EFFECTS OF SOCIAL MEDIA INSTRUCTIONAL PLATFORMS ON PUPILS' SOCIAL INTERACTION, ATTITUDE TO EXTENDED LEARNING AND ACHIEVEMENT IN BASIC SCIENCE IN EKITI-STATE, NIGERIA

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ABSTRACT

Studies have shown that social media instructional platforms such as Schoology and WhatsApp can be used to further engage pupils' interaction beyond the classroom. However, previous studies concentrated largely on the use of social media platforms for social engagement but rarely use them for learning activities and interactions (pupil-to-pupil, pupil-to-teacher and pupil-to-material interactions) outside the classroom. This study, therefore, was carried out to examine extended learning using social media instructional platforms (Schoology and WhatsApp) for primary school pupils' social interaction, attitude to extended learning and achievement in Basic Science in Ekiti-State, Nigeria to foster learning interaction among them using their parents' android mobile devices. The moderating effects of social media self-efficacy and parents' digital divide were also considered.

The study was anchored to Engagement Theory, while the pretest-posttest control group quasi-experimental design with a 3x2x3 factorial matrix was used. The three senatorial districts in Ekiti State were enumerated, while three Local Government Areas (LGAs) were randomly selected. One primary school from each LGA was purposively selected based on pupils' technology competency, availability of resources and alternative power supply. Seventy-three pupils in primary V from three schools were randomly assigned to Schoology Instructional Platform (SIP - 18), WhatsApp Instructional Platform (WIP - 24) and control (31) groups. The instruments used were Achievement Test in Basic Science (r = 0.72), Pupils' Attitude to Extended Learning (r = 0.75), Social Media Self-efficacy (r = 0.85), Parents' Digital Divide (r = 0.75), Rubric for Social Interaction (r = 0.76) scales and instructional guides. Treatment lasted 12 weeks. Data were subjected to Analysis of covariance and Bonferroni post-hoc test at 0.05 level of significance.

Treatment had significant main effects on pupils' social interaction (F $_{(2;58)}$ = 51.05, partial η^2 = 0.63), attitude to extended learning (F $_{(2;58)}$ =107.56; partial η^2 = 0.78) and achievement in Basic Science (F $_{(2;58)}$ = 725.49; partial η^2 = 0.96). Pupils in SIP group had the highest posttest mean score (57.60), followed by control (56.15) and WIP (39.54) groups on social interaction. Pupils exposed to SIP group had the highest posttest mean score (45.82), followed by control (43.06) and WIP (23.89) groups on attitude to extended learning, while pupils in WIP group had the highest posttest mean score (70.41), followed by SIP (64.01) and control (31.33) groups on achievement in Basic Science. The main effects of social media self-efficacy and parents' digital divide were

not significant. There was a significant two-way interaction effect of treatment and parents' digital divide on achievement to Basic Science (F $_{(3;58)}$ = 4.95; partial η^2 = .25), but none on social interaction and attitude to extended learning. The two-way interaction effect of treatment and social media self-efficacy, and three-way interaction effects were not significant.
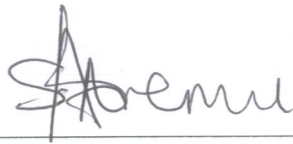
Schoology instructional platform enhanced pupils' social interaction, attitude to extended learning and achievement in Basic Science in Ekiti State, Nigeria. Schoology and WhatsApp instructional platforms should be employed to engage pupils in extended learning settings, regardless of their social media self-efficacy and parent's digital divide.

Keywords: Schoology instructional platform, WhatsApp instructional platform, Extended learning Settings in Ekiti State, Parents' digital divide

Word count: 493

CERTIFICATION

I certify that the research work that culminated in the writing of this doctoral thesis was carried out by FAKUADE Olubusayo Victor (Matric Number 167700) under my supervision.

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This work is dedicated to God almighty, the giver of life and to the memory of my late supervisor, Prof. Gloria Olusola Adedoja. May her soul rest in peace.

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INTRODUCTION

1.1   Background to the Study

All over the world, primary education serves as one of the important formal educational level. Consequently, it is the most attended educational programme by people in the society. There is no doubt that primary level of education has the highest population of learners in Nigeria education system. In Nigeria, sixty-one percent of people aged six to eleven years attend primary schools (DHS Education Data Survey, 2010). The importance of this level of education cannot be over-emphasized as it provides the required foundation for all other stages of educational levels across the world (Oni, 2008). It is at this level that learners acquire living and learning skills (Olupchunda, 2013). It is noteworthy that the potentials and competences of pupils are usually discovered and nurtured at the basic level of education and this affects their functionality at the higher stages of education and their contributions to the society in the near future (Jaiyeoba, 2007). Children at this stage of education would acquire the capability to perform concrete and formal operations which last them for life.

The strategic instructional goal of primary education as indicated by National Policy on Education (NPE, 2013) is to guarantee that pupils can relate emphatically with their environment, which would prepare them to confront the increasingly growing challenges of the contemporary world. In general terms, the destinations of essential instruction in Nigeria include: teaching of changeless numeracy and proficiency to guarantee that the members can take part in powerful correspondence; setting up a solid foundation for the acquisition of shrewd and coherent thinking; arrangement of viable citizenship training to cause compelling interest in the development and improvement of the general public; arrangement of character and good preparing to create uplifting frames of mind among the pupils; advancement of the kid's capacity to acclimate to the changing needs of the network; managing pupils the chances to create manipulative abilities that will outfit the members with the aptitudes to work in the general public and in conclusion; arrangement of imperative assets for further instructive headway including readiness for exchanges and specialties of the region (FNG, 2013).

Despite the strategic roles of primary education in laying a solid foundation for the development of a country, the learning outcomes of students, particularly public primary

school pupils, have been dwindling over the years (Obemeata, 2016). This has become worrisome as stakeholders in education are consistently questioning the quality of learning taking place at this level of schooling. The basic skills in terms of reading, writing and numeracy competence that are expected to be acquired at this level of education are increasingly fading away and this has negative effect on their functionality in the advanced level of education. At this tender age, young people need to be grounded in 21st century skills to make them contribute to the development of the society. Several factors have been identified as the causes of these problems. Bassey, Ekpoh and Edet (2008) identified these factors as problem of monitoring pupils' learning activities, inadequate structures such as classrooms and laboratories for learning in primary schools, lack of teaching materials, improper incorporation of information communication innovation (technology) into teaching-learning process to mention a few. The primary level of education provides a veritable platform for developing the core component of science and technology-related courses for other levels of education. Thus, the basic education component of the system serves as a building block to unlock the potential of the young people in the areas of science and technology. This makes education at the primary level a strategic phase in the nation's educational system, especially in the development of science and technology.

Putting measure to achieve the overall objectives of primary education and combat factors that limit acquisition of skills at the primary level of education, knowledge of science and technology has to be considered. According to Adewumi (2012), a major goal of science education at the primary level is to foster the development of the child as well as the society. This knowledge leads the child in the process of discovery in order to gain a thorough understanding of the surrounding environment. The introduction of Basic Science has helped in achieving the goals stated in the National Policy on Education by enhancing the cognitive and psychomotor development of children, as well as helping them appreciate the dynamics of the world they live in. Consequently, educators are required to demystify the teaching and learning of Basic Science by making instruction connected to real-life situation through active interaction and exchange of ideas (Ormerod and Duckworth, 2005).

This brings to the fore the need for extended learning in primary education system, especially in this part of the world. Extended learning is a learning encounter outside the school setting, that can help make subjects progressively distinctive and interesting to learners and improve their comprehension. Extended learning can likewise contribute fundamentally to pupils' performance as it allows them to be close to home, as well as social and passionate advancement (Well-being and Security Official Open air Instruction Counsels' Board, 2008).

Giving pupils learning task to do outside school condition as a type of extended learning is a factor that influences achievement all alone in an instructional setting (MacDonald, 2009). Learning beyond classroom is characterized as scholastic undertakings allotted by an instructor to be finished by pupils in a period of time which extends beyond the originally allotted lesson hours (Cooper, 2012). As it is, there should be important commitment of pupils at this degree of training since, they spend generous part of their time inside the school condition to gain abilities and information to become functional members of the society. Since learning is a persistent procedure, pupils should be actively engaged both inside and outside classroom settings. The Office for Training and Aptitudes, College of London (2006), accepted that each child should encounter the world beyond the classroom as a fundamental piece of learning and self-improvement, whatever their age, capacity or conditions.

Pupils are usually engaged outside classroom in the form of homework as assignment. As rightly observed by Odogwu (2002), primary school teachers, in most cases, are meant to teach all the subjects in their classes, as a result of this, they have limited time to effectively deal with all subjects. In that regard, there is limited instructional time that is allocated to meaningful engagement and active interaction with the pupils in the classroom. Odogwu (2002) emphasised that, for the purpose of primary level of education to be fulfilled, there is a need to actively engage pupils both in the study room and beyond, most especially pupils' environment in order to adequately set them up for subsequent stages of education which are secondary and tertiary levels, where pupils will be exposed to complex concepts.

Pupils' commitment and cooperation in the classroom are basic components of compelling instructing learning process and could be strengthened with active engagement within and outside classroom environment. Commitment is conceptualized as the effort and time pupils spend in organizing resources and participating in activities which translate into the achievement of desired lesson objectives (Kuh, 2008). Moreover, extended learning can serve as a combination of academic work, including drills and practice of fundamental aptitudes, or advancement and elaboration of thoughts exhibited in the classroom. It can likewise be utilized to develop pupils' learning abilities, satisfy managerial mandates, give parents important information about the educational programme, and serve as a link to connecting with pupils all the time (Epstein, 2008). Again, Vatterott (2010) recognized five key attributes of good learning exercises that connect with pupils outside school settings These are reason, viability, ownership, ability, and class interest. Report implies that all learning exercises in an extended learning setting are significant.

The implication is that pupils ought to be given meaningful learning exercises that are relevant to their unique personalities and environments. The introduction of learning activities by teachers should not be based on schedule or compliance rather it should be designed to help pupils achieve the lesson objectives. Pupils should likewise comprehend the motivation behind the task and why it is significant with regards to their learning experience (Xu, 2011). Giving home work or routine assignments is counterproductive. Hence, after school exercises or learning tasks are usually designed to give teachers the opportunity to influence pupils' activities and to further engage them after school hours (Redding, 2006). In the study of Protheroe, task or learning exercises after school should not be a learning task which learners have not been exposed to in the classroom. In like manner, before pupils are assigned any learning exercise, they should have substantial ideas about what is expected of them and how such an activity is to be carried out (Protheroe, 2009). There are various motivations to connect with pupils as a form of extended learning and one of the objectives is to improve academic achievement of the pupils.

Consequently, connecting with pupils in an extended learning in the twenty-first century seems to be discouraging with the increasing population and the quest for the acquisition of globally competitive skills to be functional members of the society. There seems to be a paradigm shift in the way pupils could interact with the teacher inside and outside the school system. These shifts are forcing further changes to instructor's obligations and job requirements, as scholars are consistently advocating the need to leverage the capabilities of technology to monitor learners' learning process beyond the classroom setting. It should be mentioned that the systematic adoption and integration of technological innovations to teaching-learning process could assist teachers and other stakeholders in education to maintain active engagement of pupils within and outside classroom setting (Perraton, 2007). Different forms of ICT-related interventions are considered appropriate to extend instructional activities beyond the classroom walls.

Technological innovations across the globe are increasingly being used to unlock the potential of the learners and career development at different levels. A diverse range of technological tools has been discovered as effective devices to create interactive instructional content and engage pupils in classroom activities (Johnston, Killion and Omomen, 2005). The twenty-first century pupils are technologically driven and constantly employing the use of diverse technological tools for exchange of ideas and sharing of opinions. In other words, pupils are increasingly taking advantage of different digital platforms for social interaction across the globe. Even so, the utilisation of technology innovation as an instrument for

enhancing pupils' learning has become a strategic catalyst for improving accessibility to learning resources in formal and non-formal education settings. Using technology engages pupils, aids their retention of knowledge and stimulates their interest in the instructional content (Siemens, 2007).

With active participation in an extended learning activity, it is expected that the community members would be able to establish conversation with friends, families, and experts and therefore, pupils would be provided with the opportunity to discover and understand the kind of community system of the world they are dwelling in and as a part of their informal education system or circle. This kind of interaction with the environment could improve the acquisition of scientific knowledge and competences capable of proffering innovative solutions to prevalent societal challenges.

In recent times, there has been a preponderance of online platforms, which has given limitless access to the Web and subsequently remote systems. These social media platforms have been considered as veritable tools that could engage pupils in genuine social cooperation, such that different elements in instructional process could be associated and collaborated to achieve previously stated instructional objectives. This process results in active interaction in the system and builds the foundation of correspondence technique that works for both "digital natives" and "digital immigrants" (Prensky, 2010). Social media is a correspondence channel that permits users to post and exchange materials on the web. With this sort of data stream, there is an unmistakable change in user's practices, and furthermore in the manner in which pupils respond to issues. Basically, learning does not really show that pupils ought to be confined within the classroom structure as there is a need to learn and exchange ideas within and outside classroom settings. Nowadays, pupils could be engaged with instruction outside the school setting, with the capabilities of different social media platforms. For the 21st Century learners, who live in media-immersed environments, learning can simply be a click away.

According to Abimbade (2007), these resources can be categorized into two: resource by design and utilisation. Resources by design are forms of social media technologies that are specifically designed for learning purposes, examples are Schoology, Edmodo, Collaborize classroom and others. While resources by utilisation are forms of social media technologies that are not originally designed for the purpose of learning activities but are adopted for instruction delivery, such platforms include Facebook, Twitter, Whatsapp, You-tube among others.

As could be considered, social media platforms like Facebook, WhatsApp and Skype are internet-based environments for social commitment rather than learning platforms, however pupils are progressively familiar in utilizing them for imparting knowledge among themselves. Whatsapp is a portable application that could work adequately on almost all present sorts of smart devices and operating systems. This portable application has been presented to the public since 2010; the underlying objective of the innovators of this product was essentially to substitute the current SMS platform for a more robust system that is user-friendly and cost-effective (Fischer, 2013). The platform is utilized as a channel for sending and accepting messages across various categories of people in the world. WhatsApp fuses an assortment of channels for instant messages, appended pictures, sound documents, video records, and connections to web addresses. Recently, this web-based platform has been generally accepted by different categories of users and has become also the most downloaded mobile application in more than one hundred nations (Cohavi, 2013).

Conversely, schoology is an internet-based learning site (social media learning website) which appears to be like Facebook. However, it ensures privacy and is safe for a learning situation since it enables just instructors to make and oversee accounts, and just their pupils to be part of the class using a given code (Al-Kathiri, 2014). This social learning site is a free online course with interactive framework which incorporates methodical coordination of long range interpersonal communication position into the academic classroom to encourage teaching-learning process. Schoology could be found at www.schoology.com and the platform could, without much stress, be utilized for instructional exercises in school settings. This educational platform affords educators the opportunities to convey instruction online to numerous understudies (pupils) at the same time.

Besides, extended learning using social platforms such as Schoology and WhatsApp has a quality way of increasing the interaction between teachers – pupils and pupils – pupils even within the community. The process of interactions is very crucial to the cognitive development of children. Through interactions, children are able to express themselves, create a sense of self-development skills and also learn how to accept the opinions of others. Even though the family is the first setting where pupils have their primary interaction, as they grow they become more interested in playing and interacting with peers across different ages. While playing, children learn how to cooperate, compete and share with their peers. Their psychomotor and cognitive skills are also developed in the process.

Sierpinska (1998) opined that interaction is a form of relationship between pupils or among the teachers, pupils and materials. Besides, it occurs at different levels (Fatokun and

Omenesa, 2015). Audu and Achor (2003) believed that interaction is a process through which the teacher and the pupils actively participate in classroom activities using different forms of media ranging from speech to gesture and digital resources to bring about effective communication in a teaching-learning environment. For both parties to be actively involved, the method in use ought to create an opportunity for the required interaction to take place. Interaction, therefore, can be described as a process in which teachers and pupils have a reciprocal effect upon each other through what they say and do in the classroom (Matelo, 2006).

Instructor-pupil connection in the classroom (teacher-pupil interaction) is a two-way action due to the fact that every member impacts the other's conduct that is, the understudies (pupils) condition their instructor's conduct and the other way around (Inamullah, 2015). Now, understudies (pupils) must figure out how to communicate deferentially, likewise figure out how to be confident without being discourteous, so their opinions are heard without disturbance. Whenever pupils' associations with their instructor improve, it has significant positive effect on pupils' learning outcome and social advancement. Studies have demonstrated that pupils with close, positive and community associations with their educators will probably accomplish higher than those understudies (pupils) with all the more conflicting relationships.

Social communication is the manner by which characters, gatherings, or social system act towards one another commonly impact each other (Panos Bardis, 2014). Also, captivating pupils outside learning room (classroom) with the utilization of social platforms advance better frame of mind (attitude) of understudies (pupils) towards extended learning since its instigating and fun compere with learning room (classroom) experience which is traditional way that limits understudies (pupils) to what their instructors says.

Apart from attitude towards extended learning, using social media as an instructional tool should also have impact on pupils' achievement for its overall profitability. Achievement means to get what you desire, want or attain a purpose or objective. Achievement in this context connotes attainment of primary school basic science aims and objectives. Nwoye (2014) opined that pupils' achievement means outcome, quantity and quality of progress pupils have made in a particular subject matter or unit of instruction in a classroom level. This is a particular and relative approach while the general attitude tilted to the overall progress in the school curriculum. Achievement is similar to performance but differs in terms of measurement criteria. Performance may be in terms of scores in a subject matter but achievement connotes understanding, knowledge, and acquisition of skills, values and experiences of the subject

matter. In essence, performance is an interpreted part of achievement. Ikejofor (2014) observed achievement as attaining a desirable objective in a course of action engaged by a person.

