compared to traditional text-based instruction, the students claimed the video-based curriculum was simpler to recall. According to the research, using contextualized videos in online courses could boost students' motivation. (Ismail, 2017).

The adoption of educational tools will aid in enhancing both lesson delivery and comprehension of subjects and also the educational outcome of children in the high school. Education inputs, or instructional materials, are crucial to the teaching of every topic in the school syllabus. The availability of digital educational materials as well as the usage according to Rugut and Makewa (2016) would help students retain newly learned facts. A thoughtful and innovative utilisation of multimedia tools in the class will assist to overcome boredom, supplement the value of texts and spark curiosity in learners by offering learners a tangible thing to observe and participate in, whilst at the same time encouraging independent thought. The choice of materials can aid in the student's comprehensive comprehension of the lesson, thereby making the lesson appealing, grabbing their attention and inspiring them to learn. In the past, maps, charts, and other similar tools were used as instructional materials to enhance educational delivery, but with the development of technology, these tools have changed to include film slides, iPads, laptops, projectors, televisions, and internet systems.

Additionally, studies have indicated that a teacher will use and incorporate instructional material more frequently in a subject area of interest the more familiar he or

she is with it. Akorede (2015) found that most teachers don't use instructional digital tools timely and that the usage of instructional digital tools (educational media resources) must be timely, in his opinion for the effectiveness of educational media for both educational and instructional purposes. Utilizing educational media tools during the presenting and evaluation phases of the class rather than just the introduction should be the goal. His research also indicated that when educational media resources are used for instruction and learning, it is best to include eye-catching remarks, queries, and explanations. A large number of scientific teachers struggle to evaluate their students' learning using educational media resources. The student will learn the material more clearly and understandably when a teacher uses fully labelled charts during the presentation stage of a science-based specific topic like instructional technology, biology, computer science, agricultural sciences, technical drawing, physics, chemistry, or geography that uses diagrams and charts.

During his study at Alimosho council area in Lagos State, Ekeolere (2018) explored the effect of Educational Videos on educational outcome of learners in Junior Secondary Schools.The findings revealed a substantial difference between pupils who were taught through an instructional video instructional and those who were not. Male and female learners who were given lessons on social studies through teacherial videos differed significantly on mean proficiency scores. The consistent and frequent use of educational media resources by teachers, such as video and audio resources, has been discovered to be successful in improving students' communication skills and teachers' capacity to increase students' participation in learning. The most frequently utilised library resources, according to Oluwatobi, Ehiogbae Aluko-Arowolo, and Onasote in Ogunwuyi (2018), are the online databases, books, dictionaries, and encyclopaedias, all of which are used daily. CD ROM databases were determined to be the least popular resource. Poor levels of developing electronic information resources were cited as the cause of the demise of current and updated information for research in school libraries. If the system is networked, CD ROM databases are more valuable than print.

According to a study by Korobili, Tilikidou and Delistavrou (2006), printed resources were regularly used more frequently than electronic resources. This is comparable to Olaojo's (2013) finding that social studies teachers mostly used textbooks, dictionaries, newspapers, and maps while using wall charts, photos, directories, real objects/examples, yearbooks, magazines, and journals to a lesser extent. Many academic staff members in educational institutions used printed sources more extensively than

computerised sources. The most significant resource or service that was utilized according to a different study, was electronic mail (an internet resource), which boosted lecturers' cooperation. It was noted that administrative uses of electronic resources and uses of programmes created especially for educational purposes were prevalent. It works well for video presentations as well as live instruction.

In the West Mamprusi Education District in the Northern Region of Ghana, Saviour (2018) looked into the magnitude that teachers utilised educational media tools when instructing social studies as well as the various instructional materials that social studies teachers might use. The research came to the conclusion that teachers seldom employ digital teaching materials when social studies are been taught according to interviews conducted. According to the interviews, the main reasons why educational media resources aren't used in the classroom are: they take up too much time to prepare and organise, are expensive for the school or teacher to purchase, are difficult to find, don't have enough staff, aren't identified by the teachers as resources, and aren't used because the teachers have had so much experience teaching the subject. The study recommends that through on-the-job preparation, practicums/colloquiums, teachers who teach social studies should be educated on the significance of always instructing the topic using educational media resources. Additionally, school authority in Ghana in conjunction with the parents and teachers ought to help institutes of learning get the instructional materials they require to enhance the delivery of social studies instruction.

Nwosu, Chukwudi and Ehud (2017), looked at the accessibility and usage of digital learning materials by teachers of science related subjects from representative group of Ogun state high school learners. The report claims that science teachers at Ilishan-Remo and Babcock University High Schools make use of the institutions' educational media resources. Some of the easily accessible and frequently used instructional tools include textbooks, images, PCs, publications, scientific labs, projection devices, and visual displays. Although these channels are accessible, however, both the usage rate as well as approach is shown to have significantly decreased. An obstacle to the availability as well as the utilisation of educational materials amongst teachers who teach science subjects in the chosen two schools is the lack of personal computers, an insufficient connection to the internet, personnel development /workshops, and seminars regarding modalities of digital learning material usage, as well as updating and storing amenities.

A structure that allows for the recognition of teachers' digital skills, as well as the possibility to acquire, master, and accredit said competencies, was considered essential by the Catalan government to achieve digital competence and promote the process of digital maturity within the educational system. The government established the interdepartmental programme for educators' digital proficiency (PICDD). To define the digital competencies that educators require, as well as to build a framework and determine how the competencies would be attained and accredited, the project involved three Departments of the Generalitat and was coordinated by the Department of Education. The report's findings suggest that teachers' digital competence includes both didactic and methodological skills (MDC), but also that proficiency with educational media resources is required concerning the practical application of technology (IDC). The Interdepartmental Project for Digital Competencies of Educators (PICDD), which should become the reference for accrediting the level of teachers' digital competence, is the result of the national survey, which established the identification of teachers' skills as a fundamental competence within the teachers' compulsory skills that ascertain the characteristics of teachers of the Catalan educational system. Additionally, it should enhance the initial preparation of kindergarten, elementary, and high school teachers as well as those pursuing other degrees or master's programmes and wishing to certify their level of education.

The teacher can use a number of strategies to encourage students' interest in learning. Scholars can be encouraged by employing a demanding learning method such as playing a game, and they can be inwardly stimulated by introducing pertinent, current material or interactive media. The stimulation provided by the student learning setting can help students become more motivated in addition to their internal motivation. Because of the amount of time they spend with students in school, teachers’ impact is crucial in increasing students' motivation to learn. Educators can boost the drive of their learners to study through creating learning plans that provide students with an external motive to study." Learning plans" relate to the utilisation of techniques and digital learning media resources in the process of learning (Puspitarini & Hanif, 2019). Educational media resources are not frequently utilised for instructional delivery in schools. Sometimes, this condition renders teaching-learning processes inert, preventing engagement and stimulation in learning, leading to poor comprehension, and retention and not making learning permanent. The effect can also be seen in secondary school goods. Idris, Shamsuddin, Arome, and Aminu (2018) investigated how secondary school learners in

Kaduna State's Sabon Gari Local Government Area used multimedia resources for teaching and learning, with the primary goal of investigating how the usage of multimedia resources affects students' performance in school. According to the study, incorporating audio-visual tools into lessons on categorizing living things can improve students' academic achievement.

In addition to examining the factors that influence ICT use, Nwosu, Shaffe, and Nurzatul (2018) also looked at how teachers in secondary schools in the Aba North District use educational media resources. It was shown that secondary schools in the Aba North District had low degree of adoption and utilisation of teachers' educational media tools. The perceived value, perceived usability, attitude toward educational media resources, and behavioural intention of teachers were all high. According to the study's findings, teachers in the post primary schools in the Aba North region used educational media resources at a low rate because they had difficulty accessing them and lacked the necessary expertise to use them. The study concluded that for the incorporation of educational media materials in Aba North District secondary schools to be effective, teachers required access to educational media resources and be extremely skilled in their use.

Geography lessons in secondary schools in Obio/Akpor, Rivers State, Nigeria, using information and communication technology (ICT) was the subject of a study by Abraham and Chuku (2018). The findings showed that practically all aspects of geography may be taught most effectively using educational media tools. Its implementation is not without challenges, but these challenges can be surmounted by taking certain steps, such as training and retraining geography teachers in ICT classroom usage. To effectively teach English language utilisation of the communication package, Okueso (2018) investigated the degree of teacher preparation in Ogun state. According to the survey, Ogun state's English teachers had not been significantly prepared to use communication packages in teaching the language. Many of them also agreed that there was little information available about the importance of using communication packages for effective language teaching and learning, and no clear variation exist in knowledge and preparedness among teachers based on gender. According to the study, English language teachers should receive new training and refresher classes on how to apply cutting-edge teaching methods like communication packages. Mahajan (2012) investigated the potential benefits of adopting digital applications, especially in the preparation of specialised teachers.

The study covered the necessity for pre-service teachers to employ multimedia tools in their familiar, technologically advanced homes to advance both their technical and instructional abilities as well. Furthermore, the author addressed how multimedia could assist students in developing the skills required for the twenty-first century. According to Mahajan, there is an increasing demand for educational systems all over the world to incorporate innovative technologies in their educational programmes so as to provide learners with the information and abilities required to thrive in the twenty-first century. Many countries are trying to change the teaching/learning process so as to better equip schoolchildren for a culture that is centred on ICT. Digital contents offer a number of potent instruments capable of changing the present-day confined teacher-focused, script-bound classes to prolific learner-focused collaborative knowledge settings. New technologies and multimedia learning methods must be adopted by schools. They must also strive to change the conventional learning paradigm. To avoid becoming lost in the whirlwind of the pace of advancement in technology, teacher training schools must lead the way in transforming field of learning. In order to fully gain from the use of digital contents for educational instruction, teachers-in-training and already-certified educators must have the fundamental skills as well as competencies needed.

Incedayi (2018) investigated the impact of animated content on learning outcomes of high school pupils with teachers at Bakrköy Final College. The research discovered a significant correlation amid learners' usage of animated content and their performance in geography classes. The study discussed the examination's findings and what they revealed about the Final College's teachers' use of technology, as well as the significant advantages of their successes in geography classes. Compared to not using animation technology, utilisation could result in significantly higher increases in geographic academic attainment. Kabooha and Elyas (2018) investigated how King Abdul Aziz University students studying Saudi English as a Foreign Language were doing with their vocabulary, remembering and comprehending it, due to the incorporation of YouTube to their reading lessons**,** with a specific goal of examining teachers' perceptions of the impact of using YouTube in language acquisition.

According to the research report, the group who watched the YouTube videos did well on the post-test compared to the group that was not watched it. The findings unmistakably demonstrated that YouTube had statistically significant benefits on vocabulary learning. The participants had a favourable opinion of using YouTube in their

courses as revealed by the report. The results also showed a clear improvement in the student's vocabulary proficiency. In two schools from Education District V in Lagos State, Nigeria, Akinoso (2018) looked into the impact of multimedia on pupils' math performance. The outcome demonstrated that neither the control group nor the treatment group had any discernible impact on students' achievement in mathematics. Males have higher achievement mean scores than their female counterparts while multimedia usage was to affect academic performance in mathematics. There was no discernible effect of intervention or sex, and the group receiving the intervention's mean accomplishment score was higher than that of the control groups.

By concentrating on English classes in secondary schools in Bangladesh, Khanom (2018) identified the varied impacts of educational media materials in that country's educational system. The study determined the variables that affected how educational media materials were employed in classroom instruction/scenarios. Additionally, it was determined how using educational media resources might boost both teachers' and students' motivation. There is a consensus, it was decided, that using educational media resources in the classroom favours several teaching and learning processes, particularly those requiring attention, perception, reaction, motivation, and application of new information.Seraphine, Jacob, and Joash (2018) discovered a link between the utilisation of instructional tools in agricultural instructions in high schools and the job creation in Kenya. The research discovered a positive relationship between secondary school agricultural instruction employing digital agricultural tools and youth empowerment in Vihiga County's Emuhaya Constituency. The investigation advocated the development of strategies that support the alignment of agricultural education and job creation. It suggested that youth engage in agricultural activities for occupation and that similar studies be replicated at various stages of learning, like primary and secondary school.

According to Liu (2017), there are numerous advantages to using multimedia network technology in language teaching. Although the author admitted that there are still some problems with teaching multimedia networks, she also stated that network resources and educational media resources are important teaching aids for English teachers. In real-world instruction, teachers can more efficiently mobilise their excitement for English learning and increase their students' capacity to utilise language completely by using educational media resources and related online teaching materials. Additionally, it can aid teachers in raising instruction quality and achieving their learning objectives.

Additionally, it was discovered that accessing educational media resources improved listening skills. According to Sejdiu (2017), learning a second language requires the ability to listen well. Students who can exhibit competency in L2 listening can also show proficiency in other languages. Because 'listening' plays a generally undervalued part in language acquisition, teachers as well as linguists frequently advocate equal or emphasised strengthening of listening abilities among students. Through audio, video, the Internet, podcasts, blogs, and other channels, multimedia provides L2 speakers with access to a wide range of visual and auditory L2 texts. The ultimate objective of using multimedia in listening aids is to assist L2 learners in understanding L2 in a natural setting. Computer-assisted language learning (CALL) programmes have been lauded as an effective method for L2 learners to develop and improve their language skills. However, teaching listening skills has been a neglected field.

The expansion of multimedia and network communication technology, according to Liao (2017), has given educational media resources a wealth of tools for enhancing spoken English teaching. According to the author, to fully exploit the initiative of the subject, teachers should make sure that their lesson plans do not veer off course while incorporating technology. To significantly increase oral communication skills, teachers must actively assist students in developing a spontaneous and liberated attitude toward oral learning based on technology adoption. The review's synthesis states that to reach high standards of teaching and learning worldwide, teachers must use educational media resources. The consideration for this survey is not obstreperous based on some of the studies' recommendations. As a result, the usage of digital contents for instruction by teachers in Ogun state secondary schools will increase the body of work in media technology and school library literature. Deficits in these psychological components may explain why it was very hard for teachers in utilizing digital tools regularly when instructing. The way teachers use educational media resources in secondary schools may be significantly and continuously impacted by their personality traits, critical thinking skills, and attitudes about doing so. Based on the aforementioned, the researcher examines personality traits, critical thinking, and teachers' attitudes toward the usage of digital resources as predictors of digital media usage in high schools in Ogun state, Nigeria.

2.1.3 Personality factors of secondary school teachers

In the literature, there has been a lot of focus on personality-related concerns, the environment and the individual work together to shape personality traits (Littunen, 2000). A person's life circumstances, experiences, and changes play a crucial role. Since becoming a teacher can alter a person's life, it may also have an impact on personality traits. The Big Five personality factors, as mentioned in chapter one of this study, are five personality traits established in the literature. An eagerness to discover novel things characterised the openness to experience personality traits. Individuals with higher score on openness are susceptible to novel concepts as well as perspectives, particularly the ones that contradict their preconceived notions. These set of individuals derive joy being in the attractions, theatres, galleries of art, and other cultural attractions, as well as travelling to new places and listening to music. They tend to be more accepting of unusual customs and cultures. Uncertainty and the unknown frighten persons who score lower on openness, or persons who lack experiential openness. Those who contradict their established views and ideologies are seen with greater scepticism. These set of individuals avoid unfamiliar environments due to their unpleasant feeling there. (Afhami and Mohammadi-Zarghan, 2018).

Less outgoing individuals tend to adhere to prevailing traditions and procedures given that their feeling of being more secure in so doing. When evaluating personality traits, intelligence is correlated most times with openness to new experiences. According to studies, people who scored highly on verbal/crystallized intelligence assessments reported highly open to learning novel concepts (Schretlen, van der Hulst, Pearlson, and Gordon 2010). One argument is that more open-minded individuals choose to spend their time in settings where they are more likely to learn new things (such as classroom activities including the latest technology). This is in contrast to those who like to hang out in the same, comfortable areas. Individuals' levels of openness might vary greatly, but they change over time as well. For example, it has been discovered that ageing alters openness to experience. The evaluation of the investigation in America, Bleidorn, Hopwood, and Lucas (2018) affirmed that as individuals aged, their receptivity to new experiences significantly diminished.

The Big Five personality qualities that were examined in this study, conscientiousness is ranked second. Psychologists claim that conscientious individuals

have a greater awareness regarding their behaviour and its effects compared to un-conscientious individuals. They frequently ensure to finish the chores assigned to them because they feel they owe other people something. Conscious people enjoy keeping their environment ordered and neat. They work hard to maintain correct time. Higher levels of conscientiousness are also associated with a stronger focus on goal-directed behaviours. After setting their big goals, they have the motivation to reach them. They have the drive for success in all facets of life endeavours as well as educational achievement and career progress, and they don't mind putting in the effort far as this research is concerned, a conscientious teacher is assumed to be curious to know, learn and use the available and related educational media resources to facilitate his/her teaching activities bearing in mind the deterioration in pupils' learning outcomes and needs to bolster teaching with appropriate educational media. A conscientious teacher will have a lesson note prepared to infuse appropriate educational media resources that will make the students learn better. Decreased motivated behaviour is characterised by lower conscientiousness scores.

People who are not being conscientious tend to care less about organisation and punctuality. Due to this, they might be more laid back when embarking life objectives and might arrive late to appointments and meetings. People often act more hastily and impulsively when acting unconsciously. As opposed to taking the repercussions of their decisions into account, they will act on impromptu educational media tools. According to research, conscientiousness may be influenced by both contextual and hereditary variables. According to a survey, people who experienced supportive parenting styles as kids were more likely to report being conscientious as adults (Vafaeenejad, Elyasi, Moosazadeh, and Shahhosseini, 2018). But the results of successive related studies point to the possibility that conscientiousness might be influenced, at least or partly by parental genetic materials passed on to their children (Rysamb and Nes, 2018).). The crux of the argument thus means a conscientious individual will be an early adopter of technology (educational media resources in this case), while the unconscientiously individual may be a laggard or non-adopter.

The third personality trait of the Big Five personal factor in this study is extraversion. This is represented by extroverted, sociable attitude. In social settings, extraverts are friendly, simple, and extroverted people, while they enjoy being the focus of attraction, they regularly attempt to catch people' attention. Extroverted individuals are

gregarious and pleasant with strangers, and they flourish in interactions with others. They love meeting new people. However, people who exhibit both of these tendencies are referred to as ambiverts. This personality characteristic is evaluated along a spectrum of introversion and extraversion. Introverts are those with minimal degrees of extraversion, and exhibit opposite behaviour. They are less chatty and frequently experience shyness around others. In crowded situations, they might possibly felt threatened, like in get-togethers thereby frequently make an effort to avoid obnoxious social gatherings. Introverts desire to be in the midst of intimate social settings with individuals they know. Because of their tendency to engage in more intimate social networks, introverts desire to keep a small circle of reliable pals. The German-born psychologist Hans Eysenck, the researcher who created the PEN model of personality, regarded extraversion and neuroticism as essential personality traits (Mandavilli, 2018). Extraverts, according to Eysenck, have lesser cortical arousal than the overall population. So they turn to socially engaging behaviour for external stimulation. According to Eysenck, introverts have higher cortical arousal levels and as a result, they are less dependent on external stimuli than extroverts are (Corr, 2016).

Extraversion was described by a Swiss psychotherapist Carl Jung as psychic energy that is expressed distinctively by each individual. In contrast to introverts, who focus their psychic energy on solitary pursuits like deep thought, extroverts transfer this energy outward, towards other people, according to (Geyer, 2012). The extraversion personality trait may have an impact on how teachers view, use, and embrace educational media resources when taken into account in the context of technological diffusion. While an introverted teacher could need some time to decide whether to jump on board or not, an outgoing teacher would readily engage with co-workers and get to learn how specific equipment works quickly. In this study, the fourth personal factor attribute is agreeableness. A high agreeableness score indicates a nice, cooperative personality. Peers and co-workers frequently rate agreeable people as more pleasant because they are more tolerant, charitable, and eager to assist others in need. They frequently function well as team members due to their capacity for collaboration. Arguments, disagreements with others, and other forms of confrontation are things that agreeable people avoid. They serve as their group's "peacemakers," trying to appease and calm others. On this aspect of personality, unpleasant people perform worse.

They are less focused on winning over others and gaining friends. Individuals that do not agree with their peers tend to be stingy as well as very sceptical about own motives. They are more likely to act out of self-interest and with less consideration for the needs of others. They are therefore viewed by others as having more egotistical than likeable dispositions. While those who are more unpleasant tend to have an easier time advancing their causes, those who are more agreeable typically have better interpersonal ties. Jensen-Campbell et al. (2002) discovered that youngsters who were more agreeable from an early age were unlikely to experience intimidation at school. People's agreeableness levels are changeable all-through their life, tending to rise as they age, like some of the other "Big Five personality traits" (Donnellan and Lucas, 2008). According to this study, a teacher with an agreeable personality would be more likely to persuade students to embrace and use educational media resources tools than would a teacher with a less appealing personality. This study also makes the premise that teachers with pleasing personalities will have less trouble interacting with others, especially educational media resources resource creators in the field of education and other related fields. Teachers with pleasant personality traits will be able to work effortlessly with media specialists to create educational media resources for curriculum delivery. It is envisaged that they will find it easy to collaborate with media creators to integrate educational media into the curriculum.

There is a spectrum extending from mental equilibrium to unstable emotions, or neuroticism the fifth personality trait in the "Big Five personality factor" is measured as a variable in this study. Those who score highly on neuroticism are frequently chronic worrywarts. They overthink their issues and exaggerate their significance, which makes them more afraid and nervous. They could focus on a situation's drawbacks rather than recognise the positive sides of it. With regular stressors in daily life, neuroticism might make it harder for a person to cope. Instead, if things don't go as planned, they'll frequently grow irritated with other people and even upset. Low neuroticism levels lead to reduced engagement in such unpleasant thoughts. They are better able to maintain their composure under pressure and weigh the importance of issues appropriately. They consequently tend to worry less about these issues. This hypothesis pertains to secondary school teachers in the sense that high self-efficacy might motivate them to be seriously devoted to teaching with educational media tools, thereby making them outstanding and trying not to avoid challenging situations in the classroom. The notion of neuroticism's relation to teachers' self-efficacy in terms of their capability to use educational media resources, however,

failing to successfully use educational media tools once, a teacher who suffers from emotional instability may now value or think about using them again. The employment of digital educational media resources to assist instructional processes in the classroom is frequently perceived by teachers as having low self-efficacy. This may be related to their level of emotion, particularly how they view themselves about others.

The employment of digital instructional materials in the classroom may be hampered as a result, say (Ayllón, Alsina, and Colomer, 2019), since teachers tend to regard themselves as having low self-efficacy as a result of emotional instability. Relationships with others may be impacted by a person's neuroticism. According to a study, individuals in relationships were less content than other couples if their significant other had a high personality attribute score (Headey et al, 2010). Jeffrey Alan Gray's bio psychological hypothesis, which he developed, offered one explanation for neuroticism. According to Gray, a pair of mechanisms control the way people act. Number one system, known as the behavioural activation system (BAS) driven by possibility for incentive. The desire to avoid being punished for one's actions motivates the behavioural inhibition system (BIS), a second mechanism. According to Gray, people who have high levels of neuroticism are more influenced by the latter system than others (Farrugia, Jakubowski, Cusack and Stewart, 2015).

Sometimes, using technology can be frustrating. A teacher who has emotional equilibrium will be able to handle the frustration that comes with the adoption of new technology with ease, and it is assumed in this study that teachers' levels of neuroticism (particularly when they are high) may impede the appropriate adoption of educational media resources in the performance of their duties. The Big Five constructs were used by Cucurull, Rodriguez, Yazici, Gonfaus, Roca, and Gonzalez (2018) to present a novel approach based on deep knowledge to create a personality characteristic model that combines text and images. This model entails training using pictures posted along with words that were found to be highly correlated to particular personality traits. The study's goal was to determine if OCEAN personality trait modelling may possibly be addressed using pictures, or MindPics, that appeared with specific tags containing psychological knowledge. The study discovered a relationship between the posted photographs and the phrases that accompanied them, which can be successfully simulated using deep neural networks for estimating personality. The experimental findings support earlier cyber psychology findings based on texts or visuals. Additionally, the set of images matching a

certain text exhibits some patterns, namely those reflecting an abstract concept, according to classification results on some attributes. Under the direction of psychology specialists, the findings opened up fresh directions for further research to improve the suggested personality model.

In terms of research on personality variables in Nigeria, Afolabi (2014) employed the construct to examine the impact of personality and gender on marital happiness and relationships of mentorship among Nigerian nurses. The findings showed that neuroticism, agreeableness, and gender had a substantial impact on nurses' marital satisfaction, with male nurses and nurses with low neuroticism and high agreeableness tending to be more content with their marriages than nurses in other categories. The impacts of neuroticism, agreeableness, and gender on marital happiness did not interact, though. Nurses with low neuroticism but high agreeableness gained more from the mentorship relationship than those with high neuroticism but low agreeableness. In the mentoring connection between nurses there were no gender disparities, also on the mentoring relationship among nurses, there were no significant interaction effects of neuroticism, agreeableness, or gender. The study suggested that meaningful interaction between couples be fostered, and that assistance is provided to female nurses to boost their self-esteem.

It also suggested that goal setting, self-sufficiency, and independent thinking should be encouraged, and that organisations be prepared to offer emotional support to nurses. Additionally, the joint effect of the Influence of character and drive on work performance was examined by Ejionueme, Hassan, and Doyin-hassan (2009). The opinion piece contended that a person's motivations are determined by his personality. However, a person's personality distinguishes him from other people and is what sets him apart from others, which explains why what drives one person may not drive another. It is reasonable to conclude that motivation influences job performance since it channels employees' innate drives to act in desired ways. The article further advanced the idea that the equation depicts motivation and personality as being related to job success.

The article provided a glimpse into motivation as well as personality through an overview of the existing literature on theories of personality (psychoanalytic method, trait theory, social cognitive theory, humanistic approach, evolutionary/biological approach), on the one hand, and a para-analysis of motivation theory, on the other hand, given that the second topic has already been properly addressed by pertinent scholars in psychology

domains as well as organisational dynamics. Because personality traits offer a framework for predicting employee behaviour and responses to the organisational settings under study, it was concluded that a review of personality theories can offer guidance that can result in successful job performance. The significance of teacher efficacy cannot be overstated, according to Melekeowei (2014), because it is connected to student learning outcomes. She continued by saying that certain elements, such as teachers' personalities, have a connection to teachers' effectiveness. The aforementioned research shows that the study of personality factors has garnered and still receives attention in both European and American research. The various ways that the conceptions of personality traits are used have made them adaptable enough to be employed in a variety of studies, including those that are industry-based, in schools, organisations, and individuals, among others. However, it is discovered that there is little study in Nigeria using personality factor constructions. Such studies are equally few in librarianship. Therefore, this study will close the gap that was revealed by the review.

A further variable in this study, the concept of critical thinking abilities forms the foundation of the following analysis. They are adaptable enough to be employed in a variety of studies, including those that are industry-based and those carried out in institutions like enterprises, organisations, and individuals, due to the many various contexts in which personality characteristic concepts are applied. It is discovered, however, that there is not a lot of research in Nigeria that makes use of personality factor constructs. These studies don't occur as frequently in librarianship. Thus, the gap that the review uncovered will be filled by this study. The idea of critical thinking skills is the subject of the following analysis, which is another component of this study.

2.1.4 Critical thinking of secondary school teachers

The introduction to this study states that the California Critical Thinking Disposition Inventory (CCTDI) (Facione and Facione, 1992) is the first instrument developed to evaluate seven dispositional aspects of critical thinking whose initial categorization is based on the Delphi Report. By utilising social CCTDI and associated instruments and capitalising on the extremely rare occurrence within these instruments. The following are included in the seven-attribute scale: Inquisitiveness- even when the use of the information is not immediately apparent, intellectual curiosity and a desire to learn serve as the driving forces behind inquisitiveness. Every intellectually curious individual might tend to agree with statements like "Discover all you can about it, you never know when it can come in helpful" and "No matter the issue, I am eager to learn more about something." Being naturally curious may be a sign of an attitude that restricts one's capacity to learn more. Systematicity refers to being ordered, logical, attentive, and hardworking in your research. Systematic individual might agree with "I always concentrate on the subject before I attempt to answer it," yet disagree with "My problem is that I am often side-tracked."

Analyticity emphasised the application of reason and evidence to problems, the intellectual or practical challenges these systems present, and a persistent awareness of the necessity of intervention are all important. You may define me as reasonable and it frustrates me when people use weak arguments to defend strong recommendations, respectively. Yet, an analytical person might disagree with the statement "There is no way to judge whether one alternative is better than another." Hence, teachers need to have analytical skills. Truth-seeking focuses on the quality of being eager to find the best information in a particular situation, brave when asking questions, and honest and unbiased while pursuing inquiry—even if the results do not support one's self-interest or preconceived notions. We may anticipate that the teacher who seeks the truth will be more likely to reconsider new data and supporting evidence. Contrarily, a lack of vigilance in the pursuit of the truth may have the crippling consequence of causing one to overlook crucial factors or underestimate opposing evidence. When someone says, "I believe what I want to believe," they may not be strong in finding the truth.

Being open-minded is accepting different points of view but still being conscious of one's prejudice. While self-confidence focuses on one's trust in one's own thought processes, open-mindedness is crucial to the American Academy of Nursing's goal of

providing care that is culturally appropriate (American Academy of Nursing, 1992). When one has Strong self-confidence, they can lead others in problem-solving and believe their conclusions are sound. An adequate level of CT self-confidence and an increase in CT skill mastery are the planned modifications to the teaching and learning process. Making thoughtful decisions is a key component of maturity. The mature CT person handles challenges, inquiries as well as choosing options with an awareness that certain challenges are inherently unstructured and that a number of circumstances permit the consideration of multiple viable options, that judgements should be frequently be on the basis of criteria, circumstances, and data that obstruct inevitability. The maxim “The greatest method to resolve issues is to seek assistance from others” or the axiom “Everything is as it seems to be” can both be accepted by a weak person. It seems that ethical decision-making is aided by cognitive maturity, making particularly in challenging and time-constrained circumstances. It would seem that cognitive maturity (CT) is crucial for the growth of teaching expertise.

The traits and skills of "critical thinkers" enable them to act decisively when necessary. By examining what influences help or hinder the practice of the talents, it is possible to directly identify the abilities and indirectly identify the dispositions. Standardized exams can be used to gauge how much a person exhibits these traits and abilities. Experimental research has shown that they gain from educational intervention, particularly when it includes mentoring, dialogue, and integrated teaching. There are disagreements on the transferability of critical reasoning across domains, the existence of prejudice in critical reasoning theories and instruction, and the relationship between critical reasoning and other types of thinking (Marsh, 2013). Studies all throughout the world have used the concepts of critical thinking skills. Vero and Puka explored the value of critical thinking in higher education (2018). The study investigated the potential for colleges to promote critical thinking among students as a kind of education. According to the study, critical thinking needs to be introduced into the educational process to encourage pupils to think critically about societal concerns.

According to the study, young people are regularly observed in groups evaluating and debating various social issues based solely on their personal beliefs or experiences rather than on the facts or arguments put forward in actuality. . It was proposed that teachers should develop critical thinking abilities in order to perceive and recognise events occurring

in social reality. The study focused on how much the European University of Tirana helps students think critically, what some of the basic skills teachers need to teach students to develop critical thinking, how much critical thinking was incorporated into the curriculum, how much the curriculum allowed for the expression of critical thinking, and whether the teaching methodology would be effective. The authors claimed that by doing the pupils would become more involved in comprehending content, recognising social issues, and problem-solving skills. The study came to the conclusion that the primary institution responsible for developing students' capacity for critical thought is the university.

Susiani, Salimi, and Hidayah (2018) found that research-based learning can assist students in improving their skills in critical thinking. According to the report, teaching prospective teachers should focus on developing their critical thinking abilities as one of the essential 21st-century talents. The study's aim was to clarify how research-based learning (RBL) has an impact on the improvement of prospective teachers' capacity for critical thought. In this classroom learning, a descriptive methodology was applied. Sixty-one (106) future teachers' made up the study's participant pool. Observation and tests were used to gather data. The ability to think critically can be developed through research-based learning (RBL). According to the study's findings. Research has demonstrated that while teaching students how to use the Reading Block (RBL) as a learning tool, teachers' interpretation, analysis, assessment, inference, and explanation skills are more crucial than their self-regulation skills. The study offered a unique educational opportunity that helps foster critical thinking abilities. It was employed to support earlier studies that found RBL could enhance learning processes and result in good mental and emotional benefits for teachers.

Azizi, Sedaghat, and Direkvand-Moghadam (2018) investigated the critical thinking of Iranian female teachers'. The study's aim was to establish how critical thinking instruction affected students' problem-solving abilities and sense of self. During the months of November and December 2016, among female teachers in Iran, a quasi-experimental study was carried out. The study found that teaching teachers about critical thinking improved their ability to solve problems and felt more confident in themselves. Therefore, it is feasible to say that fostering the ability to think critically is one of the key strategies for developing problem-solving abilities and self-esteem. An investigation on the role of critical thinking in EFL was done by Tosuncuoglu (2018). The findings went on to show that teachers' awareness of critical thinking was not at a desirable level. The study found

that critical thinking differs from intelligence and knowledge in important ways. The process of applying information and intelligence to accomplish goals and logical conclusions is known as critical thinking. Every learner has the potential to be an effective critical thinker, and they need not take everything they learn for granted. This means that the teacher should be able to teach critical thinking to students. An educational programme for imparting critical thinking may be set up in relation to this. Teachers and educators need to fully commit to critical thinking and its perception before they can effectively apply it to their students. Since being a facilitator is one of the qualities of a critically thinking schoolteacher, a contemporary and current educator should look for a lot of positive feedback to reflect on each lesson presented to develop critical thinkers, the future leaders of their nations.

A good critical thinker is steadfastly committed to coming up with answers that are as exact as the topic and context of the question, knowledgeable, sceptical, adaptive, objective in scrutiny, honest in dealing with one's own prejudices, wise in making decisions, open to reconsideration, distinct with regard to difficulties, organised in challenging situations, persistent in looking for pertinent details, appropriate in the selection of requirements as well as clear concerning issues (APA, 1990). To create a purposeful judgement using critical thinking, a person must provide intelligible thought to the evidence, context, theories, techniques, and criteria. At the same time, they must also monitor, correct, and enhance the process using metacognitive self-regulated thinking. Third, the reasoning meets the necessary criteria up to a certain point. Following a two-year span of deliberation, a team of forty-six theorists across the US and Canada who represented a variety of academic disciplines reached a consensus on the dispositional aspect of critical thinking. The professionals opinion quoted above embodies what some have referred to as "the Critical Spirit" a style, a collection of manners that describe a person's tendency to value and employ critical thinking in their personal, expert, and public activities (Dewey, 1933; Kurfiss, 1988; Paul, 1990; Siegel, 1988; Oxman-Michelli, 1992).

To promote the development of critical thoughtful skills in Thai high schools, Changwong, Sukkamart, and Sisan (2018) examined a new learning management system. The study was done following the Thailand 4.0 vision plan, which identified critical thinking as one of the fundamental building blocks an emerging knowledge-based society for the country's development. In contrast, the 2015 Thailand Research Fund research that

assessed 6,235 teachers in ten provinces of Thailand on their capacity for logical thought and analytical reasoning discovered that the average score was extremely low. Nine professionals met in August 2017 as a focus group to discuss ways to create a new critical thinking learning management model after the study revealed the severity of the situation. From this, the authors developed the "PUSCU Model," a five-step learning management paradigm. The experimental group performed at a high level, according to the results, and its members were happy with the teacher's use of the created learning resources in particular. They also had higher average scores in critical thinking and educational success.

The main question addressed by Kannan and Gouripeddi's (2018) survey was if the peer instructional constructive methodology improves the teacher's critical thinking. According to the study, compared to the control group, the experimental group's students' comprehension of physics concepts and cognitive approaches to problem-solving greatly improved. A variety of subject-specific skills made up teachers' critical thinking in Swedish schools. Based on a mixed-methods approach, the study by Nygren, Haglund, Samuelsson, Geijerstam, and Prytz (2018) identified There are basic definitions of critical thinking in the Swedish curriculum for grades nine and seven, as well as subject-specific categories in the syllabi and national exams for history, physics, mathematics, and Swedish. Based on the research, it was concluded that teachers' critical thinking involved a variety of subject-specific abilities. Future study is essential to help teachers and academics better understand what it means to think critically in the classroom due to the intricacy of the findings.

Across a variety of areas, critical thinking-based studies have also been carried out in Nigeria was the subject of an opinion study by Emeka and Chukwudi (2018). In this article, logic and critical thinking in Nigerian higher education and society were analytically examined in terms of their significance, origins, core, ideas, applicability, and current situation. Logic and critical thinking, according to the study, have been carelessly pushed to one of those optional general studies classes that are hardly ever necessary to fulfil the stipulated numbers of credit. As a result, not all educational institution in Nigeria provide instruction in critical thinking and logic. Additionally, some higher education institution in Nigeria employ unqualified people to handle logic and critical thinking is essential for making wise decision and taking appropriate action in daily life. Reasoning abilities that are lacking are more prone to mistake, lies, violence and underdevelopment. The article concluded that logic and critical thinking should be centrally crucial in Nigeria’s educational system due to their quality of influencing critical reasoning abilities and

competency in the populace. This is necessary for Nigeria to commence and sustain true progress.

The quantity of studies that have been undertaken utilising the construct of critical thinking suggests, as indicated in the literature review, that researchers in Europe and the United States have given the critical thinking of people and group deal of attention. This study found from the examined literature that critical thinking ability conception have not been empirically studies in local studies. This research examines the impact of secondary school teachers' critical thinking skills on their use of educational media resources to close this knowledge gap. The next discussion under the literature review will focus on the concept of attitudes which is the third independent variable of this study.

2.1.5 Attitude towards educational media resources utilisation by secondary school teachers

The psychological orientations that one develops as a result of experiences shape their attitudes which affect how they see people, things, and events and how to react to them either positively or negatively (Mensah & Oyeniyi, 2018). An object's attitude is an organisation of beliefs, emotions, and behavioural pattern (Vanghan & Hogg, 2005). An individual's actions and answer to difficulties are influenced by their attitudes, which are their favourable or negative perception of a person, things, idea, or situation (Marianne and Elaine, 2005). A person's attitude consists of three interconnected qualities or components that can vary in direction, degree, or strength. This also involves our feelings and other emotional factors, thoughts and beliefs, or a cognitive component; action and experiences with a behavioural component. Due to his ability to link positive experiences or events with educational media materials, a teacher can grow to have a favourable attitude toward them.in the teaching and learning environment and academic success, attitude is key (Maio and Haddock, 2010). Attitude as a psychological factor play a major role in the way people appreciate adopt and diffuse technology, Authors have equally argued that 'identity' and attitude are the same thing in psychological consideration. However, in the view of Hallajow (2017) few scholars have attempted to refute this claim that identity and attitude belong to two opposing schools of thought, with identification being seen as a social construct and attitude being entirely cognitive. These two countries are typically researched independently of one another. Hallajow (2017) contends that these two notions are not as mutually exclusive as commonly assumed and that it is possible to integrate the two in such

a way that both can be studied about one another rather than in isolation The article presents research findings that show there is a connection amid identity and attitude because respondents expressed their sense of self via their linguistic and cultural preferences. The study examined how linguistic inclinations and one's identity amongst lecturers in the higher institution at Aleppo Syria. A great deal of advancements have so far achieved in recent years in our understanding on how attitudes and behaviour interact. Early failures to show robust attitude-behaviour relationships were found as the cause of inconsistencies in the generality degree that existed when the aforementioned factors were evaluated. Although individual behaviours do not correlate well with general opinions regarding policies, persons, institutions, or events, they do with behavioural patterns. A certain attitude toward the behaviour itself is necessary for anticipating specific acts.

Fazio's (1990) MODE model serves as the best representation of one important line of current theorising and research on the processes through which broad attitudes may impact the performance of specific behaviours. This research has highlighted the importance of attitude accessibility, the distinction between controlled and automated information processing, and biases brought about by instantaneously triggered attitudes in information processing. A second stage of inquiry starts with distinctive behaviour and looks for its key drivers. Reasoned action approaches, and particularly the theories of reasoned action and planned behaviour (Ajzen, 1991, 2012; Fishbein and Ajzen, 1975), have had a significant impact in this area. They argue that closely related factors such behaviour-specific beliefs, attitudes, subjective norms, perceptions of control, and intentions directly precede the performance of a behaviour. Problems with the MODE model and the reasoned action method are discussed, along with recent studies on the various effects of explicit versus implicit perspectives on behaviour.

According to Tozer's (2017) research, social media communication technologies are not widely seen or used by Pennsylvania teachers as a pedagogical tool. The study offers actual proof of the use of SMC in teaching and learning by teachers. The study evaluated how teachers in Pennsylvania used social media communications as part of their instructional practices as well as how they anticipated using it in the future. The study's findings showed that teachers' perceived behavioural control was moderately positive, their attitudes were moderately encouraging, their subjective norms were moderately encouraging, and their historical use was low. Additionally, it was discovered that views of perceived behavioural control, subjective norms, and attitudes of teachers toward the use

of social media communications as a teaching tool substantially predicted actual use. The study concluded that all stakeholders should support progressive policies, such as those that encourage schools to teach proper social media use and permit teachers to use social media communications as a teaching resource.

In Mandera County, Kenya, public school students took the Kenya Certificate of Primary Education (K.C.P.E.) examination, and Ali and Warfa (2018) surveyed to learn how the students, parents, and teachers saw the reasons why the students performed poorly on the exam. Inadequate instructional or educational media materials, enormous class sizes, a lack of teachers, low level of student interest in learning, ineffective student learning strategies, a lack of student proficiency in the language of instruction, negative peer pressure, and student truancy were all found to be factors in the study's findings that contributed to students' poor performance on national exams. Considering this, the study suggested that sufficient numbers of trained teachers be employed in schools as well as adequate amounts of pertinent educational media resources.

Ogunjinmi and Oniya (2016) used attitudes as a variable to investigate the determinants of Nigerian lecturers' and undergraduates' environmental attitudes and behaviours: a case study of the Federal University of Technology, Akure, Nigeria. Religion, early outdoor experience, and involvement in environmental-related non-governmental organisations were discovered to be drivers of environmental views, whereas religion was discovered to be the sole determinant of environmental activities. The environmental attitudes and behaviours of lecturers were shown to be significantly related. The intentional and consistent incorporation of environmental issues into the curriculum and University-wide programmes may have a favourable impact on teachers' environmental behaviours. Ajazi and Adewale (2016) examined the influence of students' studying behaviours as well as teachers' approaches on educational progress in Ogun state high schools. Results of the study showed that attitudes and study habits both contributed to academic success in Economics, with attitudes yielding much more coefficients than methods of study**.** Based on the findings, teachers need to be motivated to develop strong studying routines and dispositions in order to enhance their students' performance in the topic of economics.

Sabo, Gidado, Sani, and Adeniji (2018) conducted a study like the ones mentioned above, but it was on Multivariate Determinants of Farmer Attitudes toward Agro Innovations in Northern Nigeria, the Case of Bauchi State Smallholder Farmers. The

research looked on the multivariate socioeconomic drivers of smallholder farmers' attitudes towards Agro-innovation in Bauchi state. The results of the respondents' socioeconomic inventory confirmed the farmers' beliefs, revealing that most farmers had low or poor levels of education, occupation, family size, background, farm size, irrigation potentiality, and communication characteristics. Good training of extension workers on the subject, effective supervision and evaluation of the innovation transfer program, involving stakeholders in timely preparation and implementation of the program, and encouraging farmers to form themselves into socio-economic groups to improve their knowledge and access to resources were all recommended to alleviate the farmers' poor attitude, resulting in increased adoption of Agro-innovation in the area.

Adeola (2017) discovered a connection between computer fear and self-concept in teachers' views towards interactive digital technology. Computer phobia and self-concept were examined as determinants of teachers' attitudes towards interactive digital technology in the study. When computer phobia and self-concept were coupled, the results showed that they predicted teachers' views towards interactive digital technology. Amongst recommendations of the study were; government agency responsible for educational media resource development invest heavily in infrastructure to facilitate teachers' easy access to educational media resources used, and that training and re-training programmes be organised for teachers to enhance their capacity and overcome the Techno-phobia Syndrome. As previously said, attitudes as a construct have piqued the interest of researchers both internationally and locally, as the construct has been utilised to determine a variety of study hypotheses, inquiries, and opinions. Attitudes as a research construct have also shown efficacy in the numerous psychological investigations in which it has been used. This study will cover a knowledge gap by analysing teachers' approaches to the utilisation of educational media resources in Nigeria. Literature in this area is very scanty, particularly from the standpoint of library and information science, and this study will address that knowledge gap.

2.2 Empirical review

2.2.1 Personality factors and the use of educational media resources by teachers in secondary school

The review under this section aimed at perusing literature combining the variables of this study. The combination of personality factors, critical thinking and attitude to media

and the use of educational media resources by teachers have not enjoyed much attention in the literature. Because we are constantly bombarded with visual representations, audio-visual/ audio resources, as well as media like TV and the internet, it is difficult to conceive the modern instructional method in the absence of numerous educational media tools usage. Instruction and educational media tools should support interactive learning, the acquisition of multiple skills, and the adoption of desirable morals and beliefs in addition to making the learning environment more engaging and interesting. Researchers on teachers should pay close attention to psychological factors (Genc, Peki, and Genc, 2017).

Aturu-Aghedo (2017) asserts that having personality traits makes a person more likely to engage behaviours. According to a prior study, personality traits are among the most prevalent psychological explanations and predictors of teachers' use of educational media resources (Kim, Dar-Nimrod, and MacCann, 2018). The psychological approach to teaching first emerged in the 1960s, and subsequent research connected teacher traits to students' needs for accomplishment. In comparison to non-teachers, he observed that teachers had a greater demand for achievement. Additionally, he claimed that teachers were reasonable risk-takers and would be ready to use educational media to enhance their instructional approach (Sarre and Whyte, 2017). According to Badamas (2021), classroom teachers are crucial to achieving any educational objective; as a result, the personality traits of teachers are crucial to their efficacy as teachers and their ability to manage classes. Recently, a broad range of psychological factors has been investigated as potential sources for teaching effectiveness. A large portion of this research examined variables that influence who is more likely to function at their best as teachers (Gupta and Muita, 2013). Usually designed as a component of the teacher's approach, the adoption of a new teaching technique is mostly determined by the personality traits of the teachers (Kim, 2018). As a result, teachers' personalities play a big role in whether information technology is used in the classroom. According to Kerr, Kerr, and Xu (2017), the three most discussed personality traits of a teacher are the need for accomplishment, centre of control, and proclivity to take chances.

Similarly, Mwaniki and Maket (2017) characterised the "Big Three" attributes as the desire for accomplishment, locus of control, and proclivity to take risks. Furthermore, Royo, Sarip, and Shaari (2015) stated that study has discovered common features among teachers, such as the demand for achievement, locus of control, and proclivity for risk-taking. The authors suggested that the risk-taking nature of teachers will drive them to

willingly adopt a new teaching paradigm, including the adoption of technology to assist teaching. Pourmazaherian, Baqutayan, and Idrus (2017) did a study on the Big Five Personality Factors in an Accident using a case study of accidents in Turkish construction businesses. The goal of the investigation was to review and identify which dimension of personal qualities (big five models) is more helpful in reducing occupational accidents, as well as to suggest an alternate paradigm that will help cut mishap occurrences in the construction sector. The study's outcome showed that when compared to other personality traits, neuroticism, agreeableness, and conscientiousness were more effective in preventing both occupational and non-occupational accidents. However, there was scant evidence to support a meaningful and effective link between extraversion and accidents at work. Only non-occupational accidents were appropriate for extraversion and openness. The study provided a suitable model that can be used to raise safety standards in Turkey's construction sector.

Tomik (2018) did a similar study on the influence of the Big Five personality traits on tertiary institution learners' academic success in Slovakia, assessing their grade point average as a proxy for academic performance (GPA). First-grade university students were the sample population (N= 402), and they were asked to complete the Five-Factor Inventory and report their grade point average (GPA). According to the findings, only the personality characteristic of conscientiousness was positively correlated with GPA in academic work. Furthermore, while conscientiousness is an independently significant indicator of academic accomplishment among university students, it only accounts for 2.7% of the variance in GPA. The study showed that, while there was a substantial connection and prediction solely between personalities attribute conscientiousness and GPA, there is a need for teachers to have a better understanding of the student personality in order to adequately develop student personal traits. Ejionueme, Hassan, and Doyin-hassan (2009) investigated how motivation and personality affect job performance. According to the opinion article, what inspires a person is determined by his personality. However, an individual's personality is what distinguishes him from others, which clarifies reason behind the variations on motivation across individuals. Motivation influences job performance because it harnesses the inner drives of employees to behave desirably. The interaction of motivation and personality as it impacts job performance can be deduced as follows: $p = f(p^*, m)$, where p = job performance p^* = personality and m = motivation. The report further claimed that the equation depicts job performance as a function of motivation and personality. The

article offered an understanding of personality as well as motivation through a review of pertinent literature on personality theories (psychoanalytic approach, personality trait theory, social cognitive theory, humanist approach, and evolutionary/biological strategy) on the one against one another and a paraphrase of motivational theories on the other because the latter had been adequately dealt with by pertinent authors in the fields of psychological research and organisational behaviour. As personality traits offer an approach for the prediction of workplace conduct and responses to organisational contexts, it has been discovered that a review of personality concepts can provide suggestions that can result in good job performance. Buljeta in Buljeta and Karaduman (2019) conducted a study on defining and determining the fundamental stages of utilising educational media resources under the assumption that personality affected and stipulated the attainment of their aims, functions, and duties in the educational activities. Conclusions of the study indicate that a teacher must be able to balance the advantages and disadvantages of educational media resources and adhere to usage standards in order to successfully perform any instructional duties that may need their use.

Saviour (2018) investigated how much teachers used educational media resources to teach social studies and the different instructional tools those social studies teachers might use in the West Mamprusi District of the Northern Region of Ghana's Basic Schools. Data collection and analysis were conducted using a qualitative methodology. Using structured interviews, the researcher obtained information from respondents. There were basic school students, teachers, and head teachers present. For the study, ten (10) Basic Schools were chosen at random. Using purposive sampling, twenty (20) social studies teachers and twenty (20) students, two (2) each, was chosen from the ten (10) schools. Interviews were conducted with each of the ten (10) basic schools' heads of instruction. According to the study's findings from the teacher interviews, instructional resources are not used by teachers when teaching social studies. According to the interviews, the following are the main reasons why educational media resources aren't used in the classroom: they take up too much time to prepare and organise, are expensive for the school or teacher to purchase, are difficult to find, don't have enough staff, aren't identified by the teachers as resources, and aren't used because the teachers have had so much experience teaching the subject. According to the report; through teachers training, workshops, and seminars, social studies teachers should be instructed about the importance of consistently teaching their assigned subjects with educational media contents. Additionally, the Ghana

Education Service and Parent Teacher Association (PTA) should assist schools in acquiring the necessary educational media materials so as to improve the social studies curriculum.

2.2.2 Critical thinking and use of educational media resources by secondary schools teachers

Fulford (2018) investigated whether ELA teachers in high schools in the urban-suburban Midwestern region of the USA have the understanding and capacity to include higher-order thinking skills (HOT) training for AAMSs. Five ELA teachers from a struggling urban-suburban high school in the Midwest of the United States participated in semi-structured interviews, and their lesson plans and classroom observations were also examined. As a result of the coding procedure, which involves dividing the data into units and categorising them in accordance with their characteristics, patterns, categories, and themes emerged. According to study participants, problem-solving is the most crucial higher-level thinking skill for AAMT. Like other local ELA teachers, these ones restricted the amount of constructivist activities that AAMS may engage in while they were learning by using the Socratic questioning approach as their main instructional strategy. The development of a professional training plan is aided by the data collection's conclusions. The programme's professional development might help teachers motivate AAMT to work more in the classroom. By sharing their concerns about AAMS, using HOT skills to improve AAMS literacy performance, acting as change agents and fostering positive social change by integrating constructivist practises into the school's curriculum and AAMS instruction, ELA teachers can take part in professional learning communities and contribute to closing the achievement gap.

The utilisation of educational media resources and critical thinking are related, according to Bulger and Davison's (2018) hypothesis. Media literacy has a lengthy history of development following various principles, veering between participation and protection, according to the authors' discourse. It is typically seen as a method or a collection of skills based on analytical thinking. The structure of modern media literacy frequently centres around five major themes: youth involvement, teacher training and curriculum materials, support from parents, policy initiatives, and the development of evidence-based practise. These kinds of programmes have a history of producing positive outcomes, particularly when it comes to timely responses to breaking news events, connecting critical thinking to

behaviour change, and examining political material. Additionally, established is the responsibility of teachers in ensuring that pupils comprehend scientific reports based on media coverage of scientific findings. The research conducted by McClune (2018) was based on findings from a curriculum intervention study conducted with students (aged 11 to 14) in the United Kingdom with the goal of promoting critical reading literacy through media sources that focus on science.

The study specifically concentrated on the fundamental reading literacy abilities to analyse and assess in the context of science-based media reports. The study draws on observations made during class time and a review of a schedule of science courses constructed using educational media resources focused on science news. It advised group as well as individual work tasks and contained several reading activities based on media. The development and consolidation of students' critical reading abilities in the context of science-based media reports was observed by researchers as they saw negotiation among students to reach agreement within the group. Following the activity plan, competency tests were utilised to gauge how well the students could evaluate science news reports critically. Students' classwork, video recordings, and assessment tasks were used as data sources. In addition, students responded to a questionnaire, and semi-structured interviews were done by researchers. The students showed that they understood the basic components of critical reading, but they had limited comprehension of the intermediate and advanced concepts. The environment of collaborative working was the greatest way to demonstrate competence in these skill areas. Teachers have the chance to help their students develop the critical reading skills necessary for fostering science literacy through media pieces that are meant to explain scientific research and innovation.

Using data from Federal Universities in Southwest, Nigeria, Adeoye and Adeoye (2017) examined undergraduate students' digital literacy abilities. In order to conduct the research for this study, a descriptive survey approach was employed. The sample for this study included 595 undergraduate students from Obafemi Awolowo University, the University of Ibadan, and the University of Lagos. The research tool for this study was a questionnaire. The data were examined using frequency distribution tables, and percentages, mean scores, and standard deviation were computed using the Statistical Package for the Social Sciences (SPSS). According to the study's findings, most students expressed confidence in their level of information literacy skills, particularly when it came to utilise other people's work (found online) without plagiarising. Additionally, they

demonstrated their level of comfort with information and communication technology literacy, particularly when writing online on a private website. When using media-capture technologies, such as recording on video, a significant portion of respondents felt confidence in their level of media literacy.

Teenagers at school favoured print-based knowledge resources over other types of educational media resources, such electronic resources, according to Lawal and Olawale's (2017) research. The purpose of the study, which was carried out in Lagos State, Nigeria, was to determine the degree to which access to and choice for educational media resources predicts awareness of sexual and reproductive health issues among in-school adolescents in Lagos Mainland Local Government Area of Lagos State, Nigeria. The study included 526 in-school teenagers, and the questionnaire served as the primary data collection tool. Results indicated that print-based knowledge resources were favoured over other forms of educational media, such as electronic resources, by teens enrolled in schools in the study area. It was also shown that despite teachers' low preference for print-based educational media resources tools, teenagers in the research area who attend school do have access to the necessary information about sexual and reproductive health issues. Based on their preference for and access to educational media resources materials, teenagers enrolled in school were found to know 9.9% and 38.8% more about sexual and reproductive health issues than other groups.

2.2.3 Attitude towards educational media resources utilisation and use of educational media resources by teachers in secondary schools

Regardless of the situation, teachers are expected to use educational media technologies to assist in-class instruction and the learning process. This component of the literature study intended to read articles on teachers' attitudes about the use of educational media resources both internationally and locally. Alshmrany and Wilkinson (2017) researched the elements affecting teachers in Saudi Arabia's primary schools' use of educational media resources. The study investigated the elements affecting how primary school teachers in Saudi Arabia adopted educational media resources as a teaching aid. Data analysis revealed that participants' effort expectations and level of computer literacy had a substantial beneficial impact on the study and their willingness to put forth the effort, both of which had a favourable impact on their behavioural intention to adopt ICT. However, due to Saudi culture, social conditions, system quality, and other limitations,

primary school teachers were not allowed to use educational media resources. The study's conclusion states that the results will assist the Saudi government in enhancing the positive components and minimising the negative ones in order to ensure that educational media are used successfully. Researchers Weng, Yang, Ho, and Su (2018) examined how teachers felt about their plans to use multimedia in the classroom. To investigate the effects of the educational media resources environment on perceived value, perceived simplicity of use, and mind set towards using multimedia, as well as the relevance and influence of these attitudes on behavioural intention, the technology acceptance model (TAM) was used as the fundamental model. 460 participants were chosen using stratified random sampling from the 2317 teachers in Chiayi County. The findings indicated that making multimedia content more accessible would increase the likelihood that it would be used. Utilization intentions are also influenced by one's attitude toward using.

Gretter and Yadav (2018) carried out an exploratory research on pre-service teachers. The goal of the study was to investigate the causes and assumptions that underlie pre-service teachers' intention to implement the theory of planned behaviour in their instruction of media and information literacy in their future classrooms. Findings indicate that while pre-service teachers view media literacy and information literacy as crucial skills, they do not feel that their teacher education programme emphasises these concepts, and many do not see other stakeholders like faculty, school administrators, and parents as supporting them. The study concluded that in order to provide pre-service teachers the confidence to incorporate media and information literacy into their future work, teacher modelling may be necessary.

Steel (2017) found a strong correlation between teacher attitudes and instructional support and the level of ICT. The author reported that the teacher's disposition/attitude will determine the adoption and usage of educational media resources as instructional support. The purpose of the study was to evaluate the correlations between the variables affecting Georgia High School's teachers' level of ITC in the classroom and found that teachers have a negative disposition/attitude to educational media resources which in turn harms their use of educational media resources for instructional purposes. Therefore, the study recommended that the government support professional growth for increasing the use of technology in order to increase compliance with state technology standards, which will create good social change through improved teaching and learning. Kan and Murat (2018) looked at how potential science teachers perceived their attitudes towards STEM and their

perceptions of 21st-century skills competences. "Learning and innovative skills," "life and career skills," and "information, media, and technology skills" are all endorsed by prospective teachers, according to the survey. It has been demonstrated that aspiring teachers have a positive opinion of STEM. The results of the research were used to suggest ways to improve teacher training programmes. The study of attitudes is a subfield of social psychology that focuses on understanding how people influence one another and how cognitive, motivational, and affective processes play a part in these interactions. Impact on the basis of social knowledge denotes being influenced by the things being observed about other people's attitudes and behaviours, as opposed to impact on the basis of possessive knowledge, which denotes being influenced by the things observed about their own past words and actions (Tipper, 2008). While many theories and findings have their roots in social influence, one theory the theory of planned behaviour has applicability for evaluating teachers' perspectives on using technology.

2.2.4 Factors inhibiting the use of educational media resources by teachers in secondary schools in Ogun state

A literature review on the subject will be incomplete if it doesn't contain issues that prevent teachers from using multimedia. This is to experimentally verify the existence of these difficulties and to propose a solution. Hasbay and Altndag (2018) discovered that one of the issues confronting secondary-level teachers was a poor working environment, which included a lack of educational media resources. The study looked at how management, workplace settings, and pay affected performance. The analysis of 103 surveys showed that managerial issues and the workplace environment had the biggest effects on teacher performance. To ensure that teachers work at their best, school administrators should adopt a suitable mind set while also providing appropriate and effective educational media resources. The results of the study were examined, and it was found that providing teachers with a setting where they may work without being pressured to use educational media resources tools in the classroom can enhance their performance.

Mndzebele, Dludlu and Mndebele (2018) figured out the scope of the community of practise and the availability of educational media resources. The study also discussed secondary school agriculture teachers' opinions of the relative benefits of media resources for education in Swaziland's teaching and learning processes. Data collection and analysis were done using a descriptive survey methodology. The results showed that there are some educational media resources that are sufficiently accessible for use and integration in teaching agriculture. It is still quite difficult to find stable, decent Internet, nevertheless. In the context of educational media resources, there is also a small and problematic community of practise. Therefore, the study suggested that 1) educational media resources school policies be established and made mandatory; 2) foster partnership with State-Owned Enterprises responsible for educational media resources and internet layout to negotiate the reduced cost of installation; and 3) hold professional development workshops. Alshmrany and Wilkinson (2017) conducted research on the elements affecting educators in Saudi Arabia's primary schools to use educational media resources. The study investigated the elements affecting how teachers at elementary schools in Saudi Arabia adopted educational media resources as a teaching aid. Data analysis revealed that participants' effort expectations and level of computer literacy had a substantial beneficial impact on the study and their willingness to put forth effort, both of which had a good impact on their

behavioural intention to adopt ICT. Primary school teachers were however, prohibited from using educational media resources due to Saudi culture, social circumstances, system quality, and other barriers. The study's findings, according to its conclusion, will help the Saudi government increase the good aspects and eliminate or diminish the bad ones to ensure a successful adoption of educational media resources in primary education by teachers.

The age, gender and status of employment of teachers have also been found to inhibit the internet literacy of teachers To understand the exact and speedy evolution of the world in a variety of areas, including the world of education, particularly for teachers, one must be internet literate. The level of online literacy among Indonesian teachers was investigated by Vernanda, Abdullah, and Rohendi (2017) using a descriptive qualitative research design. 99 vocational school teachers (SMK) made up the sample for the study. By using questionnaires, data were gathered. The data analysis revealed that the degree of internet literacy is consistent with the Capability Maturity Model theory. The outcome indicates that the online literacy level of vocational teachers is at level 2, indicating that these educators have repeatedly used the internet to support their daily operations. The process of teaching, communicating, and sharing knowledge is supported by teachers of SMK using the internet for a variety of needs, although social media communication is the most common. Age, gender, and employment position are variables that determine internet use. Teachers' use of educational media resources for learning and teaching in Aba District Secondary Schools is inhibited by access and lack of educational media resources competency, and insufficiency among the teachers.

The study was carried out by Researchers Nwosu Shaffe and Nurzatul (2018) examined how the secondary schools in the Aba North District's utilisation of educational media resources tools in the classroom. The study included 234 teachers as a sample, who were chosen from 20 middle and high school in the Aba North District. Surveys were used to acquire the data. The study revealed an inadequate level of educational media resources accessibility having an overall Mean (M=1.69) and a moderate degree of teachers' competency in educational media resources (M=2.87). It was discovered that the secondary school in Aba North District had a low (M=1.58) acceptance and utilisation of teachers' educational media tools. Teachers had positive attitudes towards educational media resources, perceived ease of use, perceived usefulness, and behavioural intentions. The study concluded that teachers should have access to and be highly skilled in the use of

educational media resources. Idris, Shamsuddin, Arome and Aminu (2018) found that secondary schools in the Sabon Gari local government area of Kaduna state were unable to use audio-visual materials to teach and learn about the classification of living things due to lack of materials and poor condition. This research thus suggested that the nation's educational interested parties should support the procurement of computers, generators for electricity, and multimedia equipment, as well as the expansion of computer labs in all high schools. It also suggested that all teachers undergo instruction in the use of audio-visual aids for instructional purposes due to the absence of knowledge regarding computers, and that the Parent Teacher Association (PTA), education stakeholders, and the government, through the Ministry of Education, which funds free secondary education, increase their spending on this area.

Regarding the usage of educational media resources to facilitate primary and secondary education in Africa, Butcher (2003) reported that most African countries still rely only on print resources for teaching. The report, which was part of an African-wide survey on the overview of technological facilities and use of educational media resources in education in Africa, revealed that print resources and radio were the only sources of communication in elementary and high schools, particularly in Sub-Saharan Africa, with no countries reporting using desktops and laptops. As a result, the paper emphasised the importance of working with an expansive description of educational media resources. In many cases, adopting 'older' media like radio and television can provide significant educational value, and the role of print resources is critical in many Sub-Saharan African nations where technology resources are few. The survey concluded that educational media resources can make significant contributions to schooling in Africa, but only when guided by a thorough grasp of the educational context and founded in specific educational goals.

Steel (2017) discovered substantial connections between the level of ICT and teacher temperament and educational support. The author reported that the teachers' disposition will determine the adoption and usage of educational media resources as instructional support. The purpose of the study was to assess the correlations between the variables affecting Georgia High School's level of ITC in the classroom. It was discovered that teachers had a bad attitude towards educational media resources, which negatively affected their usage of such materials for teaching reasons. According to the report, the government should promote educational opportunities for teachers in order to increase the incorporation of modern technology and enhance adherence to state technology standards,

which would lead to achieving equality through enhanced instruction and learning. Researchers discovered that employing too much instructional video in the classroom can cause students to become bored.

According to McKinnon, Nolan, and Sinclair (2000) students may develop a negative attitude towards technology if it is used excessively. A survey of 415 secondary students in New Zealand found that when usage of computers gained a regular feature of instruction in the classroom, students' motivation to use technology reduced. Richtel (2012) found that teachers typically believed they needed to put in more effort to pique and hold their students' interest. A teacher of English at Troy High School in Fullerton, California, expressed concern to him that technology had led to a more profound change in the way students learnt. On the theory that the age of continuous stimulation would come to an end eventually, he also questioned whether teachers were exacerbating the issue by tailoring lessons to pupils' shorter attention spans. Additionally, a number of studies have discovered that some educational media resources are harmful to both teaching and learning. When 685 K–12 teachers in the United States were surveyed by Common Sense Media (2012) on how they believed media related to entertainment influenced children's cognitive and psychological growth, it was found that 71% of those surveyed believed that it was harmful to student writing skills; furthermore, Salem (2013) looked into how texting and instant messaging apps like WhatsApp and Blackberry Messenger (BBM) affect how students in Kuwait who speak Arabic learn English as an additional language. A study of 211 primary and secondary school students found that how they make use of email and text-based acronyms and shortcuts has an impact on how well they can spell and use grammar.

This was corroborated by studies by Aziz, Shamim, and Avais (2013) and Rankin (2010) conducted similar studies on the issue and agreed with Salem's findings. Furthermore, it has been decided that educators should concentrate on the best methods for enhancing the teaching effectiveness of educational media resources. When using movies to teach listening proficiency in a second-language class, Canning-Wilson and Wallace (2000) suggested that teachers should break them up into smaller chunks. The learning process may become ineffective for students who are continually exposed to visual signals since they may be easily distracted from the aural component. Although video was a common learning tool, language teachers should be clear about its educational purpose before using it. As a result, it was critical for teachers to not only understand how to include

educational media resources into their lessons, but also to explore how to use them effectively.

Akujobi and Chukwu (2012) studied factors that hamper instructing and learning in Nigeria's Secondary Schools. The authors posited that factors influencing' effective teaching and learning as a second language learners include; the attitude of teachers towards the study of English, the nature of teacher/student interaction, the methods of teaching and the availability of educational media resources in Nigerian Secondary Schools. The study premised on the WAEC results of some Secondary Schools in Nigeria, and the continuous observance of' recurrent failure in teaching and learning English while the percentage pass has always been below 40%. The researchers concluded that without adequate provision of information and communication technology for teaching a foreign language, the learner cannot effectively learn in a second language situation.

A related study in Ghana by Hervie and Winful (2018), found that teachers were performing poorly in the selected schools in Accra. The survey was used during the research to gather information on teachers' professional growth and training, as well as how these factors might enhance the quality of their educational delivery as Ghana's educational service teachers. Ineffective inspection, a lack of in-service instruction, particularly in the use of ICT, a lack of instructional content based on educational resources, a lack of benefits and motivation, and a lack of these factors are what led to low teacher performance, the results of this research show. Consequently, the study recommended that the Ghana Education Service improve the regulations governing in-service training and development to better serve the requirements of teachers. Additionally, before developing teacher training programmes, frequent assessments of students' learning needs should be made. Similarly, resources should be provided to the Teachers' Education Division of the Ghana Education Service to offer more regular in-service training programmes and encouragement to teachers needed to raise their morale and give their best performance. Tella (2007) investigated Nigerian secondary school teachers' usage of educational media resources and the implications for future ICT growth in Nigerian secondary schools. The population of the study included 700 teachers from twenty-five carefully chosen private secondary schools in Ibadan, Oyo State, Nigeria. For data collection, a modified instrument titled Teachers educational media resources use survey was used, which was adapted from the UNESCO (2004) educational media resources survey indicator for teachers and staff and the New Zealand Ministry of Education MINEDU (1999) educational media resources

Teachers Survey. The results of the study revealed that teachers had universal access to ICTs at their respective schools, apart from e-mail and the Internet, because their schools are not connected. The absence of technical assistance in schools, as well as teachers' lack of competence in the use of educational media resources, was identified as a major problem impeding teachers' readiness and confidence in using ICTs during the class. Furthermore, the findings revealed that teachers saw educational media resources as simpler and more beneficial in teaching and learning. It was suggested, among other things, that teacher training and professional development-oriented policies support educational media resources related to teaching models that encourage both students and teachers to play an active role in teaching/learning activities. And that focus must be placed on the philosophy underlying the use of educational media resources for teaching/learning.

2.3 Theoretical framework

This aspect of the review will focus on theoretical issues and related theories to the study. Since the study covers the psychological factors of the usage of technology and takes its variables from different psychological factors, therefore, the Five-Factor Model of Personality which focuses on the Big Five personality factors, bio-psychosocial theory of personality which centres on critical thinking, the Theory of Planned Behaviour which focuses on attitudes forms the theoretical basis for the independent variables while the Information Utilisation Theory forms the theoretical basis for the educational media resources utilisation by teachers in Ogun state Secondary Schools.

2.3.1 The five-factor model of personality

The Five-Factor Model of Personality models how the 'super traits' of the Five-Factor explain differences in personality and the way, people behave.

Figure 2. 1: The five-factor model of personality (McCrae and Costa, 1986)

In the research and study of personality, five major aspects (the 'Big Five') are extensively utilised in psychology. These characteristics have been used to measure and build a better understanding of individual personality differences since the late twentieth century. The model was developed by McCrae and Costa in 1986 as an advancement of the Tripartite Theory of Personality (Freud, 1923), Eysenck's PEN Model of Personality (1951) and Personality Types (Friedman and Rosenman, 1976). These five factors are open to experience, conscientiousness, extraversion, agreeableness, and neuroticism. The abbreviation 'OCEAN' helps to remember the five factors. They are measured on a scale, with an individual being highly extroverted, low in extraversion (introverted), or somewhere in between.

Early personality study was guided by trait theory, which holds that a person's temperament and behaviour can be explained in terms of individual traits (such as self-confidence, friendliness, or melancholy). Trait theory adopts a lexical approach to personality, assuming that qualities may be defined using single adjectives or descriptive phrases. If enough people consistently display a type of behaviour and no name exists in a given language to define it, the lexical hypothesis states that a term will be invented so that the trait can be considered and discussed with others. In 1936, psychologists Gordon Allport and Henry Odbert pulled around 4,500 entries from Webster's New International Dictionary that characterised various sorts of behaviour or personality traits. Many of these words might be classified under superordinate factors, therefore subsequent study concentrated on the creation of more compact trait inventories, which would be more useful in the field of personality research.

In 1936, psychologists Gordon Allport and Henry Odbert pulled around 4,500 entries from Webster's New International Dictionary that characterised various sorts of behaviour or personality traits. Many of these terms might be classified under superordinate factors, therefore subsequent work concentrated on developing shorter trait inventories that would be more useful. Raymond Cattell produced a 16-item inventory of personality variables and created a practical in the field of personality research in the 1940s. The five criteria can be measured using a variety of methods, including self-report questionnaires. A subject is asked to read many descriptions or adjectives and score the accuracy with which they represent their personality on a Likert scale (1-Strongly Disagree to 2-Strongly Agree). While self-report measures provide insight into a person's personality that behavioural observation alone cannot, they are also susceptible to manipulation by a subject

who may provide more desirable responses to questions (known as social desirability bias). The Five-Factor Model of Personality has been used by various studies to theoretically support their research variables. Igier and Mullet (2003) studied the Intergenerational Impression conducted in a multifaceted manner utilising the model by respondents in a whole spectrum of demographics (young, middle-aged, and old) towards a full range of target age groups (young, middle-aged, and old). The Gough Descriptive Checklist was selected as the assessment tool, and the five-factor theory for personality traits was selected as a representation of interpersonal experience. A total of 867 respondents graded how well people believed 300 different adjectives depicted people from various ages. The five anticipated factors were discovered through factor analysis of the results.