According to Nworgu (2006), achievement tests are constructed so as to assess what a pupil has mastered or understood in general or specific areas of knowledge to which he had been exposed. From the foregoing, one can confidently state that achievement is what a pupil has mastered, understood or learnt to do, therefore in the main classification of learning domains (cognitive, affective and psychomotor), achievement objectives are usually measured. Pupils' accomplishment (achievement) has become the key factor for an individual progress. As indicated by Danjuma (2015), the craving to ascend the stepping stool of accomplishment state put a lot of weight on understudies, instructors, guardians (pupils, teacher and parents) as well as the instructive system. It shows as though the entire arrangement of overall pupils' academic accomplishment.

Besides, financial foundation can impact how families fuse computerized media into their regular day-to-day existence, the selection of gadgets accessible at home and the nature of web get to (Livingstone, 2007). Lower pay guardians are more averse to giving their children the most recent or most costly form of innovative gadgets. Notwithstanding, pupils from lower financial foundation are more regularly accustomed to sitting in front of the TV than pupils from high financial foundation which are furnished with electronic screens in their rooms, utilizes touchscreens and invest more energy utilizing PC (Nikken and Schols, 2015). All these social issues about the utilization and access to innovation can be alluded to as advanced partition at home (Forces, 2004). Digital divide is the gap in equality between those who have access to computers and the Internet and those who do not (Bernard, 2013). In spite of the way that utilization of innovation is overwhelming in the 21st century of learning, there are still wide hole between those that approach employment of innovation and those how do not. All things considered, this could be termed as advanced partition, or the computerized split. It is a social issue alluding to the varying measure of information between the individuals who approach the utilization of web, Information Innovation (IT) and the individuals who do not. The term wound up mainstream among concerned gatherings in the late nineteenth century (Berard, 2013).

Extensively, the thing that matters is not really dictated by the entrance to the Web, yet incorporates any ICTs and media channels that various portions of society can utilize (Davison, 2003). As per Wikipedia Site (2007) the advanced partition (digital divide) alludes to the hole between individuals with successful access to computerized and information innovation and those with exceptionally restricted or no entrance by any means. It incorporates the irregularity

both in physical access to innovation and the assets and abilities expected to successfully take part as an advanced resident. There are a few meanings of the term computerized partition (digital divide). Bharat Mehra (2002), characterized it basically as the alarming hole between the individuals who use PCs and the Web and the individuals who do not.

Nevertheless, there was a sharp significant difference between parent's digital divide, according to base line research carried out by the researcher in Ekiti State, Southwest Nigeria, using primary five pupils from two primary schools: Nova International Nursery and Primary School, Ado Ekiti (private) and Community Primary School Ikere Ekiti (public). Fifty pupils were selected from each school using simple random sampling technique (100 participants) to establish the digital divide of the parents and ways to monitor pupils' activities while using social platforms for learning activities. 50% of the parents in private primary schools have high digital skills in terms of access to the internet, mobile phone and ability to use it to browse, 35% have low digital skill and the remaining 15% were considered as moderate in digital skill.

The rapid growth of social media sites and other genres of social technologies among children is driven by the way and manner in which these tools provide the children with a powerful space and environment for participating in public life. As a result, learning new things by primary pupils and socializing with other people around the globe this among other things have greatly affected their attitude.

Therefore, this study investigated the use of social media by primary school pupils for an extended classroom and its effect on social interaction, attitude and achievement of pupils using Schoology and WhatsApp as instructional platforms. The findings of this study would help to obtain information that would guide its full usage, which would determine the pupils' thoughts, readiness and expectations towards integrating social media methodology for extended learning in primary school level of education.

1.2   Statement of the Problem

Strategic instruction with the use of social media platform is very crucial in this age in which web 2.0 technology like Twitter, Whatsapp, Schoology and Facebook to mention a few, is now a crucial part of our everyday life. It has been established that learning is more effective when learners are engaged both outside and inside the classroom. Most especially, using technology to engage learners for more practices on concepts that teachers introduce to learners in the classroom also improved attitude and academic achievement of pupils beyond classroom settings. However, teachers give out learning activities after school to engage pupils in the form of extended learning environment. The purpose of engaging pupils after school activities

is to adequately prepare them for the tasks both within and outside school environments. Extended learning also helps to improve good disposition toward learning and a sense of personal responsibility to finish the task or class activities that limited time in the class would not allow. Many studies had been carried out on the need to harness the capabilities of assignment to engage learners both within and outside classroom settings. However, the reason for engaging pupils in after-school activities is gradually being neglected. Many teachers give learning task that is not related to the classwork thereby reducing practice, drills and exercise which are the original aims of engaging pupils outside classroom activities. Also, teachers are not really sure if the pupils are the ones doing the learning task or assignment given to them, which results in pupils' negative attitude and low academic performance. There is a need for an all-inclusive strategy or platform that would afford teachers the opportunity to monitor pupils' activities, especially outside school setting. Teachers could leverage on the capabilities of social media platforms to engage learners both within and outside school environments. While traditional approaches may offer limited benefits, it is imperative to focus on social media as a set of additional instructional tools to extend learning beyond the classroom setting. In Nigeria, there seems to be a paucity of literature materials on integrating social media platforms into instructional delivery, especially at the primary school level as observed by the present researcher. Also, a critical review of relevant literature showed that many primary school teachers have not fully explored the potentials and capabilities of social media to actively engage pupils in after-school learning activities. In the light of this, there is a need to investigate how pedagogy on social media platforms can be developed to serve the purpose of an extended learning to support learning activities at the primary school level of education. This study, therefore, seeks to examine extended learning using social media-based instruction for primary school pupils in basic science in Ekiti-State Southwest, Nigeria.

1.3   Hypotheses

Ho_1 There is no significant main effect of treatment (social media instruction) on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho_2 There is no significant main effect of social media self-efficacy on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho_3 There is no significant main effect of parent's digital divide on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho$_4$ There is no significant interaction effect of treatment (social media instruction) and social media self –efficacy on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho$_5$ There is no significant interaction effect of treatment (social media instruction) and parent's digital divide on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho$_6$ There is no significant interaction effect of social media self-efficacy and parent's digital divide on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

Ho$_7$ There is no significant interaction effect of treatment, social media self- efficacy and parent's digital divide on pupils' social interaction, attitude towards extended learning and achievement in Basic Science.

1.4   Significance of the Study

The outcome of this study would be beneficial to pupils because it would boost their interest in learning through schoology, whatsApp platforms and thereby improve their skills, social interaction and learning performance. The study would equally be useful to pupils who are preparing for the secondary level of education in that it would provide ways of deploying social media for extended classroom instruction. Similarly, it would provide them with information about the importance of social interaction and learning engagement. Teachers are believed to find the outcome of the study useful in communicating effectively with parents through the skills that would be acquired through the study. The findings from the study could provide a realistic fact on how to use schoology and whatsApp platforms to improve pupils' academic performance and their attitude towards learning in and outside the school activities. It could also help curriculum planners to obtain information that would guide them in incorporating extended learning in the curricula of primary level of educational system. The outcome of the study is believed to help, determine the thoughts, readiness and expectations of all stakeholders towards integrating social media methodology for extended learning in primary schools.

1.5   Scope of the Study

The study covered extended learning using two social media platforms, Schoology and WhatsApp for primary school pupils in basic science. It was carried out in Ekiti-State, Nigeria. It was completed in three selected public and demonstration private primary schools from three

geo-political zones in Ekiti-State. The study covered three topics in Basic Science, solar system, global warming and, forces and types of forces. Primary five pupils were utilized and the mediator factors for the exploration are social media self-efficacy and parents' digital divide.

1.6 Operational Definition of Terms

Achievement in Basic Science: This is the performance of primary five (5) pupils in basic science test after being introduced to web based life platforms (social media platforms) in extended learning.

Resource by Design: Social media platform design for learning activities such as Schoology

Resource by Utilisation: Social media platform for social engagement but can be used for learning purposes such as Whatsapp.

Parent's Digital Divide: This is parents' ownership of device (for example, iPad, high-end phones, smart phones, computer and the internet), its release to their children's use, and the internet provision that permits interaction on social media.

Extended learning: This is a learning experience that takes place outside the conventional classroom setting.

Social Interaction: Level of interaction among primary school pupils, teachers and contents in and outside the classroom in which personalities, groups, or social systems influence one another.

Social Media Self-efficacy: This is the pupils' anticipation to successfully use social media platform for learning and socially interact with their teacher and peers.

Sociometry method: It is a means for studying the choice, communication and interaction patterns of pupils in a group. In this method, pupils were asked to choose one or more persons according to specified criteria, in order to find the person or persons with whom they would like to associate.

Attitude: This is the approach of primary school pupils towards learning activities using social platforms such as whatsApp and schoology after classroom or school activities

Social medial instructional Platforms: social media platforms that are designed for learning engagement, social interaction and collaboration among users online

Schoology Instructional Platform: A kind of social media platform that specifically design for learning.

WhatsApp Instructional Platform: This is a platform that meant for social engagement but can be used for learning purposes.

1.7   List of Abbreviations

PC: Computer devices

SM: Social media

BS: Basic science

SIP: Schoology instructional platform

WIP: WhatsApp instructional platform

Innovation: Technology

Web based life or Internet based life: Social media platform

SNS: Social networking sites

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of literature relevant to the study. The chapter covers the following headings sub-headings:

2.1 Conceptual Review

2.1.2 Extended Learning

2.1.3 Basic Science

2.1.4 Social Media

2.1.5 Schoology Platform

2.1.6 WhatsApp Platform

2.1.7 Social Interaction

2.1.8 Pupils' Attitude towards Learning

2.1.9 Digital Divide

2.1.10 Pupils' Academic Achievement

2.2 Theoretical Framework

2.2.1 Engagement Theory

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2.4   Appraisal of Literature

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2.1.2   Concept of Extended Learning

Numerous out-of-school learning exercises like traveling and presentations could enormously be improved by the instructive plan and utilization of computerized advances (digital technologies) by the pupils and instructors. These respective approaches are discussed in the work of Lauren Giarratani, the design of 'organizational dynamics' for out-of-school learning exercises that can cultivate and create pre-adolescent pupils enthusiasm for science and innovation (technology). With regards to the premises of request learning, understudies (pupils) are presented to genuine science-based issues in the community as issues to be researched, with the assistance of learning process that is demonstrated on specialists' logical techniques (scientific methods) (Bodemer, 2005). It has been noted that these activities could be further strengthened with the systematic use of social media in out-of-school activities by the pupils.

Although, it has been argued that for learners to practically retain knowledge and apply same to problem-solving, there is the need to acquire digital skills and literacy, carry out productive research, select appropriate information, reflect on the content, collaborate with other members of the class, and share opinions on different issues. Yet, learning in digital age should not rely solely on independent processing and acquisition of knowledge and skills, rather, classroom activities should leverage on the network and participation of communities of interest that digital technologies afford to foster collaborative learning (Siemens, 2007). These collaborative and interactive tools give teachers the opportunity to engage pupils in extended learning activities, after the regular school period.

Extended learning provides children with academic enrichment in a way instructors can supervise learning activities beyond the traditional school or class activities. Well-planned and coordinated extended learning activities enable pupil's positive learning disposition to explore their interests and develop their talents. In most cases, learning activities given to pupils for more practices are regularly done at home. Cooper (2006) described this learning activities as learning task designed to further engage pupils when they are no longer in the classroom with

the teacher. These learning activities would help pupils to demonstrate what they have been taught in the classroom, allowing them to interact with their environment in other to make learning more understandable such that pupils can apply classroom situation to real life experience. Olympia, Sheridan, and Jenson (2004) further defined extended learning as the kind of academic work that instructors give to the learners to practice usually outside school hour. These types of tasks are systematic learning activities giving most particularly to primary pupils to further connect them with teacher or instructor and learning content during non-school hours.

Cooper, Robinson and Patall (2006), in a meta-investigation of learning beyond classroom experience for pupils, proposed that, there is a positive relationship between engaging pupils after classroom exercises and achievement. The related objective incorporates giving pupils a chance to practice or audit materials previously displayed in class. Additionally, Cooper (2001) affirmed that it is a method for giving pupils prior insight of lessons that are to be discussed in class and stretching out or applying learning to new circumstances in their surroundings.

2.1.3 Basic Science

Basic education in Nigeria intends to provide an all-inclusive educational process to improve the functionality of the people in the society. This basic education gives an impetus to effective primary education in the country. To this end, the functionality of primary education system depends mostly on the provision of basic education with the sole objective of equipping young people with relevant resources to investigate, think, conclude and understand events within their immediate environment (Asodike and Ikpitibo, 2011). In view of this, Fafunwa (1974) as cited in Labo-Popoola, Bello and Atanda (2009) the aim of primary education across the country is to assist pupils to master critical skills like reading, writing and arithmetic skills, with a view to ensuring that these young people are equipped with relevant competences to positively affect the overall well-being of their environment and nation at large. This effort will develop in them functional literacy skill, acquisition of moral values and development of value for manual work within and outside the school system.

It is noteworthy that primary education provides the required foundation for pupils before entering into the second level of education (secondary school). Thus, there could be ripple effects of these inefficiencies at the higher levels of education. This indicates that instructional challenges that have been identified at the basic level of education need to be addressed to solve the inherent problems with the students at higher levels of education across

the world. If these problems are to be addressed, it is paramount for stakeholders in education to begin from the foundation which is the primary level of education.

Therefore, it is legitimate to enable the children understand the significance of Basic Science and how the scientific skills could be utilized to solve societal and personal problems. Considering the strategic importance of Basic Science to the societal development and global peace, it is important that learners are engaged within and outside the school setting, with a view to connecting classroom instruction with happenings within learners' environment. It is increasingly becoming imperative to expose pupils to the basic skills and competences of science beyond classroom settings, such that learners are able to effectively utilize scientific knowledge to solve personal and societal problems (Klopfer, 2007).

In recent times, learning Basic Science becomes very important and teaching it could be challenging if not made interactive with the use of innovative technologies and media. Science is a strategic subject where ideas and innovations are established to solve the myriad of challenges confronting societies worldwide. Therefore, basic science is an essential subject that connects other subjects in the school curriculum (Adewumi, 2012). In other words, every child should enjoy the right of being exposed to the fundamentals of Basic Science, with a view to assisting them to understanding various scientific ideas and acquire relevant competences to confront personal and societal challenges. This would prepare individuals in the society to become global citizens and contribute significantly to the growth and development of their immediate communities.

It should be noted that during the mid-1950s, teaching basic science was geared towards memorization and regurgitation of scientific knowledge among the students. Akinmade (2016) observed that most elementary science teachers dedicate a considerable amount of lesson time teaching for memory and comprehension as opposed to teaching for the development of productive and reflective thinking. This teacher-centered teaching method continued until when the then Soviet Union launched its first satellite (the sputnik) into space in 1957. This event necessitates a call for a reform in both the curriculum content and method of teaching Basic Science across the globe. Several curriculum materials were developed and implemented to reflect this need. These include the Physical Science Study Committee (PSSC), Science A Process Approach (SAPA) among others. In these programmes, emphasis was shifted from the acquisition of academic knowledge in science through memorization of fact, to quantitative and applied aspect of science (Emmanuel and Jonathan, 2009).

In Nigeria, curriculum changes were stimulated by individuals, professional bodies and institutions who called for changes in Nigeria educational system to reflect peculiar

circumstances and what the nation required of an individual that will be useful to his/her community. Such institutions and professional bodies according to Danladi (2013) include the Science Teachers Association of Nigeria (STAN) who developed the Nigeria Integrated Science Project, the Comparative Education Study and Adaptation Center (CESAC) now NERDC who developed the Nigeria Secondary School Science Project (NSSP), and the Primary Education Improvement Program of the then Northern Nigeria in collaboration with Ahmadu Bello University, Zaria. These bodies placed emphasis on learning science through the process of science. The attainment of the curriculum reviewed seems not to be realistic because of the way pupils are taught as observed by Hou (2014) and Usman (2011) that pupils generally find it difficult to demonstrate basic science skills and factor identified could be inappropriate teaching methodology.

2.1.4   Concept of Social Media

As individuals associated through various techniques for correspondence from the earliest starting point of time, internet-based life platforms (social media) happen to be an unprecedented need. In any case, the accentuation on advanced internet based life made possible by Web 2.0, whereby the internet has taught about coordinated effort and client-produced content rather than latent use of information. Internet-based life contains different platforms such as Facebook, YouTube, Twitter to mention but few that have capability of shearing information, connecting and meeting people online Dabbagh and Kitsantas (2012) found that web-based life as an average assortment of systems administration platform or devices with social traits of online activities as a strategy for partner and meeting each other to outline virtual system, which could be term as social programming. This definition, however, does not perceive online networking.