The variable ratings for conscientiousness displayed a progressively growing style, with children of all ages rating lower and middle-aged or older adults, elderly, and very old individuals scoring higher. The opposite pattern was shown for transparency, but the true decline didn't occur until young adulthood. While the individuals being studied were young children or adolescents, the variable ratings for neuroticism seemed very low, and when the targets were middle-aged, elderly, or very old, the factor scores were neither high nor low. The distribution of ratings for introversion resembled a U shape, with young people and adolescents on one side and the other targets on the other. Lastly, middle-aged individuals performed significantly worse than all other age groups in the agreeableness category. Overall, the age of the target impact contributed to over two-thirds of the variance that could be stated, whereas the age of the responder variable could only account for around a tenth of the variation. It suggests that there is broad public agreement regarding the attributes of personality traits for different age groups.

Mabuchi, Yoshimura, Kashiwagi, Shioe, Kanba, Iijima, and Tsukahara (2005) equally relied on the model to assess personality in patients with primary open-angle glaucoma. The authors asserted that various distinct personality types have been observed in glaucoma patients during investigations that were not based on any structural theory of personality. The research used a multicentre cross-sectional case-control design using the accepted five-factor model of personality structure. Personality was assessed using the Neuroticism Extraversion Openness Five-Factor Inventory (NEO-FFI), a questionnaire specifically developed to examine the five-factor model of personality: neuroticism (N), extraversion (E), openness (O), agreeableness (A), and conscientiousness (C). Eligible questionnaires were acquired from 196 patients with primary open-angle glaucoma (99

men, 97 women) and 223 control subjects with no ocular disease except cataracts (87 men, 136 women). The mean score for each NEO-FFI factor in POAG patients was compared to the scores in the control group. In male POAG patients, the mean N score was considerably greater (P = 0.013) compared to the reference individuals, the mean A and C scores were significantly lower (P = 0.007 and P = 0.001, respectively), and the mean E score tended to be lower (P = 0.055). Female POAG patients had a substantially lower mean E score (P = 0.023). The study indicated that distinctive personality traits were observed in POAG patients, with men having a more significant association between personality and glaucoma than women. Other studies that equally used the model included Buczkowski, Basinska, Ratajska, Lewandowska, Luszkiewicz, and Sieminska (2017) and Parkin Kullmann, Hayes, and Pamphlett, (2018). The model was adopted to determine the personality factors of teachers in Ogun state Secondary Schools as it affects the use of educational media for facilitating teaching and learning in Ogun state Secondary Schools.

2.3.2 Biopsychosocial theory of personality

The bio psychosocial theory of personality, put out by Jeffrey Alan Gray in 1970, is one of the biological models in psychology that is most frequently accepted. The study of how the brain, neurotransmitters, and other components of our biology affect our behaviours, thoughts (including critical thinking), and feelings is known as biopsychology. Gray proposed the behavioural inhibition system (BIS) and the behavioural activation system (BAS) as the two systems in charge of behavioural regulation. The BIS is believed to be associated with sensitivity to rewards as well as avoidance and approach motivation, whereas the BAS is believed to be associated with sensitivity to both rewards and approach motivation.

Tests have been developed since the BAS and BIS were developed to determine how individuals' rate in each category. The Behavioural Inhibition System and Behavioural Activation System Questionnaire is the name of the survey. An EEG may be used to examine individuals depending on the activity of either system. These tests will reveal whether a person has a BIS or BAS that is more active. The two systems operate apart from one another. These assessments can reveal a variety of personality traits, including a person's capacity for critical thought. If someone has more happy or negative moods, they can tell. Neuroticism has a positive correlation with the BIS scale and a negative correlation

with the BAS scale when measured using psychological test scales that are intended to correlate with the characteristics of these hypothesised systems.

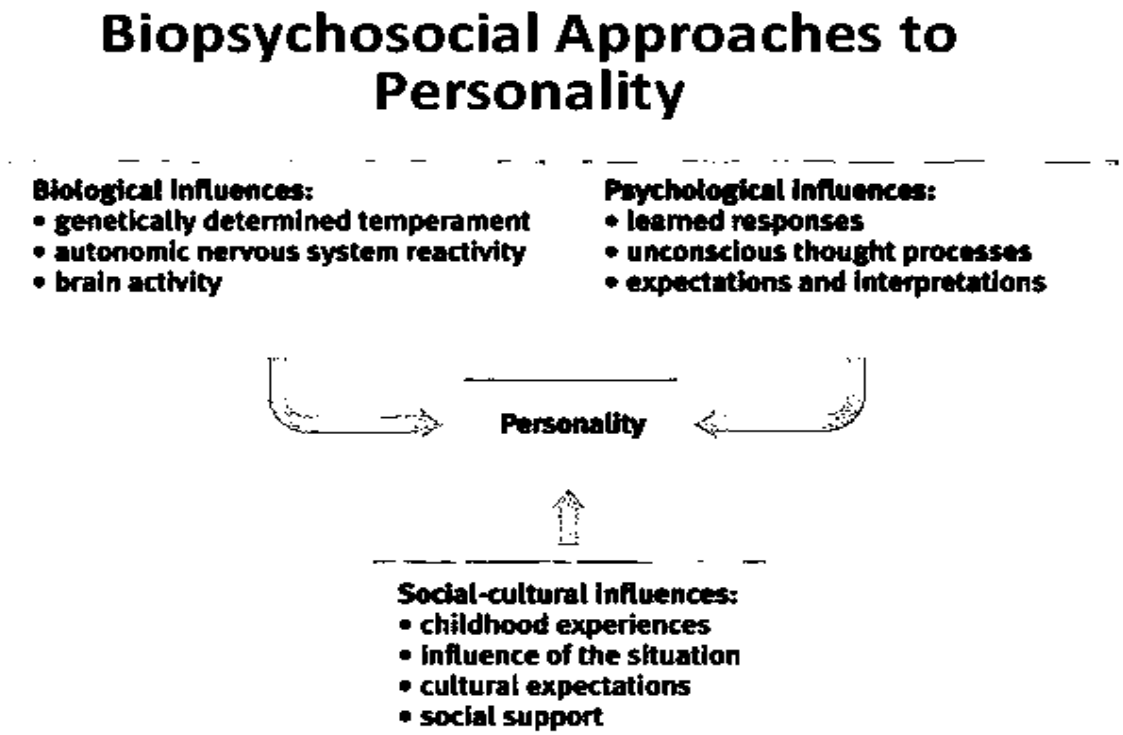


Figure 2. 2: Gray's Biopsychosocial theory of personality

Gray proved that the critical thinking of a person is influenced by the tripartite effects of biological, psychological and social-cultural. In order for someone to be able to think critically, it was hypothesised that a combination of biological factors, including a person's temperament, nervous system, and brain function, psychological factors, including learned behaviours, subconscious thought processes, expectations, and interpretations, and socio-cultural factors, including childhood experiences, the situation's influence, cultural expectations, and social support, will, statistically speaking, be favourable. Based on Gray's biopsychosocial theory of personality, Mashrouti, Mohammadi, Dolatshahi, Khani, and Pourshahbaz (2016) described the psychological symptoms in students by examining the connection between BIS/BAS and psychological symptoms. By using the cluster sampling approach, 361 students from Tabriz University (205 males and 156 girls) were chosen, and they were then assessed using the symptom checklist 90-R (SCL-90-R) and inventory of behaviour inhibition/activation systems. The Pearson Correlation coefficient and hierarchical regression were used to evaluate the data. The findings demonstrated a substantial correlation between the behavioural inhibition system and each of the nine symptoms (p 0.05). Additionally, regression analysis reveals that the Behavioural Inhibition System (BIS) accounted for 1% of sensitivity and frequency of symptoms. The study concluded that behavioural inhibition/activation systems (BIS/BAS) are among the crucial factors in elucidating psychiatric disorders, particularly in young people.

2.3.3 Theory of planned behaviour

According to the idea of planned behaviour, each person's actions are the outcome of their intentions, which are shaped by their attitudes, subjective norms, and perceived behavioural control.

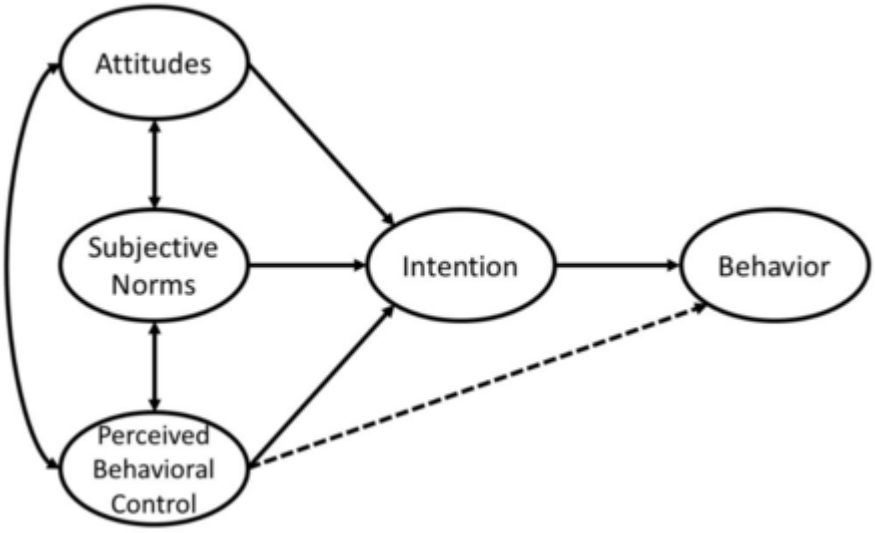


Figure 2. 3: The theory of planned behaviour model adapted from Ajzen 2005.

According to the theory of planned behaviour (Ajzen, 1991), attitudes, subjective norms, and perceived behavioural control all three play a role in determining intentions, which in turn impact behaviour. Depending on how much an individual can control their behaviour and how well perceived behavioural control represents real behavioural control, external forces may also directly compel or prohibit behaviours, regardless of the intention. In Figure 1, a dashed line denotes this relationship. Norms, perceived control, and attitudes all work together to forecast our intentions. The idea of planned behaviour, which is used to foretell intentional and planned behaviour, is built on this foundation.

Using intention to predict behaviour

This idea states that when people have time to organise their behaviour, one's intention is the greatest indicator of that conduct. In other words, you need to know what individuals want to do in order to forecast what they will do. Obviously, if you plan to do something, you will do it, right? Well, maybe not always. When a reflex or conditioned reaction is present, behaviour is not always precisely predicted by intention. When confronted with their fear, a person with a phobia, for instance, can want to remain composed yet wind up suffering a panic attack. Although very few of our intended behaviours such as going out to dine, watching a movie, reading a book, playing a game, etc. involve an involuntary reaction, the intention is still the greatest overall predictor.

Illustrating the theory of planned behaviour;

Determining Intention

One's attitude towards the behaviour comes first. Evaluations of concepts, situations, people, things, or events are what attitudes are. In general, attitudes are either favourable or negative. Imagine if you were debating attending a specific dancing event. Would you find it enjoyable to go? Or would it just be dull? Would you feel good or horrible about it?

The perception of control over the behaviour comes in second. The notion that one has some degree of control over their surroundings is referred to as perceived behavioural control. It indicates whether the activity will be simple to do or challenging. How easy would it be to utilize educational media resources while teaching? How much effort is involved? Do you have the required skills? will there be difficulty connecting the hardware? Is it easy to use?

The third is one's own personal standards. Norms are beliefs and actions that are seen as ordinary, average, or normal. They decide whether other people find the behaviour acceptable. What would people think if you decided to educate without the aid of any educational media resources? Is it necessary? How would your reputation be affected by not having the prerequisite skill knowledge?

We may describe the components as follows by using the example of teachers using educational media resources in class as the desired conduct. The utilisation of educational media resources is either seen negatively or positively depending on your perspective on teaching and learning in general. Subjective norms are social constraints that encompass how people perceive others' expectations of them as well as how much they regard those expectations. There are pertinent subjective standards for all three groups since administrators, co-workers, and students all have expectations about how teachers should conduct themselves in the classroom. How capable a person believes they are of carrying out a certain conduct in their environment is known as perceived behavioural control. Therefore, it considers both internal aspects like self-efficacy in using educational media resources as well as external elements like time and classroom conditions. The likelihood of the purpose and action occurring increases with the importance of the three components. This study, therefore, assumes that the attitudes of teachers toward educational media

resources utilisation in the classroom are germane to determining the human angle to the utilisation of educational media resources.

Although there are several attitudes assessments, the Media and Technology Usage and Attitudes Scale (MTUAS) developed by Rosen, Whaling, Carrier, Cheever, and Rokkum in 2013 was chosen for this study. 16 items make up the attitude's subscales created by Rosen, Whaling, Carrier, Cheever, and Rokkum (2013). These subscales measure positive attitudes towards technology (6 items), anxiety about dependence on technology (3 items), negative attitudes towards technology (3 items), and preferences for task switching (4 items). These include:

(Positive attitudes) I think it's critically to have access to any information at any time online.

(Favourable attitudes) I consider it crucial to have access to the Internet whenever I wish.

(Supportive attitudes) I believe it's critical to stay current with technological advancements.

(Anxiety/dependence) When I don't have my phone, I become nervous.

(Anxiety/dependence) When I don't have access to the Internet, I become nervous. I am reliant on technology because of my anxiety.

The use of technology will help us find solutions too many of our issues.

With today's technology, everything is conceivable.

(Favourable attitudes) I believe that technology helps me accomplish more.

(Unfavourable views) People squander too much time using new technologies.

(Unfavourable sentiments) Modern technology complicates existence.

(Unfavourable sentiments) Isolation increases as a result of new technologies.

(Preference for task switching) I like working on numerous tasks at once as opposed to finishing one task before moving on to another.

(Preference for task switching) When working on many assignments, I prefer to transition between them rather than completing them all at once.

I prefer to accomplish one activity before concentrating on anything else (preference for task switching).

(Preferred method of task switching) When I have a task to finish, I like to break it up by occasionally switching to different things.

2.3.4. Information utilisation theory

According to the information utilisation theory, a user will continue to demand and utilise an information source if he gets the most enjoyment out of utilising it or the source satisfies his needs. Information Utilization Theory is the foundation of collection building and effective use of educational media resources. It directs acquisition librarians in making more useful titles available while discarding or weeding those that are no longer useful to the users. The use of information is a phenomenon that manifests everywhere in the context of daily life or, in fact, of all life (Savolainen, 2009). According to Cole (2008), the broadest possible matter for which we use information concerns the survival of our species. A more common success criteria is the use of information, knowledge, and research (Dunn 1986). Both knowledge and information are representations of reality, but knowledge is held inside one's mind (for example, a recollection of the text) whereas information is held outside of one's mind (for example, text in a book). In other words, information may either be a source of knowledge or knowledge that has been externalised. Knowledge is what a person knows. Since the idea is sometimes either loosely defined in research studies or is not specified at all, it appears to be challenging to collect the data utilised (Larsen 1980; Savolainen 2009b).

According to Bouazza (1989), information usage is the act of seeking out information and using it to fill a need. The use of information, according to Hughes (2006), encompasses the user's behavior, connection to the information source, searching for information, information skills, utilising information, information literacy, information needs, context, reactions and effects, as well as results (of learning). This is because holism is a holistic concept. Hughes does not elaborate on why the notion should be defined in such a broad sense. Using information is unquestionably an informational phenomena, but so are many other things. According to this broad category of information practices, using information may be described as an intellectual activity that takes the shape of numerous ideas and behaviours (Limberg 1998).

In accordance with the concepts advanced by Cook and Brown, using information can be seen as epistemic (knowledge) work that is carried out as a natural byproduct of action or practice, such as determining the applicability of work-related information that has been retrieved from the internet (Savolianen, 2009). Maybee (2007) listed four distinct strategies to comprehend the usage of information in an interview research. One of them can provide one a decent overall concept of the types of functions that can be associated with the utilisation of information. Participants in the study see using information as

creating a knowledge foundation that can be used to various tasks. The applications of the information included making decisions and solving problems, developing a personal point of view, imparting the knowledge to others, and producing new knowledge. The knowledge base category's attributes were focused on the requirement to comprehend the viewpoint of the information source. Building one's knowledge base was secondary in the awareness structure, which placed more emphasis on how information is used (Maybee, 2007).

Many others have also provided a list of the many information practises that constitute what is generally understood to be the use of information. 1) How individuals access and use the information found in sources (Savolianen 2009); 2) Reading; analysing and evaluating information; synthesising information; and constructing meaning from information (Limberg 1998); 3) receiving and internalising information (Machulp, 1980); 4) sending and receiving information (Machulp, 1980); 5) decoding and coding stimuli in a symbolic system (Spink, 2009); The resolution of a process of being informed (to learn about a subject), or applying information (Giannini, 1998); 8) Evaluating, adopting, and implementing new information (Choo, 2006); 6) more broadly interpreting the value of information sources and guiding action (Savolianen, 2008); and 7) resolving a process of learning from or applying information. 9) Information receipt and interpretation, as well as practical application of the information (Tuominen, 1996); 10) Using certain social scientific research methodologies, deciding how to change situations, and actively ingesting and implementing knowledge (Todd, 1999); 11) Information generation and storage, as well as information search and retrieval and use for various reasons (Huvila, 2008); Information management actions include sharing the information with other interested parties, putting it to use in some specific action, or meeting a more general need (Erdelez, 1997).

As applying information; when the usage of information is viewed as applying information, information is not considered as having intrinsic value but rather as a tool that may be used in certain operations (Kari 2009). Many distinct terms have been used to discuss the application of information. While some use the phrase employing, others prefer the term applying. The latter is shown in Niemela's (2006) study, which defines information usage as the use of information contents from various channels. The term "uses" in Dervin's sense-making theory refers to the applications of cognitive bridges or responses to queries (Savolianen, 1992). Furthermore, according to Larsen (1980), implementation has been seen as information usage. In general, knowledge or information—especially internalised

knowledge or information—is considered to be something that is employed or utilised in a certain action. Cook & Brown (1999), Larsen (1980), Savolianen (2009), and Tuominen & Savolianen (1997) are only a few examples. Because information is action-oriented, its usage is hence positive and useful. A key idea in the discussion of information-seeking and user behaviour is information utilisation theory. Todd's (1999) examination of Bertram Brookes' basic equation of information science offers a theoretical framework for deepening our knowledge of the cognitive component of information use. Ford (1986) offers examples of how an information demand could be met. Information researchers have created models that are more akin to an instructional transfer (authority), where information is presented to the information seeker based on relativity more thorough and objective evaluations of the interaction within his mental processes and that of the source material in the retrieval system, in addition to responding to his stated requirement. The primary focus of educational models has been on users' internalised perspectives of their method of learning. The method and issues of systematically rich vs more cost-effective statistical methods for describing the information structures of information seekers and information providers are presented. It has implications for user education, particularly the requirement for the growth of a person's technological self-efficacy abilities in educational media resources. The Information Utilization Theory is relevant to this study because successful lesson delivery requires secondary school teachers to be trained in the use of educational media resources in the classroom.

2.4 Relevance of the theories to the study

The usage of educational media resources by teachers is influenced by personality factors, critical thinking, and teacher attitudes, according to this study. To characterise the personality features of teachers, it drew on the five-factor model of personality, the theory of planned behaviour, and the biopsychosocial theory of personality (Ajzen, 1991). In order to explain how teachers employed educational media resources, it also made use of the information utilisation theory.

2.4.1 The five-factor model of personality

The Five-Factor Model of Personality is found relevant to this study because it shares similar constructs with the constructs used in measuring the teachers' personalities in this

study. The study aimed at conducting a correlational survey of teachers' personality factors using the established five-factor model of personality structure. The Neuroticism, conscientiousness, agreeableness, extraversion, openness Five-Factor Inventory (NEO-FFI), a questionnaire created specifically to test the five-factor model of personality (neuroticism (N), extraversion (E), openness (O), agreeableness (A), and conscientiousness (C), was used to assess personality traits.

Openness to experience

Openness to experience tally with openness to change. It is characterized by imagination, curiosity, broad-mindedness and creativity. Teachers who are open to change are curious, exploratory, risk-takers, creative and original. They can appreciate new experiences, tolerate uncertainty and explore, (Afhami and Mohammadi-Zarghan, 2018). The significance of this personality trait to this study is that teachers who are open to experience would be motivated, curious and eager to use educational media resources in the classroom. They will appreciate its use and seeks out new opportunities to exhibit their creativity.

Conscientiousness

Conscientious people are more conscious of their acts and the implications of their behaviour than unconscientious persons. They have a strong sense of responsibility to others and are generally conscientious about carrying out their responsibilities. They enjoy keeping their surroundings clean and organised. They are anxious to keep good time. They behave in a goal-oriented manner. They establish lofty objectives and are driven to attain them. Undaunted by hard effort, they are driven to excel in all aspects of their lives, including academic successes and career advancement. A conscientious teacher is assumed to be curious to know, learn and use the available and related educational media resources to facilitate his/her teaching activities bearing in mind the decline in the academic performance of students.

Extraversion

Extraverted individuals are open-minded, sociable, forceful, and affectionate. They enjoy engaging and being social while displaying good interpersonal traits. They are

energetic, enjoy challenges, and are predisposed to experience happy emotions. The significance of this personality trait to this study is that teachers with extraversion personalities can adapt to new technology owing to their change and challenge accepting traits. They tend to be high performers and committed to the success of any task they handle; hence an extroverted teacher would appreciate and utilise educational media resources for the success of the teaching and learning strategy.

Agreeableness

This personality trait relates to being "courteous, open-minded, confident, friendly, compassionate, cooperative, gentle and patient". The significance of this personality trait to this study is that teachers with agreeableness personality traits possess a greater motivation to use educational media resources while teaching. They are devoted to their organisations and support the decision of the school to employ educational media resources to enhance the effectiveness and calibre of their teaching practices.

Neuroticism

Neuroticism is the propensity to experience unpleasant feelings including fear, guilt, rage, embarrassment, discomfort, anxiety, and melancholy. The significance of this personality factor to this study is that a teacher with this personality trait when confronted with fresh obstacles like the utilisation of educational media resources during lessons can experience threatening and stressful situations such as nervousness, fidgeting, worrying and insecurity. A teacher is not likely to utilise educational media resources while teaching. Thus, neuroticism as a personality factor does not promote active teaching and learning.

2.4.2 Biopsychosocial theory of personality

The use of educational media resources is predicted by teachers' critical thinking, which serves as the study's second independent variable. The study relied on the Bio psychosocial theory of personality. This research assesses critical thinking from the three vantage points of systematicity and analyticity, conversance and inquisitiveness, and maturity and scepticism. These measuring scales are traceable to the constructs in Gray’s biopsychosocial theory of personality. Gray puts the critical thinking of an individual as

being influenced by the tripartite effects of biological (systematicity and analyticity), psychological (inquisitiveness and conversance) and socio-cultural (maturity and scepticism). In this study, teachers' critical thinking was measured in line with the dimension of Gray's bio psychological personality theory from the three identified dimensions.

Systematicity and Analyticity: Analyticity, which is the primary mental quality of teachers, is about being logical, whereas systematicity is about being structured, orderly, focused, and industrious. A teacher with critical thinking of systematicity and analyticity will likely use educational media resources often while teaching to deliver a logical and organized teaching strategy. Inquisitiveness and Conversance: Inquisitiveness is about intellectual curiosity and its targets one's desire for continuous learning despite a lack of situation for the application of such knowledge. An inquisitive teacher will readily welcome and utilise educational media resources in the classroom to discover its worth and advantages. In the same vein, a teacher who is conversant with educational media resources would always utilise them during class without inhibitions. Maturity and Scepticism: Maturity focuses on the quality of making wise decisions. A critical-thinking mature teacher makes sound and authentic decisions regarding the type of educational media resources to use at a given time. He would have inquired about the educational media resources suitable for a topic or students' academic level. However, a teacher with sceptical critical thinking would not readily want to use educational media resources during classes. He or she would largely question the effectiveness of using educational media resources for instruction and learning.

The study's third independent variable is teachers' attitudes towards educational media resources tools, which predicts how often they will be used. For its analysis of teachers' attitudes, the study utilised the idea of planned conduct (Ajzen, 1991). Norms, perceived control, and attitudes all work together to forecast our intentions. The idea of planned behaviour, which is used to foretell intentional and planned behaviour, is built on this foundation.

2.4.3 Theory of planned behaviour

According to the theory of planned behaviour used in this study, teachers' attitudes towards educational media resources are likely to influence how they use those resources. The way someone chooses to act is determined by their attitude, and social standards which

can anticipate their intentions, which can then be used to forecast their action. Teachers with a negative attitude towards educational media resources may likely not utilise educational media resources. In the same vein teachers with positive attitudes towards educational media, resources would likely utilise educational media resources effectively in their teaching strategy. Positive and negative attitudes are the conceptions when it comes to teachers' attitudes towards media. The Media and Technology Usage and Attitudes Scale (MTUAS) developed by Rosen, Whaling, Carrier, Cheever, and Rokkum in 2013 serves as the foundation for the constructions. The authors premised the use of technology on perspectives which may be positive or negative. The scale indicates that for an individual to develop a strong relationship with technology the interaction with such technology develops over time and the affinity will be based on a positive attitude to technology while those with weak relationships are deemed to have been affected by a negative attitude to technology. Therefore, the way teachers feel about the spread of educational media resources is used in this study to gauge how they feel about technology.

2.4.4 Information utilisation theory

Regarding the dependent variable of this study, the use of educational media resources, its constructs are based on the Information Utilisation Theory, which claims that a user will continue to demand and use an information resource as long as he gets the most enjoyment out of using it or as long as it satisfies his need. The significance is emphasised for teacher education, the requirement for the growth of teachers' self-efficacy in educational media technology. The Information Utilisation Theory applies to this study because secondary school teachers would continue to request and use educational media resources if they get the most enjoyment out of using them or the resource satisfies their needs.

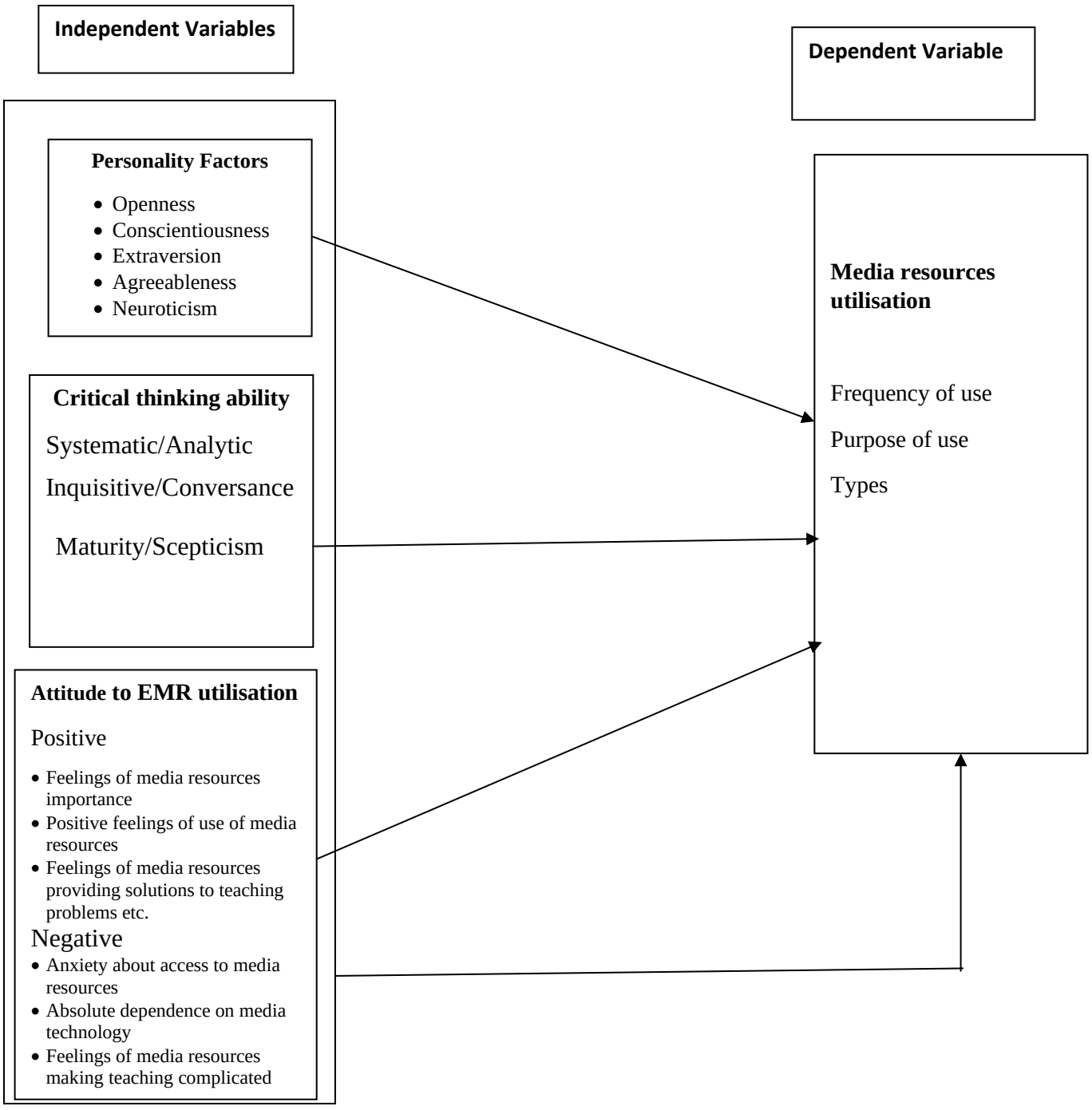
2.5 Conceptual model for this study

The theoretical frameworks used for this research is the Five-Factor Model of Personality, the Bio Psychosocial Theory of Personality, the Theory of Planned Behaviour, and the Information Utilisation Theory are the foundation of the conceptual framework for this study. This study examines the relationship between teacher personality traits, critical thinking skills, and attitude and the use of educational media resources in secondary schools in Ogun state, Nigeria. The dependent variable is the use of educational media resources, whereas the independent variables include personality traits, critical thinking, and teacher

attitudes. The Five-Factor Model of Personality and its constructs are openness to new experiences, diligence, extraversion, agreeableness, and neuroticism were strongly support the idea that personality factors have an impact on how effectively teachers use educational media. An arrow is implied between personality factors and effective use of educational media. This study identified critical thinking which hinged on the Biopsychological theory of personality that is based on tripartite effects of biological, psychological and social-cultural that are believed to have a direct relationship with how teachers utilise educational media resources.

The Critical thinking standardised developed by Demir (2015) was adapted for the study. The scale according to the author contained fifty-one items. The arrow from the variable indicates that. In order to develop, widen, and improve their teaching practices, teachers will need to employ educational media resources as efficiently and effectively as possible. Teachers' attitudes towards using educational media resources can be used to gauge how effectively they are using them. According to the Theory of Planned Behaviour, a person's attitude, perception of their ability to control their behaviour, and societal norms can all be used to forecast their intentions, which can then be used to forecast their behaviour. An individual's attitudes, how they choose to act, and societal norms determine his intention, which in turn predicts his behaviour in the utilisation of educational media resources. The Media and Technology Usage and Attitudes Scale (MTUAS), developed by Rosen, Whaling, Carrier, Cheever, and Rokkum in 2013, was modified for this investigation. The model demonstrated that individual components and attitudes will have a direct influence on educational media resources' utilisation by the teachers. Therefore, that arrow from the attitudes as an independent variable links the dependent variable which is educational media utilisation. Consequently, personality factors, critical thinking and attitudes of teachers will have combined effects on educational media resources utilisation by Ogun state secondary schools' teachers. The conceptual framework suggests that the three independent variables interact with one another.

Figure 2. 4: Conceptual model for the study



Source: A conceptual model created by the researcher was used to forecast the utilisation of educational media resources in public junior secondary schools in Ogun state, Nigeria, by considering personality factors, critical thinking and teachers' attitudes towards educational media resources. (Olaotan, 2021).

2.6 Appraisal of the literature reviewed

According to the literature, educational media resources have a positive effect on classroom instruction and student learning as well as on the teachers who utilise them. The emergence of educational media technologies has had a big influence on teaching, especially in language and math-based subjects like English and mathematics. Resources for educational media are widely available now, as opposed to the past when they were scarce and expensive to acquire. The research showed that teachers may now more easily access, use, and afford educational media materials thanks to the Internet, television, and radio, however, it is still expected that they will learn how to improvise to meet classroom expectations.

The review showed that studies of educational media resources' utilisation among teachers are well entrenched in the literature particularly in developed nations while such studies are brooding in the developing worlds like Nigeria. The review indicated that most of such studies are empirical in nature and are mostly based on a survey of correlational type while there were few which are opinion and systematic review articles. General conclusions showed that educational media resources are popular in use among schools in developed nations with their antecedent importance. However, equivalent studies in this part of the world are prediction based. Such research ignored other variables like human factors in favour of correlations between perceived utility and ease of accessibility as predictors of the usage of educational media resources.

Most of the reviewed literature relied on quantitative methods with few which relied on qualitative methods. There were no studies that combined these two methods which are often regarded as mixed or triangulation methods. These identified gaps are intended to be filled in in this current study by combining data from the questionnaire (quantitative) and students' assessment questionnaire (qualitative). As far as educational media resource utilisation among Ogun state teachers is concerned, As far as school educational media resources are concerned, not much of these studies are relevant while the available ones did not combine the variables in this study. Hence, the gap in that area is identified by this study. Geographically, Ogun state teachers in recent times have not been studied from the angle of personality factors, critical thinking and attitude to media resources as a predictor of educational media resources utilisation for use in classroom instructions in their Secondary Schools. It is therefore justified that these variables be empirically tested to reveal the true picture of the situation in Ogun state Teaching Service Commission, Nigeria.

CHAPTER THREE
METHODOLOGY

This chapter discusses the design of the study, population of the study, sampling techniques and sample size, research instruments, validation and reliability of instruments, procedure for data collection and analysis of data.

3.1 Research design

The mixed methods research design was adopted. The convergent approach of the mixed method was utilised such that the quantitative and qualitative data were collected simultaneously and analysed separately. At the quantitative stage, the descriptive research design of correlational type which involves more than one variable was adopted in this study. It gives us a better understanding of the characteristics and relationships between variables in a certain population without changing them or making claims about cause and effect. The variables were investigated without manipulating any variable. While at the qualitative stage, descriptive survey was also utilised.

3.2 Population of the study

The population of the study includes all the teachers and students in junior secondary schools in Ogun state. The total population of teachers in junior secondary schools in Ogun state is 4,225, while that of students is 265,332. See appendix IV and VI respectively.

3.3 Sampling techniques and sample size (quantitative)

A multi-stage sampling procedure was used for this study. Stage 1 – The Stratified sampling technique was used, the schools considered for this study were stratified into the four Ethno-political regions that make up Ogun state. These are Remo, Ijebu, Yewa and Egba popularly referred to as RIYE. Stage 2 - From each stratum, a simple random sampling technique was used to select two Local Governments Areas totalling eight (8) LGAs. This constituted 30% of all the Ogun State LGAs. The eight LGAs selected were Abeokuta South, Ifo, Ijebu ode, Ijebu North, Sagamu, Remo North, Ipokia and Yewa South LGAs respectively. Stage 3 - random sampling technique using balloting was used to select 30% of the total number of public junior secondary schools in each of the selected LGAs. Therefore, 28 government owned junior high schools were selected across the eight LGAs chosen for the study. (See appendix V).

The sampling procedure employed in this fourth phase, the probability proportionate to the size sample method, which selects a size measure from each population unit where the probability of selecting a unit is proportional to its size, was employed in selecting 1.5% of the entire number of junior public secondary school students, in every school chosen. However, the percentage of selected students in every schools sampled was low because the student response was used as a check or standard for the teacher's response. Thus a total of 733 secondary school students in junior category were chosen to participate in the survey, while 50% of the entire teachers, teaching in government owned junior secondary schools in each of the selected Local Governments was also selected using the Taro Yamane's sample size determination formula, which allows inferences and conclusions drawn from the survey to be applied to the complete population from which the sample was drawn (Yamane 1967 cited in Projectclue12, 2021). This was done following prior studies that assert that a sample size of 20% is required for populations consisting of several hundreds. According to Nwana (2008), there exists no specific guideline that can be used in all situations involving the size of a sample. Thus a total of 1170 junior secondary school teachers participated in the study. The breakdown is represented in following Tables (3:1 and 3:2 respectively).

Table 3:1: Sample size based on schools and students

Local Government Area	Number of schools	Number of schools selected	Total enrolment of JSS students in selected schools	1.5% of JSS students in selected schools
Abeokuta south	20	6	10716	161
Ifo	18	5	9070	136
Ijebu Ode	14	4	8114	122
Ijebu North	11	3	4536	68
Remo North	7	2	2951	44
Sagamu	10	3	5902	89
Yewa South	11	3	5005	75
Ipokia	5	2	2503	38
Total	96	28	48797	733

The percentage of students selected in each of the schools sampled was low because the student response was used as a check or standard for the teacher's response

Table 3:2: Sample size of public junior secondary school teachers based on selected Local Government Areas

Local Government Areas	Total number of teachers in schools selected	50% of JSS teachers
Abeokuta South	787	394
Ijebu Ode	396	198
Ijebu North	239	120
Sagamu	329	165
Ipokia	102	51
Yewa South	215	108
Ifo	251	126
Remo North	16	8
Total	**2335**	**1170**

3.3.2 Sampling technique and sample size (Qualitative interview schedule)

A total of fourteen teachers and fifteen students from junior public secondary schools in Ogun State were sampled. The researcher ensured that in a local government at least a student and a teacher was interviewed out of the eight local governments that this study considered. To make up for seven students and six teachers remaining, an extra student and teacher was selected each from three local governments that are urban (Abeokuta South, Sagamu and Ijebu Ode) in nature. An extra student and teacher was also selected from three local governments that are rural in nature (Yewa South, Ifo and Ipokia).

3.4 Research instruments (Quantitative)

Two structured questionnaires were used for data collection in the study. The first questionnaire was tagged **personality factors, critical thinking and teachers' attitude to utilisation of educational media resources** while the second questionnaire was christened **"Students' Questionnaire on Assessment of Educational Media Resources Utilisation of Teachers" (SQAEMRUT).** The first questionnaire (PFCTAATEMRU) was divided into five sections from sections A to E.

Section A of the questionnaire is on the demographic variables of the respondents and it contains five items on schools' name, gender, age group, years of experience, and highest level of education.

Section B The standardized personality Big five inventory of John and Srivastava (1999), containing thirty (30) items of six (6) items each for openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism subscales was adopted for the study. The psychometric property of this indicates that openness to experience generates a reliability coefficient of r=0.73, conscientiousness r=0.70, extraversion r= 0.79, agreeableness r=0.70 and neuroticism r=0.73. The scale is presented in 4 Likert formats Very likely of me, (VLOM) Likely of Me (LOM), somewhat likely of me, (SLOM) and Never Likely of Me (NLOM).

Section C deals with Critical thinking, based on the standardised scale of critical thinking of the California Critical Thinking Disposition Inventory (CCTDI) by Demir (2015). The scale according to the author yielded an overall 0.80 Cronbach alpha coefficient. The section contained fifty-one items but twenty-one (21) item), was adapted for the study. The scale is presented in a 4 Likert format of Strongly Agree, (SA) Agree (A), disagree (D) and strongly Disagree (SD).

Section D contains the attitude to the media utilization scale. It was adapted from the study of Rosen, Whaling, Carrier, Cheever, and Rokkum's (2013) Media and Technology Usage and Attitudes Scale (MTUAS). The Rosen, Whaling, Carrier, Cheever, and Rokkum (2013) Attitudes scales include 15 items, which comprise four subscales: Positive Attitudes toward Technology (6 items), Anxiety about being without Technology or Dependence on Technology (3 items), Negative Attitudes toward Technology (3 items) and Preference for Task Switching (4 items). The authors used the scale to investigate the Media and Technology Usage and Attitude Scale of Teachers. The Cronbach alpha values for the sub factor of the scale varied between 71 and 89. It is made up of fifteen (15) items, but ten (10) items were adapted (This is because I focused on the positive attitude and the negative attitude). The scale is presented in 4 Likert formats Strongly Agree, (SA) Agree (A), Disagree (D) and strongly Disagree (SD).

Section E is on educational media resources utilisation of Teachers (EMRUT). The researcher developed the instrument and it contains items which cover the frequency and purpose of use. Frequency of use was structured on 4 points Likert scale ranging from daily,

weekly, monthly, and never, while the purpose of use was measured by strongly Agree, (SA), Agree (A), Disagree (D), and strongly Disagree (SD). (See Appendix I)

The second questionnaire named Students' Questionnaire on Assessment of Educational Media Resources Utilisation by Teachers (SQAEMRUT) was developed to gather students' responses on the extent of educational media resource utilisation by their teachers and it is subdivided into 2 sections.

Section A: deals with the background information of the respondents such as school, gender, and age in that order.

Section B: measures the extent of educational media resource utilisation during teaching and learning by their teachers. The scale is a 4-point Likert type of 'very often, often, occasionally, never'. See appendix II.

3.4.1 Research instruments (Qualitative)

The instrument for the collection of qualitative data were: teacher utilisation of educational media resources in-depth interview and students' assessment of teachers' utilisation of educational media resources in-depth interview.

3.4.1.1 Teachers' Utilisation of Educational Media Resources In-depth Interview (TUEMII)

Teachers' Utilisation of Educational Media Resources In-depth Interview questionnaire contains open ended questions which are unstructured but based on the teacher responses another question is followed. TUEMII has questions on use of educational media resources, types of media resources used, purpose for which the media is used for, availability, frequency of use and challenges of use.

3.4.1.2 Students' assessment of teachers' Utilisation of educational media resources in-depth interview

It contains open ended questions which are unstructured but based on the student's assessment of their teachers' use of educational media resources, types of media resources used, purpose for which the media is used for, availability and frequency of use

3.4.2 Validity and reliability of the instrument

The instruments used were Personality Factors, Critical Thinking Ability, Teachers' Attitude to UEMR and UEMR questionnaires for students and teachers. The two questionnaires and the in-depth interview questions were given to experts in the field of Library and Information Science and Counselling and Human Development Studies at the University of Ibadan for face and content validity. Based on their suggestions and criticism items in the questionnaires and interview questions were modified to be adequate and appropriate for the study. The two questionnaires were trial–tested on 30 teachers and 30 students excluding those who participated in the actual research. In order to ascertain if the instruments are reliable, a reliability test was conducted using the data collected and it yielded acceptable Cronbach's alpha values. The result were adequate for the study and is presented in Table 3.3.

Table 3.3: Cronbach's alpha reliability coefficients test of study variables

SECTION	**Reliability**	**No of Item**
Section B: Personality factors	0.81	30
Section C: Critical thinking ability	0.83	22
Section D: Attitude to educational media utilisation	0.80	10
Section E: Teachers' educational media resources utilisation	0.81	40
Section F: Extent of educational media utilisation during teaching	0.99	30
Overall reliability test for the research instrument	**0.83**	**132**

3.5 Data collection procedure

The two questionnaires PRCTAATEMRU and SQAEMRUT and the interview questions were conducted by the researcher with the assistance of 12 research-assistants who are master degree holders, to provide necessary support. Letters of introduction were obtained from the Ag. HOD Department of School Library and Media Technology University of Ibadan and the Permanent Secretary, Teaching Service Commission, Ogun state. The letters of introduction were addressed to the principals of the selected secondary schools to seek permission to administer the instruments in their schools. The research assistants were instructed on how the two questionnaires would be administered, while the in-depth interview was conducted by the researcher. It took the researcher ten weeks to collect the entire data for the study.

3.6 Questionnaire return rate

Table 3.4: Questionnaire return rate for teachers and students.

Local Government Area	Teachers distribution	Teachers copies returned	Teachers' percentage returned (Overall frequency)	Students distribution	Students copies returned	Students percentage returned (overall frequency)
Abeokuta south	394	387	98	161	161	100
Ifo	126	126	100	136	136	100
Ijebu Ode	198	198	100	122	122	100
Ijebu North	120	104	94	68	68	100
Sagamu Remo North	165 8	159 8	96 100	89 44	89 44	100
Yewa South Ipokia	108 51	108 51	100 100	75 38	75 38	100
Total	**1170**	**1151**	**98**	**733**	**733**	**100**

The teacher's return rate is 98%, while the student's return rate is 100%

Table 3.4 presents the return rate of the teachers' distributed copies of the questionnaire in the second column totalling one thousand, one hundred and seventy (1170) with the highest

number of copies distributed in Abeokuta South Local Government Area and the lowest in Remo North Local Government area. The third column was the analysis of several copies returned based on each local government area. One hundred per cent return rate was recorded in Ifo, Ijebu Ode, Remo North, Yewa South and Ipokia local government areas.

However, Sagamu, Ijebu North, and Abeokuta South local government areas had a reduction of four per cent, six per cent and two per cent reduction respectively as far as the return rate was concerned. Therefore, the overall return rate was one thousand one hundred and fifty one (1151) which amounted to ninety-eight per cent (98).

The fourth column in Table 3.4, shows the overall frequency of the return rate and the percentage. The data in the columns will, henceforth, be used for the rest of the analysis in the study. The highest return rate (387) is recorded in Abeokuta South Local Government Area while the lowest return rate (8) was recorded in Remo North Local Government Area. All the local government areas generated an appreciable return rate.

The fifth, sixth and seventh columns of table 3.4, show the return rate of the students' distributed copies of the questionnaire in the fifth column totalling seven hundred and thirty-three (733) with the highest number of copies distributed in Abeokuta South Local Government Area and the lowest in Ipokia Local Government area. The seventh column was the analysis of the number of copies returned based on each local government area. One hundred per cent return rate was recorded.

3.7 Methods of data analysis

The data collected were analysed using descriptive statistics such as percentages, mean, and standard deviations, for research questions 1-4 while multiple regressions were used for research questions 5 and 6. Pearson's product-moment correlation at 0.05 level of significance was used for hypotheses 1 – 3. The qualitative data was thematically analysed

3.8 Ethical considerations

The study strongly upheld and protected the right and freedoms of participants. The researcher obtained permission from the relevant authorities, and all respondents willingly participated in the survey. The information obtained from respondents was handled with utmost confidentiality, ensuring that it was exclusively used for the purpose of this research.

Information provided by the respondents during in-depth discussions was presented without revealing the identity of the respondents.

CHAPTER FOUR
RESULTS AND DISCUSSION

4.0 Chapter overview

The analysis of data and discussion of the findings of this study were carried out in this chapter. Areas covered in this chapter include the demographic information of the participants' results as well as the stated research questions and the hypotheses. The chapter was arranged, starting with the demographic variables followed by the research questions, hypotheses and the discussion of the findings. The discussion of the findings were based on the related literature reviewed in this study while the literature were used to either affirm or disprove the findings of the study.

4.1 Demographic variables of the respondents (Teachers)

Table 4.1: Demographic variables of the respondents

Sex	**Frequency**	**Percentage**
Male	433	40
Female	649	60
Age group		
20-29 years	158	14.6
30 to 39 years	338	31.2
40 to 49 years	474	43.8
50 to 59 years	99	9.1
60 years and above	13	1.3
Years of Experience		
5-10	451	41.7
11-20	514	47.5
21-30	87	8
31 and above	30	2.8
Qualifications		
NCE	201	18.6
Bachelor Degree	734	67.8
Master's Degree	118	10.9
PhD	29	2.7

In Table 4.1, the demographic variables of the respondents (teachers) were presented. The majority of the teachers were female (60%) and the majority of the respondents were in the age range of 40 to 49 (43.8). Most of the respondents have been in the teaching profession for at least 11 to 20 years (47.5%) and have obtained a Bachelor's Degree (67.8%). In contrast, there was 1.3 per cent of the older population (60 years and above) of the teachers participated in the study while those who had work experience of above thirty years were 2.8 per cent. 2.7 per cent of the respondents had a PhD degree. Therefore, female gender constituted the most of teaching population in the Ogun State Teaching Service Commission. The age range is constituted the mid-age of between forty and fifty years while the normal degree expected to teach in secondary school has been obtained by the teachers and the teaching experience was also average in range. The older population had more years of experience

Answers to the research questions

This section contains answers to the research questions raised for the study. The results were presented using frequency counts, percentages, mean and standard deviation. Decisions were set using the weighted mean of the scales to determine levels and measures. Multiple regression analysis was employed to answer the fifth and sixth research questions.

4.2. Research Question One: What are the personality factors of secondary school teachers in Ogun State, Nigeria which can enhance the utilisation of educational media resources?

Table 4.2: Personality factors of secondary school teachers in Ogun state.

S/N		VLoM	LoM	SLoM	NLoM	X	S.D
Openness to experience		**F %**	**F %**	**F %**	**F %**		
1.	I have creative and imaginative abilities to improvise new teaching strategies	490 45.3	383 35.4	176 16.3	33 3.0	3.22	0.82
2.	Using works of art to teach is simple for me	490 45.3	383 35.4	163 15.1	46 4.3	3.21	0.85
3.	I enjoy participating in the happenings in my school environment	429 (39.6)	475 (43.9)	142 (13.1)	36 (3.3)	3.19	0.78
4.	The infusion of innovation into teaching is always exciting	417 38.5	387 35.8	218 20.1	60 5.5	3.07	0.89
5.	Events in my school environment hardly passed me unnoticed	512 (47.3)	276 25.5)	147(13.6)	147(13.6)	3.06	1.07
6.	I find it hard to devise unconventional means to achieve teaching goals and aims	333 30.8	374 34.6	198 18.3	177 16.4	2.79	1.05
	Weighted mean					**3.09**	
Conscientiousness							
1.	Discharging my teaching duties is often challenging	383 35.4	258 23.8	215 19.9	226 20.9	2.73	1.14
2.	I do not take chances in the course of my duties	338 31.2	286 26.4	291 26.9	167 15.4	2.73	1.06

3.	I do not waste time thinking over issues before responding in my teaching	357 33	282 26.1	218 20.1	225 20.8	2.71	1.13
4.	I do not mind giving up teaching for other activities sometimes	356 32.9	213 19.7	226 20.9	287 26.5	2.58	1.20
5.	I rarely give attention to details	307 28.4	222 20.5	271 25	282 26.1	2.51	1.15
6.	I often forget to get all I need ready before each lesson.	254 23.5	308 28.5	223 20.6	297 27.4	2.49	1.12
	Weighted Mean					**2.62**	
Extraversion							
1.	My teaching could still improve	366 33.8	294 27.2	266 24.6	156 14.4	2.8	1.06
2.	I do not consider trying new ideas when my teaching method is working	252 27.3	383 35.4	225 20.8	222 20.5	2.61	1.06
3.	I do not find it enjoyable to relate with everyone in my school.	333 30.8	234 21.6	257 23.8	258 23.8	2.59	1.16
4.	Teaching could be somehow boring.	313 28.9	241 22.3	279 25.8	249 23	2.57	1.13
5.	I enjoy being alone	284 26.2	261 24.1	278 25.7	259 23.9	2.52	1.12
6.	My students think I am too tough	215 19.9	317 29.3	251 23.2	299 27.6	2.41	1.09
	Weighted mean					**2.58**	
Agreeableness							
1.	I do not tolerate indiscipline when teaching	338 31.2	405 37.4	210 19.4	129 11.9	2.87	0.98

2.	I cannot hide the fact that I am better than my colleagues.	367	33.9	311	28.7	274	25.3	130 12	2.84	1.02
3.	I rarely feel touched by what happens to others	372	34.4	328	30.3	222	20.5	160 14.8	2.84	1.05
4.	My students and colleagues often flock around me	391	36.1	254	23.5	249	23	188 17.4	2.78	1.11
5.	I love being diplomatic	317	29.3	384	35.5	244	22.6	137 12.7	2.78	0.99
6.	I find it hard to forgive people easily	412	38.1	204	18.9	228	21.1	239 22	2.73	1.18
	Weighted mean								**2.81**	
Neuroticism										
1.	I am always tense during teaching activities	312	28.8	249	23	234	21.6	287 26.5	2.54	1.16
2.	I prefer other jobs to teach	260	24	276	25.5	265	24.5	295 27.3	2.48	1.14
3.	I think many of my colleagues are better than I am	295	27.3	263	24.3	170	15.7	354 32.7	2.46	1.2
4.	I avoid my students because they could be irritating	265	24.5	280	25.9	219	20.2	318 29.4	2.45	1.15
5.	I often feel that the students are talking about me	252	23.3	270	25	265	24.5	295 27.3	2.44	1.12
6.	Teaching is irritable to me	209	19.3	324	29.9	203	18.8	346 32	2.36	1.12
	Weighted mean								**2 .45**	
	Overall weighted mean								**2 .73**	
	Criterion mean								**2 .50**	

This study sought, through research question number one, to ascertain the personality factors Ogun State secondary school teachers. The personality factors were tested from the perspective of the Five-Factor Model of Personality of McCrae and Costa (1986). The original five-factor personality factor was measured using high and low scales. Each of the factors was measured using the weighted mean compared with the decision rule of 2.50 as the criterion mean. Results from Table 4.2 on the "Openness to experience" of teachers generated a weighted mean of ($\bar{x}$ =3.09) which indicates that the teachers' Openness to Experience is high. The majority of the teachers stated that they are always conversant with the happenings in their school environment (VLoM = 47.3%), and they can creatively and imaginatively improvise new teaching technologies and use works of arts to teach (VLoM = 45.3% respectively). Therefore, the weighted mean score of 3.09 higher than 2.50 shows that the majority of the teachers possess high personality as far as Openness to Experience is concerned.

The second factor of the five personality factors measured in this study is conscientiousness. This factor determines how painstaking the teachers can be in the delivery of their teaching assignments. Based on the results obtained in Table 4.2, "Conscientiousness" ($\bar{x}$ =2.62), was also a major personality trait of teachers in the study. A larger percentage of the teachers stated that it is challenging in discharging their teaching duties (VLoM = 35%), they do not waste time thinking over issues before responding to teaching issues VLoM = 33, and would not give up teaching for other activities (VLoM = 32%). However, the weighted mean score of 2.62 on the scale indicated that the teachers' conscientiousness is high as against the criterion mean score of 2.50. This is an indication that the teachers are painstaking in their teaching activities such as going the extra mile to develop alternative teaching aids in the absence of the ones that are supposed to be provided by the government.

Equally, to measure the secondary school teachers' personality factors based on The Five Factor Model, the third factor is Extraversion. In psychology, an extroverted disposition is concerned with what is outside the self. Like the two previous factors, Openness to experience and conscientiousness, extraversion is measured by six items on the scales of Very Likely of Me and Not Likely Me. Results from Table 4.2 showed that the teachers' Extraversion is equally high. The judgement is based on the weighted mean calculated for the scale (weighted mean = 2.58). However, the majority of the respondents stated that it is likely for them to not try a new idea for teaching since their current teaching

style is working for them (LoM = 35%), though they accepted the fact that their teaching method still requires improvement (VLoM = 33%) and as well find it not enjoyable relating with everyone in their school VLoM = 30. The Extraversion personality of the teachers is high.

The fourth construct of measuring the personality factor of the teachers in this study is Agreeableness. This means that the teachers' temperamental disposition is agreeable to relating with colleagues to improve teaching activities. The weighted mean generated for this scale is 2.81 which means the teachers' agreeableness personality is high. There is the majority of the teachers stated that it is very likely for them not to forgive people easily (VLoM = 38%), and the majority who are not comfortable with people around them my students and colleagues often flock around me (VLoM = 36%). Teachers' agreeableness personality also indicates that the majority of the teachers rarely feel touched by what happens to others around them (VLoM =34%) and they cannot hide the fact that they are better than their colleagues (VLoM =33.9%). Therefore, teachers' agreeableness personality is high.

Neuroticism of secondary school teachers is the final and the fifth measure of personality factor of the Five-Factor Model of Personality of McCrae and Costa (1986). The result generated from Table 4.2 showed that the teachers do not have irritation with the teaching profession (NLoM =32%) and do believe they are not inferior to their colleagues (NLoM =32%). Thus, based on the weighted mean score of 2.45, the neuroticism of the teachers is low meaning mental or personality disturbance is not attributable to any known neurological or organic dysfunction of the teachers.

Overall, the personality of the teachers based on the Five-Factor Model of Personality of McCrae and Costa, (1986) is high as the overall mean score of the teachers generated an overall mean of 2.73. The personality factors among Ogun state secondary schools' teachers which can enhance the utilisation of educational media resources are; "Openness to experience" ($\bar{x}$ =3.09) was the main personality trait of teachers in the study and was followed by "Agreeableness" ($\bar{x}$ =3.82), "Conscientiousness" ($\bar{x}$ =2.63), "Extraversion" ($\bar{x}$ =2.59), and lastly by "Neuroticism" ($\bar{x}$ =2.45) respectively.

4.3. Research Question Two: What is the critical thinking level of secondary school teachers in Ogun State, Nigeria?

Table 4.3: Critical thinking level of secondary school teachers in Ogun State

S/N	To what level do you agree with the following statement **Systematicity and analyticity**	SA	A	A	SD	X	S.D
F	% F % F % F %						
1	Before answering, I always focus on the question first	486 44.9	482 44.5	77 7.1	37 3.4	3.31	0.75
2..	If there are four views in favour of, and one view against an argument, I would tend to side with the four favourable opinions	353 32.6	547 50.6	146 13.5	36 3.3	3.13	0.76
3.	Since I make decisions judiciously by properly taking the "rules" into account, my friends generally consult and trust me with their own decisions	296 27.4	498 46	224 20.7	64 5.9	2.94	1.84
4.	Rather than only explaining their view to us, people should also try to listen to our views.	398 36.8	475 43.9	128 11.8	81 7.5	3.09	0.88
5.	I cannot be impartial when discussing my own opinions	306 28.3	492 45.5	234 21.6	50 4.6	2.97	0.83
6.	I admire my ability to present creative choices and solutions	273 25.2	478 44.2	261 24.1	70 6.5	2.88	0.85
7	Other people often consult me to determine reasonable standards concerning the implementation of their decisions	346 32	455 42.1	204 18.9	77 7.1	2.98	0.89

	Weighted mean					**3.04**	
Inquisitiveness and conversance							
8	It is important to try to understand the thoughts/opinions of people	471 43.5	461 42.6	117 10.8	33 3	3.26	0.77
9	Analogies and metaphors are only as useful as boats on a highway	363 33.5	482 44.5	192 17.7	45 4.2	3.07	0.82
10	The best way to solve a problem is to ask for the answer from someone else.	326 30.1	504 46.6	171 15.8	81 7.5	2.99	0.87
11	Learn everything you can, since you never know when you might need it	488 45.1	387 35.8	119 11	88 8.1	3.17	0.92
12	Nothing is ever as it seems.	384 35.5	523 48.3	117 10.8	58 5.4	3.13	0.81
13	Having an open mind towards different world views is less important than what people think.	357 33	428 39.6	244 22.6	53 4.9	3.01	0.86
14	Spending a lot of effort to solving complex problems is not all that important	373 34.5	324 29.9	251 23.2	134 12.4	2.86	1.02
	Weighted Mean					**3.07**	
Maturity and scepticism							
15.	Being open-minded means not knowing what is right and what is wrong	384 35.5	344 31.8	257 23.8	97 9	2.93	0.97
16.	I act as if I were rational, while I am not	359 33.2	358 33.1	282 26.1	83 7.7	2.91	0.94
17.	Everyone, including myself, generally engages in debates	333 30.8	402 37.2	233 21.5	114 10.5	2.88	0.96

	and arguments out of self-interest						
18.	I panic whenever I have to deal with something truly and excessively complex	304 28.1	321 29.7	276 25.5	181 16.7	2.69	1.05
19.	People generally say that I am too hasty when making decisions	283 26.2	347 32.1	285 26.3	167 15.4	2.68	1.02
20.	Reading is something I avoid whenever I can	271 25	318 29.4	354 32.7	139 12.8	2.66	0.99
21.	Studying so many subjects in secondary schools is a waste of time	214 19.8	292 27	397 36.7	179 16.5	2.5	0.98
	Weighted mean					**2.75**	
	Overall weighted mean					**2 .95**	
	Criteri0n mean					**2 .50**	

Research question number two was raised to determine the critical thinking disposition of the teachers in Junior Secondary Schools in Ogun State. The critical thinking disposition of the teachers is based on their disposition to systematicity and analyticity disposition, inquisitiveness and conversance disposition and maturity and scepticism disposition. All the scales contained seven items each. Using the aggregate of SA-Strongly Agreed and A-Agreed as agreed and D-Disagreed and Strongly Disagreed as disagreed, it was revealed in Table 4.3 that the teachers' systematicity and analyticity are high as indicated by the weighted mean generated for the scale (weighted mean =3.04). This scale measures the teachers' ability in being able to analyse situations before making a decision. Results showed that irrespective of the situation, the majority of the teachers will join the bandwagon of ideas even if the idea contradicts common sense (83% of the respondents if they strongly agreed and agreed opinions are aggregated), while the majority will prefer others listen to them when discussing issues rather than they listen to others and learn from their opinions on issues (80% of the respondents if they strongly agreed and agreed opinions are aggregated) and the majority equally will accept the fact that they cannot be right on issues all the time (73% of the respondents if they strongly agreed and agreed opinions are aggregated). The result, therefore, affirmed that the teachers' systematicity and analyticity are high based on the calculated weighted mean of 3.04, which is higher than the criterion mean of 2.50.

How inquisitive and conversant the teachers are, is the second construct measuring the teachers' critical thinking disposition. It was found in Table 4.3 that the majority of the respondents agreed that nothing is ever as it seems 35.5, the best way to solve a problem is to ask for the answer from someone else 30.1, analogies and metaphors are only as useful as boats on highway 35.5 and that it is important to try to understand the thoughts of other people 43.5. Thus, with these results and based on the calculated weighted mean of the scale, the disposition of the teachers as far as how inquisitive and conversant they are to situations around them generated a high level (weighted mean = 3.07).

The maturity and scepticism displayed by the teachers are also key to determining their critical thinking. To ascertain this, the seven items measuring the scale were also subjected to descriptive analysis of frequency counts and measures of central tendency. The weighted mean of 2.75 generated for the scale stipulates that the teachers' level of maturity and scepticism is high. For maturity and scepticism, it was found that it was very likely of the teachers did not understand what being open-minded is as the majority (SA = 36%)

affirmed it. The aggregation of the respondents who strongly agreed that it was very likely of them and agreed that it was likely of them to act irrationally amounted to 66% and the majority equally take decisions hastily (SA and A = 58%).

The overall weighted mean of the teachers' critical thinking disposition is found to be high as a result of the 2.95 weighted means generated in Table 4.3. This result implies that the teachers' critical thinking disposition is high. The level of teachers' critical thinking is expected to be higher than 2.95 since they are in the practice of raising minds. However, it was found to be moderately high which could impact the teachers' level of utilisation of educational media resources.

4.4. Research Question Three: What is the secondary school teachers' attitude in Ogun State, Nigeria towards educational media resource utilisation?

Table 4.4: Secondary school teachers' attitude towards educational media resources utilisation

SN	Attitudes towards educational media use by the teachers	SA		A		D		SD		X	SD
	Positive attitudes	**F**	**%**	**F**	**%**	**F**	**%**	**F**	**%**		
1	I feel it is important to be able to find any information using educational media resources whenever I want to facilitate my teaching	537	49.6	430	39.7	55	5.1	60	5.5	3.33	0.81
2	I feel it is important to be able to use educational media resources to facilitate the way I teach	399	36.9	575	53.1	81	7.5	27	2.5	3.24	0.69
3	I think it is important to keep up with the latest trends in media technology in making my teaching more impactful and meaningful.	470	43.3	449	41.5	114	10.5	49	4.5	3.23	0.81
4	Media Technology will provide solutions to many of my teaching problems.	424	39.2	494	45.7	98	9.1	66	6.1	3.17	0.83
5	With media technology, I can adapt various teaching methodologies.	399	36.9	507	46.9	148	13.7	28	2.6	3.18	0.75
6	I feel that I get more accomplished in my teaching because of technology.	412	38.1	468	43.3	122	11.3	80	7.4	3.12	0.88
	Weighted mean									**3.21**	

	Negative attitudes						
7	The use of media technology makes teaching more complicated for the teacher.	240 22.2	349 32.3	291 26.9	202 18.7	2.42	1.03
8	The use of media technology makes teachers waste too much time teaching.	286 26.4	266 24.6	355 32.8	175 16.2	2.38	1.04
9	The use of media technology makes the teacher more isolated in class.	329 30.4	219 20.2	353 32.6	181 16.7	2.35	1.08
10	I'm not anxious when I don't have access to educational media resources to support my teaching.	332 30.7	344 31.8	290 26.8	116 10.7	2.17	0.98
	Weighted mean					**2.36**	
	Overall weighted mean for the two scales					**2.33**	
	Criterion mean					**2.5**	

The essence of the third research question was to ascertain the teachers' attitudes towards the use of educational media resources. Two sets of questions relating to positive attitudes to the use of educational media resources as well as the negative attitude were drawn. Based on the results captured in Table 4.4, it is evident that the teachers had a positive attitude toward to use of educational media resources. As indicated in the Table, the majority of the teachers stated that it is important they can access any information using educational media resources anytime (Strongly Agreed and Agreed = 89.2), equally asserted that it is important to use educational media resources in facilitating teaching Strongly Agreed and Agreed = 90 while they also agreed that it is important they keep up with the latest trends in media technology in making their teaching more impactful and meaningful (Strongly Agreed and Agreed = 84.8).

Other results in Table 4.4 showed that the teachers affirmed that media devices will help them solve most of their teaching-related issues Strongly Agreed and Agreed = 84.9 and that they can adapt different teaching methodologies through the usage of media technologies (Strongly Agreed and Agreed = 83.8). The teachers equally showed that they have a positive attitude to the use of educational media resources since they stated that their accomplishment in teaching could be attributed to technology use, particularly the educational media resources (Strongly Agreed and Agreed = 81.4).

However, the results for the negative attitude still indicate that the teachers may be portraying some traits which may tend to the fact that they possess a negative attitude to educational media technology use. About half of the respondents stated that the use of technology may be responsible for the reason the teachers waste time when teaching (Strongly Agreed and Agreed = 51), stated that it makes teaching more complicated for them (Strongly Agreed and Agreed = 54.5), and that it makes the teacher more isolated in class (Strongly Agreed and Agreed = 50.6). Overall, the most of the teachers exhibited more conclusive attitudes towards the usage of educational media than the negative attitude; therefore, it is safe to say that the teachers possess the right attitude toward the utilisation of digital instructional resources in the classroom.

4.5. Research Question Four: What is the pattern of use (type, frequency and purpose) of educational media resources being utilised by teachers in secondary schools in Ogun State, Nigeria?

Table 4.5: Types and frequency of educational media resources being utilised by secondary school teachers

S/N	Educational media resources	Daily	Weekly	Monthly	Never	X	SD
Audio resources							
1	Radio	557 51.5	183 16.9	106 9.8	236 21.8	2.98	1.21
2.	Public Address Systems	395 36.5	320 29.6	204 18.9	163 15.1	2.87	1.06
3.	Audio Tapes and Players,	382 35.5	330 30.5	134 12.4	236 21.8	2.79	1.14
4.	Audio educational media resources in MP3 formats usable through handsets, PDAs, and computers	396 36.6	277 25.6	205 18.9	204 18.9	2.79	1.12
5.	Audio Compact Discs and Players,	395 36.5	279 25.8	177 16.4	231 21.3	2.77	1.15
	Weighted mean					**2.84**	
Visual resources							
1.	Photographs	416 38.4	264 24.4	216 20	186 17.2	2.84	1.11
2.	Projectors	360 33.3	331 30.6	170 15.7	221 20.4	2.76	1.11
3.	Flipcharts	346 32	350 32.3	173 16	213 19.7	2.76	1.1
4.	Pictorial and Graphic Boards	369 34.1	279 25.8	198 18.3	236 21.8	2.72	1.14
5.	Banners	307 28.4	354 32.7	207 19.1	214 19.8	2.69	1.08

6.	Educational Films	338 31.2	302 27.2	177 16.4	265 24.5	2.65	1.15
7.	Optical Aids	296 27.4	361 33.4	173 16	252 23.3	2.64	1.11
	Weighted Mean					**2.72**	
Audio-visual resources							
1.	Marker and Electronic Boards	388 35.9	287 26.5	154 14.2	253 23.4	2.74	1.17
2.	Audio-Visual Animated Simulations for teaching complex concepts	355 32.8	289 26.7	203 18.8	235 21.7	2.71	1.13
3.	Television	343 31.7	306 28.3	169 15.6	264 24.4	2.67	1.16
4.	Video Compact Discs and Players	356 32.9	265 24.4	204 18.9	257 23.8	2.66	1.16
5.	Audio-Visual Projectors	331 30.6	303 28	182 16.8	266 24.6	2.64	1.15
	Weighted mean					**2.68**	
Realia							
1.	Real Objects	484 44.7	230 21.3	162 15	206 19	2.91	1.16
2.	Specimens	456 42.1	257 23.8	163 14.1	206 19	2.89	1.15
3.	Globes	428 39.6	254 23.5	149 13.8	251 23.2	2.79	1.19
4.	Maps	349 32.3	345 31.9	184 17	204 18.9	2.77	1.09
5.	Models	354 32.7	266 24.6	206 19	256 23.7	2.66	1.16
	Weighted mean					**2.8**	
Computer assisted instructional educational media resources							
1.	Internet Facilities	510 47.1	268 24.8	166 15.3	138 12.8	3.06	1.06

2.	Social Media	459 42.4	262 24.2	178 16.5	183 16.9	2.92	1.12
3.	Computers and Mobile Phones	355 32.8	405 37.4	175 16.2	147 13.6	2.89	1.01
4.	Simulation Programmes and Games	336 31.1	391 36.1	201 18.6	154 14.2	2.84	1.02
5.	Computer-Aided Instructional Software	344 31.8	378 34.9	201 18.6	159 14.7	2.83	1.03
6.	Laptop/ I-pad	385 35.6	308 28.5	176 16.3	213 19.7	2.79	1.12
7.	Electronic Interactive Board	314 29	352 32.5	153 14.1	236 24.3	2.63	1.13
8.	Multi-media Projector	335 31	314 29	223 20.6	210 19.4	2.09	1.1
	Weighted mean					**2.75**	
	Overall mean					**2.75**	
	Criterion Mean					**2.50**	

The main aim of the fourth research question was to affirm the pattern of use (type, frequency and purpose) of educational media resources being utilised by Ogun State secondary schools' teachers. The first construct under this research question is the types used. The types and frequency of use are measured in terms of Daily, weekly, monthly and never used levels. There are five types of educational media resources identified in this study. These are audio, visual, audio-visual, realia and computer packed educational media resources. Results in Table 4.5 showed that all the resources were highly used. Based on the weighted mean generated for these scales, audio resources (weighted mean = 2.84) are the most used, followed by realia (weighted mean = 2.8), then computer packed educational media resources (weighted mean = 2.75). The visual and audio-visual instructional educational media resources (weighted mean = 2.72 and 2.68) respectively were the least used. The most sought-after educational media resources by teacher in secondary schools in Ogun state is "Audio resources" ($\bar{x}$ =2.84) and "Realia" ($\bar{x}$ =2.8), and was followed by "Computer packed instructional educational media resources" ($\bar{x}$ =2.75), "Visual resources" ($\bar{x}$ =2.72), and lastly by "Audio-visual resources" ($\bar{x}$ =2.68) respectively. The overall weighted mean for all the five constructs also suggests that the use of educational media resources by secondary school teachers is high and all the five types identified in this study, audio, visual, audio-visual, realia and computer packed educational media resources, were used. The percentage frequency of use of educational media resources for all five types of educational media resources indicates that teachers do use the resources daily. Therefore, the frequency of use of educational media resources among Ogun State secondary schools' teachers is daily.

Table 4.6 Perception of students about their teachers' use of educational media resources during the teaching and learning process

Do your teachers use educational media resources during teaching and learning	Frequency	Percentage
No	574	78.3
Yes	159	21.7
Total	733	100.0

Table 4.6 showed students' perception of the use of educational media resources during the teaching and learning process by their teachers. The majority of 574(78.3%) of the students indicated that their teachers do not use educational media resources during the teaching process, and 159(21.7%) students indicated their teachers do use educational media resources during teaching in the study.