Kaplan and Haenlein (2010) asserted that web-based life is even more unequivocal as it is a web-based programming that was made from web 2.0 which licensed coordinated effort and exchange of users produced content. They opined further that web 2.0 is an utilization of web as a stage where substance and application are infrequently made and appropriated by people. Web 2.0 is seen from Web 1.0 in which data was constrained by specialists and scholastics (Dedo, 2008). Web 2.0 tends to a move from the introduction of material by webpage suppliers to the dynamic co-improvement of focal points by frameworks of patrons (Dede, 2008). Kaplan and Haenlein (2010) recognized that when Web 2.0 tends to the ideological and innovative establishment, user generated Content (UGC) can be viewed as the aggregate of the amazing number of propensities by which individuals use web based life. The

various livelihoods of web based life are wide as Web 2.0 devices (for instance, Wikipedia) helped a number of people manufacture online systems for creative mind, cooperation and sharing (Dede, 2008).

Internet-based life and electronic kinds of correspondence join an extent of associations including long range of informal communication, sharing of contents, learning discussion. This kind of media is changing correspondence as it empowers users to be more informed and contribute to societal issues. Similarly, the media not only useful in social gathering, other institution like religion, business and most especially academic environment see this innovation as vital tool that help users to collaborate, enlighten, create, modify and co-make content in an online situation. The clarification behind online life is to share data and substance, trade contemplations, share in talk through remarks, set up exchange, inspecting assessments of individuals about society issues likewise gives space for individual to be spoken to in a virtual frameworks network. Online life challenge standard media in that the past have a wide reach and their inclination of substance contrasts fantastically (Greenhow, Robelia and Hughes, 2009)

However, the assumption is that these technologies could distract learners from the classroom activities if not properly managed. Some scholars, de Vries, Gensler, Leeflang (2012) are of the view that even with the capabilities of technological tools to enhance instructional content, it could divert pupils attention from the content of the instruction in the classroom. This perception had triggered stringent rules guiding the integration and utilization of ICT devices, particularly mobile phones by the learners within the school environment. Many schools have strict laws preventing the use of technologies by the pupils, especially during classroom instruction.

Notwithstanding, these stringent conditions in the school rules against the utilization of certain technologies had additionally created a feeling of computerized cacophony (digital dissonance) as pupils and instructors are discovering it very hard to keep up a harmony between the social and instructive merits of these digital tools in the educational system (Clark, 2009). Apart from the fact that the experience would change pupils' perspectives on different scientific and technological concepts, Bouillion (2001) found that there is usually a manifestation of high level of awareness of scientific concept and events among pupils' who in the past did not have a secure reputation about science skills while learning in the classroom. However, as the opportunity to learn science extends beyond the classroom into their social environment and daily lives, they would have the opportunity of gaining more concrete and meaningful idea of science and science concepts, especially in the teaching and learning of

basic science. The study also helps to explain the complex development of learner's identities as individuals who know and practise knowledge of science acquired in the classroom and beyond the classroom setting (Bouillion and Gomez, 2001).

However, as good and adoring this online media platforms could be, yet there are limitations of misuses. Organizations, affiliations, and individuals are abusing the various limits given by online life, media ways of life are problematic in a way that a couple of utilizations have different limits, divergent opinions, attitude and understanding of its uses. For instance, Facebook is an open platform where anyone can comment, like or dislike, upload any media contents which can be shared from one user to another even with another online media application that any customers can purchase or sell information.

Boyd and Ellison (2008) corroborated the above assertion when they opined that internet-based life and social networking sites (SNS), focused on media sharing and incorporated ability to be socialised individual. In the opinion of Bruns (2008), there has been a paradigm shift in the function of World Wide Web from an information repository platform to a more robust social environment where users become active participants in information exchange and creators of knowledge through cross-fertilisation of ideas. In the recent time, Web-based technologies incorporate features that enable users to socialize in virtual spaces, which could encourage collaboration, community formation and information sharing (Suter, Alexander and Kaplan, 2005). Web technology has systematically moved from static information distribution to massive interaction and exchange of ideas among users across different regions of the world. Scholars had identified this revolution as a systematic development from older version to latest version of technologies that are evolving daily despite the preponderance of applications for people to interact and exchange opinions. Social media had been identified as an innovative application that has witnessed an exponential explosion in usage among many nations and individuals across the globe (Barnes, 2009; Bernoff, Pflaum, and Bowen 2008; Corbett, 2009; Miller, 2009).

Social media have been regarded as group of cloud communities, blog, network connection and platform that enable virtual communication and group interactions thereby helping in exchange of ideas across wide spectrum of individuals in the society (Junco, Heibergert and Loken, 2010). In the opinion of Bryer and Zavatarro (2001), social media could be referred to as digital tools or technologies that enhance social interaction, collaboration, and enable deliberation across stakeholders. A number of studies have viewed social media differently. For instance, Sadalof and Drake (2009) considered social media to include a collection of conversational application or media, behavior, practices and individuals who

constantly interact and share information across a network. Conversational media, here, refers to web-based applications or software that gives one opportunity to generate and share media contents such as texts, pictures, videos, and audios. While some view social media as tools, others view it as activities.

A combination of these perspectives would imply that social media are veritable platforms with lot of potentials to engage pupils in the classroom setting and beyond. This authenticates the portrayal of internet based life by (Nail, 2009), that online networking stages are cloud virtual network that permits association with individuals, cooperation, coordinated effort likewise making or sharing of different kinds of digital substance. In a similar vein, Kaplan and Haenlein (2010) see the presentation of web-based social networking stages as earth shattering, in spite of the fact that, there might be a disarray with respect to what precisely is incorporated into this term and how it might contrast from other comparative and related ideas in data innovation (Kaplan and Haenlein, 2010). There is a decent variety of online advances utilized as powerful apparatus to help pupils' instructive learning for instance, sites, wikkis, social sharing, social bookmarking to make reference to a couple.

Social media use varies among individuals for a number of reasons which include flexibility in use, ability to upgrade to latest status, ability to analyze, sharing of contents and information also it helps users to reflect on daily activities, establishing social contacts and interact with one another. Similarly, institutions such as educational institution, business and religion bodies use social media platform as support tools to facilitate innovative learning practices that guarantee engagement and participation. Therefore, this explains the rapid adoption of social media as virtual communities among educators for the purpose of instruction (Mejias, 2005; Ajjan and Hartshorne, 2008).

2.1.5 Schoology Platforms

Schoology is a kind of social blog that can be referred to social learning networks (SLNs) which could be alluded to PC learning framework or media learning framework since it is a stage that getting inevitability in the field of electronic learning. From its site page (www.schoology.com), it explaines that schoology is an electronic learning social structure and various levelled strategy that improves learning through better correspondence, collaboration and stretched out access to enlightening course of action and supplemental substance. Highlights on Schoology incorporates however not constrained to the following: Course, Gathering Dialog, Assets, Test, Participation and Examination. Schoology is free and considers

instructors and understudies to interface online in a simple way to utilize and checkmate the condition.

In essence, this learning platform affords teachers the opportunities to extend learning beyond the four walls of the classroom. It should be noted that pupils in the classroom come from different backgrounds with diverse learning styles and abilities, thus, an interactive platform like schoology could be a viable channel to engage different categories of learners in teaching-learning activities. By this, the learning platform allows teachers to branch into an online setting to make learning opportunities available for pupils, such that it would become easy to participate in discussions, group projects, and increase pupils and teachers' ability and willingness to communicate and collaborate with each other. Thus, schoology engages learners with instructional content and facilitates interaction between learners and their teachers.

Also, the platform (schoology) gives teachers or administrators to post or add a discussion board to any assignment, this would allow pupils to collaborate, and discuss with their teacher also ask questions and receive help on any assignment or learning task. As such, pupils' activities on the platform would be accessed and monitored by the teacher or the administrator. In this study, Whatsapp and Schoology can be considered as the social media platform for extended learning at the primary level of education. Hence, using these platforms (Schoology and WhatsApp) help facilitate learning in extended way and gives pupils the opportunity to integrate their home and social lives with their school learning environment.

Additionally, the strategy of Schoology is parallel to that of Facebook whereby customers can cause social occasions, to develop course substance, make resource interface. In like manner, it is a phase that urge users to cooperate in having talks, sending of messages either through the platform or customers email address, statuses are updated also, information and other media like images, video and audio are shared (Mosser and Zwiefelholfer, 2016). Mosser and Zwiefelholfer found that Schoology helps in meeting training destinations by keeping relevant information about the habits we display during teaching and learning process instead of obliging discussions to happen in our examination corridors which invariably depend on such old strategies for instructing and learning.

Hence, It is avowed that schoology stage can be received by educators and pupils, comparably learning activities can be coordinated into this new electronic age. Pupils can take part with each other, comparatively as their instructors, outside of the examination passage in scholarly ways, underscoring the expansion among scholastics and veritable conditions and helping understudies to be progressively attracted with their mentor.

Schoology is expressly open on android mobile device, for example, cell phones, which can help grow the standard learning experiences beyond the confinements of the classroom. As requirements be, the Product Data and Industry Affiliation (PDIA) distinguishe Schoology as the best platform for learners learning preparation in year 2015 (Schoology, 2015). The schoology learning platform gives instructors the opportunities to make, share, and change instructional materials, for instance, tests, quizzes, assignments, homework, group discussion and grades that can be finished on the web or be engraved in printed duplicate (Techtarget, 2012). Subsequent to finishing the assignments, pupils can transform the exercises into a digital drop box to weight evaluating from the instructor or this should likewise be possible with the assistance of a PC created reviewing framework for coordinating or different decision organized assignments. The platform has the ability to help guardians to be dynamic members in basic leadership process at various levels. Guardians could be given access code to see their youngster's online instructional exercises. This permits the guardians and school the board to associate and take important activities on the understudies learning progress at a specific time.

This platform could equally be used to engage learners in primary, secondary and higher institutions of learning. Furthermore, at the basic level of learning, the core subjects offered by all pupils include Mathematics, Basic Science, English Studies and Social Studies. ISTE (2007) affirmed that pupils are expected to exhibit positive disposition to the use of web-based technologies that support teamwork, collaboration, deep learning, and active engagement. These learning activities could easily be entrenched in instructional process through systematic use of Schoology and other social media platforms that encourage peer tutoring, collaboration and teamwork. For instance, schoology has capability to create an account profile for each learners in which users or co-learners can reflects on each other account to post, comment, ask or answers question and discussed class related matters.

At the point when pupils have opportunities to talk and listen to one another, prospects are made accessible for help, sharing of learning encounters, making respect, so they have a tendency that they have a spot and are comprehended and contemplated by their companions. Communications among pupils creates a conducive atmosphere that help address pupils' issue for comprehension (Ciani, Middleton, summers, and Sheldon, 2010; Martin and Dowson, 2009; Furrer and Skinner, 2003). Collaborations among pupils that add to structure in the classroom are similarly critical for the advancement of a feeling of control. Regardless of the way pupils do not give structure comparably the way instructor do, pupil – pupil cooperation (interaction) give sensible affordances that can reinforce educational ability (Wentzel, 2009).

In like manner, it is expressed that learning stirs in children an assortment of interior formative procedures that can work just when they collaborate with progressively competent individuals in their condition and in participation with their friends (Vygotsky, 1978). He emphasises that children develop in a social domain that is framed by their connections and collaborations with other children. The social condition is a noteworthy supporter of the perception of children in light of the open territory of communication that exists, which enable them to express and arrange thoughts just as add to one another's understanding. Hence, social communication among pupils can advance each other's self-governance in an all-inclusive learning condition when pupils endeavor to comprehend each other's perspectives (Youniss and Haynie, 2012). At the point when understudies (pupils) cooperate to arrange exercises in the all-encompassing learning settings, participate on gathering exercises, look at and challenge their very own convictions, explaining class activities to each other, take part in self-investigation, and offer their thoughts, they are completely included to build more information. (Beiswenger and Grolnick, 2010).

2.1.6   WhatsApp Platform

A registered mobile application that has the capability of instant electronic messaging service with use of web that is most compatible with android phones or good phones is whatsApp (Alsanie, 2015). In the same vain, Bouhnik and Deshen, (2014), proclaimed that WhatsApp supports a good degree of message varieties, from clear substance to photos and recordings. This application helps to circularise information during a big selection of distance and relies on convenience of network services.

This portable application was planned by Brain Acton and Jan Koum previous specialists of Yahoo, thereafter, WhatsApp application use as at February 2016 has returned to quite one (1) billion as a andriod flexibility and price effective compere with alternative social network services (Statista, 2016). WhatsApp could be a user-friendly application that offers users stress-less efforts to make an account. Users produce account on Wahtsapp platform through their movable numbers, primarily whatsApp application run with success on mobile application. All the same, with the speed of technology development, the employment of whatsApp application will currently be used on workstations and PCs subject to arrange acceptable that features users downloading the applying on play store simply while not confinement (Yuvaraj, 2014).

Apparently, WhatsApp can be seen as a platform that engenders interpersonal interaction that enables individuals to get to a lot of informations quickly. The basic activity

plan makes the programme open to an assortment of individuals of various ages and foundations. It empowers communication with any individual who has a cell phone, a functioning web association (internet connection) and installed the application. One of the application unique characteristics is the alternative to make a gathering (group) and to communicate among a specified number of members at a time. The maker of the gathering (group) turns into its director (group admin), a place that incorporates the benefit of including and expelling members without the requirement for endorsement from the gathering individuals (group member). Besides, the majority of the members in the gathering enjoy equivalent rights. In any case, instructors can make a gathering (group) for their learners this would establish a kind of collaborated classroom (Fischer, 2013).

2.1.7   Social Interaction

Social interaction refers to a mutual conversation between at least two individual that serves to build interpersonal bonds among each other, the impression is to upkeep coherent conduct by making participants and their doings noticeable to one another. For example, when at least two individuals meet, they may act towards each other in limitless various ways. An outsider, for example, may ask where the closest inn is and someone else may supply the required data. The inquiry for this situation is the boost and the data given is the reaction. The appropriate response may effectively turn into the new boost and in this manner lead to advance reactions and inter-stimulations. Interaction itself may envelop one individual to another. Such interaction with oneself happens when somebody breaks down a given thought or talks about the advantages and disadvantages of a significant issue or choice with himself. Social interaction, at that point, is the manner by which characters, groups or social frameworks act towards and commonly impact each other.

Unfortunately, the set up term 'social interaction' is fairly repetitive, since interactive methods between or among people or gatherings, which is one of the core principles of this platform. To be sure, while the descriptive word mental burdens the individual, social alludes to the gathering or collectively, including a dyad, or two people, as on account of a spouse and his better half. Sociologists usually utilize the term social relationship as an equivalent word for social interaction. Representative interaction is likewise utilized most of the time. However, this term means interaction through human correspondence. Social interaction is of various potential degrees. One outrage is involved by profound exceptional interaction while the contrary extraordinary comprises in the zero level of social interaction or complete segregation.

A deserted kid, for instance, who has no contact with other people, is disengaged, encountering zero social interaction.

2.1.8   Pupils Attitude towards Learning

Pupil's academic success is dependent on their attitude towards learning. It is therefore imperative to understand the various attitudes pupils may exhibit during the learning process in order to help them learn better. When attitude is positive pupils tends to have a better learning outcome. (Kpolovie, Joe and Okoto, 2014). In the area of social media technology, attitude is one of the factors that contribute to its wide usage. Moreover, attitudes are essentially divided into likes and dislikes (Siragusa and Dixon, 2008). With the broad expansion of social media platforms in education in recent years, many research studies have explored the attitudes of users (teachers and pupils) towards the integration of social media in education (Gasaymeh, 2009). A report of findings in this regard has shown that pupils have varying attitudes towards social media but generally their attitudes are positive. For example, in a study carried out in Ghana Nassoura (2012) pointed out that many pupils had positive attitudes towards social media for learning because it enhances their motivation to learn and also develop their self-esteem. It was reported that social media platforms attract the attention of pupil to the extent that they become so engrossed in the sites and end up neglecting their academic work (Dale and Lewis, 2013). They get easily distracted while trying to obtain instructional materials and end up using social platforms for unplanned activities (Dale and Lewis, 2013).

However, in another one shot experimental research study conducted by the researcher, using twenty primary six pupils in a private primary school in Ibadan metropolis. The study sought to explore, attitude of pupils exposed to the use of social media platforms for learning purpose. It also sought to investigate the willingness of pupils using Edomodo platform for extended learning and parent's attitude, willingness to allow their child to have access to their device for learning purposes. After the study, the researcher used focus group discussion (FGD) to gather information from the pupils. The findings indicated that 53% of pupils have positive attitude towards learning using social platforms and were willing to interact with peers on Edmodo, 66% were willing to introduce Edmodo to friends so that they can interact with one another.

The study also revealed that 93% of the pupils have a positive attitude and were ready to use the platform for extended learning. Similarly, 75% of pupils said that their parents will allow them to have access to their devices as long as they use them for learning purposes, while 20% of the pupils have negative attitude towards learning using social platform and that, their

parents would not allow them to prevent them from wasting the device battery and 15% of pupils positioned that their parents would think they wanted to use the device to play games, or visit wrong sites on the Internet rather than use it for studies after classroom activities.

Similarly, a research report indicated that in spite of the growing interest, familiarity and usage of social media platform among primary pupils, pupils' attitude towards extended learning using social platform varies. Many parents believe that social media will have a negative on their children, and that nothing can be done to shield their children from being affected by it. This actually affects parents' attitude towards their children using of social platforms for extended learning. According to Nathanson, (2001) it is handy to surrender that children at the elementary school level are basically the most convincing events headway and a stage all through life in which children test models of lead as they assemble their own lives. Fine (2004) refered to in Liau, Khoo and Hwa (2005).Young people are looking past family principles which may fluctuate from their folks' ideal and at this period in the young childs' life his/her insight of the world augmentations and necessities or targets change. A lot of effects may have caused these alterations in child progression which may fuse watchmen, peers and the media.