Table 4.7 Students' perception of the educational media resources used by teachers during the teaching and learning process

s/n	Educational media resources	Never	Occasionally	Often	Very Often	$\bar{x}$	S.D
	Audio resources (Weighted mean =2.40)						
1	Public Address Systems	195 26.6%	146 19.9%	49 6.7%	343 46.8%	2.74	1.290
2	Audio educational media resources in MP3 formats usable through handsets, PDAs, and computers	239 32.6%	149 20.3%	72 9.8%	273 37.2%	2.52	1.284
3	Audio Compact Discs and Players,	219 29.9%	197 26.9%	71 9.7%	246 33.6%	2.47	1.233
4	Audio Tapes and Players,	255 34.8%	86 11.7%	357 48.7%	35 4.8%	2.23	0.986
5	Radio	380 51.8%	89 12.1%	124 16.9%	140 19.1%	2.03	1.205
	Visual resources (Weighted mean =2.29)						
6	Optical Aids	168 22.9%	130 17.7%	201 27.4%	234 31.9%	2.68	1.147
7	Pictorial and Graphic Boards	139 19.0%	265 36.2%	174 23.7%	155 21.1%	2.47	1.026
8	Educational Films	301 41.1%	106 14.5%	141 19.2%	185 25.2%	2.29	1.238
9	Banners	241 32.9%	215 29.3%	147 20.1%	130 17.7%	2.23	1.090
10	Photographs	324 44.2%	183 25.0%	16 2.2%	210 28.6%	2.15	1.260
11	Projectors	231 31.5%	240 32.7%	185 25.2%	77 10.5%	2.15	0.984
12	Flipcharts	253 34.5%	272 37.1%	117 16.0%	91 12.4%	2.06	0.999
	Audio-visual resources (Weighted mean =2.35)						

13	Audio-Visual Projectors	135 18.4%	171 23.3%	241 32.9%	186 25.4%	2.65	1.051
14	Video Compact Discs and Players	254 34.7%	116 15.8%	110 15.0%	253 34.5%	2.49	1.279
15	Marker and Electronic Boards	185 25.2%	273 37.2%	87 11.9%	188 25.6%	2.38	1.120
16	Audio-Visual Animated Simulations for teaching complex concepts	280 38.2%	174 23.7%	130 17.7%	149 20.3%	2.20	1.155
14	Television	378 51.6%	116 15.8%	68 9.3%	171 23.3%	2.04	1.242
	Realia (Weighted mean =2.58)						
18	Real Objects	198 27.0%	12 1.6%	162 22.1%	361 49.2%	2.94	1.260
19	Models	231 31.5%	10 1.4%	238 32.5%	254 34.7%	2.70	1.239
20	Specimens	181 24.7%	174 23.7%	116 15.8%	262 35.7%	2.63	1.202
21	Maps	257 35.1%	124 16.9%	188 25.6%	164 22.4%	2.35	1.174
22	Globes	226 30.8%	266 36.3%	64 8.7%	177 24.1%	2.26	1.138
	Computer packed instructional educational media resources (Weighted Mean =2.42)						
23	Internet Facilities	177 24.1%	124 16.9%	74 10.1%	358 48.8%	2.84	1.264
24	Computer-Aided Instructional Software	190 25.9%	195 26.6%	134 18.3%	214 29.2%	2.51	1.164
25	Simulation Programmes and Games	192 26.2%	178 24.3%	180 24.6%	183 25.0%	2.48	1.129
26	Computers and Mobile Phones	161 22.0%	248 33.8%	142 19.4%	182 24.8%	2.47	1.089
27	Laptop/ I-pad	229 31.2%	172 23.5%	116 15.8%	216 29.5%	2.44	1.209

25	Multi-media Projector	205 28.0%	193 26.3%	158 21.6%	177 24.1%	2.42	1.135
26	Electronic Interactive Board	363 49.5%	74 10.1%	134 18.3%	162 22.1%	2.13	1.244
30	Social Media	287 39.2%	246 33.6%	62 8.5%	138 18.8%	2.07	1.107
Overall weighted mean = 2.40							
Criterion mean = 2.50							

Table 4.7 showed students' perception of the educational media resources used by teachers during the teaching and learning process in secondary schools in Ogun State, Nigeria. The most used educational media resources by the teacher in secondary schools in Ogun State is "Realia ($\bar{x}$ =2.58)" and was followed by "Computer Assisted Instructional Educational media resources" ($\bar{x}$ =2.42), "Audio resources" ($\bar{x}$ =2.40), "Audio-visual resources" ($\bar{x}$ =2.35), and lastly by "Visual resources" ($\bar{x}$ =2.29) respectively. The overall mean of 2.40 showed low use of resources.

Table 4.8 Comparison of teachers' utilisation claim and students' perception

S/N	Instructional material utilisations	Students' perceptions based on the mean score	Teachers utilisation claim
1	CPI	Below average	Above average
2	Realia	Above average	Above average
3	Audio-visual	Below average	Above average
4	Audio	Below average	Above average
5	Visual	Below average	Above average

The teachers' pattern of utilisation of educational media resources claim contradicts the student's perception claim of use by teachers during the teaching and learning process.

Table 4.9 Purpose of use of educational media resources utilised by teachers

s/n	Purpose of use of media resources	SD	D	A	SA	$\bar{x}$	S.D
1	I use a marker and electronic board to introduce a topic	50 4.6%	151 14.0%	363 33.5%	518 47.9%	3.25	0.862
2	I use textbooks and other online educational media resources to prepare lesson notes for classes	36 3.3%	138 12.8%	441 40.8%	467 43.2%	3.24	0.798
3	I use photographs, textbooks and additional reading materials for class management and giving assignments to students	86 7.9%	183 16.9%	406 37.5%	407 37.6%	3.05	0.928
4	I use the internet and other online educational media resources for current affairs and further reading	71 6.6%	181 16.7%	468 43.3%	362 33.5%	3.04	0.874
5	I use social media and the internet for peer learning	69 6.4%	208 19.2%	477 44.1%	328 30.3%	2.98	0.867
6	I use real objects and digital video discs for teaching complex concepts	69 6.4%	229 21.2%	473 43.7%	311 28.7%	2.95	0.867
7	I use audio-visual aids as part of the teacher's lesson delivery	74 6.8%	216 20.0%	507 46.9%	285 26.3%	2.93	0.856
8	I use a multi-media projector as a stimulus for class discussion	98 9.1%	261 24.1%	380 35.1%	343 31.7%	2.89	0.954
9	I use audio/ video compact discs and television for language teaching	140 12.9%	176 16.3%	437 40.4%	329 30.4%	2.88	0.986
10	I use Computer Programmes and Games for simulations	127 11.7%	289 26.7%	435 40.2%	231 21.3%	2.71	0.932
Weighted mean = 2.99							
Criterion mean = 2.50							

The second construct under the use pattern of educational media resources is the purpose of use. The ten items measuring this construct include the introduction of the topic to be taught, part of lesson delivery, stimulating class discussion, class simulation, peer learning, teaching complex concepts and current affairs plus further reading, class management and giving assignments, preparing lesson notes and teaching language skills. Following the results, Table 4.5.4 above showed the purpose of the utilisation of digital instructional resources by Ogun State secondary schools' teachers. "I use marker and electronic board to introduce a topic" ($\bar{x}$ =3.25) was ranked highest by the mean score rating as the main purpose of use of educational media resources and was followed in succession by "I use textbooks and other online educational media resources to prepare lesson notes for classes" ($\bar{x}$ =3.24), "I use photographs, text books and additional reading materials for class management and giving of assignments to students" ($\bar{x}$ =3.05), "I use internet and other online educational media resources for current affairs and further reading" ($\bar{x}$ =3.04), "I use social media and the internet for peer learning" ($\bar{x}$ =2.98), "I use real object and digital video disc for teaching complex concepts" ($\bar{x}$ =2.95), "I use audio-visual aids as part of teacher's lesson delivery" ($\bar{x}$ =2.93), "I use multi-media projector as stimulus to class discussion" ($\bar{x}$ =2.89), "I use audio/ video compact disc and television for language teaching" ($\bar{x}$ =2.88), and lastly by "I use Computer Programmes and Games for simulations" ($\bar{x}$ =2.71) respectively.

Hence, the purpose of the use of educational media resources by secondary school teachers in Ogun State, Nigeria includes introducing a topic, preparing lesson notes for classes, class management and giving an assignment to students, current affairs and further reading, and peer learning respectively.

4.10. Research question five: What is the joint contribution of secondary school teachers' personality factors, critical thinking and attitude towards educational media resources dimensions on utilisation of educational media resources in Ogun State, Nigeria?

Table 4.10: Summary of Regression analysis showing the joint contribution of personality factors, critical thinking, and attitude towards educational media on the utilisation of educational media resources

R	**R Square**		**Adjusted R square**	**Std. the error in the estimate**	
.577	.333		.331	18.97645	
A N O V A					
Model	**Sum of squares**	**DF**	**Mean square**	**F**	**Sig.**	**Remark**
Regression	193727.089	3	64575.696	179.324	.000	Sig.
Residual	388194.005	1078	360.106			
Total	581921.094	1081				

Table 4.10 above shows the joint contribution of personality factors, critical thinking, and attitude towards educational resources on the utilisation of educational media resources. The table above reveals a coefficient of multiple correlations R = .577 and a multiple R^2 of .333. This indicates that when the three predictor variables were combined, they explained 33.3% of the variation. The composite contribution significant was determined at $\alpha = 0.05$. The table reveals that the analysis of variance for the regression yielded an F-ratio of 179.324 (significant at 0.05 level). This suggests that the independent factors' combined contribution to the dependent variable was significant and that additional variables not considered in this model might have contributed to the remaining variation.

4.11. Research question six: What are the relative contributions of secondary school teachers' personality factors, critical thinking and attitude to educational media to educational media resources utilisation in Ogun State, Nigeria?

Table 4.11 Summary of the relative contribution of secondary school teachers' personality factors, critical thinking and attitude to educational media to educational media resources utilisation in Ogun state, Nigeria

Model	**Unstandardized Coefficient**		**Standardized Coefficient**	**T**	**Sig. p**
	B	**Std. Error**	**Beta contribution**		
(Constant)	4.032	3.686		1.094	.274
Personality factors	.267	.039	.230	6.798	.000
Critical thinking	.665	.084	.297	7.954	.000
Attitude towards Educ. media	.548	.149	.129	3.684	.000

Table 4.11: shows the relative contribution of the independent variables to the dependent variable, expressed as beta weights, viz: Personality factors ($\beta = .230$, $p<.05$), Critical thinking ($\beta = .297$, $p<.05$), Attitude towards educational media resources ($\beta = .129$, $p<.05$) respectively. Hence, personality factors, critical thinking, and attitude to educational media resources utilisation were significant i.e., could independently and significantly predict the utilisation of educational media resources by secondary school teachers in the study.

4.8 Answers to hypothesis

Findings of the three research hypothesis that were raised in this study are presented in this section. The three hypothesis were answered using the Pearson Product Moment Correlation coefficient.

Hypothesis one: There is no significant relationship between the Ogun State teachers' personality factors and the utilisation of educational media resources.

Table 4.12: Pearson product moment correlation showing the relationship between the Ogun State teachers' personality factors and the utilisation of educational media resources

Variables	Mean	Std. Dev.	N	R	p-value	Remark
Personality factors	88.6364	35.1724	1082	.598*	.000	Sig.
Educational media resources utilisation	79.0909	22.3371				

*Sig at .05 level

Table 4.12: presents the correlation between the teachers' personality factors and the utilisation of educational media resources by teachers in Ogun State, Nigeria. To establish the relationship, a Pearson product-moment correlation was conducted. The result showed that there was a positive significant relationship between teachers' personality factors and the utilisation of educational media resources by teachers in Ogun State, Nigeria r = .598*, n= 1082, p <.05). In this study, any P value that is less than 0.05 which is the significance level indicated that the stated null hypothesis will be rejected. Hence, from the study, improvement in the teachers' personality factors in Ogun State, Nigeria results in better educational media resource utilisation. Therefore, the hypothesis states that there is no significant relationship between the Ogun State teachers' personality factors and the utilisation of educational media resources is rejected.

Hypothesis two: There is no significant relationship between the critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources.

Table 4.13: Pearson product moment correlation showing the relationship between critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources.

Variables	**Mean**	**Std. Dev.**	**N**	**r**	**p-value**	**Remark**
Critical thinking	49.0909	10.5194	1082	.366*	.000	Sig.
Educational media resources utilisation	79.0909	22.3370				

*Sig at .05 level

Table 4.13: presents the correlation of the relationship between the critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources in Ogun State, Nigeria. To establish the relationship, a Pearson product-moment correlation was conducted. The result shows that there was a positive significant relationship between the critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources in Ogun State, Nigeria r = .366*, n= 1082, p <.05). In this study, any P value that is less than 0.05 which is the significance level that the stated null hypothesis will be rejected. Hence, from the study, improvement in critical thinking increases the utilisation of educational media resources in Ogun State, Nigeria. Therefore, the hypothesis states that there is no significant relationship between the critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources in Ogun State, Nigeria is rejected.

4.15 Hypothesis three: There is no significant relationship between the Ogun State secondary school teachers' attitude towards educational media resource utilisation and utilisation of educational media resources.

Table 4.14: Pearson product moment correlation showing the relationship between the Ogun State secondary school teachers' attitude towards and utilisation of educational media resource.

Variables	Mean	Std. Dev.	N	R	p-value	Remark
Critical thinking	19.7273	5.3111	1082	.661*	.000	Sig.
Educational Media Resources Utilisation	79.0909	22.3370				

*Sig at .05 level

Table 4.14 presents the correlation between the Ogun State secondary school teachers' attitudes towards educational media resource utilisation and the utilisation of educational media resources by teachers in Ogun State, Nigeria. To establish the relationship, a Pearson product-moment correlation was conducted. The result shows that there was a positive significant relationship between the Ogun State secondary school teachers' attitude towards and utilisation of educational media resources by teachers in Ogun State, Nigeria r = .661*, n= 1082, p <.05). In this study, any P value that is less than 0.05 which is the significance level indicates that the stated null hypothesis will be rejected. Hence, from the study, improvement in the Ogun State secondary school teachers' attitude towards the use of educational media resources results in better utilisation of educational media resources. Therefore, the hypothesis states that there is no significant relationship between the Ogun State secondary school teachers' attitude towards educational media resource utilisation and the utilisation of educational media resources by teachers in Ogun State, Nigeria is rejected.

4.16 Qualitative data

This section presented the qualitative data collected through in-depth interview based on research questions three and four

Research question three: What is the secondary school teachers' attitude in Ogun State, Nigeria towards educational media resource utilisation?

Based on teachers' responses to the qualitative interview, they have knowledge of Educational Media Resources and a cheerful disposition toward it.

The responses of the teachers when they were asked whether they get anxious or panic whenever they have to deal with something new or complex indicates that sometimes they get anxious when they have to use a new educational media Resource

Emotional reactions to the use of educational media resources

Negative Emotions

Teacher A*: Yes, I always get anxious because I want to know what that thing is all about and what I really should do about it.* [**Teacher A is a Female, Home Economics teacher in an urban school in Abeokuta South Local Government Area]**

Teacher B: *I must say that I sometimes panic but mostly anxious and excited to learn something new in order to give to my students. After learning it by the grace of god, I'll be at ease and be able to pass it down to my students.* **[Teacher B is a female, business study teacher in an urban school in Abeokuta South Local Government]**

(Positive Emotions and Attitude)

Teacher C*: Well, actually, I am always okay. The only thing is to learn more about it. Someone doesn't need to panic. You just need to learn more. Like, during Covid-19, we were introduced to google meet method of teaching students, I mean online teaching. We actually adapted to it later. It is just about making up your mind to learn.* **[Teacher C is male computer studies teacher in an urban school in Abeokuta South Local Government]**

Teacher D: I am very comfortable to use media resources of any type for instructional delivery

[**Teacher D is a female, basic science teacher in a rural school in Ifo Local Government**]

From the transcript of the in depth interview, the attitude of junior secondary school teachers to the use of educational media resources ranged from negative to positive. Teachers A and B showed a negative attitude that is laden with negative emotions such anxiety and panic when they are to utilise educational media resources. Although the Teachers A and B expressed openness to experience of utilisation of media resources along with the anxiety combination a positive attitude towards using educational media resources. The teachers C and D were the one with a positive attitude in totality and it is important to note that C is a male and computer science teacher while D is a female basic science teacher. Although the number of respondents is too small to make a generalization on the link between the variables (subject area) and attitude to utilisation of educational media resources for teaching.

Research question four: What is the pattern of use (type, frequency and purpose) of educational media resources being utilised by teachers in secondary schools in Ogun State, Nigeria?

Based on the teachers' responses, the purpose of use of educational media resources ranges from to; verification of information on the topic the teacher is teaching, plan lesson, introduce lesson, do assignment, and teach.

(Verify information on the topic the teacher is teaching)

. ***Teacher D:*** *Whenever I get information, I always want to go online to discover and check people that have been using it, to know more so that when the learners ask questions, it will be easy to answer their questions. I get information about teaching strategy mostly online through suraasa (this is an application for teachers to get mentorship)* **[Teacher D is a female, basic science teacher in and rural school in Ifo Local Government]**

Teacher B*: Basically, because of my subject, it changes and we need o teach the students fact and not myth. So, I do verify information before passing it to my students so that they will not go home with wrong information. I verify with the help of the internet, I google information in case it is kind of something deliberated in the class, so, I google to get facts.*

Teacher B*: I don't wait for conferences before updating my knowledge in my area. So, I google some scientific applications online in order to get updated.*

[Using educational media resources for planning lesson]

Teacher A: Not really the introduction of the lesson but just as an instructional material that they can always see and know what it looks like in case they don't have the opportunity or the privilege to touch it somewhere else.

Teacher B: ...for lesson introduction and in depth learning of each topic.

Teacher C: Majorly, we use it to teach our students in the class and when assignment is given, they can do it on their parents' phone and send it back to the group

[Types of media resources used]

Teachers also select and use different types of educational media resources that suit their subject and the topics.

Teacher A*: In some aspects, you have to make use of life instruments depending on the topic you're teaching them. Like, if you are talking about keyboarding, you have to bring the computer, your laptop, or the keyboard to the class, and if you have a typewriter, you can also bring it for the students in a school that doesn't have a business study lab so they can see it. Sometimes, you show it to them or call them one after the other to touch it and know how it feels.*

Teacher B*: Mostly, we use the chart because sometimes we take them around since it is science and sometimes, we come in with a projector in order to see real life objects that we cannot see around.*

Teacher C**:** *Actually, what we use it to teach is mathematics as I told you earlier on, majorly, we use our own boards and markers and every other thing. But, if you have an assignment to give based on time, you can send it to their whatsapp group. You can also do corrections and send them to them. Majorly, we use that one after the major class because of time. But the one we use majorly in the class is just the board and marker.*

[Availability of educational media resources]

According to the teachers, some of these educational media resources are not available and accessible in the school.

Teacher A: They are not really accessible and I don't know why the school does not have it. But, in my own case, I improvise whenever I need it.

Teacher B: We have various charts which are very much available. But, in the case of the projector, sometimes, we have electricity constraints. We don't often use them, but for the charts, we have various charts.

Teacher C: The ones we have majorly in the school are the projector and a board, apart from our graph board and other mathematical equipment. Those are the ones available.

Students' responses to teachers' utilisation of educational media resources

[Frequency of use and the discipline of teachers]

From students' responses, some subject teachers make use of educational media resources more frequently than others. These include basic science, basic technology and computer teachers.

(**Students A and B are male from urban school while C is female in a rural school and D is male from rural. E and F are females from urban School)**

[Discipline of teachers using media resources and number of teachers using it]

Interviewer: So, how many of your teachers use educational media resources to teach you?

Student A: Our computer teacher.

Student B: Computer teacher.

Student C: Three teachers. Basic technology, computer, and sometimes English when she wants to use her phone to search a dictionary or so.

[**Teachers who use frequently]**

Interviewer: Is there a teacher that uses educational media resources very well other than the three subjects you have mentioned and what subject is that?

Student A: None of them.

Interviewer: So, it is just on a fairly moderate level.

Student A: Yes

Student B: Computer

Student C: Computer teacher. He uses phone and laptop to explain to us. For example, how to open an email account.

Student D: Business studies teacher uses flex to teach us.

Based on the students' responses, teachers use board, projector, flex, computer and mobile phones. The students also gave different reasons why subject teachers in junior secondary schools use educational media resources.

Interviewer: For what purposes do you think your teacher uses educational media resources during lessons? Is it during the introduction of the lesson or for assignment or for classwork?

Student A: Classes and assignments.

Student B: For introduction, that is basic technology, for assignment, that is computer.

Student C: The computer teacher uses it during the introduction when he wants to explain to us.

Student D: So that we will not easily forget the lesson since we have seen it with our eyes.

Student E: To make the class lively.

Student F: To enlighten the pupils more.

4.16 Discussion of the findings

4.16.1 Personality factors that can affect the use of educational media resources by secondary school teachers in Ogun State, Nigeria

Results from the findings indicate that the teachers' openness to experience is high. Therefore, this study established that teachers possess high personalities as far as openness to experience is concerned. The study also found that the teachers' conscientiousness is regarded as high. This is an indication that the teachers were painstaking in their teaching activities such as going the extra mile to develop alternative teaching aids in the absence of the ones that are supposed to be provided by the government. The study equally found that extraversion which is an extroverted disposition of the teachers is equally high. It was also established that the teachers' agreeableness, which means how the teachers' temperamental disposition is agreeable to relating with colleagues to improve teaching activities, is high. Equally, the neuroticism of the teachers which is their mental or personality disturbance not attributable to any known neurological or organic dysfunction of the teachers is low. Overall, the personality of the teachers based on the Five-Factor Model of Personality of McCrae and Costa (1986) is high.

The results of this study lends support to the study of Yu (2021) who focused on how to better use online learning platforms by lecturers in the Covid-19 era. The conclusion of the findings showed that personality traits have an impact on the results of online learning. It led to a rise in the use of online learning strategies that highlighted positive

personality qualities like conscientiousness, agreeableness, and openness to new experiences over those that highlighted extraversion and neuroticism, which underperformed. As a consequence of the investigation, it was discovered that the respondents' personality elements were strong.

These findings also contradicted the research conducted by Buabeng-Ando (2012) who examined the factors that influence teachers' decisions to adopt and incorporate educational information and communication technology into their classes in Ghanaian secondary schools. The study identified, among other things, the lack of confidence among teachers as a deterrent to the successful uptake and utilisation of ICTs in the classroom. The high neuroticism level of "lack of confidence" had a substantial impact on how little educational media technology was used by teachers

4.16.2 Critical thinking level of secondary school teachers in Ogun State, Nigeria

The propensity to systematicity, analyticity, conversance, inquisitiveness, maturity and scepticism are the foundations of the teachers' critical thinking disposition. The ability of the teachers to analyse events and come to decisions was found to be well-developed. This skill is measured by the teachers' systematicity and analytical. The temperament of the teachers' critical thinking is another indicator of how inquisitive and knowledgeable they are. It was discovered that the teachers' dispositions were very perceptive and knowledgeable about their surroundings. The study considered that the teachers' maturity and scepticism were crucial in assessing their level of critical thinking, thus it also examined these traits. According to the scale's results, teachers have a high level of maturity and scepticism. It was discovered that teachers generally have a high level of critical thinking temperament. It is safe to say that the teachers have strong critical thinking skills.

This study demonstrated the need for teachers' critical thinking skills for them to be able to teach effectively. Given that, it validated Vero and Puka (2018) who claimed that they had investigated the effectiveness of critical thinking in education. The study looked at how universities might encourage young people to engage in critical thought as a kind of education. According to the study, critical thinking must be incorporated into the teaching process to encourage students to think critically about societal issues. Giving to the study, young people are frequently seen in groups that evaluate and discuss various

social issues based only on their own opinions or experiences rather than on the evidence or arguments presented.

The results of this study, which showed that teachers had high critical thinking, contradict the preliminary findings of Changwong, Sukkamart, and Sisan (2018), who found that teachers in training in Thailand had moderate critical thinking when tested before beginning a longitudinal study intended to improve their critical thinking. Changwong et al. (2018) conducted an experiment on teachers and discovered that the experimental group had average critical thinking and academic success scores, and its members were happy with the model performance level, particularly the teacher's usage of the created learning materials. Although, few empirical studies support the findings of this study about teachers' critical thinking in Nigeria. However, Emeka and Chukwudi (2018) carried out a study on opinions on the topic, nevertheless. The paper concluded that critical thinking and logic skills are essential for daily human expressions, judgements, and acts. Lack of sound reasoning abilities leads to mistakes, lies, violence, and fake democracy. The paper concluded that logic and critical thinking should be centrally paramount in Nigeria's educational system due to their capacity to influence critical reasoning skills and competency in the populace. This is necessary for Nigeria to establish and sustain true democracy and development.

4.16.3 Attitude of secondary school teachers in Ogun State, Nigeria towards educational media resources utilisation

The essence of the third research question was to ascertain the teachers' attitudes to the use of educational media resources. Two sets of questions relating to positive attitudes to the use of educational media resources as well as the negative attitude were drawn. Based on the results +-captured, it was found that teachers had a positive attitude towards educational media resource utilisation. However, the results for the negative attitude still indicate that the teachers may be portraying some traits which may tend to the fact that they possess a negative attitude toward educational media resources to use. Overall, the majority of the teachers exhibited more positive attitudes toward the use of educational media than the negative attitude; therefore, it is safe to say that the teachers possess the right attitude toward the use of educational media resources.

This result contradicts the findings of Nwosu, Chuwudi, and Monday (2017) regarding the usage of educational media resources by selected scientific subject teachers

at Ilishan Remo senior level school, Ogun state. The results showed that despite having access to these resources, teachers still had a poor attitude toward utilising the media resources in the classroom which results in a low level. The discovery that teachers had the appropriate attitude toward using educational media resources for instruction is consistent with Tozer's (2017) findings about Pennsylvanian teachers who had a moderate level of attitude toward using educational media resources. The author also claimed that the use of social media communications as an educational tool was strongly predicted by teachers' views, subjective norms, and perceived behavioural control. The study so advised that progressive policies, such as those that support teachers' use of ethical educational media resources, including social media communications as a teaching tool, be supported and approved by all participants.

This findings supports what Nwosu, Shaffe, and Nurzatul (2018) discovered . Based on the authors, teachers had positive attitudes about educational media resources tools and high levels of perceived utility, perceived ease of use, and behavioural intention. The study looked at how secondary schools in the Aba North educational district use ICT and how teachers use educational media resources. It was discovered that ICT use was influenced by a favourable attitude regarding educational media resources. Based on the reports of Oyeniyi (2018), Mensa (2013), Maio and Hoddock (2010) Vaughan and Hogg (2005), and Marianne and Elaine (2005) as cited in Mensah, Okyere and Mavis (2019), this study supports the findings that A teacher can develop a positive attitude towards educational media resources because he learns to associate positive experiences or events with it. Attitude plays a crucial role in the teaching/learning situation and achievements. Therefore attitude as a psychological factor would play a major role in the way people appreciate, adopt and utilise educational media technology.

4.16.4 Pattern of use (type, purpose and frequency) of educational media resources being utilised by teachers in secondary schools in Ogun State, Nigeria

The fourth research's question primary goal was to confirm how frequently and for what purposes teachers in secondary schools in Ogun state, Nigeria, used various educational media tools. It was discovered that teachers use a variety of educational media resources elements, including audio, visual, audio-visual, realia, and computer-assisted. Additionally, it was shown that audio resources, realia, and computer-assisted instructional instructive media are the most popularly used resources. The least frequently used resources

were visual and audio-visual. Teachers in secondary schools make extensive use of educational media resources generally. According to the study, the preparation of lesson notes is the top reason for using educational media resources, followed by introducing topics, reading for current events and further reading, peer learning, managing classes and assigning homework, delivering lessons, explaining difficult concepts in class, and using simulations. Overall, educational media materials are used for a variety of teaching and learning objectives.

This result contradicts Sheed's (2019) findings, which indicated that private secondary school teachers in Oyo state primarily used technology-based educational media. She suggested that this finding might not be unrelated to how easily learning resources can be accessed via technology devices, which has revolutionised the education sector. The great utilisation of technology-based education and learning tools may also be attributed to the teachers' versatility in their use of technology as well as the private schools' ability to provide for these resources.

The above findings is at odds with Saviours' (2018) findings, which looked at the extent to which teachers used educational media resources to teach social studies and the different instructional resources that social studies teachers could use in Basic Schools in the West Mamprusi Education District in the Northern Region of Ghana. According to the study's analysis of the teacher interviews, social studies lessons are not taught using instructional materials. According to the interviews, the following are the main reasons why educational media resources aren't used in the classroom: they take up too much time to prepare and organise, are expensive for the school or teacher to purchase, are difficult to come by, fail to identify materials and staff needs, and are based on the teacher's extensive prior teaching experience. The study recommended that Social Studies teachers receive training on the importance of always teaching the subject using educational media resources through in-service training, workshops, and seminars. It also suggested that Ghana Education Service and Parent Teacher Association (PTA) support schools in terms of acquiring the necessary instructional resources to improve the teaching of social studies. Additionally, this conclusion contradicts Ogunwuyi and Omoike's (2018) study on the adaptation and use of educational media resources for efficient instruction delivery in Akure, Ondo State. The results indicated that teachers in Akure's public secondary schools were either not using or underusing educational media tools for instruction. This resulted

in sluggish and ineffective instruction, which affected students' academic achievement. However, this discovery supports the research of Tolorunleke in Nwosu (2017), who saw educational media resources as how instructions are communicated to the students to appeal to their senses of touch, seeing, hearing, and feeling to achieve desired behavioural changes. Furthermore, Öztürk and Talas (2019) stated that educational media resources had altered how people collaborate, communicate, work, study, and engage. In comparison to other educational management systems, educational media resources can be employed more readily because of their user-friendly and adaptable character. Furthermore, educational media resources are advantageous to institutions due to their qualities, which include assisting students' learning processes, expanding blended learning opportunities, and assisting teachers' teaching and evaluation processes.

4.16.5 Joint contribution of secondary school teachers' personality factors, critical thinking and attitude towards educational media to educational media resources utilisation in Ogun State, Nigeria

In this study, it was determined that the personality traits of secondary school teachers, critical thinking skills, and attitudes regarding the use of educational media resources in Ogun state, Nigeria, together made a substantial contribution. This suggests that other variables not included in this model may have accounted for the remaining variation and that the joint contribution of the independent variables to the dependent variable was considerable.

The three factors have never been integrated as independent measures against the use of educational media resources in a single study. With one or two additional variables, several studies have found comparable results. For instance, Buljeta (2013) linked psychological traits to academic success in Nigeria. He did a study on outlining and figuring out the fundamental steps in using educational media resources, presuming that they impacted and stipulated the accomplishment of their goals, roles, and responsibilities in the teaching and learning process. According to the study's findings, to complete the potential tasks of teaching using educational media resources, the teacher must be able to weigh the benefits and drawbacks of those resources and follow the guidelines for their proper usage.

Kan and Murat (2018) linked teachers' personalities to their comprehension of 21st-century skills and abilities, as well as prospective science teachers' perspectives of and attitudes about Science, Technology, Engineering, and Mathematics (STEM) and the

connections between them. It was shown that aspiring teachers have a favourable view toward STEM. Regarding attitudes toward STEM, there was no discernible gender difference. The subscales of the "21st-century Skills Competence Perception of Teacher Candidates" and the "STEM Attitude Scale" were shown to have a low and somewhat favourable connection. In teacher training programmes, suggestions for enhancing STEM and 21st-century skills training were made in light of the research's findings. In this study, teachers' personality traits, critical thinking skills, and attitudes toward using educational media resources all played a role. This is similar to a study by Bulger and Davison (2018), who found a link between using educational media resources and developing critical thinking skills. The writers discussed how media literacy is typically thought of as a process or a collection of abilities based on critical thinking. They also discussed how it has a long history of evolving following various values, swinging between participation and protection. The organisation of contemporary media literacy often revolves around five key themes: youth involvement, teacher preparation and curriculum materials, parental support, policy initiatives, and evidence base development. Programs similar to this have shown promising results, linking critical thinking with behaviour modification, and evaluating partisan content.

The results of this research corroborated those of Weng, Yang, Ho, and Su's (2018) investigation into schoolteachers' attitudes toward the intention to use multimedia. The Technology Acceptance Model (TAM) was utilised as the fundamental model to investigate the effects of the educational media resource environment on the perceived usefulness, perceived ease of use, and attitude toward using multimedia, as well as the relevance and influence of these attitudes on behavioural intention. The findings indicated that making multimedia content more accessible would increase the likelihood that it would be used. Utilization intentions are also influenced by one's attitude toward using.

Gretter and Yadav (2018) exploratory research of pre-service teachers is refuted by this conclusion. The study aimed to investigate the motivations and assumptions that underlie pre-service teachers' intention to implement the planned behaviour theory in the media and information literacy lessons they will provide in their future classes. Findings indicated that although pre-service teachers view media literacy and information literacy as crucial skills, they do not believe that their teacher education programme emphasises these concepts, and many do not believe that other stakeholders like faculty, school administrators, and parents support them. According to the study's findings, pre-service

teachers may benefit from teacher modelling of media and information literacy to assist them to gain confidence in using it in their future employment.

The result of the study by Alshmrany and Wilkinson (2017) who looked at the variables impacting teachers' use of educational media resources in Saudi Arabian primary schools, is also made concrete by the discovery. The study looked into the elements affecting how primary school teachers in Saudi Arabia adopted educational media resources as a teaching aid. Data analysis revealed that participants' effort expectations and level of computer literacy had a substantial beneficial impact on the study and their willingness to put forth the effort, both of which had a favourable impact on their willingness to adopt ICT. However, Saudi culture, social circumstances, system quality, and other barriers prohibited primary school teachers from using educational media tools. To ensure the successful use of educational media resources in the classroom, the study's findings will help the Saudi government strengthen the positive characteristics and eliminate or diminish the negative ones.

The results of this study are consistent with those of Steel (2017), who found a strong correlation between the amount of ICT and both teacher attitude and instructional support. According to the author, a teacher's personality will influence whether or not educational media tools are adopted and used as instructional support. The goal of the study was to quantify the links between the variables that influence how much technology (ITC) is used in the classrooms of Georgia high school teachers. It was discovered that teachers' attitudes toward educational media resources were incorrect, which negatively impacted their usage of these resources for teaching. Therefore, the study recommended that the government support professional development by increasing the use of technology to increase compliance with state technology standards, which will create good social change through improved teaching and learning.

4.16.6 Relative contributions of secondary school teachers' Personality factors, critical thinking and attitude towards educational media to educational media resources utilisation in Ogun State, Nigeria

The results of this study show that personality traits, critical thinking skills, and attitudes toward the use of educational media resources were significant, that is, they could independently and significantly predict the use of educational media resources by

secondary school teachers in the study. Teachers' personality traits, critical thinking skills, and attitudes about the use of educational media resources are all psychological characteristics that favourably affect their usage of these tools. This has the conclusion that the factors independently and relatively influenced how the teachers used the resources provided by the media for instruction.

This result dismisses Tomik's (2018) conclusion, which examined the influence of the Big Five personality traits on the academic performance of "teacher trainees" in Slovakia. It was conducted to investigate the association between the Big Five personality traits and the "teacher trainees' academic achievement measured by their grade point average" (GPA). The outcome demonstrated that the personality element was important to academic performance, however, only the personality characteristic of conscientiousness was positively correlated with academic performance GPA. Additionally, it was discovered that the personality characteristic of conscientiousness was a statistically significant predictor of academic achievement among "teacher trainees." The study concluded that despite the substantial association and prediction between the personality characteristic of conscientiousness and GPA identified in the research, trainee teachers' personality qualities must be adequately developed for higher academic achievement. This findings support Azizi, Sedaghat, and Direkvand-Moghadam (2018) findings that studied the effect of critical thinking education on the problem-solving skills and self-esteem among the Iranian female teachers. The research finding showed that there was a significant difference between the two groups; those with problem-solving skills/self-esteem and those without critical thinking education. The study concluded that teaching of critical thinking skill to the teachers had a positive effect on problem-solving skills and self-esteem. Therefore, it can be said that critical thinking education is one of the important tools to create, cultivate and increase problem-solving skills and self-esteem among teachers.