According to Kuppuswamy and Shankar (2010), social platform can increase attitude of pupils' learning through pupil- pupil (S-S) interactions or pupil-teacher (S-T) interaction, collaboration is more experienced when social media are incorporated into an academic course. Arnold and Paulus (2010), in their study, carried out in South Africa found that even when social media is used for an educational purposes, pupils incorporate the technology into their lives in a way that may differ from the intentions of the course instructor. Therefore, it is extremely important to gadget methods for creating and continuing enthusiasm of pupils in extended learning, especially in science subjects since it is the foundation of acquiring skills in achieving objectives of primary education in Nigeria. For any meaningful achievement in science, pupils' interest in Basic Science must be developed and sustained because interest produce effort, effort increase interests and a combination of the two produce achievement (Ayadema, 2011).

Attitude towards learning could be positive or negative. Any idea that determines a person's inclination of resemblance or abhorrence to anything is named his/her attitude towards that thing. Attitude can be a technique, mien, feeling or condition in regard of an individual or item, especially of the brain. (Khan and Ali, 2012). Hussaini, Foong and Kamar (2015) expressed that attitudes resemble scholarly accomplishment since they are huge factors in guaranteeing pupils' achievement. It is significant for teachers to guarantee that pupils have

uplifting attitudes towards getting information should particularly outside classroom condition, however studies demonstrates that the manner in which pupils are instructed in the classrooms is not fascinating to them by and large since pupils are now acquainted with talk technique for educating by their teachers (Abe and Gbenro, 2014).

Brown (2008) recognized that the attitude in early youth are the consequence of parents or guidance and peers' mentalities, of contact with people who are differentiating in any number of ways and of interfacing different factors in the human experience. In Lambert's (2012) wide assessments on the impact of pupils' disposition to language learning the pupils' motivation to learning is determined by their attitude as creativity that made up of explicit performance. Likewise, John Oller and his accomplices (2007) composed on the relationship among disposition and language accomplishment. In their assessments, the association between Chinese, Japanese and Mexican assessment school accomplishment in English Language and their frame of mind towards self, the earth language assembling, the objective language assembling, their explanations behind learning English Language and their inspirations driving making a voyage to the whole nation (US) were examined.

The disclosures engaged the researchers to mastermind a couple of critical lots of attitudinal factors that showed positive association with capacity. The study continues with that every one of the three assessments yielded barely different closures, yet by and large, learning foreign language were determined by the attitude of pupils either positive or negative. Therefore, disposition of pupils towards learning is an important factor to be considered in teaching-learning process (Brown, 2008).

Interestingly, Al-Tabolli and Sheuil (2009) presented an undeniably extensive importance of the term attitude. According to him, an attitude consolidates three sections: subjective, full of feeling and conduct. The intellectual portion is related to the feelings and considerations or emotions about the object of the outlook. The full of feeling component is about the tendency and sentiments that one has towards a thing, likes or despises, with or against. In other words, attitude of learners can be varied in terms of behaviour. The social part is involved in one's containing exercises or conduct objectives towards activities or learning task.

Concerning hypothesis of attitudes, Sheuil (2009) claimed that it does not generally have any kind of effect whether all or only one of the three sections are assessed; the association between the fragments is close to such a degree, that satisfactory information on pupils' attitude can be obtained by evaluating only a solitary portion, paying little respect to one another. Attitude can be assessed in an indirect manner through estimations, for instance, the Semantic Differential Systems (SDS) or direct using self-report studies such a way that

learners or individual attitude will be determined. The learners' attitude towards learning a specific thought is formed by the crossing point motivation behind their frames of mind about their very own ethnic character and those about the objective language culture.

In most cases, the pupils end up spending almost all their times on the social media and forget about the course materials they originally intended to look for. Although some parents feel comfortable with the opportunities and exposure these social media sites afford their children, many other parents are not so open to the use of social media due to the possible negative influence it could have on their children. Baker (2010) and Baker (2016), contend that I would say no to social media sites, the intentions are good but what a waste of childrens' time and family time. We just sit down for a minute then an hour is gone. Huycke, (2010:1) suggested that, even if you don't allow children to go online, many of them set up an account on a friends computer and never tell their parents'(Huycke 2010).

Kabakci, Ferhan and Ahmet (2008) present that children have more information and capacity to utilize this innovation because of the way that they experience web advancements sooner than their folks. At the end of the day, while the internet-based life is another innovation for guardians, it is a natural domain for children as they have known and grown up with it since their initial ages. Moreover, a couple of research revealed that children usage of the web and the web based life (web based life) explicitly has some productive results of attitude towards adjusting, for instance, access to data, correspondence, learning backing and individual improvement (Cramer, 2002).

Attitude is the aggregate of an individual's inclination toward a specific sort thing, association or thought. As demonstrated by Gronlunds (2006) the most loosened up centrality of attitude is what holds all bits of character improvement, for instance, particular interest, goals, values, proficient change got from expert interests and various times of one's step by step lives. This could be aggregated from clear direct both verbal and non-verbal, which may have its proposal on the academic execution being the following outcome of the learning issue of any understudies at any informational level. Assuming this is the case, it depicts, as Crissy refered to Ifayefunmi (2004) that inflexible stereotyped attitudes can impact achievement in a subject where flexibility of outlook (particularly basic science subjects) is essential, could be exhibited right. As demonstrated by Ifayefunmi (2004), poor attitude is a huge consider causing dissatisfaction subject inclinations number juggling, Joined science and various sciences subject and consequently, pupils in silly cases made fear and hatred to the instructing learning process in the school all things considered and that is the reason different pupils are captivated with being missing from school routinely.

2.1.9   Digital Divide

Digital divide shows the variety of holes among the people who approach use of innovation, web gadgets and the people who do not. The hole could be credited to contrasts in social mood of an individual. It is obvious, that most Nations of the world now strategies on how to deal with the problem of gap in the use of and access to innovation as a result of mostly economic status of an individual. Digital divide indicate gap between those that approach and those that do not approach PCs or any innovation gadgets as a result of ability to acquire technology gadget or not be able to (http://www.ntia.doc.gov/). Also, the qualification or hole in digital divide is not generally managed by a passage to web, anyway by a passageway to ICT and to media that the various zones of society can utilize. With respect to the web, the entry is just a lone perspective.

There are various implications of the term digital divide. It was made by Bharat Mehra as the disturbing hole between the people who use PCs and the web and the people who do not. As Web access came to be seen as a central piece of social event, the term's usage moved to PCs yet what's more access to the web. The term can mean conflicting access to PCs gear likewise as sporadic characteristics between get-together of people. The issue of the electronic division starting late got undeniable quality after reports issued by the National Media correspondences and Information Association (NMCIA) depicted conscious differences in home access to PCs. By the fifth NTIA Report (NTIA, 2002), a Nation On the web, there remained striking openings in Web utilize subject to age, pay, coordinating, race and ethnicity and twofold or single parent nuclear families.

The exposure in the NTIA report, regardless did not encounter quantifiable controls to expel the centrality of covering parts, for example, race, heading and pay. Tireless appraisals utilizing capably cautious guaranteed systems have acknowledged the closeness of the electronic parcel: Individuals most fundamentally hesitant to have progress get to (a home PC, home Web get to or an email address) are consistently appalling, less masterminded now rather logically sorted out. Latino or African American (Mossberger, Tolbert and Stansbury 2003, http://www.ntia.doc.gov/).

The pulling back lines between the rich and despondent individuals, between the North and the South are the fiber-optic and quick motorized lines. If top tier division is an abused verbalization, it watches out for a reality that vehicle not be denied. Fifteen percent of the world's masses control around 80 percent of the world's telephones and around 90 percent of zones to the Web and they are on different occasions bound to have PCs than the rest while the rest are the 85 percent of the world's family living in low and lower-focus pay countries. When

contemplating the social effect achieved by ICT, digital divide is possibly one of the thoughts considered. One could see that these improvements will pass on differentiates in the movement chances of individuals and that a division will be set up between those with access to these advances and those without.

The likelihood of the computerized hole is twisting up consistently dynamically multifaceted as access to the utilization of advancement gadgets, moves after some time since when the closeness of a pushed segment beginning late made, it spun around access to PCs and related degrees of advancement. The astonishing expenses of PCs make a tremendous gap between individuals who could manage the cost of them, and who advanced toward the majority of the upsides of a PC, and the individuals who showed unable.

2.1.10 Academic Achievement

The school gives a wide combination of achievement experiences than the family. As demonstrated by Levy (2012), academic execution relies upon the amount of parts, for instance, children' attitudes, interests, character characteristics and social class despite learning. The possibility of achievement has a couple of references. It generally implies development and expertise affecting the earth and battling with some standard of significance. The under- achieving child is one whose genuine satisfaction, as exhibited by his instructive achievement in school, does not measure up seeing his potential achievement as appeared by his abilities.

Levy (2012) further characterized over-achievers as pupils whose school fulfilment is in abundance of desires shaped based on their exercises. The idea of over and under achievement proposes that there are factors notwithstanding capacity which affect execution and that there is no ideal positive relationship among insight and fulfilment.

Accomplishment in children's lives relies upon intellectual capacity as well as on the enthusiastic aptitudes (Gliebe, 2012). Hilton (2016) in his work examined the impact of social acknowledgment and academic achievement on the self-efficacy improvement procedure of outstanding pupils. The general findings proposed that the advancement of the whole child necessitates that instructors comprehend the impacts of school association upon both self-idea and academic achievement.

The result of the investigation carried out by Moller (2013) were astonishing. They investigated the inward/outside edge of reference (I/E) model on 270 pupils going to grades 5-9 to see whether I/E model is being circled to pupils with learning incapacities or not. The (I/E) model expect that, pupils contrast their degrees of academic execution and their cohorts, other

than that, they take part in intra individual, dimensional correlations, looking at their very own achievement in one subject with their achievement in different subjects. These dimensional correlation procedures are expected to bring about negative ways from achievement in one subject to self-idea in another (Moller, 2013).

2.2   Theoretical Framework

2.2.1 Engagement Theory

The Engagement theory was developed by Kearsley and Shneiderman (1998) who were the authors that practised instruction in media platforms and distance learning conditions. The fundamental information about the theory is that pupils must be genuinely occupied with learning rehearses through cooperation with others and helpful assignments. They opined that technology can improve learning practices that conventional technique cannot achieve and that engagement theory is relied upon to be a connected structure for technology based learning and teaching.

One of the theories made from learners' (Primary school) findings that reflect constructivism is engagement theory. Engagement theory is changed over into the investigation corridor through three key standards enduring with constructivist feelings and shaped from particles of various epistemologies; dynamic learning, issue-based learning, and case-based learning. One such application such as learners-centered learning environments (LCLEs), is intended to support learning also make available interaction that compliment activities that allow learners to address learning interests, study at multiple levels, and deepen their understanding of complex concepts. Learners are even occupied with learning practices through instructional strategies, for instance, adventure-based and advancement based through these strategies, learners engaged and shared learning. Learners are presented with real problems where they develop their own position on an issue, not just study someone else's resolution (Land, 1999).

Technology-based instruction involves facilitating interaction and collaborative communication distantly through the use of various technologies. Most communication and interaction would not be possible without technological advances that allow us to do so. For instance, Google classroom and Edmond are different learning on the social system that enable us to be a piece of classes made out of group of learners from all around the globe. Through this technology, we are permitted to speak with these learners, which would not be conceivable without these apparatuses (Dahms, 2008). These models of instruction are tied down in different constructivist epistemologies that have been shaped into a theory called "engagement

theory". Thinkers and scholars have removed the ideas of valid, venture based and joint effort figuring out how to shape the fundamental establishment of engagement theory (Jonassen and Land, 2000).

Thus, engagement theory could be termed as a model utilized with the combination of technology into teaching and learning to further engage learners. Engaged learning recommended that all pupils exercises include dynamic psychological procedures (cognitive processes), for example, decision making, critical thinking, reasoning, basic leadership, and assessment. Consequently, pupils are naturally aroused to learn because of the important idea of the learning condition and exercises. Engagement theory depends on making effective community-oriented groups that work on driven activities that are important to somebody outside the classroom. The proponder of this theory proposed three fundamental standards of connected learning:

Relate: learning through joint effort (collaboration)

Create: learning using a project-based approach, and

Donate: learning using experience outside classroom (Kearsley and Shneiderman, 1998).

Relate: Collaboration involves communication, arranging, social abilities and task the management skills in a team effort. Collaboration get learners ready for the modern working environment since it constrains them to clarify and verbalize their issues to make sense of arrangement and expand their inspiration to learn. This will give learners opportunity to work together with different learners from various societies with changed encounters. The community oriented system could lengthen through numerous long stretches of improvement of educational plan (for example, multi-year venture) or limited ability to focus could be a couple of moment peer-to-peer classroom exercise.

Term-length exercises done on a very basic level outside the instructing space are the most outstanding kind of collaboration since they require unimportant changes to the standard investigation space plan. Nevertheless, people group learning is a framework that applies to any zone. Learners that are talented in numberings can tackle issues like logic; while others who have eagerness for English language can review each other's work and so on.

Essentially, one of the most significant collective instruments that typically fill in as the correspondence spine for all exercises is web 2.0. Web gathering sheets and talk projects are likewise significant methods for coordinated effort and sharing of learning. It assumes a significant job regarding securing data and primary pupils are likewise prone to utilize smart phones, I-pads or mobile technologies generally, since it is advantageous and financially

friendly. Since community-oriented techniques might be creative for some primary school pupils and instructors, there is probably going to be an abnormal state of vulnerability towards the commencement of such exercises. Educators will need practice in sorting out and leading community exercises, especially the facilitative job that is required.

Create: learning using a project-based approach

Project-based learning is a dynamic approach to teaching that gives learners a chance to investigate real issues. The learners have a feeling of command over their learning because they get the chance to structure their own projects allowing them the chance to practice creativity, time management and application of key ideas to a particular area and make tracks in an opposite direction from the stale course reading issues they are accustomed to. Nonetheless, the initial meaning of the project may be the most troublesome aspect of project-based learning to learners. The instructor can give a rundown of proposed points which helps to give learners an idea of potential arrangement.

In addition, the instructor can give records/delineation of past projects and state the criteria that will be used to assess the projects to enable them to choose the suitability of their tasks. Ideally, learners can complete various brief group practices with various accomplices in the initial couple of classes so they can choose a good choice of colleagues for full-scale projects. In this one of a kind of situation, learners ought to be sharpened to critical issues, for example, sex or racial inclination, character clashes and assorted work affinities. A decent starter action is to apportion pair of pupils to look into a request or issue and report their outcomes to the whole social event. A further advance is to demand that each gathering evaluate each other's work. On the other hand, a group can be made out of three people, one of whom is accused of proposing an underlying answer, the second offers an elective response while the third gives an investigation or blend of the underlying two responses.

Consequently, web gives an enormous asset to collaborative endeavours since it is easy to rapidly reveal a great deal of information about any subject. A natural project for pupils is to deliver an online reading material or encyclopaedia for their course. With a class of 10-20 pupils, this turns into a major exertion with an editorial board to build up a diagram, indicate the audience, produce a style control, manage assignments and arrange audits. At the point when student's projects are set up on the web, this gives a motivating force to them to do the most ideal work, since they realize that their work will be seen by their classmates and potentially, the entire world. It also gives an easily accessible source to demonstrate their work to their companions and those who are knowledgeable than them.

Donate: learning using an outside (authentic) focus

Standard authentic focus bothers on how significant it is, that learners feel like they are making a beneficial responsibility while simultaneously learning. Learners make relationship with what they are acknowledging and this promotes inherent and outward motivation (Kearsley and Shneiderman, 1998). Disclosures concerning chipping away at using authentic focus systems in the classroom have yielded incredibly positive results and brought a couple of pay to learners from having this kind of sensible focus to work out. Since learning occurs in an authentic setting, pupils' learning capacities and attitude to work has tremendously improved. They similarly gain proficiency with various capacities related with participation and client correspondence that are as often as possible not instructed in courses (yet doubtlessly should be). Doing authentic errands gives a more raised measure of satisfaction to students than wearing down phony issues since they can see the impact of their work on people and condition.

At last, the delayed consequences of their undertakings may bring them capable affirmation or grants which are finally extensively more inspiring than assessments. By and by, the activity of innovation in the hypotheses is to disentangle all pieces of duty. The use of web 2.0, internet-based life innovation, mobile learning and sound/videoconferencing in a general sense expands the degree and effortlessness of connection among all individuals as well as access to data. The enormous range of programming instruments open for analysis, design, planning, problem-solving and making acquaintances enable pupils with a more refined and complex learning exercises. Innovation gives an electronic learning that senergizes the level of imagination and correspondence as expected to help their commitment levels.

2.2.2   Application of the Theory to the Study

Engagement however covers an array of factors such as investment in the academic experience of school, classroom interactions, effective participation in co-curricular activities, and social interaction among peers (Pascarella and Terenziniz 2005; Kuh 2009). Engagement is dynamic and it necessitates that pupils be involved in participation process; it requires them to be focused on the task of discovering some inalienable incentive in what is being executed. The engaged pupils not only exclusively carry out the responsibility allocated to them, however, they additionally do it with eagerness and perseverance (Judy and Wilkinson, 2001). A considerable level of engagement should be maintained both within and outside the school. This is why teachers in the conventional classrooms give out home work as a way of engaging pupils in form of extended learning activity to keep them busy outside the classroom activities.

The Schoology and WhatsApp instructional platforms furnish the learners with the chance to relate. The primary purpose of engagement theory gives significance of pupils' cooperation which incorporates correspondence, arranging the executives and social aptitudes. Pupils from various foundations meet on social platforms to frame a gathering that offers opportunity to perform and can contribute adequately in all aspects of group task or venture posted on the stage. Thus, pupils obtain involvement in all parts of the task and they can build up their personal relationship and community oriented aptitudes.

Be that as it may, relate part of engagement theory has demonstrated an effective vehicle in crossing over the progress from the hypothetical or limited learning of the classroom to the pupil's condition. In the imaginative procedure, the key segment of engagement theory makes learning inventive and intentional. Regularly, from traditional classroom instruction, pupils do not get a feeling of command over their adapting yet, social average stage, for example, Whatsapp and Schoology help pupils to have their feeling of control. Accordingly, pupils begin to focus on the learning activities or task providing for them on the social platform and with exclusive expectation they complete the task in a kind way.

Correspondingly, the third parts of engagement theory focuses on the benefit of making a valuable commitment while learning. Pupils assemble encounters when they work together on social platforms for gathering exchange or task, they cooperate with their group individuals and finally they accomplish a feeling of fulfilment and trust in their abilities.

2.3   Empirical reviewed

2.3.1   Schoology Instruction Platform and Pupils Social Interaction

With the advancement in technological innovations and the use of the Internet and social computing, digital tools have been widely recognised as communication devices that could be used to mediate social interactions among different categories of people in the society. Such instruments incorporate person-to-person communication (social networking), blogs, wikis and skype which are part of the social collaborative devices that empowers a global network of collaboration and knowledge-sharing among individuals (McLoughlin, 2011).

In the opinion of Clark (2009), there are some technological tools that are recommended to support learning in the classroom but if these technologies are not properly managed in the classroom setting may lead to destructive tools rather instructive tools for pupils. Such technologies are but not limited to mobile phones, online chat, social networking applications, cloud documents shearing and other virtual community sites. Learning by utilizing the online classroom (online class) is an effort to encourage learning to be conducted

anytime and anywhere. Learning in an online classroom is not replacing face-to-face learning undertaken together with a lecturer in the classroom, but by utilizing the online classroom, pupils gets extra or enrichment material that would complement the conventional learning (Aminoto, Tugiyo and Hairul, 2014). Through learning with a model like this, learners will be encouraged to be more active and creative. Learning using social platforms, learners are expected to search for, read and understand the materials from a variety of digital learning resources.

In addition, learners can code, create, sort and share knowledge as well as disseminate information to other participants. Via online classes, learners are expected to be able to discuss and collaborate in virtual groups (SEMOLEC, 2014). Schoology platform is a social media platform classified as learning management systems that can be used to further engage pupils beyond classroom experience. This platform helps to create a learning environment that encourage discussion, practical activities and help to develop pupils' social interaction skills whereby pupils will be more relaxed and able to relate concepts with their environments.

Furthermore, schoology can also be classified as Social Learning Networks (SLNs) circulating in the world of the World Wide Web (www). It is similarly a medium to complete learning on the web. It consolidates a few highlights of the Learning Management System (LMS) and a portion of the highlights of social systems administration (Social System) to turn into a medium learning in an alluring and simple to-utilize media which later ended up in what is known as Social Learning Networks (SLN).The concept is similar like Edmodo, however, in the e-learning thing, schoology has a lot of advantages (Srivastava, Ekta, Agarwal and Nisha, 2013).

It is more favorable to create online learning with Schoology unlike using Moodle because it does not require the hosting and management (more users-friendly). Certainly not as complete as the moodle feature but very adequate for online learning (Greenhow, Robelia and Hughes, 2009). On schoology platform, users (pupils, teacher and parents) are registered as status required before they can log in with their user name and password. Teacher or administrator has the privilege to create a group or a course group whereby a code to invite pupils into various class or course that teacher may want to facilitate on the platform. Similarly, the platform has capability to invite parents to any class or group created in other to monitor their children's progress on the platform.

Exercises on this platform are usually performed by the instructor, pupils and guardians if important to associate with each other through the posting of remarks or reactions. The dialogue theme can be displayed by the educator toward the beginning of what will at that

point become a pupil's coordinated string of discussion and can be improved with the transferring of archives or connections. In the same way as other online networking destinations, members in the discussion can like a remark, react legitimately to a remark or make an autonomous remark. Using this platform for learning, the learning task can be uploaded or programmed for weekly affairs whereby pupils are required to participate in the posting as many times they wish to interact with either teacher or pears (Huang, 2010).

Nevertheless, since the disclosure of online social platforms, the demand for social interaction among primary school pupils most especially on social media platforms has convoyed humankind since human aura has consistently driven and will consistently prompt structure possess social system of companions, partners, contacts, customers and others, consequently number of social ties by every individual is continually expanding (Trust, 2015). Besides, dynamic progression in the utilization of web, likewise impel the formation of online platforms with new technology devices. With the utilization of these advancements, explicitly virtual community platforms have prospect of making and keeping up social ties. Additionally, online social platforms are changing the manner in which we see ourselves, how we live and work as in client is never again a simple beneficiary of data yet the co-maker of web content, which is relying upon the action of its clients (Fraser and Dutta, 2008).

Schoology platform is a LMS apparatus use for learning practices in a virtual network by social event of pupils with standard premium. Along these lines, it licenses pupils and instructors similarly as guardians and school directors to work together and pleasingly partake in a run of the mill adventure. Nowadays, social platforms like schoology have loosened up to an area like informative frameworks (Garrigos-Simon, 2012). Ellison (2007) portrayed Social Framework Districts (SFD)as online platform that empowers people to make an open profile inside a bound structure and sales to connection up with various customers with whom they share a relationship in a virtual network. In spite of the fact that the appearance of social media caused a major blast, but in overall, it had no real sway on the field of training. In a domain of rudimentary instruction, the social media are frequently connected with trepidation and analysis that pupils are too youthful to even consider operating or get the hang of utilizing social platform (Granovetter, 2013).

Kapounová and Homanová (2014), in their research work where 550 Czech elementary schools partook, found that the two principals and teachers need web innovations to be executed into guidance and managerial activities. Be that as it may, their announcements were regularly trailed by "but". The most continuous protests from the school and the social platform indicated worries pertaining the well-being of the pupils. In maltreatment of open source

media, it was gathered that pupils were found more of this social platform than face to face content delivery. Furthermore, as indicated by benchmark study by the researchers in 2016, 35% of guardians and teachers came short on the data about how to utilize these advances in guidance, 15% deficiency in preparing teachers and 17 % on issues with the Web association.

In perspective on the survey of International Computer and Information Literacy Study (2013) and Basl (2014), instructors raised the stress that the school officials are distraught to change the current enlightening practices, since pupils discovered employments of social schoology as increasingly educational that what educating and realizing used to be. In other words, instructors were secure of losing their calling to the employment of social stage. Moreover, there is a nonattendance of a fantasy and educational system being created of computerized advancements in the school, lacking specific assistance, inability to deal with basic particular issues, nonappearance of time (for getting ready instructors, anticipating training), fragility (fear of losing master before pupils and educators) or issues with dealing with the guidance utilizing those innovations.

2.3.2   WhatsApp Instructional Platform and Pupils' Social Interaction

In fact, WhatsApp application was structured as text administrations stage however it tends to be seen as an interpersonal organization that enables individuals to interface one another, get to a lot of data quickly, sending and get data both in synchronous and asynchronous ways. WhatsApp as a social stage that is extremely easy to intercede with by the clients, its activity plan makes the program me open to an assortment of individuals of various ages and foundations. WhatsApp empowers correspondence with any individual who has an advanced mobile phone, android telephones and perhaps on PC, the clients must has a functioning web association and has introduced the application on their gadgets.

Calvo, Arbiol and Iglesias (2014) declared that online cooperation between gatherings of understudies and educators has turned out to be pervasive during the most recent decade through different social stages, for example, Email, SMS, Facebook gatherings, Twitter and as of late WhatsApp. Every last one of these stages has differing highlights that impact its reasonableness for learning purposes. Past examinations by Hrastinski, Edman, Andersson, Kawnine and Soames (2014) overviewed instant messaging (IM) administrations for learning purposes. The investigation likewise exhibited how elementary school pupils that utilize it for learning were upheld through text benefits. It additionally enables learners to pose inquiries on territories of troubles during the time spent learning and after school hours. It ended up being sure that an individual relationship with the teacher was alluring over the obscure social affair;

the instructor came to know the understudies and could help in a huge and solely exceptionally fitted way.

In another study that relates with collaborating with primary level of education during and after the class learning or school activities using instant messages system that the school made, found that pupils will in general pose more inquiry and take an interest in learning activities through instant message system (Scornavacca, Huff, and Marshall, 2009). In this way, occupations of grouped platforms of instant messages among teacher and get-together of pupil disclosure would help them with creating potential for learning advancement (Smit, 2012); increase ability to perform learning tasks (Cifuentes and Lents, 2011); casual correspondence between pupils (Cifuentes 2012); in-person participation among pupils and teachers related to course substance and individual issues, sentiment of having a spot and system, breakdown of educator essential pupils social points of confinement and pupils will all around spotlight on assignments more when they are on social platform so as to astonish their mates (Sweeny, 2010). Interaction among pupils and teacher on whatsApp stage can be delineated as social networking.

Pupils network each other on the platform by adding friends' contacts creating group (social group, discussion group). Generally, pupils find it easier to use this platform in broadcasting information, managing the class activities, group activities and helping pupils to socially interact by connecting with one another. Besides, WhatsApp social platform is inconceivably profitable not only for planning and learning among the understudies, instructors or school heads also imagine that its useful in part of genuine effort, it saves a colossal proportion of time that as a rule would be spent attempting to send the message through different frameworks and make class limit by helping pupils to survey their learning activities and collaborating on learning task. It also helps to invigorate parent – teacher and school relationship, proportionately get guardians or course mindful of their kids' (pupils) progress and school rehearses in general.

These things happen when pupils start to help one another, answer each other's deals and offer their duty and disclosure. WhatsApp interfaces with essential and sharp transference of learning materials on the web; makes understudies get together with one another after school or study section learning hatred standard framework for urging that limit understudies (pupils) to think about waiting room resources. Sending study materials through WhatsApp ensures that everyone gets the message, paying little regard to where and when.

2.3.3   Practice Extended Learning (PEL) and Pupil's Social Interaction

Extended learning instruction is a learning activity given to pupils by their teacher from what they have been exposed to in the classroom in other to rehearse (practices) with after classroom or school learning exercises (Cooper, 2009). These activities or exercises are portrayed by the accompanying simplify contents difficulty level; discovery of skills on subject area; level of individualization; level of social interaction setting (ability to move freely with pears, higher knowledgeable other), mandatory or intentional and in case it will be submitted for assessing (Cooper, 2007; Coutts, 2004).

Besides, teachers allot learning task as a type of extended learning for a wide scope of reasons, which are strengthening material that has quite recently been displayed in class (National Instruction Affiliation, 2008; Place for Government funded Training, 2007; Cooper, 2007; Pytel, 2007). Paulu, (2008), choosing whether pupils comprehend the activity and have aced the required aptitudes (National Training Affiliation, 2008), primary pupils mastery capability, familiarizing pupils with new material the teacher will present later on (Pytel, 2007).

Furthermore, PEL helps pupils to have access to things they can relate learning with in their environment, it offers chances to recognize and make sense of how to use learning resources, for instance, the library, Web, reference books and other system resources. This allows pupils to internalize classroom experience and practices learning task with real life experience (National Training Affiliation, 2008b; Breswster and Fager, 2000).

Similarly, PEL helps discover pupils' ability, talents and weaknesses in other to help such pupils capitalize or build on area of his/her strength by more practices and interaction with higher knowledgeable and the environment. Thus, it empowers pupils to use their special gifts and abilities to convey individualized and innovative work (Horowitz, 2005; Corno, 2000).

However, extended learning is any relevant learning activity selected by the teacher, often in discussion with the pupils to be completed outside of class time. While it is usually done at home, it may also take the form of supported study or extended learning (Christie, 2009). The study identified four main types of extended learning activities that can engage pupils after school:

A.   Practice: Sometimes learners need to do the same kind of work repeatedly to help them remember a skill. For instance, learning mathematics, word definition, dates and spelling. This affords learners to apply new knowledge, revise or reinforce newly acquired skills.

B.   Preparation: This is a way to introduce learners to new topics. Learners gain background information to better prepare them for future lessons, for example, reading, research and collecting information.

C.   Extension: Children need to be able to connect separate topics. This encourages learners to pursue knowledge individually and imaginatively. For example, they might be asked to compare and contrast two historic events, write a book review or research local news. This is often long-term extended learning.

D.   Creative: It is challenging for learners to use different skills to show what they have learnt. For instance, learners might be asked to build a model for science class. This is often long-term extended learning, set over a number of lessons (Christie, 2009).

Despite the quality and important extended learning activities to pupils at primary level of education, there are some challenges that discredit the value of extended learning. The researchers have found out that giving homework as the form of extended instruction to further engage pupils after school activities teachers cannot ascertain or monitor the progress of pupils' activities while they are out of school, hence, expanded learning help with innovation would find pupils' exercises. It additionally makes accessible to educator little data about understudies' actual instructive level or progress past the beyond the classroom settings. This technique helps include every single instructive partner to be progressively participatory in pupils' scholarly progress and making recommendation for educating and learning commitment.

Pupils' social associations can extend from straightforward trades of welcome to working cooperatively on assignments or framing companionship ties outside the classroom setting. The range and nature of these connections may have impacts on learning results. The study on gander, interaction that happen among pupils, instructor and instruction that takes place in and outside study room setting. For example, how pupils are allocated to cooperate, to decide if the course design, residency of the teacher and grade responsibility are identified with the manner in which that pupils structure social associations in a classroom.

The quality and quantity of interaction among pupils, instructors and media constitutes a significant component of effective instruction in any educational system whether online or conventional face-to-face setting. Online learning appeals to a large number of pupils because it offers flexibility, ease of access and convenience in participation. Online learning, for reasons earlier stated would continue to occupy a strategic position in our educational system, especially at the basic educational level.

Instructors use a great deal of significance getting ready talks, which are increasingly conscious of educating pupils. They diagnose devices communication and connect the information, pick the most fundamental focuses and make them in a firm way, make exercise notes, and after that pass on the data to pupils who sit inactively reliably considering everything except for what the teacher is communicating. Who is doing the majority of the work in this procedure? The Educator. As such, instructing in this respect is instructor focused that limits pupils to what the educator says in the study hall. The instructor is the one scrutinizing, making, thinking, talking and subsequently, the individual who is learning (Vacca and Vacca, 2011).

Wilkinson, Soter, and Murphy (2010) concurred that we have to move the heaviness of picking up from educators shoulders to understudies, there should be a reliable arriving of commitment for control of the discussion from teacher to students. Probst (2007) prescribed that the students ought to be effectively associated with the work. In essence, learning should go beyond being centred on teachers centred, it should be a teacher-pupil affairs, such that as pupils gain from teacher, so also, teacher gaining from pupils. ELP help both teacher and pupil share learning experience by collaborating together, and interact often. One course for pupils to hold up under the dedication concerning learning is for them to be the perusers, researchers, speakers, group of spectators, individuals and brains in the study hall through incredible obligation in social relationship with others (Alvermann, Phelps, 2005 and Mraz, 2011). In this respect, social coordinated efforts can be a sort of talk among primary pupils. Routman (2005) emphasized that understudies balance more when they can chat with each other.

2.3.4   Schoology Instructional Platform and Pupils Attitude towards Extended Learning

Schoology demonstrates the effects for pupils in extended learning setting. From the review, the pupils concurred that this movement improved them in securing social media skills. The subtleties are that schoology stage improved their perusing skills in extended learning exercises; it improved their composition and social interaction skills. Listening aptitude has the most reduced rate on the grounds that the pupils want to direct listening practice in on location classroom as opposed to an online classroom. The main confinement is issue with web association. For perusing and composing skills, the pupils can do it both in on location and online classroom. While talking expertise, the pupils love to transfer their talking task as video through Schoology.

Furthermore, the specialists additionally found the pupils' attitude in the wake of joining extended learning action that pupils found a decent balance among on the web and

classroom learning exercises. Despite the fact that pupils were progressively dynamic in the conventional classroom compared with on the web. They delighted in the learning exercises accordingly. They turned out to be more order and dynamic subsequent to partaking extended learning. The educator additionally gives them an opportunity to ask anything identified with the course subjects both in on the web and disconnected.

Researchers have furthermore found that children at understudy level of education are mostly engaged with cognitive load, paper and pencil activities which are more limited to classroom affairs. This effort limits pupils' adequate preparation and self-discovery which affects pupils' achievement. Hoover-Dempsey (2001) expressed that primary school pupils constrained mental purpose of repression, progressively energetic adolescents will all in all have less stunning assessment tendencies and are less arranged to centre and stay away from distraction than progressively settled children). Likewise, primary school teachers recognize significantly more fervently in giving endeavours in an all-encompassing picking up setting to plan pupils on the best way to deal with mull over and utilize their time well.

This proposes for major level instructors to be increasingly arranged, sort for sufficient assets to connect with pupils and make learning pupils focused exercises so that pupils will decide the bearing of education and learning and educators would direct the exercises of pupils. It accommodates and stimulates a lot, the overseers' capacities, the impacts of which would be more clear and more understandable to children than instruction in classroom exercises. (Muhlenbruck, Cooper, Nye and Lindsey, 2000). There are primarily four errand types to be specific; imaginative, expansive, course of action and practice (explicit, innovative, broad, planning and practice). Regardless of these sorts, there are consolidated assignments, for example, book reports, innovative articles and sound undertakings which foresee that pupils should utilize two or three aptitudes in a specific undertaking.