4.16.7 Relationship between the Ogun State teachers' personality factors and the utilisation of educational media resources

It was found that there was a positive significant relationship between teachers' personality factors and the utilisation of educational media resources by teachers in Ogun state, Nigeria. Therefore, improvement in the teachers' personality factors in Ogun state, Nigeria results in better educational media resource utilisation. This study rejected the first

hypothesis based on this fact. This finding is an extension of earlier studies like Saviour (2018) and Kan and Murat (2018). For example, Saviour (2018) examined the extent of teachers' utilization of educational media resources in teaching Social Studies and the various instructional resources that can be utilized by Social Studies teachers for teaching purposes in Basic Schools within West Mamprusi District of Ghana. The study found that teachers' personality was responsible for non-usage as they do not use instructional resources in the teaching of social studies during the interviews conducted. The causal factors for not using educational media resources in teaching from the interviews include; waste of time in preparing and organizing instructional resources to teach a particular topic, difficulty to obtain and expensive to buy by either the teacher or school, financial constraints, teachers' lack of identification of materials and human resources, and teachers basing their lack of media resource used to their many years of experience in teaching the subject. The study recommended that social studies teachers need to be given orientation on the need to always teach the subject using educational media resources through in-service training, workshops, and seminars, Ghana Education Service and Parent Teacher Association (PTA) should support schools in terms of procuring the needed instructional resources to enhance the teaching of social studies.

4.16.8 Relationship between critical thinking of Ogun State secondary school teachers and the utilisation of educational media resources

It was found that there was a positive significant relationship between the critical thinking of Ogun state secondary school teachers and the utilisation of educational media resources in Ogun state, Nigeria. The meaning of this finding is that improvement in the critical thinking level results in an increase in the utilisation of educational media resources in Ogun state, Nigeria. The hypothesis was rejected based on this.

Thus, the assertion of Bulger and Davison (2018) that there is an association between educational media resources utilisation and critical thinking is correct. The authors discussed that media literacy is traditionally conceived as a process or set of skills based on critical thinking and that it has a long history of development according to different values, swinging between protection and participation. Contemporary media literacy tends to organize around five main themes: youth participation, teacher training and curricular resources, parental support, policy initiatives, and evidence base construction. Programs

like these have demonstrated positive outcomes, particularly in the case of rapid responses to breaking news events, connecting critical thinking with behaviour change, and evaluating partisan content.

In addition, this study established a relationship between critical thinking and the use of educational media resources by secondary school teachers. It corroborated the study of Fulford (2018), who explored whether high school teachers in an urban-suburban Midwest region of the United States have sufficient knowledge and skills to incorporate higher-order thinking skills (HOT) instruction for the American Association of Mathematics Teachers (AAMT). Participants from this study suggested that problem-solving was the main higher-level thinking skill for AAMTs. These local teachers also used the Socratic questioning method as their primary instructional strategy but limited constructivist activities for AAMSs to engage in during the instructional process.

The findings from the data collection support the development of a professional training programme. The professional development of the program could help teachers engage AAMTs in increasing their academic endeavours. Also, teachers can participate in professional learning communities by communicating concerns about AAMSs, using HOT skills to increase AAMSs literacy performance, becoming change agents and promoting a positive social change by using constructivist practices in the school curriculum and instructions for AAMSs, eventually closing the achievement gap.

4.16.9 Relationship between the Ogun State secondary school teachers' attitude towards educational media resources utilisation and the utilisation of educational media resources

A positive significant relationship between the Ogun state secondary school teachers' attitude towards and utilisation of educational media resources by teachers in Ogun state, Nigeria was established in this study. Hence, from the finding, improvement in the Ogun state secondary school teachers' attitude towards the use of educational media resources results in better utilisation of educational media resources. This finding shows similarity with what was found by Oyeniyi (2018), Mensah (2013), Vaughan and Hogg (2005), and Marianne and Elaine (2005) that if teachers have the right attitude to the use of educational resources, its usage and implementation to teaching and learning will be seamless.

It also supported the assertion of Maio and Haddock (2010) who postulated that there are huge benefits brought by ICT use in the delivery of teaching and learning and the attitude of teachers to use educational media resources generally. The author further highlighted the benefit that ICT has brought to the education system generally stating that the educational media resources utilization has transformed the education system and that ICT has brought about lowering some obstacles involved in instructional delivery. ICT has improved instructional delivery through teleconferencing and collaboration with one another.

The finding is also in line with the study of Kan and Murat (2018) who examined the 21st-century skills, competencies, and perceptions of prospective science teachers and their attitudes towards Science, Technology, Engineering, and Mathematics (STEM) as well as the relationship between them. It was determined that prospective teachers have a positive attitude toward STEM. No significant difference was observed based on gender regarding attitude towards STEM. It was found that there is a low and moderate positive relationship between "Teacher Candidates' 21st-century Skills Competence Perception and "STEM Attitude Scale" subscales. Based on the findings of the research, proposals for improving 21st-century skills and STEM training were presented in teacher training programs.

Judge and Kammeyer-Mueller (2012) have noted as well that the limitations in the use of educational media resources among teachers are in the form of the attitude teachers possessed, with whom they share the idea among their colleagues regarding the use of educational media resources, and how their behaviour is often not studied or is studied in a sterile, though well-controlled, an experimental context which is based on their attitudes. This study, therefore, has brought a new paradigm to the use of educational media resources among teachers and has confirmed the tripartite contribution of teachers' personality factors, critical thinking and attitude of teachers towards educational media resource utilisation and use of educational media resources by secondary school teachers in Ogun State, Nigeria.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

In this chapter, summary of findings, conclusions as well as recommendations are presented and also presents the conclusion based on the result of data analysis. It as well entails this research's contribution to knowledge and suggestions for further investigation.

5.1 Summary

The study is on the tripartite contribution of teachers' personality factors, critical thinking, and attitude of teachers towards educational media resource utilisation and usage of digital instructional resources by teachers in Ogun state secondary schools. The key findings of the study are as follows:

i. Teachers' openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism were high. Overall, the personality of the teachers based on the Five-Factor Model of Personality of McCrae and Costa (1986) was high.

ii. The teachers' critical thinking disposition was found to be high. Their systematicity and analyticity, inquisitiveness and conversance, teachers' level of maturity, and scepticism were all high.

iii. The majority of the teachers exhibited more positive attitudes toward the use of educational media resources than the negative attitude; therefore, it is safe to say that the teachers possess the right attitude toward the use of educational media resources. However, some of the teachers were portraying some traits which may tend to the fact that they possess a negative attitude toward educational media resources utilisation

iv. It was found that teachers use audio, visual, audio-visual, realia, and computer-packed educational media resources. It was also established that audio resources are the ones mostly used, followed by realia and then computer-assisted instructional educational media resources, and visual and audio-visual resources are the least used.

v. It was found that the frequency of use of educational media resources among secondary school teachers is daily.

vi. The purpose of the use of educational media resources by secondary school teachers includes; introducing a topic, preparing lesson notes for classes, class management

and giving an assignment to students, current affairs and further reading, and peer learning respectively.

vii. Teachers' personality factors, critical thinking, and attitude to educational media resources were positively significant in their relative contributions to the utilisation of educational media resources by teachers in Ogun state, Nigeria.

viii. The joint significant contribution of secondary school teachers' personality factors, critical thinking, and attitude to educational media and educational media resources utilisation in Ogun state, Nigeria were established.

ix. The positive and significant relationship between teachers' personality factors and the utilisation of educational media resources by teachers in Ogun state, Nigeria was established.

x. The positive and significant relationship between the critical thinking of Ogun state secondary school teachers and the utilisation of educational media resources in Ogun state, Nigeria was established.

xi. The positive significant relationship between the Ogun state secondary school teachers' attitude towards educational media resources use and utilisation of educational media resources by teachers in Ogun state, Nigeria was established in this study.

5.2 Conclusion

The study confirmed that the secondary school teachers' personality factors, critical thinking, and attitude towards educational media resources have a significant and positive relationship with educational media resources utilisation in Ogun state, Nigeria. Furthermore, it was established in this study that the teachers' personality factors and critical thinking, and the utilisation of educational media resources were high. Teachers' attitude was right to the use of educational media resources. However, results of the negative attitude still indicate that the teachers may be portraying some traits which may tend to the fact that they possess a negative attitude toward educational media resources. About half of the respondents stated that the use of technology may be responsible for the reason the teachers' waste time while teaching. All the stated educational purposes were the reasons why the majority of the teachers are using the highlighted educational media resources which were audio-visual resources, visual resources, realia and audio and computer-packed instructional educational media resources. It has become imperative that educational media resources can be effectively utilised by teachers if their personality

factors and critical thinking disposition are improved. As for the teachers' attitude, and the use of educational media resources, the right attitude will continue to improve the usage.

5.3 Recommendations

Given the findings of the study, the following recommendations were made:

1. The Ogun state Government should promote the use of educational media resources among the teachers in the State by initiating sensitisation programmes such as workshops, seminars and training that would be regularly carried out. This is necessary since the usage of educational media resources was found to be moderate.
2. The secondary school teachers in Ogun state should work on their personality traits, particularly those that affect their interaction with colleagues and their use of educational media resources. The teachers should engage more in collaboration and resource sharing to show that they are ready for technological exchange. Therefore, the teachers should work higher on their openness to experience, conscientiousness, extraversion and agreeableness and complement their neuroticism.
3. Ogun state Government through its ministry of education must encourage and train the teachers on how to sustain the high level of their critical thinking dispositions and make more effort at increasing the tempo.
4. The teachers in Ogun state schools must improve their level of positive attitudes to the use of educational media resources. The student evaluation (see pages 106-109) showed that the teachers' use of educational media resources in teaching was low as obtained by the teachers' questionnaire data. Thus, if the teachers have a positive attitude to the use of educational media resources, their use of the media resources will improve even if the situation is stringent as it is currently the case, their positive attitude will make the usage easy since they will look less of the negative dispositions.

5.4 Contributions of the study to knowledge

This study has contributed to knowledge in the following ways:

1. The personality factors of openness to experience, conscientiousness, extraversion and agreeableness are determinant factors that can affect the use of educational media resources, but neuroticism could not

2. The critical thinking level of secondary school teachers facilitates their use of educational media resources in Ogun state, Nigeria.

3. The teachers moderately use educational media resources in teaching the students. Based on the in depth interview report.

4. Personality factors of teachers, critical thinking and attitude when taken together can improve the utilisation of educational media resources by secondary school teachers in Ogun state, Nigeria.

5. Personality factors, critical thinking and attitude to educational media resources are good predictors of educational media resources utilisation among Ogun state secondary schools teachers.

6. The conceptual model developed by the researcher for the study, would assist in further research on educational media resource utilisation and development.

5.5 Suggestions for further studies

The following are suggested for further studies:

1. Secondary school teachers' psychological factors and educational media resources utilisation in other geo-political zones in Nigeria.
2. Secondary school teachers' psychological factors and educational media resource utilisation among College of Education students in southwest, Nigeria.
3. Effect of Secondary school teachers' psychological factors and educational media resources utilisation among university students in the southwest, Nigeria.

REFERENCES

Abdul Rahman A., Jamaludin, A. and Mahmud, Z. 2011. Intention to use digital library based on modified UTAUT model: perspectives of Malaysian Postgraduate Students. *International Journal of Social, Management, Economics and Business Engineering*, 5(3), 57-63.

Abraham, L. N., and Chuku, B. J. 2018. Application of information and communication technology (ICT) in teaching Geography in Secondary Schools in Obio/Akpor, Rivers state, Nigeria. *International Journal of Scientific Research in Education*, 11(1), 28-50.

Ackerman, C. E. 2019. Big five personality traits: The OCEAN Model Explained. *Journal of Positive Psychology*. 189, 1-56p

ACRL. 2018. Guidelines for educational media resources in Academic Libraries. *American Library Association Journal.* Vol 2. 13p

Adegbore, A.M. and Salaam, M.O. 2012. Information Needs and Acquisition of School Pupils in Abeokuta, Ogun state, Nigeria. *The Official Journal of the Pacific Northwest Library Association*, Vol 75, (42), 1-7

Adeola, K. L. 2017. Computer anxiety and self-concept as correlates of teachers' attitudinal disposition towards interactive digital technologies, *Nigerian Journal of Business Education (NIGJBED), 4*(2), 328-337

Adeoye, A. A. and Adeoye, B. J. 2017. Digital Literacy Skills of Undergraduate students in Nigeria Universities, *Library Philosophy and Practice (e-journal), 1665*.

Afe, Babalola 2017. Poor state education Nigeria. Kaduna State Mirror. (2), 11p.

Afhami, R., and Mohammadi-Zarghan, S. 2018. The Big Five, aesthetic judgment styles, and art interest. *Europe's Journal of Psychology*, 14, 764-774.

Afolabi, O.A. 2014. Do personality and gender have effects on marital satisfaction and mentoring relationships among Nigerian nurses? *Nigerian Journal of Applied Behavioural Sciences*, 2, 153- 165.

Ajayi, O. K. and Adewale, K. A. 2016. Study habits and ' attitudes as determinants of ' academic achievement in economics in senior Secondary Schools in Ogun state, *Nigerian Inquiry in the Humanities (NITH),* 2(1), 35-43

Ajzen, I. 1991. The theory of planned behaviour, *Organizational Behavior and Human Decision Processes*, 50(2), pp.179-211.

Ajzen, I. 2012. The theory of planned behaviour. In P. Lange, A. Kruglanski, and E.T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 438-459). London, UK: Sage.

Akande, S. O. 2017. The role of School Library in the academic motivation of secondary school students in Osun State, Nigeria. *International Journal of Library Science* 6(1) 18-27.

Akande, S. O. 2018. Effects of social media use on the reading habits of selected High School Students in Nigeria. *Information Impact Journal of Information and Knowledge Management* 19 (2).

Akinoso O. 2018. Effect of the Use of multimedia on students' Performance in Secondary School Mathematics, *Global Media Journal*, 16(30), 1-8.

Akujobi O. S. and Chukwu E. 2012. Challenges of effective Teaching and learning in Nigerian Secondary Schools. *International Journal of Arts and Humanities*, 1 (4): 57-68.

Akorede, J. O, 2015. *Introduction to Educational Media and Microteaching*; Educational Media. His Grace Printers, Ijebu-Ode. Pg. 25-27.

Aleburu, V.I. 2008, *Using educational media for effective teaching in E.O Adeniyi*., T. Ajobiewe. and A.A Adejumobi, 2008, A handbook on effective classroom practices for participants In federal teachers' scheme. Universal Basic Education Commission (UBEC), publications, 71-94.

Ali, M. M., and Warfa, A. O. 2018. Pupils, Parents and Teachers Perceptions on Causes of Low Achievements in Kenya Certificate of Primary Education Examination: A Case Study in a Public School in Mandera County, Kenya. *International Journal of Academic Research in Progressive Education and Development*, 7(2).

Almajalid, R. M. 2017. A Survey on the Adoption of Cloud Computing in Education Sector. *CORR*, 1–12.

Al-Seghayer, K. 2001. The effect of multimedia annotation modes on L2 vocabulary acquisition: A comparative study. *Language Learning and Technology, 5(1),* 202-232.

Al-Senaidi, S., Lin, L., and Poirot, J. 2009. Barriers to adopting technology for teaching and learning in Oman. *Computers and Education, 53(3),* 575-590.

Alshmrany, S. and Wilkinson, B. 2017. Factors Influencing the Adoption of Educational Media Resources by Teachers in Primary Schools in Saudi Arabia. *International Journal of Advanced Computer Science and Applications*. 8, 12.

Alvarado, L.E., Aragon, R. 2020.Teachers' Attitudes towards the Introduction of Educational Media Resources in Ecuadorian Public Schools. Tech Trends. 64, 498-505

Álvarez Valencia, J. A. 2016. Language views on social networking sites for language learning: the case of Busuu. *Computer Assisted Language Learning, 29(5),* 853-867.

Alwagait, E., Shahzad, B. and Alim, S. 2015. Impact of Educational media usage on students' academic performance in Saudi Arabia. *Computers in Human Behavior,* 51 (2015), 1092– 1097.

Ani, Okon & Esin, Jacob & Edem, Nkoyo. (2005). Adoption of information and communication technology (ICT) in academic libraries. *The Electronic Library Journal. 23*. 701-708.

Araba, S. Y. 2017. Availability and Utilization of Educational Media resources for the Teaching and Learning of Hearing Impaired Students in Ogun state. An unpublished NCE Project, Federal College of Education (Technical), Akoka, Yaba, Lagos

Area Moreira, M.; Correa, J.M. Las, T. 2010. Nuevos retos educativos, nuevas prácticas docents, entran en las escuelas. In Políticas Educativas y Buenas Prácticas con TIC; De Pablos, P., Area, M., Valverde, J., Correa, J.M., Eds.; Graó: Barcelona, Spain, 43–77.

Ashaver, D. and Igyuve, S.M. 2013. The use of audio-visual materials in the teaching and learning processes in secondary school students in Ogun state-Nigeria. *IOSR Journal of Research and Method in Education, 1*(6), 44-55

Asia Society and China Institute. 2009. New York task force: Report on Chinese language and culture initiatives. *ASCI Journal, (13)2-6*

Association of College and Research Library (ACRL). 2018. ACRL Guidelines for Educational media resources in Academic Libraries 2018 Revision.

Assmann, A. 2013. Transformations of the modern time regime, in Chris Lorenz, Berber Bevernage (eds.), breaking up time: negotiating the borders between present, past and future. *Göttingen: Vandenhoeck and Ruprech.*, (3),39–56

Atalay, R. 2014. Lise ogrencilerinin sosyal medyaya iliskin tutumları ile algıladıkları sosyal destek duzeyleri arasındaki iliski (The relationship between the attitude of high school students on social media and the social support levels they perceive). Published Postgraduate Thesis. Marmara University Institute of Educational Sciences, İstanbul

Aturu-Aghedo, C. 2017. *Human and organisation behaviour*, Abuja: National Open University Publishers.

Ayllón, S., Alsina, Á. and Colomer, J., 2019. Teachers' involvement and students' self-efficacy: Keys to achievement in higher education. *Plosone, 14*(5), 1-11.

Aziz, S., Shamim, M., Aziz, M. F., and Avais, P. 2013. The impact of texting/SMS language on the academic writing of students what do we need to panic about? *Elixir Linguistics and Translation*, 55(2013), 12884-12890.

Azizi, M., Sedaghat, Z. and Direkvand-Moghadam, A. 2018. Effect of Critical Thinking Education on Problem-Solving Skills and Self-Esteem in Iranian Female, *Journal of Clinical and Diagnostic Research, 12(1), 4-7*

Babbie, E. 2013. *The Practice of Social Research.* 7thEdition.Belmont CA: Wadsworth.

Badamas, O. S. 2021. Basic school teachers' personality type as a determinant of classroom management in Lagos State Nigeria. *Journal of Education and Learning.* 15 (3) 329-334.

Bae, Y.H, Moon, S., Jun, J.W., Kim, T.; Ju, I. 2018. The Impact of Consumers' Attitudes toward a Theme Park: A Focus on Disneyland in the Los Angeles Metropolitan Area. *Sustainability, 10(10),* 3409.

Bagdasarov, Z., Luo, Y. and Wu, W., 2017. The influence of Tablet-based technology on the development of communication and critical thinking skills: An interdisciplinary study, *Journal of Research on Technology in Education* 49(1), 55–72

Bailin, S., Case, R., Coombs, J. R., and Daniels, L. B. 1999. Conceptualizing critical thinking. Journal of Curriculum Studies, 31(3), 285–302.

Baker-Eveleth, L. and Stone, R.W. 2008. Expectancy theory and behavioural intentions to use computer applications. *Inter-disciplinary Journal of Information, Knowledge, and Management,* 3, Issue no missing 135-146.

Bakhshi, S. I. 2013. Organisation and use of multi-educational media resources in Indira Gandhi national centre for arts and Desidoc, Delhi: a comparative study, *Shodhganga: a reservoir of Indian theses @ INFLIBNET.*

Balakrishnan, V., and Gan, C. L. 2016. Students' learning styles and their effects on the use of Educational media technology for learning. *Telematics and Informatics*, *33*(3), 808-821.

Balaman, F., and Karatas, A. 2012. Lise ogrencilerinin internet ortamında sosyal paylasım sitelerini kullanım amacları ve sosyal paylasım unsurları (High school students' purposes for using social networking sites on the internet and elements of social networking). *Batman University, Journal of Life Sciences, 1(1),* 497-504.

Bello, A.A. 2021. Personality Theory in General Psychology: A basic text for undergraduate. Aderanti R A (ed). Ibadan.

Barnard, J. P. 2000. A study of Internet and library use in an academic setting. *Dissertation Abstracts International,* 61 (2), 577.

Barth, M.; Godemann, J.; Rieckmann, M.; Stoltenberg, U. 2007. Developing key competencies for sustainable development in higher education. *International Journal of Sustaining Higher Education*. 8, 416–430.

Bedir, A. 2016. Sosyal medya kullanımının universite ogrencilerinin akademik basarılarına ve tutumlarına etkisi (The influence of Educational media use on the academic achievements and attitude of university students). Postgraduate Thesis. Ataturk University, Erzurum.

Bell, F., 2011. Connectivism: its place in theory', *Informed Research and Innovation in Philosophy.(12) 20-33.*

Benischke, M., Martin, G and Glaser, L. 2019. CEO equity risk bearing and strategic risk-taking: The moderating effect of CEO personality. *Strategic Management Journal,* 40(1), pp.153 – 177.

Bill and Melinda Gates Foundation. 2012. Innovation in education: Technology and effective teaching in the U.S. Seattle, WA: Bill and Melinda Gates Foundation.

Bleidorn, W., Hopwood, C. J. and Lucas, R. E., 2018. Life events and personality trait Change. J. Pers. 86, 83–96.

Blythe, J., Sethna, A. 2019. Consumer Behaviour. 4th ed. London, SAGE Publications Ltd. 576 pages.

Bouazza, A. 1989. Information user studies. *Encyclopedia of Library and Information Science*, Vol 44(9), (pp. 144-164). London: Taylor and Francis.

Bouchard, T. J. and McGue, M. 2003. Genetic and environmental influences on human psychological differences. *Journal of Neurobiology,* 54, 4-45.

Briley, D. A., Tucker-Drob, E. M. 2014. Genetic and environmental continuity in personality development: A meta-analysis. *Psychological Bulletin.* 140 (5): 1303–31

Brundiers, K.; Wiek, A.; Redman, C. 2010. Real-world learning opportunities in sustainability: From classroom into the real world. *International Journal of Sustain. Higher Education.* 11, 308–324.

Buabeng-Andoh, C. 2012. Factors influencing teachers' adoption and integration of information and communication technology into teaching: A review of the literature. International *Journal of Education and Development using Information and Communication Technology (ICT), 8(1)* 136-155.

Buczkowski, K., Basinska, M. A., Ratajska, A., Lewandowska, K., Luszkiewicz, D. and Sieminska, A. 2017. Smoking Status and the Five-Factor Model of Personality: Results of a Cross-Sectional Study Conducted in Poland. *International journal of environmental research and public health, 14*(2), 126.

Bulger, M., and Davison, P. 2018. The Promises, Challenges, and Futures of Media Literacy. Data and Society Research Institute.

Bungum, B. 2016. Transferring and transforming technology education: A study of Norwegian teachers' perceptions of ideas from design and technology. *International Journal of Technology and Design Education,* 16(1), 31-52.

Bušljeta, R. 2013. Effective Use of Teaching and Educational media resources. *Czech-Polish Historical and Pedagogical Journal, 5(2),* pp.55–69.

Butcher, K., Sparks, B. and O'Callaghan, F. 2003. Beyond core service. *Psychology and Marketing*, 20: 187–208.

Büyüköztürk, Ş. 2011. *Sosyal bilimler icin veri analizi el kitabı* (*Social sciences data analysis handbook*). Ankara: Pegem Publishing.

Cahill, M. J., M. A. McDaniel, R. F. Frey, K. M. Hynes, M. Repice, J. Q. Zhao, and R. Trousil. 2018. Understanding the Relationship between Student Attitudes and Student Learning. *Physical Review Physics Education Research* 14 (1): 16

Cakır, H. and Korucu, A.T. 2015. Dinamik web teknolojileri ile gelistirilen isbirlikli ogrenme ortamini kullanan ogretmen adaylarinin gorusleri (The views of teacher candidates using the collaborative learning medium devised through dynamic web technologies). *Adiyaman University Journal of the Institute of Social Sciences*, 19: 225.

Canning-Wilson, C., and Wallace, J. 2019. Practical aspects of using video in the foreign language classroom. *The Internet TESL Journal*, 6(11), 1-6.

Changwong, K., Sukkamart, A., and Sisan, B. 2018. Critical thinking skill development: Analysis of a new learning management model for Thai high schools. *Journal of International Studies*, 11(2), 37-48

ChanLin, L. J., Hong, J. C., Horng, J. S., Chang, S. H., and Chu, H. C. 2016. Factors influencing technology integration in teaching: A Taiwanese perspective. *Innovations in Education and Teaching International, 43(1),* 57-68.

Chapelle, C. A. 2010. Invited commentary research for practice: A look at issues in technology for second language learning. *Language learning and technology, 14*(3), 27-30.

Chen, Q. 2014. Bibliometric analysis on the study of education informatization. In Frontier and future development of Educational media resources in medicine and education (pp. 869-877). Springer Netherlands.

Cherry, K. 2022. Attitudes in Psychology: Definition, Formation and Changes. *Very well Mind.*

Chirico, A., Shiota, M. N. and Gaggioli, A. 2021. Positive Emotion Dispositions and Emotion Regulation in the Italian Population. *Plosone.* 16(3).

Choi, H. J., & Johnson, S. D. 2010. The effect of context-based video instruction on learning and motivation in outline courses. *American Journal of Distance Education, 19(1),* 215-227.

Chun, D. M., and Plass, J. L. 2016. Effects of multimedia annotations on vocabulary acquisition. *The Modern Language Journal, 80(2)*, 183-198.

Cisco. 2013. Cisco Unified Communications System 9.0 SRND. New York: CISCO

Clarke, L., and Heaney, P. 2013. Author On-Line: using asynchronous computer conferencing to support literacy. *British Journal of Educational Technology, 34(1*), 57-66.

Clore, G. L., and Schnall, S. 2005. The influence of effect on attitude. In D. Albarracín, B. T. Johnson, and M. P., Zanna (Eds.), Handbook of attitudes (pp. 437-489). Mahwah: Erlbaum

Cocioc, P., 2017. On the attitude to risk and the decision-making behaviour. Review of Economic Studies and Research Virgil Madgearu, 10(1), pp.27-46.

Colbert, A.E., Barrick, M.R. and Bradley, B.H. 2014. Personality and leadership composition in top management teams: implications for organizational effectiveness", *Personnel Psychology*, 67 (2), pp. 351-387.

Cole, C. 2008. People transforming information - information transforming people: what the Neanderthals can teach us. *Proceedings of the American Society for Information Science and Technology*, 45(1), 1-10.

Collischon, M. 2018. Can Personality factor Explain Glass Ceilings? SOE Papers on Multidisciplinary Panel Data Research 965, DIW Berlin. The German Socio-Economic Panel (SOEP).

Common Sense Media. 2012. Children, teens, and entertainment media: the view from the classroom. San Francisco, CA: Common Sense Media.

Cook, S.D.N. & Brown, J.S. 1999. Bridging epistemologies: the generative dance between organizational knowledge and organizational knowing. *Organization Science*, **10**(4), 381-400.

Corbeil, G. 2017. Can PowerPoint presentations effectively replace textbooks and blackboards for teaching grammar? Do students find them an effective learning tool? CALICO Journal, 24(3), 631-656.

Corr, P. J., and Matthews, G. 2009. *The Cambridge handbook of personality psychology*, Cambridge, U.K.: Cambridge University Press.

Costa, P. T. and McCrae, R. R. 2017. The NEO Inventories as instruments of psychological theory. In T. A. Widiger (Ed.), The Oxford handbook of the five-factor model (pp. 11– 37). Oxford, England: Oxford University Press.

Creswell, J. 2014. *Research design: Qualitative, Quantitative, and Mixed Methods approaches.* London: Sage

Creswell, J.W., 2013, *Qualitative inquiry and research design: Choosing among five approaches*, Sage, London.

Cucurull, G., Rodríguez, V. P. Yazici, O.,Gonfaus, J. M.,Roca, F. X., and Gonzàlez, J. 2018. Deep Inference of Personality factors by Integrating Image and Word Use in Social Networks. ResearchGate.

Dalege J., Borsboom, van Harreveld, F., and van der Maas, H. L. J. 2017. A network perspective on attitude strength: Testing the connectivity hypothesis. Santa Fe Institute.

DeMarree, K.G., Clark, C.J., Wheeler, S.C., Briñol, P. and Petty, R.E., 2017. On the pursuit of desired attitudes: Wanting a different attitude affects information processing and behaviour. *Journal of Experimental Social Psychology*, *70*, pp.129-142.

Demir, S. 2015. Evaluation of critical thinking and reflective thinking skills among science teacher candidates. *Journal of Education and Practice*, 6 (18), 17-22.

Demirbaş-Çelik, N. and Korkut-Owen, F. 2018. Personality and Meaning in Life: The Mediating Role of Wellness, *Universal Journal of Psychology*, 6(3), 94-103.

Dempster, E.R.; Kirby, N.F.2018. Inter-rater agreement in assigning cognitive demand to Life Sciences examination questions. Perspect Educ. 36, 94–110.

Deniz, A. 2012. Sosyal ag kullanimi ve sosyal aglarda benlik algisi: Mugla ili ornegi. (Using social networks and sense of self in social networks: the example of the province of Mugla). Unpublished Postgraduate Thesis. Ege University Institute of Science, İzmir.

Dewey, J. 1933. How We Think: A restatement of the relation of reflective thinking to the Educational Process. Lexington, MA: D.C. Heath

Diener, E., Lucas R.E. and Cumming J.A. (2019). Personality Traits: Introduction to psychology.

Di Zhang, D., and Bruning, E. 2011. Personal characteristics and strategic orientation: entrepreneurs in Canadian manufacturing companies. *International Journal of Entrepreneurial Behaviour and Research, 17(1),* 82-103.

Donnellan, M. B., and Lucas, R. E. 2008. Age differences in the Big Five across the life span: Evidence from two national samples. Psychology and Aging, 23, 558–566

Draper, J. B., and Hicks, J. H. 2012. Foreign language enrollments in public secondary schools fall 2000. U.S. Department of Education, Office of Educational Research and Improvement, Educational Resources Information Center.

Dube, P. 2020. The utilisation of Educational media resources in teaching and learning by secondary school teachers. A case of MKOBA1 High School. *International Journal of Innovative Science and Technology*. 4(9).

Dunn, W.N. 1986. Conceptualizing knowledge use. In G.M. Beal, W. Dissanayake & S. Konoshima (Eds.), *Knowledge generation, exchange, and utilization.* pp. 325-343. Boulder, Co: Westview Press.

Dwan, T., and Ownsworth, T. 2017. The Big Five personality factors and psychological well-being following stroke: a systematic review, *Disability and Rehabilitation*, 1–12.

Dzvapatsva, G.P., Mitrovic, Z. and Dietrich, A.D., 2014, 'Use of Educational media platforms for improving academic performance at further education and training colleges, *South African Journal of Information Management* 16(1), 604.

Effiong, N. H. 2017. Evaluating the Availability Accessibility and Utilization of Instructional Materials in Public Secondary Schools in Lagos State. An unpublished NCE Project. Federal College of Education (Technical), Akoka, Yaba, Lagos

Egunjobi, A.O 2012. Concise and basic concepts of educational technology. Ibadan: Jetsol Publisher

Eguz,S., Ozurk, C and Keston, A, 2019. Technology supported global education: A mixed method study. *Pegem Journal of Education and Instruction 9(4),* 1210-1244

Ejionueme, N., Hassan, A. R., and Doyin-Hassan, B. 2009. The *combined influence of motivation and personality on job performance*. *Journal of Management Studies*, 1(1), 102–115

Eke, C.I. and Singh, S., 2018, 'Social networking as a strategic tool in the management of school-based violence', *Southern African Journal of Education* 38(1), 1–8.

Ekeolere, O. I. 2018. Accessibility and Utilization of E-Learning Technology in Teaching and Learning in Tertiary Institutions in Lagos State. An unpublished PDE Project. Federal College of Education (Technical), Akoka, Yaba, Lagos.

Ekwaley, E. O. 2017. Impact of Instructional Video on Students Achievement. In Social Studies in Junior Secondary School in Lagos. An unpublished B.tech degree project. Federal University of Technology, Minna.

Emeka, C. G. and Chukwudi, E. E. 2018. Logic and critical thinking: the missing link in higher education in Nigeria, *International Journal of History and Philosophical Research,* 6(3), 1-13.

Erdelez, S. 1997. Information encountering: a conceptual framework for accidental information discovery. In P. Vakkari, R. Savolainen & B. Dervin (Eds.), Information seeking in context: proceedings of an international conference on research in information needs, seeking and use in different contexts pp. 412-421. London: Taylor Graham.

Eskja, Vero and Edi, Puka 2018. The effectiveness of critical thinking in higher education. *Journal Modelling the New Europe, 26*.

European Commission/EACEA/Eurydice. 2019. Digital Education at School in Europe.

Eysenck, H. J. 1951. The organization of personality. *Journal of Personality*, 20 (1), 101-107.

Facione, P. A. 2020. Critical thinking: What it is and why it counts. Insight Assessment.

Fallon, G. and Khoo, E., 2014, 'Exploring young students' talk in iPad-supported collaborative learning environments', *Computers and Education* 77, 13–28.

Falloon, G., 2015, 'What's the difference? Learning collaboratively using iPads in conventional classrooms', *Computers and Education* 84, 1–19.

Fang, X., and Warschauer, M. 2014. Technology and curricular reform in China: A case study. *TESOL Quarterly,* 38(2), 301- 323.

Farrugia, N. Jakubowski, K. Cusack, R. & Stewart, L. 2015. Tunes stuck in your brain: The frequency and affective evaluation of involuntary musical imagery correlate

with cortical structure. *Consciousness and Cognition: An International Journal, 35*, 66–77.

Fazio, R. H. 1990. Multiple processes by which attitudes guide behaviour: The MODE model as an integrative framework. In M. P. Zanna (Ed.), New York: Academic Press. *Advances in experimental social psychology vol. 23*, pp. 75-109

Feyzioglu, I. B. 2016. *Egitimde sosyal medyanin kullanilmasina iliskin okul yoneticilerinin ve ogretmenlerin gorusleri* (*The views of school managers and teachers on the use of Educational media in education)*. Postgraduate Thesis, Afyon Kocatepe University, Afyon.

Fishbein, M., and Ajzen, I. 1975. Belief, attitude, intention and behaviour: An introduction to theory and research. Reading, MA: Addison Wesley

Flick, U., 2014, *The Sage handbook for qualitative data analysis*, Sage, London.

Forbush, E., and Welles F. B. 2016. Social media use and adaptation among Chinese students beginning to study in the united states. International Journal of Intercultural Relations 50, 1–12.

Foster, W., and Goodman, S. E. 2019. The diffusion of the Internet in China.

Ford, J.L. (1986). The Current Status of Solid Dispersions. Pharmaceutica Acta Helvetiae, 61, 69-88.

Freud, S. 1923. The Ego and the Id. In J. Strachey et al. (Trans.), The Standard Edition of the Complete Psychological Works of Sigmund Freud, Volume XIX. London: Hogarth Press.

Fulford, W. M. 2018. Secondary English Teachers' Experiences on Critical Thinking for African American Male students, Project Study Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education, Walden University.

Furman, N., Goldberg, D., and Lusin, N. 2010. Enrollments in languages other than English in United States institutions of higher education, Fall 2009. New York, NY: Modern Language Association.

Giannini, T. 1998. Information receiving: a primary mode of the information process. *Proceedings of the Annual Meeting of ASIS*, **35**, 362-371.

Geyer, P. (2012). Extraversion – Introversion: what C.G. Jung meant and how contemporaries responded.

Genc, L., Pekic, J. and Genc, A. 2014. The structure of the personality of a good teacher from a student's perspective according to the Big-Five model. Psihologija, 47, 1, 49-63.