Likewise, the adjustments in the occupations of educators and pupils by uprightness of the utilization of information progresses in preparing and direction ought not be rejected. Clear arrangement of guidance has changed from what it used to be instructor focused (task provider and organizer) which was customary method for guidance to students focused (facilitator and supporter), This enables pupils to take an interest in guidance process. Subsequently, instructors offer pupils to use their aptitudes and practice what they understand by using advancement rather than giving all pupils a tantamount endeavour (Zisow, 2002).

Schoology improves learning and increases motivation this has caused a couple of disputes. Some feel that since this platform limited to users and learning resource alone, it shields pupils from getting huge information and constructing learning by themselves because

every resource needed has been provided by the teachers or group administrator. Similarly, activities are limited to users on the platform is alone unlike other social platform that allows users to connect with various social platforms outside the insisting ones.

In any case, it has been understood that the Web is an astounding platform to access learning resources since only a mouse snap is relied upon and stress lees effort to get learning materials needed as long as the internet is being provided. Regardless, pupils need to recognize among reliable and deceitful information sources (Sgouros and Martin, 2005). In any case, pupils have a positive attitude towards extended learning exercises utilizing schoology platform. Interestingly, Tuncok (2010) underscored that utilization of media platform, for example, schoology in extended setting is significant in the light of the fact that it creates pupils' creative powers. Hence, making increasingly dynamic and basic media clients, who will consistently be all the more requesting later on. Schoology and extended learning have to do with e-learning which positively affects the pupils' learning progress. It has to do with what to educate through on the web, when and how. Its focal point is to empower pupils to create basic reasoning, breaking down and pondering their encounters while utilizing different methods for social technologies.

2.3.5 WhatsApp Instructional Platform and Pupils Attitude towards Extended Learning

WhatsApp instructional platform proposed for central level instructors to be progressively arranged, sort for sufficient assets to connect with pupils and make learning pupil-focused exercises so that pupils will decide the heading of education and learning and educator would control the exercises of pupils. It accommodates and empowers a lot, the managers' capacities, the impacts of which would be more clear and more understandable to children's than educators' pupils study hall exercises. (Lindsey, 2000). There are generally four undertaking types to be expressed; creative, wide, technique and practice (unequivocal, inventive, far reaching, status and practice). Regardless of these sorts, there are joined assignments, for example, book reports, creative articles and ordinary undertakings which envisage that understudies should utilize a couple of aptitudes in a specific undertaking.

Also, the alterations in the occupations of educators and pupils by standards of the use of data advances in getting ready and heading should not be ousted. Clear arrangement of guidance has changed from what it used to be instructor focused (task provider and organizer) which was regular method for guidance to pupils focused (facilitator and supporter). This enables pupils to take an interest in guidance process. Henceforth, teachers offer pupils to use

their aptitudes and practice what they understand by using advancement rather than giving all pupils a tantamount endeavour (Zisow, 2002).

2.3.6   Pupils' Attitude towards Practice Extended Learning

The acknowledgment of routine with regards to extended learning has been either or against the ideas by the parents in the ongoing time. Giving of learning exercise for practices after school in the twentieth century was seen as psychological or mental assignment. In any case, the idea of extended learning configuration shows up positively since students can be locked in past study room or works on learning task at home. Instructors, parents and all stakeholders involving in the ideas of extended learning accepted that the idea could help create information ability. In as much the learning movement given to students would be done in non-school hours, accordingly it would improve student's scholastic execution. So, extended learning exercises give students sufficient opportunity to mediate, interact with exercises or learning assignment given to them. With respect to contrasts crosswise over sex, by and large investigations have demonstrated that females have more positive drive towards extended learning exercises than their male counterparts (Keith, Reimers, Fehrmann, Pottebaum and Aubey, 2004).

Conversely, many studies have found a relationship between time spent on extended learning activities and engagement with other activities. Coopers (1999) reported that there is nexus between time pupils spent watching television and pupils' academic achievement, if time pupils use to watch television is more than time devote for learning, this would have negative impact of such pupils. Similarly, Keith (1993) found a positive direct effect of primary pupils that devote more time to practice learning after school and spent less time in watching television.

Farrow (1999) found that not only time spent in extended learning contributed to the learner's academic performance. It was reported that learners found engaged in extended learning have positive attitude towards particular concepts that are being practiced in extended learning settings. Hong and Milgram (1999) found that US of America (USA) essential understudies reinforced powerfully decent conditions for widened getting the hang of including music, refreshments, learning with made applications, present and sound-related learning while pupils in Korea maintained cognizant formal conditions. This was reinforced by Longoria (2008) who discovered social relationship between Greek, US, UK and Japanese understudies in their affinities for taking a gander at wrapping tunes while considering. All things considered, the Japanese understudies took a gander in any event music, the Greeks the most.

A key finding from this examination was that, with age, pupils ended up being better organized to see when music was redirecting them from their work and were capably arranged to comprehend how to deplete the music.

In another investigation carried out by Cooper, Batts, Patall, and Imprint (2010), it was found that the attitude of pupils towards learning beyond classroom settings was not regarding pupils' trademark, viability, home/family background or parent's frame of mind and student's network or condition. They proceeded to state that parent's certain mien towards expanded learning influence students as well as spur students to learn and relate with nature. In the event that the guardians can impact stretched out learning to such an extraordinary degree, at that point one would normally trust that the student's close to home support from the classroom would likewise assume a job in broadened learning settings. By and large, it has been observed that all-inclusive learning, background, utilizing social stages were overwhelmingly positive (Chiu, 2009).

2.3.7 Schoology Instruction Platform and Pupils' Achievement in Basic Science

One popular educational tool recently tapped by primary school teachers around the nation is 'Schoology' (www.schoology.com). Schoology provides tools for educators to take attendance, grade, post readings, and track assignments. Schoology is an adjustable system that can change according to pupil's needs and continually improve as education and technology advance (www.schoology.com, 2013).

In addition to common search engines (for instance Yahoo, Bing and Google) used for research purposes and e-mailing between the teacher and pupils, tools for educational online discussions and blogging are prevalent now. Recently, the LMS has become an active domain for educational online research. In particular, the study examined the communication that occurred between focal participants and their peers and the communication that occurred between focal participants and their teachers, as well as had informal discussions with their respective teachers about pedagogical adjustments. Schoology's mission statement emphasized supporting teachers and enhancing pupils' learning (Blacklist, 2009). Teachers can introduce new concepts through a LMS like Schoology (for instance digital images or YouTube clips).

Equally, teachers have the option of inserting links to academic/educational websites or social media sites for pupils to explore both in and out of school anytime. Because pupils live an era in which digital technologies and literacies are increasingly relevant to schooling practices, scholars have encouraged educators to find means of acclimatising to the new online learning practices and urged the necessity for understanding how the Web requires new social

practices, abilities and procedures (Sweeny, 2010). Even though there is increased focus on technology used in classrooms, research has proven that technology is scantily being used in meaningful ways (Boiling, 2008).

Similarly, Beach and O'Brien (2007) recommended that educators should be furnished with the information of how to infuse educational plan (curriculum) with interactive online tools such as chat, instant messaging, blogs and wikis for teaching and learning which are beneficial when interacting in discussion forums. Lam (2000) claimed that online cultures afford immigrant youths with spaces to develop new linguistic and technical skills. Even though Schoology does not allow the automatic interaction between other pupil users outside the boundaries of a specific class or with pupil users from other regions of the globe, the system does permit teachers to grant access to their pupils to connect with other pupil users if needed.

Nonetheless, giving pupils opportunities to interact with digital literacy in school can provide socially meaningful experiences since they are already adopted e-mail and blog as a way to communicate outside of school (Williams, 2011). An online threaded discussion group benefits more reserved pupils significantly because it allows them to reflect before responding (English, 2007). Electronic discussions equally have the potential to build virtual communities that allow pupils to negotiate between peers' responses and text across classroom boundaries (Mercer, 2000).

Accessible studies by researchers such as Nwagbo (2009) and Ibeneme (2013) revealed that utilizing Schoology platform has helped to improve pupils accomplishment in sciences more than the conventional instructional strategies like talk, chalkboard. Nwagbo (2009) studied on the impacts of schoology platform on the disposition and accomplishment in Basic Science on primary school pupils. The discoveries of the investigation demonstrated among other things that the attitude of pupils towards basic science was high as a result of exposure to the use of schoology platform while compared with other groups which they were taking through conventional method approach respectively. In enhancing achievement in basic science, pupils exposed to schoology platform found performed better than talk, chalkboard strategy groups.

Accordingly, the researchers discovered that schoology platform definitively improved pupils accomplishment than regular strategy for educating. In a related report by Timothy and Awodi (1997) on the impact of LMS and social communication of excellent and averagely performance of primary pupils in elementary science (basic science). The investigation revealed a basic difference between schoology platform and talk technique in improving

student's presentation in Basic Science Achievement Test for the request approach since low achiever pupils were energized and support utilizing another platform and system that are diverse to what they used to. Additionally, the schoology improved the low achiever's presentation in the Fundamental Science Accomplishment Test.

2.3.8 WhatsApp Instruction Platform and Pupils' Achievement in Basic Science

The activity of the educator as a mentor is to assist pupils with taking consideration of issues. Pupils are doled out commitment with respect to their own one of a kind learning. Pupils should reliably screen and survey their learning progress as they have ended up being dynamic and self-sufficient pupils (MacHemer and Crawford, 2007). Moreover, the beneficial utilization of WhatsApp has created pupils' estimation of structure, invigorates data sharing and advances joint exertion among partners (Minocha, 2009). It urges understudies to pass on what necessities be, make self-characters and highlight their capacities and experiences of learning (Notley and Tachi, 2011).

Likewise, pupil's utilization of WhatsApp for pleasure and individual socialization yet as a phase for enormous contemplations. They make partners, share interfaces, and advance web learning and enlightening relationship among understudies and assets (Gross, 2004).The activity of the instructor as a mentor is to assist pupils with taking consideration of issues. Pupils are doled out commitment with respect to their own special learning. Pupils should reliably screen and survey their learning progress as they have ended up being dynamic and independent pupils (MacHemer and Crawford, 2007). Moreover, the gainful usage of WhatsApp has fabricated pupils' idea of system, revives data sharing and advances joint exertion among amigos (Minocha, 2009). It urges learners to pass on what necessities should be, make self-characters and highlight their capacities and experiences of learning (Notley and Tachi, 2011).

Furthermore, pupil's utilization WhatsApp for amusement and individual socialization moreover, as a phase for colossal contemplations. They make partners, share interfaces, and advance web learning and illuminating relationship among understudies and resources (Gross, 2004). Ibe and Nwosu (2003) completed an examination on the impacts of WhatsApp and demonstration techniques for educating on science process capacities acquisition among primary school in Basic Science study. The outcome obtained from the investigation demonstrated that the pupils showed using whatApp performed fundamentally superior to anything those educated through demonstration and regular (address) methods. The result of the investigation discovered that sexual orientation was not a noteworthy factor on

understudy's accomplishment. The analyst prescribed that utilization of whatsApp ought to be embraced in teaching as it urges pupils to be effectively involved in the classroom.

Moreover, Fakuade and Ariyibi (2017) did an exploration on the impacts of Instant message (Whatsapp) among primary pupils in Akingbile community of Oyo State. One hundred and fifty (150) primary school pupils in co-instructive schools were randomly selected. The experimental group was indicated utilizing whatsApp, while the control was demonstrated utilizing the traditional method. The findings from the investigation showed that pupils in whatsApp group performed expressively improved than those showed using the traditional method.

2.3.9 Practice Extended Learning and Pupils' Achievement in Basic Science

The desires for all stakeholders pertaining learners performance is that pupils would most likely exhibit and interpret what they have been taught in the classroom to society which extended learning is a crucial technique in achieving it. The conspicuous advantages of extended learning are: ability of pupils to retain class-taught activities, capability to emphasised what they have been exposed to, also created learning pattern which give pupils opportunity to create as autonomous pupils and their subjective comprehension of their environment.

Extended learning is an expansion of the learning beyond conferment of the learning room activities which gives pupils opportunity to internalize what their teachers or instructors introduce to them in the classroom. Extended learning is vital in that it stands as a convergence among home and school which plays an extraordinary essential action in pupil's life. The most notable reason for stretched out learning (extended learning) is to have pupils practice material recently acquainted in class with support learning and invigorate the dominance of unequivocal limits ability to take assignments encourages them to interact with the material that will be treated in future exercises. These exercises aim to encourage pupils to acquire the most extraordinary skills when the new learning content is being introduced in the classroom.

The research carried out on disposition (attitude) towards essential science (basic science) has got consideration in late decades (Ali and Awwan, 2013) and this is the key in the ideal authority of science (Nordin and Ling, 2011). Tighezza (2013) revealed that attitude is characterized as a constructive normality as far as suspecting (cognition), feeling (affection) and inclination activity (psychomotor) an individual against a viewpoint in the encompassing condition. This idea is known as triadic plans, the view that attitude as a response to a blend of subjective, full of feeling and conduct of an item. The intellectual, full of feeling and

psychomotor (conduct) as an independent factor which would then shapen the idea of frame of mind or also called the tripartite models (Eagly and Chaiken, 2007).

2.3.10 Social Media Self-efficacy and Pupils' Social Interaction

Teaching and learning procedures that have been traditionally facilitated are currently testing the rise of technology in the ongoing time. Aremu and Fasan (2011) revealed that with the utilization of inventive, instructional and academic enhancements recently, teaching and learning procedures are not what they used to be. The reconciliation of these more up-to-date gadgets into educational system demonstrates the improvement and presentation of inventive thoughts in teaching and learning system. Therefore, there is need by educational partner to begin advocacy for the utilization of new technology, for example, web-based social networking stage for learning, since they accept that it will improve learning and teaching procedure and adequately prepared learners most especially understudy learners to viably and proficiently take an interest in the recently economic advancement (Butzin, 2000 and Reiser, 2001).

Self-viability (self-efficacy) has happened to progressively serve as imperative energy to researchers focusing the educational uses of online advancement. A great deal of this assessment identifies with primary educational level system, which focused on improving aptitudes and self-efficacy utilizing web based life (social media). For instance, Kutner, Olson and Hertzog (2008) have focused on how web-based life (social media) can be deployed to develop and improve efficacy of learners for constant participating and more socially interact in learning activities. Moreover, focusing on how online networking platforms can be utilized to improve efficacy and pupils by through social platform instructional platform. This urges them to increasingly collaborate and communicate with other along these lines picking up certainty of utilizing media innovations. Experts like Shipper (2012) have focused on advanced education settings, perceiving how utilizing electronic life platform can improve self-ampleness for learning science courses, (Award, 2009). A reliable finding from this line of research is that the usage of this electronic individual to individual correspondence produces independence for the substance passed on by strategies for the different stages.

Regardless, in coordinating online networking (social media) technology in primary level of education, researchers have recommended that unusual condition of self-efficacy in the usage of web-based social networking could highly impact helping understudies (primary pupils) learn internet based life skills and its uses for learning purposes (Busch, 2005). Bouffard (2001) characterized self-efficacy as one capacity to show self-certainty (self-

efficacy) or level of execution in some random assignment. It is the impression of one capacity to play out the conduct required to produce explicit result which is consistently thought to legitimately affect the decision to take part in an assignment, just as the effort that will be exhausted and the diligence that will be displayed. The author additionally affirmed that self-efficacy has been showed up as an effort of support that influence decision of connecting with learners in an errand, the effort set up to play out the assignment by the learners and the voting public presentation by the learners in achieving the task or activities The more noteworthy pupils appraise their efficacy to use media element, the more dynamic and longer they drive forward in their effort (Bandura, 1999).

Social coordinated effort (social collaboration) suggests a typical talk between at any rate two characters or people as alluded to in Walker (2007) and Garrison (2003) exhibited four part of affiliations that usually happen during learning process: the correspondence between (a) teacher and pupils (b) pupils and pupils (c) the educator and substance (learning materials) and (d) the pupils and substance (learning materials). These interaction we cannot rule out in instructional system. Social affiliation (social association) can in like manner be viewed as a creation of care and which are characteristics of shown social translucence. The idea is to reinforce conscious lead by making individuals and their activities indisputable to one another in PC interceded interchanges (Erickson and Kellog, 2000).

2.3.11 Social Media Self-efficacy and Pupils' Attitude towards Extended Learning

Numerous elements should have been viewed as when discovering the utilization of social media platform for extended learning. Some of these factors are social media self-efficacy and parent digital divide. Social media self-efficacy suggests pupils' confidence about his or her capabilities to perform desired functions specifically in the social media environment. According to Metzger (2010), who suggested that those that are self-efficacious in social media which, by nature, involve sharing information and interactivity between social media users, may be particularly motivated to interact with and seek out information from others. Similarly, Social media self-efficacy is one aspect of effective social skills that can be referred to as a readiness to initiate behaviour in social conditions. (Sherer and Adams, 2013; Smith and Betz, 2002). It is also considered as individuals' beliefs that they are capable of initiating social contact and developing new friendships (Gecas, 2009). Social media self-efficacy also can be considered as the pupil's expectancy that can successfully perform or complete a target behavior in an academic or everyday situation involving social interaction (Connolly, 2009; Gresham, 2014).