George, K. 2007. *Fundamentals of research methods and data processing.* Ibadan: Joytal Education Services.

Gray, J. A. 1970. The psychophysiological basis of introversion±extraversion. Behaviour Research and Therapy, 8, 249±266.

Gray, L., Thomas, N., and Lewis, L. 2010. Educational technology in U.S. public schools: Fall 2008 (NCES 2010–034). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Gretter, S. and Yadav, A. 2018. What do pre-service teachers think about teaching media literacy? An exploratory Study using the Theory of Planned Behavior," *Journal of Media Literacy Education*, 10(1), 104 -123.

Gupta, A. and Muita, S., 2013. Relationship between Entrepreneurial Personality, Performance, Job Satisfaction and Operations Strategy: An Empirical Examination. *International Journal of Business and Management, Vol.8 (2)*, pp. 86-95

Headey, B., Muffels, R. and Wagner, G. G. (2010). A long-running German panel survey shows that personal and economic choices, not just genes, matter for happiness. *Proceedings of the National Academy of Sciences of the United States of America*. *107*(42). 17922-17926.

Hallajow, N. 2018. Identity and Attitude: Eternal Conflict Educational media resources or Harmonious Coexistence, *Journal of Social Sciences*, 14, 44-54.

Hamilton, K. and Johnson, B. T.2020. Thirty-one Attitudes and Persuasive Communication Interventions. The handbook of behaviour change, 445-460 Cambridge: Cambridge University Press

Han, S. Y. & Carpenter D. 2014. Construct validation of student attitude toward science, technology, engineering and mathematics project-based learning: The case of Korean middle-grade students. *Middle Grades Research Journal*, 9 (3), 27–41

Happer, C. and Philo, G., 2013. The role of the media in the construction of public belief and social change. *Journal of social and political psychology*, *1*(1), pp.321-336

Harknett, R. J., and Cobane, C. T. 2017. Introducing instructional technology to international relations. Political Science and Politics, 30, 496-500.

Harrison, R., and Thomas, M. 2009. Identity in online communities: Social networking sites and language learning. International Journal of Emerging Technologies and Society, 7(2), 109.

Harrison, J., Thurgood, G., Boivie, S and Pfarrer, M. 2019. Measuring CEO personality: Developing, validating, and testing a linguistic tool. *Strategic Management Journal, 40(8) pp.*1316 – 1330.

Hasbay, D. and Altındag, E.2018. Factors that affect the performance of teachers working in secondary-level education, Academy of Education Leadership Journal 22(1), 1-19

Hazar, C. M. 2011. Sosyal medya bagimliligi–bir alan calismasi. (Educational media addiction-a field study). The *Journal of Communication, Theory and Research, 32,* 151-176.

Hervie and Winful. 2018. Enhancing Teachers' Performance through Training and Development in Ghana Education Service (A Case Study of Ebenezer Senior High School). *Journal of Human Resource Management.* 6(1), 1-8.

Hew, K.F. and Cheung, W.S., 2008. 'Attracting student participation in asynchronous online discussions: A case student of peer facilitation', *Computers and Education* 51(3), 11–124

Hicks, T. and Turner, K.H., 2013. 'No longer a luxury: Digital literacy can't wait', *English Journal* 102(6), 58–65.

Hitchcock, D. 2018. Critical Thinking. In E. N. Zalta (Ed.). The Stanford Encyclopedia of Philosophy.

Hogg, M., & Vaughan, G. 2005. *Social Psychology (4th edition)*. London: Prentice-Hall.

Hughes, H. 2006. Responses and influences: a model of online information use for learning. *Information Research*, **12**(1), paper 279.

Huvila, I. 2008. The information condition: information used by archaeologists in labour, work and action. *Information Research*, **13**(4), paper 369.

Idris, A. T., Shamsuddin, I. M., Arome, A. T. and Aminu, I. 2018. Use of Audio-Visual Materials in Teaching and Learning of Classification of Living Things Among Secondary School students in Sabon Gari LGA of Kaduna State. *Plant*. 6(2), 33-37.

Igier, V. and Mullet, E. 2003; Application of the Five-Factor Model of Personality to Intergenerational Perception. *The Journals of Gerontology: Series B*, Volume 58(3), 177–186.

Iluromi, G. A. 2017.Factors Affecting the Use of Electronic Educational Media resources in Teaching Basic Technology in Secondary School in Lagos State. An unpublished B. Tech Degree Project. The Federal University of Technology Minna

Incedayi N. 2018. The Impact of Using Multimedia Technologies on Academic Achievement in the Bakirkoy Final College, *International Journal of Humanities Social Sciences and Education*, 5(1), 40-47

Ingre, D. and Basil, R., 2017. Engineering communication: A practical guide to workplace communication for engineers, Cengage Learning, Boston, MA.

Iscioglu, A. 2012. *Universite ogrencilerinin sosyal paylas Educational media resources sitelerine yonelik algılarinin ve kullan Educational media resources nedenlerinin incelenmesi.* (*An analysis of the university students' perceptions of social networking sites and the reasons for their use*. Unpublished Postgraduate Thesis).Necmettin Erbakan University, Institute of Educational Sciences, Konya.

Ishikawa, T., and Morán Panero, S. 2016. Exploring language attitudes in ELF research: Contrasting approaches in conversation. Englishes in Practice, 3(4), 74-109.

Ismail, S., Almekhlafi, A., and Al-Mekhlafy, M. 2010. Teachers' perceptions of the use of technology in teaching languages in United Arab Emirates' schools. International Journal for Research in Education, 27(1), 37-56.

Iyen, J. 2017. Pre-Service Teachers Awareness and Perception of Use of Electronic Books (P-books) in Tertiary Institutions in Lagos State. An Unpublished PDE Project. Federal College of Education (Technical), Akoka, Yaba, Lagos.

Jato, M, Ogunniyi, S.O and Olubiyo, P. O.2014. Study habits, use of school library and student's academic performance in selected secondary schools in Ondo West Local Government Area, Ondo State. *International Journal of Library and Information Science 6(4).*57-64.

Jensen-Campbell, L. A., Adams, R., Perry, D. G., Workman, K. A., Furdella, J. Q., & Egan, S. K. 2002. Agreeableness, extroversion, and peer relations in early adolescence: Winning friends and deflecting aggression. *Journal of Research in Personality*, 36, 224–251.

Jeong K. 2018. Developing Efl learners' communicative competence through Multimedia-Assisted Language Learning. *Journal of Theory and Application of Information Technology.* 96 1367-1376.

John, O. P., and Srivastava, S. 1999. The Big-Five trait taxonomy: History, measurement, and theoretical perspectives. In L. A. Pervin and O. P. John (Eds.), Handbook of personality: Theory and research (Vol. 2, pp. 102–138). New York: Guilford Press.

Jonassen, D.H., 2006, *Modeling with technology: Mind tools for conceptual change*, 3rd ed., Upper Pearson Merrill Prentice Hall, Saddle River, NJ.

Joseph, G. 2013. A Study on School Factors Influencing Students' Attitude towards Learning Mathematics in the Community Secondary Schools in Tanzania: The case of Bukoba Municipal Council in Kagera Region. (Masters dissertation). Retrieved -from http://repository.out.ac.tz/919/

Jude, W. I. and Dankaro, J. T. 2012. Educational Media Resource utilisation, availability and accessibility by teachers educations for instructional development in college of education Katsina-Ala, *New Media and Mass Communication*, 3, 1-6.

Judge, T., & Kammeyer-Mueller, J. 2012. Job attitudes. Annual Review of Psychology, 63, 341-36

Kabooha, R. and Elyas, T. 2018. The Effects of YouTube in Multimedia Instruction for Vocabulary Learning: Perceptions of EFL students and Teachers, Teaching and Learning Teaching, 11(2), 72-81

Kahn, J. H. 2006. Factor analysis in counselling psychology research, training and practice: principles, advances and applications. *The Counseling Psychologist*, 34: 684-718.

Kajee, L., 2018, 'Teacher education students engaging with digital identity narratives', *South African Journal of Education* 38(2), 1–9.

Kan, A. Ü., Murat, A. 2018. Investigation of Prospective Science Teachers' 21st Century Skill Competence Perceptions and Attitudes Toward STEM, International Online Journal of Education Sciences, 10(4), 251-272

Kannan, V. and Gouripeddi, S. P. 2018. Enhancement in Critical Thinking Skills Using the Peer Instruction Methodology, *2018 IEEE 18th International Conference on Advanced Learning Technologies (ICALT)*, Mumbai, India, 2018, pp. 307-308.

Karaduman, M., and Kurt, H. 2010. Iletis Educational media resources fakultesi ogrencilerinin sosyal medyayi kullan Educational media resources düzeyleri. XV. (Communication faculty students' level of using social media. Paper submitted in the XVth Conference on Internet in Turkey). Istanbul Technical University, Istanbul. *Journal for Educators, Teachers and Trainers JETT, 10 (1).*

Karaduman, S. (2019). New media literacy: New skills/opportunities/risks. Erciyes. Journal of Communication, 6(1), pp.683-700

Karanasios, S., Cooper, V., Deng, H., Molla, A and Pittayachawan, S. 2010. Antecedants to greening data centres: a Conceptual model and exploratory case studies. *ACIS 2010 proceedings.* Paper 54.

Karasar, N. 2015. *Bilimsel arastirma yontemleri*. (*Scientific research methods)*. Nobel Publishing House, Ankara (28th Edition).

Kardum, I., Hudek-Knezevic, J., & Mehić, N. 2019. Dark Triad traits and mate retention behaviours in romantic couples: The Actor–Partner interdependence model. Evolutionary Psychology.

Kari, J. 2009. Informational uses of spiritual information: an analysis of messages reportedly transmitted by extraphysical means. *Journal of Information Science*, **35**(4), 453-468.

Kerlinger, F. and Lee, H. 2000. *Foundations of behavioural research*. 5th ed. Ontario: Wadsworth Thomson Learning, 599-620.

Kerr, Sari Pekkala, William R Kerr, and Tina Xu. 2017. Personality factors of entrepreneurs: A review of recent literature. Foundation and Trends in Entrepreneurship, forthcoming.

Khanom, S. 2018. Application of educational media resources in English Classrooms: A Study of the Secondary Schools in Dhaka, Submitted in partial fulfilment of the requirements for the degree of Masters of Arts in TESOL, BRAC Institute of Languages (BIL), BRAC University.

Kim, L., Dar-Nimrod, I., MacCann, C. 2018. Teacher Personality and Teacher Effectiveness in Secondary School: Personality Predicts Teacher Support and Student Self-Efficacy but Not Academic Achievement. *Journal of Education Psychology*, 110(3), 309-323.

Kima, L. E., Dar-Nimrod, I., and MacCann, C. 2018. Teacher personality and teacher effectiveness in secondary school: Personality predicts teacher support and student self-efficacy but not academic achievement. *Journal of Education Psychology*, *110,* 309-323.

Kline, P. 2014. *An easy guide to factor analysis*. Routledge. Oxfordshire.

Koç, M., and Karabatak, M. 2011. Sosyal aglarin ogrenciler uzerindeki etkisinin veri madenciligi kullanilarak incelenmesi. (The analysis of the influence of social networks on students by data mining). Paper submitted in the 5th International Symposium on Computer and Instructional Technologies. Fırat University, Elazıg.

Koç, M., and Karabatak, M. 2011. Sosyal aglarin ogrenciler uzerindeki etkisinin veri madenciligi kullanilarak incelenmesi. (The analysis of the influence of social networks on students by data mining). *Library Review, 55*(2), 120-131.

Korobili, S., Tilikidou, I. & Delistavrou, A. 2006. Factors that the use of library resources by faculty members. *Library Review, 55*(2), 91-105.

Kost, C. R., Foss, P., and Lenzini, J. J. 2019. Textual and pictorial glosses: Effectiveness on incidental vocabulary growth when reading in a foreign language. Foreign Language Annals, 32(1), 89-97.

Kurfiss, J. 1988. Critical Thinking: Theory, research, practice, and possibilities. ASHE-ERIC Higher Education Report (2). Washington DC: Association for the Study of Higher Education.

Ladipo, S. O, Fasanu, C. I., Sangosanya A. K and Eddy-Ugorji, D.C. 2018. Background Factors and Media Resource Preference on Media Resource Utilisation among Public Secondary School Students in Lagos State Nigeria. *Nigerian School Library Journal Vol, 17*

Larsen, J.K. 1980. Knowledge utilization: what is it? *Knowledge: Creation, Diffusion, Utilization*, **1**(3), 421-442.

Lawal, W. O. and Olawale, G. S. 2017. Preference for and Access to Educational media resources as Predictors of In-School Adolescents Knowledge of Sexual and Reproductive Health issues in Lagos State, Nigeria, Journal of Information and Knowledge Management 8(4), 24 - 42

Le, H., Janssen, J. and Wubbels, T., 2018. 'Collaborative learning practices: Teacher and student perceived obstacles to effective student collaboration', *Cambridge Journal of Education* 48(1), 103–122.

Lemay, D. J.,Doleck, T, and Basilais,P.2019.Computers in Human Behaviour. Elsevier, vol. 91, Pg186-191

Liao, W. 2017. An Optimal Design of College Oral English Teaching Model Framework Based on Classroom Dialogue Model, Revista de la Facultad de Ingeniería, 32(12), 348-353.

Lie, A., 2017. English and Identity in multicultural contexts: Issues, challenges and opportunities, *Teflin* 28(1), 71–92.

Lim,D.,Norman, R.and Robinson S. 2020. Consumer preference to utilize a mobile health app; A stated preference experiment. *Plosone J*ournal 15 (2), 0229546.

Limberg, L. 1998. *Att söka information för att lära: en studie av samspel mellan informationssökning och lärande [To seek information for learning: a study of interaction between information seeking and learning]*. . Borås, Sweden: Valfrid. (Skrifter från Valfrid 16)

Lin, C. H., Warschauer, M., and Blake, R. 2016. Language learning through social networks: Perceptions and reality. *Language Learning and Technology*, 20(1), 124-147.

Littunen, H. 2000. Entrepreneurship and the characteristic of the entrepreneurial personality. *International Journal of Entrepreneurial Behaviour and Research, 6*(6), 295–309.

Liu, Chen-Chung, Pin-Ching Wang, and Shu-Ju, D. T. 2016. An analysis of student engagement patterns in language learning facilitated by Web 2.0 technologies. *RECALL 2*8, no. 02, 104-122.

Liu, L. 2017.A Method of English Teaching Based on Multimedia and Internet Technology, *Boletín Técnico,* 55(17), 961-964

Livingstone, S.2012. Critical reflections on the benefits of educational media resources in education. Oxford. Rev. Educ. 38, 9–24.

Long-Crowell, E. (2021). Elaboration Likelihood Model of Persuasion: Central vs Peripheral Route. Psychology Courses, Study.com

Lotherington, H. and Jensen, J. 2011. Teaching multimodal and digital literacy in L2 settings: New literacies, new basics, new pedagogies, *Annual Review of Applied Linguistics* 31, 226–246.

Lowry, R. B. 2019. Electronic presentation of lectures – effect upon student performance. University Chemistry Education, 3(1), 18-21.

Mabuchi F, Yoshimura K, Kashiwagi, K. 2005. Personality assessment based on the five-factor model of personality structure in patients with primary open-angle glaucoma. *Jpn J Ophthalmol*. 49:31–35.

Machlup, F. 1980. Knowledge and knowledge production: Knowledge creation, distribution, and economic significance. *Vol. I*. Princeton, NJ: Princeton University Press.

Mackey, A., and Gass, S. M. 2015. Second language research, methodology and design. *TESL-EJ*, 9(3), 92.

Mahajan, G. 2012. Multimedia in Teacher Education: Perceptions and Uses. *Journal of Education and Practice, 3(1),* 5-13.

Maio, G and Haddock, G 2010. The psychology of attitude and attitude Change. London: Sage Publications Ltd.

Mandavilli, Sujay Rao. 2018. The relevance of Culture and Personality Studies, National Character Studies, Cultural Determinism and Cultural Diffusion in Twenty-first Century Anthropology: An assessment of their compatibility with Symbiotic models of Socio-cultural change Sujay Rao Mandavilli.

Marsh, M. 2013. *Advanced analytic cognition: Thinking dispositions*. Wright-Patterson AFB, OH: Air Force Research Laboratory.

Mashrouti, Mohammadi, Dolatshahi, Khani, and Pourshahbaz. 2016. Explaining the psychological symptoms in students based on Gray's Biological Models of Personality, International Journal of Applied Behavioral Sciences (IJABS) 3(1), 18-24

Maybee, C. 2007. Understanding our student learners: a phenomenographic study revealing the ways that undergraduate women at Mills College understand using information. *Reference Services Review,* **35**(3), 452-462.

Mayisela, T. 2013. The potential use of mobile technology: enhancing accessibility and communication in a blended learning course. *South African Journal of Education*, *33*(1)

Mensah, J. K., Okyere, M., & Kuranchie, A. 2013. Student attitude towards Mathematics and performance: Does the teacher's attitude matter? *Journal of Education and Practice*, 4(3), 132-139.

Mensah, J & Okyere, M. 2019. Student attitude towards Mathematics and performance: Does the teacher's attitude matter? 4. Pp. 132-139.

McClune, W. 2018. Reading critically: Evaluating context, evidence and claims in science-based media reports. Paper presented at NARST Annual conference 2018: Re-entering on Scientific Literacy in an era of Science Mistrust and Misunderstanding, Atlanta, United States.

McCrae, R. R., and Costa, P. T., Jr., 1986. Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, 385–405.

McGue, M., Willoughby, E. A and Rustichini, A. 2020.The Contribution of Cognitive and Non-Cognitive Skills to Intergenerational Social Mobility.

McKinnon, D. H., Patrick Nolan, C. J., and Sinclair, K. E. 2000. A longitudinal study of student attitudes toward computers: Resolving an attitude decay paradox. *Journal of Research on Computing in Education*, 32(3), 325-335.

McKnight, K., O'Malley, K., Ruzic, R., Horsely, M.K., Franey, J.J. and Basset, K., 2016, 'Teaching in a digital age: How educators use technology to improve student learning', *Journal of Research on Technology in Education* 48(3), 194–211

Melekeowei, P. D. 2014. 26 five-factor personality model as determinants of teachers' effectiveness in secondary schools in Lagos State, Nigeria. *International Journal of Research Development.* 26. Pp 1-14

Milosevic, D. 2017. Using Video Materials in English for Technical Sciences: a case study: In New Developments in ESP Teaching and Learning Research. Pp 15 – 30.

Mndzebele, N., Dludlu, M., and Mndebele, C. B. S. 2018. Availability, Community of Practice and Relative Advantage of Educational Media Resources Utilisation in Teaching–Learning Secondary School Agriculture: Lessons from Swaziland. *Advances in Social Sciences Research Journal,* 5*(5)* 87-97.

Mok, J. Y. 2018. Using psychological theories to understand citizen attitudes toward government performance and collaborative behaviours in the public sector, *Theses and Dissertations--Public Policy and Administration*. 28.

Mubarak, A.A.A., 2016, 'Learning English as a second language through Educational media: Saudi Arabian tertiary context', *International Journal of Linguistics* 8(6), 112–127.

Mukherjee, S. 2018. Role of multimedia in education. *Edelweiss Applied Science and Technology*, *2(1)*, 245-247. ISSN: 2576-8484.

Mwaniki, M. N. and Maket, L. 2017. Assessing enterpriser profiles on entrepreneurial managerial activities in Eldoret, Kenya, *International Journal of Research - Granthaalayah*, 5(12), 368-376.

Napal, M.; Peñalva, A.; Mendióroz, A.M. 2018 Development of digital competence in secondary education teachers' training. *Educ. Sci, 8, 104.*

Napal, M.; Zudaire, M.I.2019. STEM: La Enseñanza de las Ciencias en la Actualidad; Dextra: Madrid, Spain, p. 213.

National Department of Basic Education, 2011, Curriculum and Assessment Policy Statement (CAPS) 2011, Department of Basic Education: Republic of South Africa, Pretoria.

Natoli, B. and Hunt, S. 2019. *Teaching Classics with Technology*. Bloomsbury Academics; London, p. 264.

Ngesi, N., Landa, N., Madikiza, N., Cekiso, MP, Tshotsho, B. and Walters, L.M. 2018, 'Use of mobile phones as supplementary teaching and learning tools to learners in South Africa', *Reading and Writing* 9(1), 190. https://doi.org/10.4102/rw.v9i1.190

Niemelä, R. 2006. *Ikääntyneiden informaatiokäyttäytyminen: laadullinen tutkimus arkielämän informaatiokäytännöistä ja toimintaan aktivoitumisesta. [Information behaviour of older adults: qualitative study on information practices and enactment in everyday life]*. Oulu, Finland: University of Oulu. [Ph.D. dissertation] (Acta Universitatis Ouluensis B Humaniora 74).

Njoku C., 2020. Teacher's personality traits and their teaching effectiveness: important factors for student's success. *European Journal of Research and Reflection in Educational Sciences, 8 (3)*

Nieuwenhuis, J. 2010, Analysing qualitative data in Maree (ed.), *First steps in research*, 4th edn., pp. 69–97, Van Schaik, Pretoria.

Nwana, O.C. (2008) *Introduction to Educational Research*. HEBN Publishers, Ibadan.

Nwabunwanne, C. Olibie, E. and Ezenwanne D. 2015. Teachers' Improvisation of instructional materials for Home Economics Curriculum Delivery: Challenges and strategies. *International Journal of Adult Education and Technology* 4(4), 74.83.

Nwabunwanne, C. C. 2009. Improvisation and utilisation of instructional materials by basic 7-9 secondary school home-economics teachers in Anambra State. A research project for the partial requirements of the award of a Master's Degree in Home-Economics submitted to the University of Nigeria, Nsuka.

Nwosu, J., Chukwudi, J., & Ehud, M. 2017. The Use of Instructional Media among Selected Science Subject Teachers in Ilishan Remo Senior Secondary Schools Ogun State. *Journal of Educational Policy and Entrepreneurial Research, 4*(1), 61-71.

Nwosu. A., Shaffe, M. D. and Nurzatul S.K. 2018. Teachers' Use of Educational Media Resources in Teaching and Learning in Aba North District Educational media resources Secondary Schools, *Journal Of Humanities And Social Science (IOSR-JHSS)* 23(4), 30-40.

Nygren, T., Haglund, J., Samuelsson, C. R., Geijerstam, Å and Prytz, J. 2018. Critical thinking in national tests across four subjects in Swedish compulsory school. Education Inquiry.

Obiyo, N and Inyama, J. 2019. Underutilization of instructional materials for teaching and learning Chemistry in Nigerian secondary schools: Ohafia Educational Zone, Abia State's example; *African Journal of Teacher Education, 50 - 60.*

Obunadike, C. 2008. Problems of Teaching and Learning Clothing and Textiles. In Secondary Schools in Anambra State. *Interdisciplinary Education Journal 6(2)* 17-23.

Oduma, C. A. 2014. Information and Communication Technology use in education: Emphasis on the impact of asynchronous media. *An International Journal of Arts and Humanities Bahir Dar, Ethiopia*, 3 (2), 212-231

Ogunjinmi, A.A and Oniya B.J., 2016. Determinant of Environmental Attitudes and Behaviours of Nigeria undergraduates; A case of Federal University of Technology, Akure, Nigeria, *Applied Tropical Agriculture* 21(1):175-182.

Ogunjobi, T.E. and. Oyewusi, F.O. 2016 Educational media resources Availability and utilisation for effective publication output by Agricultural Researchers in Southwestern Nigeria. World Scientific; *Journal of Information and Knowledge Management,* vol.15, no.02, 16-27.

Ogunniyi, S.O., Lawal, W.O. and Sheji, M.R., 2018. Assessment of Resources in Selected Secondary School Library Media Centres in Ondo, Ondo State. *Library Philosophy and Practice*, pp.1-15

Ogunwuyi, B .O. 2018. Emotional Intelligence, Media Improvisation and Self-Efficacy as Determinants of Educational media resources Utilisation among Lecturers in State-Owned Colleges of Education In South-West, Nigeria Unpublished PhD Thesis, University of Ibadan, Ibadan.

Okpala, P. N. and Onocha, C. O. 2012. *Tools for education research*. Ibadan: Stirling Horden.

Okueso, S. T., Osikomaiya, M. O., Osijo, Y. E., Omotayo, A. O. and Arowolo, A. 2018. Effective teaching of Teaching and learning using communication package: how prepared are the teachers in Ogun state Nigeria? *European Journal of Teaching and Learning and Literature Studies*, 6(2), 30-40.

Olaojo P.O. 2013. Influence of availability and utilisation of school educational media resources on students' learning outcomes in secondary school social science subjects in Oyo State Nigeria. Unpublished PhD Thesis, University of Ibadan, Ibadan.

Olaotan, C.E. 2016. Socio-Economic Background and Library Resources Factors as predictors of Reading Habit among Secondary School Students in Ogun state, Nigeria Unpublished M.Phil. Thesis.

Olaotan, C.E. 2008. A Comparative Study of the Problems Militating against the Teaching and Learning of Social Studies in Junior Secondary Schools in Odeda and Abeokuta South Local Government Areas of Ogun state. Unpublished PGDE Project June 2008.

Olaotan, C.E. and Ogunleye, M.M.B. 2016. The Role of the Library in Education for Self Actualization. In Kayode Ajayi, Comfort Onabanjo, Samuel Ezeani and Ayoade Ajayi. Emergent Issues in Nigeria Education: A Book of Reading in honour of Dr Kasali Salawu. Dr Tunji Folaji. Abeokuta; Perfect Finish Publisher, 289-300.

Olaotan, C.E. 2016. Information communication and the medium of television. In Samuel Olu Adeyoyin, Catherine Enobong Olaotan, Felicia Titilayo Olanrewaju, Godwin Olusegun Oyewole and Ogunleye, M.M.B. Professional Concerns, Information Resources and Library Product and Services Promotion. Abeokuta; Eagle Publishers, 17-23.

Olarinde, L.A., Fakomogbon, M.A, Olabisi, A. S. 2019.Assessment of Instructional Resources for Teaching Basic Technology in Junior Secondary Schools in Ogbomoso, Nigeria. International Journal of Educational Research 2(9): 10.

Oluwatobi, Ehioghae, Aluko-Arowolo & Onasole 2014. Utilization of library resources for effective research output among post-graduate students in the Adventist University of Africa. *Global Advanced Research Journal of Social Sciences (GARJSS) 3(4),* pp. 052-057.

Omotosho, T. 2021. Cognitive Psychology in General Psychology: A basic text for undergraduate; Aderanti R A (ed). Ibadan.

Onasanya, S.A. 2004. Selection and utilisation of Educational Media resources for effective practice in a teaching institute. *Journal of Studies in Education*, 2. Pp.1-10.

Osinaike, A. B., and Adekunmisi, S. R. 2012. Use of multimedia for teaching in Nigerian university system: A case study of the university of Ibadan. *Library Philosophy and Practice (e-journal).*

Otto, S., Kröhne, U., and Richter, D. 2018. The dominance of introspective measures and what this implies: The example of environmental attitude. *Plosone, 13*(2), 1–13.

Oyedipe, W. J. Okewale, O. S and Adekunmisi, S. R. 2019. School library resources provision and utilisation in selected secondary schools in Sagamu Local Government

Area, Ogun state. *Middle Belt Journal of Library and Information Science*. Vol 17.20-33

Oxman-Michelli, W. 1992. Critical thinking as critical spirit. Resource Publication Series 4 (7), pp.1-13. Montclair, NJ: Institute for Critical Thinking.

Oyeniyi, T. S. 2018.Availability of Learning Materials and Attitude to Learning as Predictors of Achievement Mathematics among Secondary School Students in Ikorodu, Lagos State. An unpublished B. Tech Degree Project. Federal College of Education (Technical), Akoka, Yaba, Lagos

Ozaydin A., Baykus H. and Cemrek F., 2014. Sosyal medya kullan Educational media resources ve davranslarinin kullanimlar ve doyumlar yaklasimi baglaminda incelenmesi; Eskisehir Osmangazi Universitesi ornegi. (The analysis of Educational media use and behaviours in the context of uses and satisfactions approach; the example of Eskisehir Osmangazi University). *Alphanumeric Journal, Vol. 2, No. 2*.

Öztürk, F., and Talas M., 2019. Sosyal medya ve egit Educational media resources etkilesimi. (Interaction of Educational media and education). *Journal of World of Turks, Vol.7(1)*.

Pebriani, C. 2017. The effect of video media uses toward motivation and cognitive achievement of the science of five graders. *Journal Prima Edukasia, 5(1),* 11-21

Páramo, M.B.; Pérez, R.; Ruiz, F.J. 2016. Metodologías activas para la formación con tecnologías. In Formación Para la Educación con Tecnologías; Gallego-Arrufat, M.J., Raposo, M., Eds.; Pirámide: Madrid, Spain, pp. 84–91.

Parkin Kullmann, J. A., Hayes, S., and Pamphlett, R. 2018. Are people with amyotrophic lateral sclerosis (ALS) particularly nice? An international online case-control study of the Big Five personality factors. *Brain and behaviour*, *8*(10), e01119.

Paul, R. 1990. Critical thinking. Rohnert park, CA: Centre for critical thinking and moral critique.

Persky, A. M., Medina, M. S. and Castleberry, A. N. 2018. A Review of Developing Critical Thinking Skills in Pharmacy students. *American Journal of Pharmaceutical Education e-View (5)9-20*.

Phahlane, M. and Kekwaletse, R. 2014. Management information systems use in higher education environments. *SAIS 2014 Proceedings*. Paper 29.

Pourmazaherian, M., Baqutayan, S.M., and Idrus, D. 2017. The Role of the Big Five Personality Factors on Accident: A Case of Accidents in Construction Industries. *Journal of Science, Technology, and Innovation Policy*. 3(2), 46-55

Prensky, M., 2001, 'Digital natives, digital immigrants', *On the Horizon* 9(5), 1–6.

Project Tomorrow. 2014. The new digital learning playbook, advancing college and career-ready skill development in K-12 schools.

Puspitarini, Y. D., & Hanif, M. 2019. Using Learning Media to Increase Learning Motivation in Elementary School. *Anatolian Journal of Education*, *4*(2), 53-60.

Quadri R.F. 2008. The utilisation of teaching aids in the class in E.O Adeniyi; T. Ajobiewe and A.A. Adejumobi. A Handbook on effective classroom practices for participants in teachers' scheme. *UBEC* pg. 36-53.

Rankin, S. L. 2010. The impact of text messaging language shortcuts on developmental students' formal writing skills. *ProQuest LLC.*

Retnawati, H.; Hadi, S.; Nugraha, A.C. 2016. Vocational High School Teachers' Difficulties in Implementing the Assessment in Curriculum 2013 in Yogyakarta Province of Indonesia. *International. Journal. Instruction*. 9, 33–48.

Richtel, M. 2012. For better or worse, technology use alters learning styles, teachers say. *New York Times, A18.*

Ritakumari, S. 2019. Educational Media in teaching and learning process. *Bharityam International Journal of Education and Research. 8(3),7-14.*

Robertson-Kraft, C., and Duckworth, A. L. 2014. True grit: Trait-level perseverance and passion for long-term goals predict effectiveness and retention among novice teachers. *Teachers College Record*, (116), 1– 27.

Rodríguez-Brito, M. G., Ramírez-Díaz, A. J., Ramos-Real, F. J., and Perez, Y. 2018. Psychosocial traits characterizing EV adopters' profiles: the case of Tenerife (Canary Islands), *sustainability*, 10 (2053), 1-26.

Rosen, L. D., Whaling, K., Carrier, L. M., Cheever, N. A., and Rokkum, J. 2013. The Media and Technology Usage and Attitudes Scale: An empirical investigation. *Computers in human behaviour*, *29*(6), 2501-2511.

Royo, M., Sarip, A., and Shaari, R., 2015. Entrepreneurship Traits and Social Learning Process: An Overview and Research Agenda. *Procedia-Social and Behavioral Sciences* 171, 745-753.

Rubin, J. 2019. How learner strategies can inform language teaching. Language Use, Language Teaching and Curriculum, 270-284.

Rugut, E., Makewa, L. N. 2016. Utilisation of Education Media in Teaching and Learning of History and Government in Selected Secondary Schools in Kenya. *Journal of Humanities and Social Science* 21(09): 46-55.

Russell, V. 2022. Foreign language enrollments in K-12 public schools: Are students ready for a global society? *American Council on the Teaching of Foreign Languages (ACTFL). (33)69-80.*

Rwodzi, C., 2018, 'Exploring teacher initiatives on digital literacy in English', Unpublished PhD thesis, University of Pretoria.

Roysamb, E., Nes, R. B., Czajkowski, N. O. & Vassend, O. 2018. Genetics, personality and wellbeing. A twin study of traits, facets and life satisfaction. *Scientific Reports,*

Sabo, E., Gidado, A. S., Sani, R. M. and Adeniji, O. T. 2018. Multivariate Determinants of Farmer Attitudes towards Agroinnovations in Northern Nigeria, the Case of Bauchi State Smallholder Farmers. *Agroinnovations.* (12) 12-20.

Sadock, B., Sadock, V., Ruiz, Pedro. 2002. *Kaplan and Sadock's Comprehensive Textbook of Psychiatry*. Wolters Kluwer.

Salem, A. (2013). The impact of technology (BBM and WhatsApp applications) on English linguistics in Kuwait. *International Journal of Applied Linguistics and English Literature,* 2(4), 64-69.

Sanchez-Castro, O., and Strambi, A. (2017). Researching learner self-efficacy and online participation through speech functions: An exploratory study. *CALICO Journal,* 34(2), 219.

Sangra, A. and Gonzalez-Sanmamed, M., 2016, The role of information and communication technologies in improving teaching and learning processes in primary and secondary schools, *Research in Learning Technology* 18(3), 207–220.

Sarre, C. and Whyte, S. 2017. *New Development in ESP Teaching and Learning Research*. France: Researchpublishing.net

Savage, J. McGoun, C., 2015, *Teaching in a networked classroom*, Routledge, London.

Saviour, A. 2018. Bridging the gap between theory and practice; teachers' utilization of instructional resources in teaching social studies in basic schools in west Mamprusi district Educational media resources in the northern region, Ghana, International *Journal of Education, Learning and Development,* 6(1), 10-25

Savolainen, R. 2008. *Everyday information practices: a social phenomenological perspective*. Lanham, MD: Scarecrow Press.

Savolainen, R. 2009b. Information use and information processing: comparison of conceptualizations. *Journal of Documentation*, 65(2), 187-207.

Schretlen, D. J., Van der Hulst, E. Pearlson, G. D. & Gordon, B. 2010. A neuropsychological study of personality: Trait openness about intelligence, fluency, and executive functioning. *Journal of Clinical and Experimental Neuropsychology, 32:10,* pp, 1068-1073.

Schwartz, S. H., Cieciuch, J., Vecchione, M., Davidov, E., Fischer, R., Beierlein, C. and Konty, M. 2012. Refining the theory of basic individual values. *Journal of Personality and Social Psychology, 103*(4), 663-688.

Sejdiu, S. 2017. Are listening skills best enhanced through the use of Educational medical resources*? Digital Education Review,* (32), 60-72.

Seraphine, S. A., Jacob J. J. O. K. and Joash K. K. 2018. Influence of instructional resources in learning agriculture in secondary schools on employment creation in Vihiga County, Kenya, *International Journal of Education Administration and Policy Studies,* 10(1), 1-9

Shabi, I. N. 2019.Socio-demographic factors, media and health literacy skills as Predictors of Internet Health Information use among in-school Adolescents in Osun State, Nigeria. An unpublished PhD. Thesis, University of Ibadan.

Shabi, I. N., Oyewusi, F.O. and Shabi, O.M. 2018.The pattern of media literacy skills and internet health information utilisation among in-school adolescents in Osun State South-West, Nigeria. *Nigerian Journal of Family Practice*; vol. 9 No. 1

Shava, H. and Chinyamurindi, W., 2018, 'Determinants of Educational media usage among a sample of rural South African youth', *South African Journal of Information Management* 201(1), 827.

Sheed, A. O (2019). Cognitive styles and educational media resources utilization as a predictor of the reading habit of private secondary school students in Oyo State, Nigeria. An Unpublished PhD. Thesis.