Today, learners most especially pupils across all levels are hooked on to different social media platforms for keeping in contact with their peers. It has become a utility tool, whose affordances can be harnessed by educators to support learning activities (Baruah, 2012). It has been observed that primary school pupils level of awareness of social media for instruction and self-efficacy is on the increase. According to baseline investigation which was conducted in Ibadan metropolis South-Western of Nigeria with 400 pupils of primary five of both private and public schools. (University of Ibadan Staff School, God Blessing Group of School, City of David Nursery and Primary school, and King's Junior Academy) and Ekiti State using primary five pupils from two schools; Nova Nursery and Primary School, Ado Ekiti (private) and Community Pilot School Ikere Ekiti (public) it was revealed that 80% of the pupils were familiar with social media platform, most especially social media by utilization such as Facebook, Twitter, Whatsapp and 2go, while, 20% of the respondents were familiar with social media by resource such as Schoology and Edmodo. However, the report also indicated that 64% of the pupils used Facebook, Twitter, Whatsapp and 2go regularly while 21% used Schoology and Edmodo. Furthermore, the report also indicated that pupils have high level of social media-efficacy, in other words, a significant number of these pupils used social media for social engagement but were willing to use it for learning activities.

Self-efficacy serves as an ability to organize and implement action or given task. It was first proposed by Bandura (1977) as a theory in year 1977. Self-efficacy, according to this theory, it helps an individual to deal with any given task with level of confidence possessed by them. As a result of this, it was assumed that self-efficacy can be used as a mechanism for coping with stress. Recently studies revealed that self-efficacy have been modified and applied into difference field of domains (Topkaya, 2010; Tschannen-Moran, Hoy and Hoy, 1998). Therefore, social media self-efficacy can be interpreted as the ability of one to be able to initiate social contact and develop social interaction in a virtual community.

Thus, Wei (2005) as well as Hagedoorn and Molleman (2006) reported that self-efficacy has been popularly used in many domains such as adult social interaction, counseling pupils and facilitate instructions among pupils studying in different locations. They stated that self-efficacy can therefore be attributed as the ability of pupils to communicate with one another, create a platform of social interaction and collaborative effort in the virtual community to impact their dispositions towards the network and the methods by which they carry on in a social situation either for learning or for social commitment. In addition, expanded learning (extended learning) develops student's learning skills, creates uplifting mentalities of learners toward schooling and show that learning can happen outside of formal learning settings.

In any case, inordinate broadened learning may affect contrarily an understudy's achievement and furthermore lessen their entrance to relaxation exercises, impact of expanded learning on pupils, their frames of mind and their achievements blended with both positive and negative impacts. Pupils report great frame of mind to broadened learning and feel some comprehensive learning is noteworthy in helping them discover genuine accomplishment as to learning assets. The study also demonstrated that learners, families and schools profit by a community-oriented exertion of utilizing social platforms to build up the productivity of extended learning. A positive result for extended learning seems, by all accounts, to be dependent upon instructor arrangement, the inspiration of learning. Larson (2011) found that the authority level of extended learning is emphatically affected by pupils' inspiration and interest level, in spite of the fact that motivation and interest level do not increase extended learning completion rates.

2.3.12 Social media Self-efficacy and Pupils Achievement in Basic Science

Pupils report great disposition to expanded learning and feel some comprehensive learning is huge in helping them discover genuine achievement at to learning assets. Analysts have likewise proposed that models may assume a progressively powerful job during transitional periods, for example, the move from basic to center school, during which time youths become more receptive to social media information (Eccles, Midgley, 2004). Pupils are well while in transit to change their convictions following a model's prosperity or inability to the extent that they feel like the model in the zone being referred to (Schunk, 1987). Viewing a comparable colleague prevails at a difficult arithmetic issue, for example, may persuade individual pupils that they likewise can vanquish the test. Vicarious data picked up from others saw to be comparative in capacity yields the most persuasive near data, however the encounters of those apparent as having comparable traits (for example age, sexual orientation and ethnicity) are frequently incredible wellsprings of self-adequacy data.

Furthermore, Self-efficacy has been hypothesized to influence choice of behavioral activities, effort exertion, persistence in the face of difficulties and task performance (Bandura, 1993; Bandura and Schunk, 1981; Multon, Brown and Lent, 1991; Pajares and Miller, 1995). Many researchers found the relevance of self-efficacy theory to understand and predict the academic achievement. Bandura (1982) has found that academic self-efficacy is strongly related to actual (future) task performance more strongly than to past performance. He also claimed that self-efficacy is a causal variable that effects on performance directly and indirectly. In contrast, Lent (1997) proposed that self-efficacy was more strongly related to past

performance than to future performance and it remained the best predictors of future performance.

However, social self-efficacy theory has been found to be powerful in explaining and predicting academic performance variables among pupils. Different perceptions of academic social self-efficacy will be reflected in subsequent performance of the task (Wood, 1987). Lee (1984) found that both goals and social self-efficacy had independent, complementary effects on task performance. Pupils reported with strong social self-efficacy generally achieved higher grades and were much more likely to persist in majors over a 1-year period than were those with low academic self-efficacy (Wareham, 2004).

Moreover, Shih (2005) reported that basic science performance, achievement, social self-efficacy measures were significantly and positively correlated with attitude towards basic sciences.

2.3.13 Parents' Digital Divide and Pupils' Social Interaction

The idea digital proficiency is used as an enlargement and explanation of the computerized gap and it has been discovered a powerful apparatus to portray and quantify the sort of aptitudes where various gatherings of individuals change as a component of certain auxiliary and relevant factors (for instance, sexual orientation, race, financial level, pay, spot of root). In this sense, Hargittai (2012) consented to the distinctions in individuals' online abilities as the second digital divide. Equally, Hargi (2013) identified about five components of the digital divide: specialized methods (programming, equipment, availability quality); independence of utilization (area of access, opportunity to utilize the mode for one's favoured exercises); use designs (sorts of employments of the Web); social encouraging groups of people and aptitudes (capacities to utilize the medium successfully). Dijk (2005) recognized four various types of hindrances to access and the type of access they restrict:

• No ownership of PCs and system associations (material access).

• Absence of critical usage openings (usage access).

• Nonappearance of basic computerized involvement because of absence of intrigue, PC tension and ugliness of the new innovation (mental access).

• Absence of computerized skills because of deficient ease of use and insufficient training or social help (skills access). This creator protects that access issues identifying with computerized innovation continuously move from the initial two sorts of access (structural barriers) to the last two sorts, which are factors inside the second advanced partition.

In any case, there is an extraordinary spread of writing about what the digital divide involves: regardless of whether the utilization and access to PCs or whether the utilization and access to the Internet. Despite the fact that there is an exploration line dependent on dissecting the utilization of PCs and of the Internet freely, we ought to recognize that they are connected together. The two concepts have likewise developed at the same time trying to adjust to the demands of the various settings and to the subsequent social needs. These concepts have showed up with regards to the new Data Society under various methodologies: sociological, educational and psychological, which straightforwardly influence the elements, markers or propensities used to clarify the effect of PC and Internet skills on our general public.

Social interactions allude to specific types of externalities, in which the activities of a reference gathering influence a person's inclinations. The reference gathering relies upon the specific circumstance and is ordinarily a person's family, neighbours, companions or friends. Social interactions are some of the time called non-advertise interactions to underline the way that these interactions are not controlled by the value instrument. Duesenberry (2016) and Leibenstein (2015) are likewise among the soonest givers. In spite of the fact that Veblen's Theory of the Leisure Class has had an amazing effect in the social sciences; Schelling's spearheading formal investigation of the impact of social gatherings in conduct was especially significant for the later advancements in financial aspects.

Models of social interactions appear to be adjusted to take care of an inescapable issue in the social sciences, in particular the perception of huge contrasts in results without comparable contrasts in basics. Numerous models of social interactions show vital complementary, which happened when the minor utility to one individual of undertaking an activity is expanding with the normal measure of the move made by his friends.

2.3.14   Parents' Digital Divide and Pupils Attitude towards Extended Learning

Studies on digital divide as being carried out by researchers alludes to digital divide as digital contrasts. It is the contrasts among low and high financial status of different families. The primary focal point of digital divide is on grown-up restricted access to utilization of innovation, internet and capacity to utilize innovation to fulfilment level. (Dijkstra, Geske, Lucia and Hanmer, 2004). As indicated by Martinez-Aleman and Wartman (2009) and Livingstone (2008) in US, digital divide is escaping as the utilization of innovation getting to be accessible and most sought after.

Studies have exhibited that watchmen's (folks) capacity to utilize innovation and web all around relies on social money related status. Kind and partners (2005) found that among

guardians who are low pay workers and low taught gatekeepers (guardians) those with the most irrelevant pay were to the least degree committed to approach or approach a PC. Moreover, parents (guardians) obtaining more significant salary and learned have been associated with higher use of technology and internet among their partners (Allen and Rainie, 2002). Conversely, contemporaries like Martin and Robinson (2007), conducted a survey on 2,221 Swedish parents to ascertain the level of digital divide. The investigation found no distinction in educated and higher pay procuring guardian utilizing innovation and the individuals who do not, on the grounds that most of respondents had pay levels at or beneath the national standard. Therefore, the examination inferred that digital divide among guardians in term of access to utilize innovation were fluctuating.

Dettmers, Trautwein and Ludtke (2010) declared that extended learning can be impacted by numerous components: the family background of learners, pupils' disposition towards learning, motivation and learners characteristics, for example, age and sexual orientation will invariably impact extended learning either positively or otherwise. While there is no accord in the writing regarding whether extended learning raises pupil accomplishment, extended learning proponents guaranteed that extended learning does as such by expanding all out examination time, covering a greater amount of the educational plan, and strengthening work canvassed in class (Jacket, 2009; HMI for Instruction and Preparing in Grains, 2004). They accept that through extended learning, pupils can figure out how to utilize assets adequately and grow great investigation propensities.

Supporters likewise guaranteed that extended learning has non-scholarly benefits, particularly for more youthful pupils including: improving pupils' time, enhances the board's authoritative skills, improving understudies (pupils) attitude to schooling and indicating that learning can occur beyond the study room. Bennett, Sara, Kalish and Nancy (2006) buttressed that extended learning concept in addition to other things encourages a feeling of moral obligation and self-control among youthful learners. It also creates parental association in child tutoring. A Canadian audit noted that pupils in study room (classroom) that adopts extended learning perform at a decently better level than those in classroom that are appointed less extended learning (The Instruction Commission Report, 2006).

Guardians (parents) and educators (teachers) saw web based life (social media) as lacking security insurance and that primary pupils are too youthful to be in any way presented to utilize internet based life platform (social media platform) either for learning or for engagement reason since it tends to be a diversion, exposure to inappropriate online contents, an introduction to digital tormenting (cyber bullying) and absence of control. Also, Lei, (2009)

widely revealed numerous variables that could be impeding the utilization of Web 2.0 innovations (technologies) in various ways. At the point when these elements are expressly comprehended, educators will almost certainly use those innovations so that individual understudies (pupils) can apply them in both academic and general purpose. The study also showed that, 75% of pupils' parents in private schools have positive attitude towards using social platforms for extended learning by their children while 66% of parents of public schools pupils consented to allow their children to use social media platform for learning purposes. This indicates that high percentage of the parents and pupils have a very positive attitude towards extended learning using social platforms such as whatsApp and schoology.

2.3.15 Parents' Digital Divide and Pupils' Achievement in Basic Science

Due to parent's socio-economic factors, digital divide has recommended differences on how parents use technology and the web. A few investigations like Rothbaum and associates (2008) found that higher salary parents utilized the web to perform numerous exercises, for example, in communication with family, meeting individuals and checking their youngsters online than low pay parents. Besides, Radey and Randolph (2009) expressed that parents that spend most of their time looking for data online are exceptionally instructed parents. Some scholars contended that lower salary parents may not likely be looking for data on the web. This finding infers that a learning hole exists between lower pay and higher pay parents.

In a study of African American mothers, parents passed on the craving to improve their utilization of technology and web abilities. With low pay and education, 58% of mother scan web for data however just 41% of parent approached web and technology at home. The examination infers that parents with low pay and education confronted obstructions to get to data online with the utilization of technology gadgets. Notwithstanding, Zhao (2009), revealed that low pay and low instructed parents with youngsters may have favorable position of getting to on the web and use technology than higher pay and taught parents

Despite what might be expected, studies have demonstrated that high pay parents connect on social exercises online than lower pay parents (Nielsonwire, 2009). Recently, studies on parents' online exercises found that there was no significant inconsistencies in the recurrence of parents' online social exercises paying little mind to pay level, age and education (Doty, Dworkin and Connell, 2012). On a Swedish site, it was discovered that parents profiting by social help being solitary parents do approach technology and progressively dynamic on online exercises paying little heed to their lower salary and education (Sarkadi and Bremberg, 2004). In any case, researchers have found that socio-economic factors may not be just

purposes of digital divided among parents, failure of some parent to approach utilization of technology and online exercises could be because of aptitudes and solace. Absence of commonality by certain parents with utilization of technology, for example, PCs, cell phones and web exercises may impede parents from utilizing technology instead of absence of intrigue. (Cohall, 2004)

It was observed by Walker and colleagues (2011) that guidance (parents) with dynamic internet exercises often may feel good with the utilization of technology gadgets, while simultaneously, parents who are increasingly okay with the utilization the internet may feel progressively great with technology gadgets. Along these lines, access to internet exercises and utilization of technology has turned out to be generally spread, yet inequalities in access to and utilization of technology and internet exercises by parents still self-evident.

As a bit of the continued with rules by science teachers at improving learners' insightful achievement, Ige and Gbemuga (2011) broke down the feasibility of ICT as method in training and learning of Basic Science. 154 male and female pupils from 4 unblemished classes taken from 4 arbitrarily chose primary schools in Kwara state, Nigeria, looked into the examination. Two grade schools haphazardly chose for every treatment, get-together were made to partake in the utilization of ICT. One research question was answered while three theories were attempted. Three instruments were made and grasped to oversee pupils ICT use in the examination. It was endorsed that primary pupils ought to be urged by their instructors to make trust in them since their help in Mental training will engage them to pass on their thoughts in fundamental right language of discourse.

In late year, utilizing social platforms for extended learning clearly influence understudy scholastic performance just as pupil's preparation for learning. The purpose behind this effect is that social platforms gives a lot of incitement and therefore help the pupils to be increasingly dynamic and energize joint effort which likewise influence their accomplishment decidedly (Lin, 2013). Social media additionally invigorates the joining of instructional methodology since it endeavors to adjust the specialization of the teacher with the dynamic interest of the pupils. Coordinated effort through social media backing is to a greater degree a constructivist way to deal with learning, where pupils and teachers can cooperate to co-make comprehension of a specific point, instead of a methodology that underlines singular commitments (Selvaraj, 2013).

As demonstrated by Ayadema (2011), lead or experience is a keen limit (intelligent capacity) (F) of the individual and nature. Their Numerical recipe B=F (P, E) demonstrates that direct (conduct) (B) mirrors the earth (E) and the individual or individual inside nature (P).This

equation focused on the requirement for new explore methodologies in which conduct is viewed as an element of the individual and nature (environment). Present day science learning focused on the significance of pupils' support in the process through presentation to various learning encounters (Baikie 2000). Academic accomplishment (achievement) of pupil is characterized as the degree of execution in a specific field of study. Higher scores demonstrate better academic accomplishment. In the instructional system, a poor or an underachiever is somebody whose exhibition is continually below average. Suggestions by Okebukola and Jegede 1988; Oparah, 2003; WAEC, 2008 cited by Okoro (2012) on science instruction in Nigeria show that accomplishment in science training is poor. Okoro blamed the poor performance on educational system in Nigerian schools. He expressed that science is introduced obstinately in many schools as a progression of incoherent certainties and ideas which learners discover hard to relate with this present reality.

Also in the study, parents suggested ways to enhance the effective use of social media platform for instructional purpose. 52% of the parents stated that to maintain internet and social safety, parents must monitor and supervise children's Internet activities; keep computers or mobile phones in common areas of the house, and supervise online time. 34% of the parents also stated that parents should inform children that their Internet history would be monitored from time to time to ensure they do not visit wrong sites. This is in line with the work of Kaplan (2007) that when kids access the Internet through mobile devices, insist on having access to the devices periodically to monitor activities. Some parents utilize parental controls on computers to limit children's activities on the Internet. These programmes will allow you to restrict web browsers from visiting certain types of websites. Similarly, 14% of the parents were of the opinion that parents and teachers should be part of pupils' activities on the platform in other to monitor and guide.

2.4   Appraisal of Literature

The foundation of extended learning enables teachers to reach out to more pupils and in this manner they can address their needs more successfully, especially when managing pupils. Utilizing social media platforms, classrooms can be set up in a period and on the web and after school empowering an increasingly compelling participation by a more noteworthy number of pupils working together and all the more captivating. The numerous associations that can be built up from the social media platform like Schoology and Whatsapp, bring numerous potential outcomes in regards to the execution of various learning settings. Everything can be assembled, demonstrated, simulated and emulated, all territories of education can be secured

and any issue can be attended to with the assistance of social media platforms thereby aiding easy realization of educational goals.

In spite of the recognized advantages, a few difficulties ought to be viewed when planning such learning settings. Pupils should be inspired to interconnect and consequently draw full favourable position of web-based learning circumstances. Circumstances of interaction and socialization will happen essentially by being on the web or on the grounds that the innovation permits it. This implies we ought not to underestimate the capacity and inspiration of pupils to interface and convey. The limits of the learning condition winds up and diffuse, along these lines a cautious arranging and a decent administration are key components. Pupils are allowed to pick up as per their very own standards, in any case, an instructor or facilitator ought to be a steady nearness to guide and direct. Planning and actualizing an extended learning using social media platforms, thus requires readiness, time and assets. One can not underestimate the pupils' interest in collective learning situations. There is a need to advance and keep up such support. Pupils must be empowered and reminded about their jobs and ought to be independent, yet the instructor must show commitment and take the lead and more importantly give necessary motivation.