Shiota, M.N., Keltner, D., and John, O. P. 2006. Positive emotion dispositions are differentially associated with Big Five personality and attachment style. *The Journal of Positive Psychology*, 1, 61-71.

Siegel, H. 1988. Educating reason: Rationality, Critical Thinking, and Education. NewYork: Routledge, Chapman & Hall.

Singeh, F.W., Abrizah, A and Abdulkar Educational media resources 2011. Malaysian authors' acceptance of self-archive in institutional repositories: towards a unified view. *The Electronic Library*. 31 (2) 188-207.

Solís, M.Á.U. Competencias para la sostenibilidad y competencias en educación para la sostenibilidad en la educación superior. *Uni-pluriversidad* 2014, 14, 46–58.

Spink, A., Currier, J. K. & Cole, C. 2009. Evolutionary approaches to information science research and information use. *Proceedings of the 72nd ASIS&T Annual Meeting*, **46**,

Steel, D. E. 2017. Factors Influencing Degree of Implementation of Technology in a Georgia High School, Project Study Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Education.

Sun, Z., Lin, C. H., You, J., Shen, H. J., Qi, S., and Luo, L. 2017. Improving the English-speaking skills of young learners through mobile social networking. Computer Assisted Language Learning, 1-21.

Susiani, T. S., Salimi, M., and Hidayah, R. 2018. Research-Based Learning (RBL): How to Improve Critical Thinking Skills. SHS Web Conference, 42.

Sylvén, L. K., and Sundqvist, P. 2017. Editorial. Special issue: Computer-assisted language learning (CALL) in extracurricular/extramural contexts. *CALICO Journal*, ISSN 2056–9017, 34(1), I-IV.

Syyeda, F. 2016. Understanding attitudes towards mathematics (ATM) using a Multimodal modal Model: An Exploratory Case Study with Secondary School Children in England. *Cambridge Open-Review Educational Research e-Journal*, 3, 32-62.

Taiwo S.C. 2009. Teachers' perception of the role of media in classroom teaching in Secondary Schools. *The Turkish Online Journal of Education Technology*, 8, (1), 75-83.

Taiwo, A.A. and Downe, A.G. 2013. The theory of user acceptance and use of technology (UTAUT): A meta-analytic review of empirical findings. *Journal of Theoretical and Applied Educational media resources*. 49 (1) 48-58.

Taiwo, S.A. 2008. Principles underlying. the improvisation of teaching aids for effective classroom management in Adeniyi E.O. Ajobiewe, T and Adejumobi A.A. 2008.*A handbook on effective Classroom practices for Participants in Federal Teachers Scheme*, UBEC, publication, 54-70.

Tella, A., Ayeni, C. O., and Popoola, S. O. 2007. Work motivation, job satisfaction, and organisational commitment of library personnel in academic and research libraries in Oyo State, Nigeria. *Library Philosophy and Practice*, 1-16.

Tella, Adeyinka., Tella, Adedeji., Toyobo, O.M., Adika, L.O. and Adeyinka, A.A. 2007. An Assessment of Secondary School Teachers Uses of ICT: Implications for further Development of ICT's Use in Nigerian Secondary Schools. *The Turkish Online Journal of Education Technology.* 6(3).

Tibenderana, P., Ogao, P. Ikoja-Odongo, J. Wokadala, J. (2010) Measuring levels of end-users acceptance and use of hybrid library services. *International Journal of Development Using Information and Communication Technology*. 6 (2). 33-54.

Timuçin, M. 2016. Implementing CALL in an EFL context. *ELT Journal*, 60(3), 262-271.

Tipper, S.P. and Bach, P., 2008. Your actions influence how you perceive other people: A misattribution of action appraisals. *Journal of Experimental Social Psychology*, *44*(4), pp.1082-1090.

Tkach, C., and Lyubomirsky, S. 2006. How do people pursue happiness?: Relating personality, happiness-increasing strategies, and well-being. *Journal of Happiness Studies*, 7, 183-225.

The Ogun state Teaching Service Commission (2020). Abeokuta Staff Data Analysis of Ogun state Public Secondary by Zones.

Todd, R.J. 1999. Back to our beginnings: information utilization, Bertram Brookes and the fundamental equation of information science. *Information Processing and Management*, 35(6), 851-870.

Toffano,Z. 2018. "Eigenlogic in the spirit of George Boole", Cornell University Library.

Tomsik, R. 2018. Impact of big five personality factors on academic performance of the university students.

Tuominen, K. 1996. *Tiedonkäyttö faktuaalisten versioiden rakentamisessa: diskurssianalyyttisen tutkimusotteen kehittelyä [Information use in constructing factual versions: developing a discourse analytic approach]*. Unpublished licentiate thesis, University of Tampere, Tampere, Finland.

Tuominen, K. & Savolainen, R. 1997. A social constructionist approach to the study of information use as discursive action. In P. Vakkari, R. Savolainen & B. Dervin (Eds.), *Information seeking in context: proceedings of an international conference on research in information needs, seeking and use in different contexts* (pp. 81-96). London: Taylor Graham.

Tosuncuoglu, I. 2018. Place of critical thinking in EFL, *International Journal of Higher Education*, 7(4), 26-32

Tozer, B. C. 2017. Pennsylvania teachers' perceptions and use of social media communication technologies as a pedagogical tool. *Theses and Dissertations* (all). 1563

Ude, V.C and Ezugwu E.N. 2019. The extent of provision and utilisation of Educational Media resources for biology instruction in secondary schools in Ikwo Local Government Area of Ebonyi State. *International Journal of Academic Research in Progressive Education and development, Vol. 8;* 22-31.

Unamba, E.C., Ugochukwu, N.J. and Udeji, N.C 2020. Assessment of the impact of Reggio Emilia's instructional approach to enhance critical thinking skills and Academic Achievement of Pupils in Mathematics. *Journal of CUDIMAC, 8(1);* ISSN: 0794-4764.

Vafaeenejad, Z. & Elyasi, F., Moosazadeh, M. & Shahhosseini, Z. 2018. Psychological factors contributing to parenting styles: *A systematic review* Vol.1; Research 7:906.

Venkatesh, V., Morris, M. G., Davis, G. B., and Davis, F. D. 2003. User acceptance of Educational media resources: Toward a unified view. *MIS Quarterly 27 (3):*425-478.

Vernanda, D., Abdullah, A. G. and Rohendi, D. 2017. Internet Literacy of Vocational High School Teachers, IOP Conf. Series: Materials Science and Engineering 306 (2018) 012032.

Vero, E. & Puka, E. 2018. The effectiveness of critical thinking in higher education. *On-line Journal Modelling the New Europe, (26),* pp. 217-233.

Vural, Z.B.A., and Bat, M. 2010. Yeni bir iletis Educational media resources ortamı olarak sosyal medya: ege universitesi iletis Educational media resources fakultesine yonelik bir arastırma. (Educational media as a new medium of communication: a research for Ege University Faculty of Communication). *Yasar University Journal, 20(5),* 3348-3382.

Wallen, N. E., and Fraenkel, J. R. 2001. Education research: A guide to the process (2nd ed.). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.

Walther, J. B. 1992. Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research, 19(1),* 52–90.

Wang, Q. 2008, A generic model for guiding the integration of educational media resources into teaching and learning, *Innovations in Education and Teaching International 45(4),* 411–419.

Weidmann, J. S. 2018. A phenomenological exploration of secondary teachers' perceptions of the flipped classroom model, A Dissertation Presented in Partial Fulfilment of the Requirements for the Degree Doctor of Education, Liberty University.

Weng, F., Yang, R., Ho, H. and Su, H. 2018. A TAM-based study of the attitude towards use intention of multimedia among school teachers. *Applied System Innovation,* 1(36), 1-9.

White-Harris, K. L. 2017. The influence of technology usage on academic achievement (reading and math) from a teacher's perspective, *Dissertations*. 1451.

Williams, M.D., Rana, N.P., Dwivedi, Y.K. and Lai, B. 2011. Is UTAUT used or just cited for the sake of it? A systematic review of citations of UTAUT's originating article.

Williams, Z. 2013. The Use of Multimedia Material in Teaching Chinese as a Second Language and Pedagogical Implications. Masters Theses 1911 – February 2014. 1016. University of Massachusetts, Amherst.

Wu, J. 2015. University students' motivated attention and use of regulation strategies on educational media. *Computers and Education 89.* 75-90.

Yang, S. C., and Huang, Y. F. 2018. A study of high school English teachers' behaviour, concerns and beliefs in integrating educational media resources into English instruction. *Computers in Human Behavior, 24(3),* 1085-1103.

Yarbro, J., McKnight, K., Elliott, S., Kurz, A. and Wardlow, A., 2016. Digital instructional strategies and their role in classroom learning, *Journal of Research on Technology in Education* 48(4), 274–289.

Yeh, Y., and Wang, C. W. 2013. Effects of multimedia vocabulary annotations and learning styles on vocabulary learning. *Calico Journal, 21(1),* 131-144.

Yildirim, A. and Simsek, H. 2008. *Sosyal bilimlerde nitel arastirma yontemleri. (Qualitative research methods in social sciences).* Seckin Publishing, Ankara.

Yin, R.K., 2012, *Qualitative research from start to finish*. 2nd ed. The Guilford Press, London.

Yu, Z. 2021. The effect of gender, educational level, and personality on learning outcomes during the COVID-19 pandemic. *International Journal of Educational Technology in Higher Education, 18, (14).*

Zapalska, A. M., Nowduri, S., Imbriale, P., Wroblewski, B. and Glinski, M. 2018. A Framework for Critical Thinking Skills Development across Business Curriculum Using the 21st Century Bloom's Taxonomy, *Interdisciplinary Education and Psychology*, 2(2), 1-14

Zhi-Feng, Z. 2012. The application of Educational media resources in foreign language teaching, in D. Zheng(ed,) *Advances in Computer Science and Engineering (AISCE)* 141, 85-90.

Zhou, Q., Huang, Q., & Tian, H. 2013. Developing Students' Critical Thinking Skills by Task Based Learning in Chemistry Experiment Teaching. *Creative Education, 4(12)*, 40.

APPENDIX I

DEPARTMENT OF SCHOOL LIBRARY AND MEDIA TECHNOLOGY

FACULTY OF EDUCATION

UNIVERSITY OF IBADAN, IBADAN

QUESTIONNAIRE ON PSYCHOLOGICAL FACTORS AND EDUCATIONAL MEDIA RESOURCE UTILISATION BY T EACHERS I N PUBLIC SECONDARYSCHOOLS IN OGUNSTATE, NIGERIA, (QPFEMRUT)

Dear Respondent,

I am conducting PhD Degree research on **psychological factors and educational media resources utilisation by teachers in public secondary schools in Ogun state, Nigeria.** Your schoolhas been selected for the study. This questionnaire was designed to elicit your response. The information provided will be treated with confidentiality. Thank you for your time and cooperation.

Olaotan Catherine E. (Mrs.)

SECTION A: Respondent's demographic data (Please tick (✓) as appropriate)

1. School (optional):_____

2. Gender: Male ☐ Female ☐

3. Age group (in years): 20 – 29 ☐ 30 – 39 ☐ 40 – 49 ☐

   50 – 59 ☐ 60 and above ☐

4. Years of experience: 5 – 10 ☐ 10 – 20 ☐ 20 – 30 ☐

   30 and above ☐

5. Highest Educational Qualifications? NCE ☐ Bachelor's Degree ☐

   Master's Degree ☐ PhD. ☐

Section B: Personality Factors Scale (PFS)

INSTRUCTION: Kindly Tick (✓) in the appropriate space with this Key: VLoM (Very Likely of Me), LoM (Likely of Me), SLoM (Somewhat Likely of Me), NLoM (Not Likely of Me)

SN	Openness to experience	VLoM	LoM	SLoM	NLoM
1	Events in my school environment hardly passed me unnoticed				
2	I enjoy participating in the happenings in my school environment				
3	I find it hard to devise unconventional means to achieve teaching goals and aims				
4	I have creative and imaginative abilities to improvise new teaching strategies				
5	Using works of art to teach is simple for me				
6	The infusion of innovation into teaching is always exciting				
	Conscientiousness				
1	Discharging my teaching duties is often challenging				
2	I often forget to get all I need ready before each lesson.				
3	I do not take chances in the course of my duties				
4	I rarely give attention to details				
5	I do not mind giving up teaching for other activities sometimes				
6	I do not waste time thinking over issues before responding in my teaching				
	Extraversion				
1	I do not find it enjoyable to relate with everyone in my school.				
2	My students think I am too tough				

3	Teaching could be somehow boring.				
4	I do not consider trying new ideas when my teaching method is working				
5	My teaching could still improve				
6	I enjoy being alone				
	Agreeableness				
1	I find it hard to forgive people easily				
2	I love being diplomatic				
3	My students and colleagues often flock around me				
4	I do not tolerate indiscipline when teaching				
5	I cannot hide the fact that I am better than my colleagues.				
6	I rarely feel touched by what happens to others				
	Neuroticism				
1	I am always tense during teaching activities				
2	Teaching is irritable to me				
3	I prefer other jobs to teach				
4	I often feel that the students are talking about me				
5	I avoid my students because they could be irritating				
6	I think many of my colleagues are better than I am				

SECTION C: Critical thinking Scale (CTAS)

INSTRUCTION: Kindly Tick (✓) in the appropriate space

Key: SA(StronglyAgree), A(Agree), D(Disagree), SD(StronglyDisagrees)

SN	Question Items	SA	A	D	SD
	To what level do you agree with the followingstatement **Systematicity and analyticity**				
1	Before answering, I alwaysfocus onthe questionfirst				
2	If there are fourviews in favour of, and one view against an argument, Iwould tendto side with the four favourable opinions				
3	Since I make decisions judiciously by properly taking the "rules" into account, my friends generally consult and trust me with their own decisions				
4	Rather than only explaining their view to us, people should also try to listen to our views.				
5	I cannot be impartial when discussing myown opinions				
6	I admire my-ability topresent creativechoices and solutions				
7	Otherpeople often consult me to determine reasonablestandards concerning the implementation of their decisions				
	Inquisitiveness and conversance				
8	It is important to try to understand the thoughts/opinions of people				
9	Analogies and metaphors are only as useful as boats on a highway				
10	The best wayto solve a problem is to ask for the answer from someone else.				
11	Learn everything you can, since you never know when you might need it				
12	Nothing is ever as it seems.				
13	Having an open mind towards different world views is less important than what people think.				
14	Spending a lot of effort to solving complex problems is not all that important				
	Maturity and scepticism				

15	Being open-minded means not knowing what is right and what is wrong				
16	I act as if I were rational, while I am not				
17	Everyone, including myself, generally engages in debates and arguments out of self-interest				
18	Reading is something I avoid whenever I can				
19	People generally say that I am too hasty when making decisions				
20	Studying so many subjects in secondary schools is a waste of time				
21	I panic whenever I have to deal with something truly and excessively complex				

SECTION D: Attitude to Educational Media Utilisation Scale (AEMUS)

INSTRUCTION: Kindly Tick (✓) in the appropriate space

Key: SA(StronglyAgree), A(Agree), D(Disagree), SD(Strongly Disagree)

SN	Items	SA	A	D	SD
	Positive attitude				
1	I feel it is important tobe ableto find any information using Educational media resources whenever I want to facilitate my teaching				
2	I feel it is important to be able to use educational media resources to facilitate the way I teach				
3	I think it is important to keep up with the latest trends in media technology in making my teaching more impactful and meaningful.				
4	Media Technology will provide solutions to many of my teaching problems.				
5	With media technology, I can adapt various teaching methodologies.				
6	I feel that I get more accomplished in my teaching because of technology.				
	Negative attitudes				
7	I get anxious when I don't have access to educational media resources to support my teaching.				
8	The use of media technology makes teachers waste too much time teaching.				
9	The use of media technology makes teaching more complicated for teachers.				
10	The use of media technology makes the teacher more isolated in class.				

SECTION E: Teachers' educational media resources utilisation: Frequency of use of educational media resources**.**

INSTRUCTION: Kindly Tick (✓) in the appropriate space in consonance with your frequency of use.

How often are the listed Educational media resources utilised?

Daily [D]; weekly [W]; Monthly [M]; Never [N]

S/No	Items	D	W	M	N
	Educational media resources				
	Audio Resources				
1	Radio				
2	Audio Tapes and Players,				
3	Audio Compact Discs and Players,				
4	Public Address Systems				
5	Audio educational media resources in MP3 formats usable through handsets, PDAs, and computers				
	Visual resources				
6	Photographs				
7	Educational Films				
8	Projectors				
9	Flipcharts				
10	Banners				
11	Optical Aids				
12	Pictorial and Graphic Boards				
	Audio-visual resources				
13	Video Compact Discs and Players				
14	Television				
15	Markerand Electronic Boards				
16	Audio-Visual Projectors				
17	Audio-Visual Animated Simulations for teaching complex concepts				
	Realia				
18	Models				

19	Maps				
20	Globes				
21	Real Objects				
22	Specimens				
	Computer packed instructional educational media resources				
23	Internet Facilities				
24	Computer-Aided Instructional Software				
25	Multimedia Projector				
26	Electronic InteractiveBoard				
27	Laptop/ i-pad				
28	Simulation Programmes and Games				
29	Computers and Mobile Phones				
30	Social Media				

ii. ***For what purpose do you utilise educational medical resources***

Please tick the appropriate item and how often it is used, using the rating;

StronglyAgree[SA]; Agree[A]; Disagree[D] and StronglyDisagree[SD]

S/No	Items	S A	A	D	S D
1	I use a marker and an electronic board to introduce a topic				
2	I use audio-visual aids as part of the teacher's lesson delivery				
3	I use the multi-media projector as a stimulus for class discussion				
4	I use Computer Programmes and Games for simulations				
5	I use social media and the internet for peer learning				
6	I use real objects and digital video discs for teaching complex concepts				
7	I use the internet and other online educational media resources for current affairs and further reading				

8	I use photographs, textbooks and additional reading materials for class management and giving assignments to students				
9	I use textbooks and other online educational media resources to prepare lesson notes for classes				
10	I use audio/ video compact discs and television for language teaching				

APPENDIX II

DEPARTMENT OF SCHOOL LIBRARY AND MEDIA TECHNOLOGY
FACULTY OF EDUCATION
UNIVERSITY OF IBADAN, IBADAN

STUDENTS' QUESTIONNAIRE FOR ASSESSMENT ON TEACHER'S MEDIA RESOURCES UTILISATION (SQATEMRU)

Dear Respondents,

I am a postgraduate student of the Department of School Library and Media Technology, Faculty of Education, University of Ibadan, Ibadan carrying out a study on **psychological factors and educational media resources utilisation by teachers in public secondary schools in Ogun state, Nigeria.** This questionnaire is aimed at gathering information on teachers' educational media resource utilisation in public Secondary Schools in Ogun state, Nigeria. Kindly respond to the items as honestly as you can. Your response will be treated with the utmost confidentiality. Thank you for your cooperation.

Olaotan Catherine E. (Mrs.)

Section A: ***Demographic information of respondents***

1. Name of School (optional):_____

2. Gender: a. Male [ ] b. Female [ ]

3. Age Range: 13 – 15 ☐ 16 – 18 ☐ 19 – 21 ☐

Section B: ***Extent of educational media utilisation during teaching***

1. Do your teachers use Educational Media Resources during teaching and learning?
   Yes [ ] No [ ]

   Which of these under-listed Educational Media Resources are used and how often are they used during the teaching and learning process?

Please tick the appropriate box, using the rating scale;

Very Often [VO]; Often [O]; Occasionally [OC] and Never [N]

S/No	Educational media resources	VO	O	OC	N
	Audio resources				
1	Radio				
2	Audio Tapes and Players,				
3	Audio Compact Discs and Players,				
4	Public Address Systems				
5	Audio educational media resources in MP3 formats usable through handsets, PDAs, and computers				
	Visual resources				
6	Photographs				
7	EducationalFilms				
8	Projectors				
9	Flipcharts				
10	Banners				
11	Optical Aids such as Microscope				
12	Pictorial and Graphic Boards				
	Audio visual resources				
13	Video Compact Discs and Players				
14	Television				
15	Marker and Electronic Boards				
16	Audio-Visual Projectors				
17	Audio-Visual Animated Simulations for teaching complex concepts				
	Realia				
18	Models				
19	Maps				
20	Globes				
21	Real Objects				
22	Specimens				
	Computer packed instructional educational media resources				
23	Internet Facilities				
24	Computer-Aided Instructional Software				

25	Multi-media Projector				
26	Electronic Interactive Board				
27	Laptop/ i-pad				
28	Simulation Programmes and Games				
29	Computers and Mobile Phones				
30	Social Media				

APPENDIX III

DEPARTMENT OF SCHOOL LIBRARY AND MEDIA TECHNOLOGY, FACULTY OF EDUCATION UNIVERSITY OF IBADAN, IBADAN

IN-DEPTH INTERVIEW ON PSYCHOLOGICAL FACTORS AND EDUCATIONAL MEDIA RESOURCES UTILISATION BY TEACHERS IN PUBLIC JUNIOR SECONDARY SCHOOLS IN OGUN STATE, NIGERIA,

TEACHERS' USE OF EDUCATIONAL MEDIA IN-DEPTH INTERVIEW (TUEMII)

GUIDELINES AND QUESTIONS

GUIDELINES

Welcome

Thank you for making out time to be part of this Interview you are highly appreciated.

Introduction

Subject teachers, research assistant, students

Purpose of in-depth interview

The reason for having this in-depth interview is to find out about your understanding on psychological factors, critical thinking ability and attitudes of teachers as predictors of educational media resources utilisation in junior public secondary schools in Ogun state, Nigeria. Your sincere response is crucial to this work and you must share your honest and open thoughts with us.

Interview rules

You will do the talking, there is no right or wrong answer and the session will be recorded.

In-Dept interview guide

Engagement questions:

S/N	**QUESTION THEME/SUB-THEMES**	**QUESTION ASKED**
1	Psychological factors and educational media resources utilization. **a) Openness to Experience** **b) Conscientiousness** **c) Extraversion** **d) Agreeableness** **e) Neuroticism**	• Do you attend in-services training on the use of new Educational Media for Instructional Purposes**?** • Any Latest improvement in the area of your specialisation? • How do you get information about new teaching strategy (Conferences and Online? Please mention the site? • Do you feel at ease when you are teaching or nervous • Do you get feedback from the students (yes), What type of feedback (If No) and why don't you get them? • How do you cope with the large population? • As a deliberate attempt, did you choose teaching as a profession or a job?
1.	Critical thinking ability and educational media resources utilization	• Do you find time to verify every information you received around your environment? If yes, how do you verify the information, if No why?
2.	Attitude to media and educational media resources utilization	• Do you get anxious or panic whenever you have to deal with something new and complex? • Do you think using EMR in the classroom will facilitate your work or waste your time?
3.	Utilisation of educational media resources by teachers	• What are the types of Educational media resources you use for teaching? And how frequently do you use them? o Which of the educational media resources do you access easily and

		use within your school environment? Which of them are available? And which of them are not accessible? Give reasons…… ○ For what purpose e.g. lesson introduction, assignments , do you use the Educational Media resources to teach in the classroom
4.	Demographic profile of the teachers	• Could you please introduce yourself, qualification, and your teaching experience?

Students' Assessment of Teachers' Utilisation of Educational Media Resources In-depth Interview (SATUEMIL)

Introduction

Respondents' demographic data (Please tick (✓) as appropriate)

Gender: Male ☐ Female ☐

Age group (in years): 10 – 12 ☐ 13– 15 ☐ 17 – 20 ☐

Class JSS1 ☐ JSS2 ☐ JSS3 ☐

1. Do you know what educational media resources are? (they are instructional materials other than notebooks and chalkboard)
2. How many of your Teachers use EMR to teach you in the class? (Subject Teachers)
3. Give me examples of the EMR your teachers uses to teach, in the various school subjects?
4. Social studies, Integrated Science, Introductory Technology, Home Economics, English, Mathematics, Yoruba, Igbo, Hausa, French
5. There is a teacher that uses EMR very well, what subject does that teacher teach?
   a) What type of instructional material does he brings to class?

b). Does it help you to understand the subject better?

6. Do you submit assignments through email or WhatsApp?
7. Do your teachers ask you to surf the internet for information on a particular school subject?
8. Do your teachers use EMR to teach regularly? If yes
    a) How frequent, daily, weekly or if no, is it occasionally?
    b) For what purpose do you think your teachers uses EMR during lesson e.g. lesson introduction, assignment, and classwork?
9. Do you have a computer lab?
    a) Is it equipped?
    b) Have you visited it?

APPENDIX IV

Total Population of Teachers in Public Secondary Schools in Ogun state, Nigeria as of 31st December 2020

S/N	ZONES	SENIOR			JUNIOR			COMBINED			GRAND TOTAL		
		M	F	T	M	F	T	M	F	T	M	F	T
1	ABEOKUTA NORTH	126	211	337	102	322	424	120	133	253	348	666	1014
2	ABEOKUTA SOUTH	266	488	754	169	618	787	21	22	43	456	1126	1584
3	EWEKORO	47	32	79	20	52	72	66	92	158	133	176	309
4	IFO	90	150	240	60	191	251	114	196	310	264	537	801
5	OBAFEMI/ OWODE	45	64	109	41	68	109	82	101	183	168	233	401
6	ODEDA	72	145	217	56	163	219	73	66	139	201	374	575
7	IJEBU EAST	41	24	65	22	55	77	99	56	155	162	135	297
8	IJEBU NORTH	142	115	257	109	130	239	29	23	52	280	268	548
9	IJEBU NORTH-EAST	33	51	84	28	53	81	69	79	148	130	183	313
10	IJEBU ODE	141	262	403	87	309	396	40	26	66	268	597	865
11	ODOGBOLU	65	79	144	45	86	131	129	147	276	239	312	551
12	OGUN WATERSIDE	53	12	65	30	18	48	74	13	87	157	43	200
13	IKENNE	78	84	162	57	82	139	47	54	101	182	220	402
14	REMO NORTH	6	8	14	4	12	16	48	35	83	58	55	113

15	SAGAMU	107	206	313	79	250	329	100	173	273	286	629	915
16	ADO-ODO/OTA	163	289	342	118	328	446	146	277	423	427	894	1321
17	IMEKO/AFON	43	13	56	23	15	38	64	28	92	130	55	186
18	IPOKIA	81	36	117	62	40	102	68	35	103	211	111	322
19	YEWA NORTH	88	36	124	65	41	106	102	47	149	255	124	379
20	YEWA SOUTH	126	101	227	73	142	215	45	33	78	244	276	620
	TOTAL	**1813**	**2406**	**4219**	**1250**	**2975**	**4225**	**1536**	**1636**	**3172**	**4599**	**7017**	**11616**

Source: Ogun state Teaching Service Commission, Abeokuta Staff Data Analysis of Ogun state Public Secondary Schools on 31st December 2020 (Teaching Staff) by Zones

APPENDIX V

OGUN STATE MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

DEPARTMENT OF PLANNING, RESEARCH AND STATISTICS

ENROLLMENT STATISTICS OF STUDENTS IN SELECTED OGUN STATE PUBLIC SECONDARY SCHOOLS

2020/2021 ACADEMIC SESSION

Table 3.1: SELECTED PUBLIC JUNIOR SECONDARY SCHOOLS IN OGUN STATE WITH THE STUDENTS

S/N	ZONES	NAME OF SCHOOLS (IN FULL AND CASE)	JSS 1			JSS 2			JSS3		
			M	F	T	M	F	T	M	F	T
1	ABEOKUTA SOUTH	ABEOKUTA GRAMMAR SCHOOL (JUNIOR), IDI-ABA, ABEOKUTA	400	364	764	724	508	1232	712	482	1194
2		BAPTIST GIRL'S COLLEGE (JUNIOR), IDI-ABA, ABEOKUTA	0	413	413	0	639	639	0	568	568
3		SAINT JOHN'S HIGH (JUNIOR), KUTO, ABEOKUTA	101	107	208	99	123	222	70	108	178
4		REV. KUTI MEMORIAL GRAMMAR (JUNIOR), ISABO, ABEOKUTA	288	284	572	368	339	707	371	337	708

5		**EGBA COMPREHENSIVE HIGH SCHOOL GRAMMAR (JUNIOR), ASERO, ABEOKUTA**	**358**	**375**	**733**	**547**	**540**	**1087**	**424**	**404**	**828**
6		**MACJOB GRAMMAR SCHOOL ONIKOLOBO**	**120**	**134**	**254**	**123**	**100**	**223**	**94**	**92**	**186**
7	**IFO**	**ADENRELE HIGH SCHOOL (JUNIOR), IFO**	**301**	**258**	**559**	**230**	**256**	**486**	**275**	**247**	**522**
8		**IFO HIGH SCHOOL (JUNIOR), IFO**	**242**	**244**	**486**	**249**	**254**	**503**	**219**	**207**	**426**
9		**NAWAIR-UD-DEEN GRAMMAR SCHOOL (JUNIOR), SOLU**	**271**	**307**	**578**	**390**	**292**	**582**	**284**	**243**	**527**
10		**ANGLICAN GRAMMAR SCHOOL (JUNIOR) OKENLA**	**376**	**370**	**746**	**493**	**432**	**925**	**357**	**356**	**713**
11		**PAKOTO HIGH SCHOOL (JUNIOR), AYEDE**	**345**	**340**	**685**	**381**	**371**	**752**	**323**	**257**	**580**
12	**IJEBU-ODE**	**ADEOLA ODUTOLA COLLEGE (JUNIOR), ODUTOLA ROAD IJEBU-ODE**	**357**	**186**	**543**	**443**	**245**	**688**	**651**	**317**	**968**
13		**OUR LADY OF APOSTLE SECONDARY SCHOOL (JUNIOR) IJEBU-ODE**	**0**	**409**	**409**	**0**	**670**	**670**	**0**	**631**	**631**

14		**IJEBU MUSLIM COLLEGE (JUNIOR), ODUTOLA ROAD ABIO IJEBU-ODE**	**283**	**269**	**552**	**511**	**377**	**888**	**555**	**406**	**961**
15		**IJEBU-ODE GRAMMAR SCHOOL (JUNIOR), IJEBU-ODE**	**495**	**0**	**495**	**699**	**0**	**699**	**610**	**0**	**610**
16	**ODEDA**	**SALAWU ABIOLA COMPREHENSIVE HIGH SCHOOL (JUNIOR), OSIELE**	**210**	**292**	**502**	**198**	**272**	**470**	**180**	**207**	**387**
17		**NAWAIR-UD-DEEN GRAMMAR SCHOOL (JUNIOR) OBANTOKO**	**428**	**383**	**811**	**426**	**396**	**822**	**453**	**418**	**871**
18		**EGBA ODEDA HIGH SCHOOL (JUNIOR) ODEDA**	**122**	**136**	**258**	**125**	**102**	**227**	**96**	**92**	**188**
19	**SAGAMU**	**SAGAMU HIGH SCHOOL (JUNIOR), SAGAMU**	**246**	**258**	**504**	**218**	**172**	**390**	**190**	**160**	**350**
20		**REMO DIVISIONAL HIGH SCHOOL (JUNIOR) SAGAMU**	**204**	**184**	**388**	**346**	**344**	**690**	**311**	**383**	**694**
21		**METHODIST COMPREHENSIVE COLLEGE (JUNIOR), SAGAMU**	**377**	**343**	**720**	**408**	**392**	**800**	**345**	**322**	**667**

22		**MUSLIM HIGH SCHOOL (JUNIOR), SAGAMU**	**438**	**349**	**787**	**293**	**282**	**575**	**302**	**228**	**530**
23		**MAKUN HIGH SCHOOL (JUNIOR), SAGAMU**	**274**	**294**	**568**	**336**	**299**	**635**	**291**	**264**	**555**
24	**YEWA SOUTH**	**YEWA COLLEGE (JUNIOR), ILARO**	**167**	**205**	**372**	**292**	**334**	**626**	**295**	**263**	**538**
25		**ANGLICAN GRAMMAR SCHOOL (JUNIOR), ILARO**	**236**	**232**	**468**	**207**	**216**	**423**	**201**	**195**	**396**
26		**AREA COMMUNITY HIGH SCHOOL (JUNIOR) OWODE**	**402**	**408**	**810**	**445**	**420**	**865**	**409**	**449**	**858**
27		**OWODE SECONDARY SCHOOL (JUNIOR) OWODE**	**319**	**295**	**614**	**309**	**237**	**546**	**303**	**251**	**554**
28		**MUSLIM PROGRESSIVE HIGH SCHOOL (JUNIOR) OKE-ODAN**	**82**	**75**	**157**	**83**	**77**	**160**	**52**	**69**	**121**

SOURCE: PLANNING, RESEARCH AND STATISTICS, MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY, OGUN STATE

APPENDIX VI

OGUN STATE MINISTRYOF EDUCATION, SCIENCE AND TECHNOLOGY

DEPARTMENT OF PLANNING, RESEARCH AND STATISTICS

ENROLLMENT STATISTICS OF STUDENTS IN PUBLIC JUNIOR SECONDARY SCHOOLS IN OGUN STATE

2020/2021 ACADEMIC SESSION

S/N	LOCAL GOVERNMENT AREA	JSS 1			JSS 2			JSS 3			SUB TOTAL J S S 1 - J S S 3		
		M	F	T	M	F	T	M	F	T	M	F	T
1	ABEOKUTA NORTH	3084	2898	**5982**	3419	3349	**6768**	3052	2916	**5968**	**9555**	**9163**	**18718**
2	ABEOKUTA SOUTH	4398	4536	**8934**	4892	5079	**9971**	4477	4533	**9010**	**13767**	**14148**	**27915**
3	ADO-ODO/OTA	7159	6963	**14122**	8363	7732	**16095**	7384	7163	**14547**	**22906**	**21858**	**44764**
4	EWEKORO	1550	1503	**3053**	1775	1656	**3431**	1603	1346	**2949**	**4928**	**4505**	**9433**
5	IFO	3733	3550	**7283**	4088	3734	**7822**	3612	3255	**6867**	**11433**	**10539**	**21972**
6	IJEBU EAST	932	898	**1830**	1031	907	**1938**	905	845	**1750**	**2868**	**2650**	**5518**
7	IJEBU NORTH	1803	1793	**3596**	1970	1979	**3949**	1843	1743	**3586**	**5616**	**5515**	**11131**
8	IJEBU NORTH-EAST	495	458	**953**	575	461	**1036**	540	474	**1014**	**1610**	**1393**	**3003**
9	IJEBU ODE	2438	2486	**4924**	2925	2919	**5844**	3034	3057	**6091**	**8397**	**8462**	**16859**
10	IKENNE	1365	1332	**2697**	1576	1465	**3041**	1391	1376	**2767**	**4332**	**4173**	**8505**
11	IMEKO/AFON	906	919	**1825**	905	831	**1736**	776	686	**1462**	**2587**	**2436**	**5023**
12	IPOKIA	2308	2172	**4480**	2280	2163	**4443**	2071	1831	**3902**	**6659**	**6166**	**12825**
13	OBAFEMI OWODE	1997	1995	**3992**	2229	2179	**4408**	1909	1885	**3794**	**6135**	**6059**	**12194**
14	ODEDA	1297	1298	**2595**	1253	1188	**2441**	1204	1149	**2353**	**3754**	**3635**	**7389**

15	ODOGBOLU	1158	1009	**2167**	1091	977	**2068**	984	901	**1885**	**3233**	**2887**	**6120**
16	OGUN WATERSIDE	744	674	**1418**	765	698	**1463**	586	625	**1211**	**2095**	**1997**	**4092**
17	REMO NORTH	412	387	**799**	441	425	**866**	416	406	**822**	**1269**	**1218**	**2487**
18	SAGAMU	3597	3343	**6940**	3697	3530	**7227**	3112	3012	**6124**	**10406**	**9885**	**20291**
19	YEWA NORTH	2091	1842	**3933**	2216	2098	**4314**	1905	1746	**3651**	**6212**	**5686**	**11898**
20	YEWA SOUTH	2523	2434	**4957**	2782	2643	**5425**	2490	2323	**4813**	**7795**	**7400**	**15195**
	GRAND TOTAL	**43990**	**42490**	**86480**	**48273**	**46013**	**94286**	**43294**	**41272**	**84566**	**135557**	**129775**	**265332**

SOURCE: PLANNING, RESEARCH AND STATISTICS, MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY, OGUN STATE