The interaction ought to be improved through a two-route correspondence between members, sorting out social interaction, joint efforts and shared exercises generally. Utilizing social media platforms in extended learning, social media self-efficacy is significant factor that could undermine its utilization. Social media self-efficacy proposes pupils' certainty about their abilities to perform wanted capacities explicitly in the social media condition. These days, most learners especially pupils are dependent on the use of various social media platforms for staying in touch with their companions. It has turned into an utility apparatus, whose affordances can be outfit by teachers to help learning exercises, likewise to further connect with pupils and build up pupils' social abilities. Teachers should likewise cultivate a feeling of network and empower the improvement of a social presence.

In conclusion, there is no gainsaying the fact that social media platforms have done more good than harm as it not only aids teaching-learning in the 21st century but has made learning to conveniently take place within or without the four walls of a classroom. The various social media platforms examined have helped to arouse the interest of basic school pupils towards learning and helped them to enhance their academic achievement. Parents, tutors and other education stakeholders have also enjoyed value for their investment and social interactions are improved and strengthened. The need for face-to-face contact between teachers and pupils has also reduced drastically as both parties can connect online and interact, teach,

give assignments, guide, mentor and thoroughly supervise the learning progress of each child. Each pupil also can learn at their pace thereby catering for individual learning needs of each child.

The literature review showed that the extension of learning in primary school classroom in Nigeria has been under-researched in terms of intervention. This crucial aspect of learning has many advantages when it comes to making learning experience permanent. This huge benefit has prompted researchers to examine the influence of selected intervention outside Nigeria. Therefore, this present study took advantage of the interest of millennial in 2.0 technology such as WhatsApp and Schoology platforms for extending classroom instruction. The literature also stated the advantages of factors such as parent's digital divide and social media self-efficacy. Hence, the moderating effect of parents' digital divide and social media self-efficacy were determined on students' social interaction, attitude to extended learning and achievement in basic science.

CHAPTER THREE

METHODOLOGY

The chapter discussed method of research design adopted, as well as variables of the study and selection of participants for this study. Other items include: research instruments, validation of the instruments, procedure for the study and method of data analysis.

3.1   Research design

The study adopted the pretest-posttest control group quasi-experimental design. The design is schematically represented as follows:

Experimental group 1 = O_1 X_1 O_2

Experimental group 2 = O_3 X_2 O_4

Control Group   (C)   = O_5 X_3 O_6

$O_1,$ $O_3,$ and O_5 are the pretest scores for experimental groups 1, 2 and the control group respectively. O_2, O_4, O_6 represent the posttest scores for the experimental groups and the control group respectively.

X_1 represents Treatment 1 (**Schoology Instructional Platform**)

X_2 represents Treatment 2 (**WhatsApp Instructional Platform**)

X_3 represents the Control group (**Practice Extended Learning)**

Table 3.1: 3 x 2 x 3 Factorial matrix of the study variables

Treatment	Parent's digital Divide	Social media self-efficacy	
		High	Low
Schoology Instructional Platform (SIP)	High		
	Moderate		
	Low		
WhatsApp Instructional Platform (WIP)	High		
	Moderate		
	Low		
Control group (Practice Extended Learning)	High		
	Moderate		
	Media Low		

3.2 Variables in the study

Variables considered in the study are as follow:

A. Independent variable

Independent variable is the extended learning manipulated at three levels:

  i.   Schoology Instructional Platform (SIP)

 ii.   WhatsApp Instructional Platform (WIP)

iii.   Control group (Practice Extended Learning)

B Moderator variables

The following are the moderator variables in the study

  i.   Social media self-efficacy

    a.   High

    b.   Low

 ii.   The three levels of Parent's digital divide was manipulated

    a.   low

    b.   Moderate

    c.   High

C Dependent variables

  i.   Pupils' social interaction

 ii.   Pupils' attitude towards extended learning

iii.   Pupils' achievement in basic science.

3.3 Selection of schools and participants

Three grade (primary) schools were purposively chosen to take an interest in the investigation (study) from three Geo-political zones within Ekiti State. Two demonstration primary schools for the experimental groups, (Ekiti central and Ekiti South) and one public primary school was randomly selected for the control group (Ekiti north). The criteria for the purposive determination of the schools were the following:

1. Availability of resources to deliver the instruction.

2. Pupils' level of competency to use technology device.

3. Accessibility to alternative electricity in case of power outage.

4.   Status and ability of the school to take an interest in the investigation,

   Using convenience sampling method, primary five was selected. Similarly, intact classes of 73 pupils from the three schools were allocated to schoology instructional platform group (18), WhatsApp instructional platform group (24) and control group (31). All the pupils were given

consent form, any parents/guardians that agreed or signed the consent form were used as participants in the study.

3.4   Research instruments

Eleven research instruments were used for the study and they are categorized into stimulus instruments, response instruments and assessment checklists.

A.   Assessment Checklist

i.   Pupils' Online Interaction Observation Scale (POIOS)

ii.   Pupils' Offline Interaction Observation Scale (POIOS)

B.   Response Instruments comprise:

i.   Pupils Attitude towards Extending Learning Questionnaire (PAELQ)

ii.   Social Media Self-efficacy Questionnaire (SMSEQ)

iii.   Parents' Digital Divide Questionnaire (PIDDQ)

iv.   Basic Science Achievement Test (BSAT)

C.   Stimulus instruments include:

i.   Social Media Lesson Plan Template (SMLPT)

ii.   Control Group Lesson Guide (CGLG)

iii.   Parent's Consent Form (PCF)

3.4. 1 Pupils' Online Interaction Observation Scale (POIOS)

The instrument was adapted from Edelstein, Susan and Edwards (2015). It was used to gather information on pupils' online interaction using social media platform. The instrument contains four criteria (frequency of use, content contribution, pupils' activities posting and pupil-pupils interaction). The criteria are rated with 0 to 3 points (0 point = 0 unacceptable, 1 point = 10 acceptable, 2 point = 20 good and 3 point = 30 excellent). The instrument was exposed to examination for face and substance legitimacy by specialists in Educational Technology Unit, their valuable observations and recommendations were effected. Similarly, inter-rater reliability was estimated using Scott's π. The inter-rater reliability index obtained was 0.76.

3.4.2   Offline Pupils' Interaction Observation Scale (OPIOS)

The instrument was created by the researcher to accumulate data on pupils' social interaction status. This instrument contains four criteria namely, (how often pupils visit the platform, group contribution, pupils' activities and pupil-pupils interaction). The criteria are rated with 0 to 3 points (0 point = 0 unacceptable, 1 point = 10 acceptable, 2 point = 20 good

and 3 point = 30 excellent). In order to establish the psychometric properties of the instrument, experts in the Educational Technology Unit were consulted for both face and substance legitimacy. The contribution of the experts were critically checked and effected. Similarly, inter-rater reliability was estimated using Scott's π. The inter-rater reliability index obtained was 0.76.

3.4.3   Pupils' Attitude towards Extending Learning Questionnaire (PAELQ)

The instrument was utilized to accumulate information on frame of mind of pupils towards broadened learning exercises. This instrument has section A and B. Section A contains bio-data, while B has fourteen (14) items to evoke reactions on the members' attitude towards extended learning exercises. The instrument was created by the analyst. In order to establish the psychometric properties of the instrument, specialists in the Educational Technologist were consulted for both face and substance legitimacy. The instrument was later administered to twenty five (25) pupils from primary school outside the population of the study. The data gathered were later analysed and a validity of 0.756 using Cronbach alpha was established.

3.4.4   Social Media Self-Efficacy Questionnaire (SMSEQ)

The questionnaire comprises two sections. Section 'A' contains the demographic data of the participants while 'B' contains 10 items placed alongside a two-point Likert Scale of "Yes" and " No", pupils are expected to choose options that indicate the extent of their level of competency of social media usage with each item. To ensure that the items in the instrument are consistently reliable, the questionnaire was administered to twenty pupils from public primary school in Ekiti state who were not part of the main study. Cronbach Alpha was used to analyse the data and reliability coefficient of 0.854 was obtained and this showed that the instrument was reliable.

3.4.5   Parents' Digital Divide Questionnaire (PDDQ)

The questionnaire of parents digital divide was designed by the researcher based on the problems identified in this study such as: access to divices (iPad, high-end phones, smart phones, computer, internet) at home, socio economic status (Parents' occupation, educational background), availability of internet access (such as broadband, wireless,). The questionnaire comprises two sections. Section 'A' contains the demographic data of the participants, access to technology device, how often they access the internet. While 'section B' consist of 10 items placed alongside a three-point Likert Scale of Yes, No and Uncertain. Parents were expected to

choose options that indicate their level of digital divide. Both face and content validity of the instrument were carried out with the assistance of the experts in the field of Educational Technology. Their contributions were carefully integrated to ensure the validity of the instrument. The instrument was also administered to parents of pupils used for pilot study outside the scope of this study to establish the reliability value of 0.752 using cronbach alpha.

3.4.6 Basic Science Achievement Test (BSAT)

This instrument was designed by the researcher to ascertain the level of achievement of the primary five pupils based on the content of the selected three modules in basic science (Solar system, Global Warming and Force and Types of Forces) that were taught. This instrument consisted of twenty (20) multiple choice questions covering the entire three modules, the options attached to each question range from A- D from which primary pupils would choose the correct option against each test item. This instrument was given to four specialists in early childhood education unit, faculty of education, university of Ibadan and two primary five teachers from public primary school in Ado Ekiti metropolis to ascertain the face and content validities. Their suggestions were carefully integrated to guarantee the legitimacy. The instrument was also administered to 30 pupils outside the selected primary schools to test the reliability value of 0.720 using KR 20.

Table 3.2 Detail of Basic Science Achievement Test Specification table

Below is specification table of pupil's achievement test topics selected and the dimension of items on each topic are as follow: (Solar system, Global Warming and Force)

Topic	Knowledge	Comprehension	Application	Total
Solar System	1,2,6	3,4	5	6
Global Warming	7,10,11,12		8,9,13	7
Force	17,20	14,15	16,18,19	7
Total	**9**	**4**	**7**	**20**

3.4.7   Schoology Lesson Plan Template (SLPT)

The lesson plan for schoology contains the template that the teachers used to prepare their lesson plan using the features and applications on the schoology platform. The SLPT allows the teacher to provide detail information of the lesson and provide arrangement of exercises that are to be carried out using the schoology platform. The major headings in the SLPT include the subject/topic, subject description, instructional objectives and introduction of the lesson, the content, questions and tasks for the pupils and evaluation.

3.4.8   WhatsApp Lesson Plan Template (WLPT)

The lesson plan for whatsApp contains the template that the teachers used to prepare their lesson plan using the features and applications on the whatsApp platform. The WLPT allows the teacher to provide detail information of the lesson and provide arrangement of learning task that is to be carried out using the whatsApp platform. The major headings in the WLPT include the subject/topic, subject description, instructional objectives and introduction of the lesson, the content, questions and tasks for the pupils and evaluation.

3.5   Procedure for the Study

There were three degrees of treatments utilized in this investigation, they are:

  i.   Schoology Instructional Platform (SIP)

 ii.   WhatsApp Instructional Platform (WIP)

iii.   Control group (Practice Extended Learning)

The participants for the study were primary five pupils of the three selected primary schools in Ekiti State. The researcher employed the service of five research assistants who served as guides for the two experimental and control groups respectively. Each of the three selected primary school were exposed to different treatment conditions since the content taught (Basic Science and Technology) was the same as prescribed and approved by the Nigerian Educational Research and Development Council (NERDC) six (6) year Basic Education Curriculum (FRN,2012). The research assistants for each of the treatment groups were class teachers and postgraduate students of Educational Technology Unit, Ekiti State University of who had experience of mobile technology devices for teaching and learning purpose. They were trained on the mode of operation of this research. Also, computer teachers of the selected schools were readily available to give any required technical assistance.

3.5.1   Treatment Procedure

Administration of Pre-test (Week 1 - 2)

The researcher through the help of research assistants helped in administering the pre-test to the pupils in the following order: Parents' Consent Letter (PCL) and Parents 'Digital Divide Questionnaire (PDDQ)**,** Pupils Attitude towards Extended Learning Questionnaire (PAELQ)**,** Social Media Self-Efficacy Questionnaire (SMSEQ) and Basic Science Achievement Test (BSAT). The result of social media self-efficacy scale was used to order pupils in groups 1and 2 into high and low social media self-viability (efficacy) level

3.5.2   Procedure for Experimental Group 1 (Week 3 - 10)

In this, parents' consent was used by research assistants to register pupils on the schoology platforms used as treatments in the study. The steps of registering are as follow:

i.   Opening of gmail accounts for each participant

ii.   Registering online as Instructor/ pupils @ www.schoology.com

iii.   Setting up privacy and rules to guide users.

iv.   Creation of group/course on schoology platform

v.   Generating assess code for the participant to be able to join their respective group on schoology platform

Steps: The teacher/research assistants

Step 1 - review the lesson and asks questions to ascertain entry behaviour of learners

Step 2 - pupils responded to the post uploaded by teacher/research assistants about their knowledge on what they were taught in the classroom

Step 3 - teacher/research assistants uploaded video of content taught in the classroom on the platform (Schoology) to further aid pupils understanding

Step 4 - teacher/research assistants asks question on video uploaded

Step 5 - pupils responded to the questions raised by the teacher/research assistants

Step 6 - teacher/research assistants comment and commend on pupils comments

Step 7 - pupils were allow to comments on other pupils post, while teacher/research assistants observed and grade pupils interaction using rubric.

Step 8 - gives pupils task of relating what they have taught to their environments.

Procedure For experimental group II (Week 3 - 10)

       The feedback of the parents' consent letter was used by the research assistants to register pupils on the WhatsApp platforms used as treatments in the study. The steps of registering are as follow:

i.   Creation of group/course on whatsApp platform

ii.   Adding pupils to the group created using their parents/guidance phone contact

iii.   Setting up privacy and rules to guide users.

iv.   Inviting the participant to join whatsApp platform

Steps: The teacher/research assistants

Step 1 - review the lesson and asks questions to ascertain entry behaviour of learners

Step 2 - pupils responded to the post uploaded by teacher/research assistants about their knowledge on what they were taught in the classroom

Step 3 - teacher/research assistants uploaded video of content taught in the classroom on the platform (whatsApp) to further aid pupils understanding

Step 4 - teacher/research assistants asks question on video uploaded

Step 5 - pupils responded to the questions raised by the teacher/research assistants

Step 6 - teacher/research assistants comment and commend on pupils comments

Step 7 - pupils were allow to asked themselves questions, while teacher/research assistants observed and grade pupils interaction using rubric.

Step 8 - gives pupils task of relating what they have taught to their environments.

3.6.   Treatment Procedure for Control Group (Week 1 -2)

       In this, sociometry was used as placebo to discover and describe social status of the control group. According to Franz (2011), defines sociometry as a method for watching the decision, correspondence and connection types of people in a gathering. It is worried about attractions and abhorrence between people in a gathering. In this strategy, pupils were approached to pick at least one people as per determined criteria so as to discover the individual or people with whom he/she might want to associate with. After all, they were divided into three groups supervised by the research assistants with rubric to evaluate their social interaction.

Steps followed (Week 3 - 10)

The teacher/research assistant

Step 1 - Gives pupils home work after the teacher has taught them in the classroom.

Step 2 - The teacher/research assistants allows pupils to look around their environment to identify and explain what they have been taught in the classroom to one another.

Step 3 - The teacher/research assistants observed and evaluate the activities of the pupils in a group using rubric.

Step 4 - The teacher/research assistants asked pupils to provide relevant information on what they have been taught in the classroom in their environment

Step 5 - The teacher/research assistants evaluate pupils' activities, and rate their performance.

Step 6 - The researcher went round to guarantee that the exploration partners and educators pursue the rule given to them.

3.6.1 Administration of Post-test (Week 11 - 12)

The tenth and eleventh weeks were used for post-test administration, at the completion of the modules in the following order:

  i.   Achievement in Basic Science (ABS)

 ii.   Pupils' Attitude towards Extended Learning Questionnaire (PAELQ)

iii.   Evaluation checklist for Pupils' social interaction

All the three groups wrote the test conventionally, while the scripts were marked manually by the researcher.

3.7   Method of Data Analysis

Data were analysed using Analysis of Covariance (ANCOVA) of the post-test scores with pre-test scores as covariates. The Bonferroni post-hoc analysis was equally carried out for pair wise comparisons of the result

CHAPTER FOUR
RESULTS

This section presents the demography analysis of the respondents, which comprises of pupils in primary five of the three selected schools in Ekiti State, also the results of the data gathered which was subjected to Analysis of Covariance (ANCOVA) in order to test the hypotheses at 0.05 level of significance. The results were further discussed.

4.1 Analysis of Sample Distribution

Table 4.1.1   Information of Pupils based on Treatment Groups

	Groups	Frequency
1	Schoology Group	18
2	WhatsApp Group	24
3	Control Group	31
	Total	**73**

The table indicate population of pupils based on group: 18 pupils were randomly assigned to Schoology group, WhatsApp group were comprises of (24) pupils and (31) pupils in control groups respectively.

4.2   Testing of Null Hypotheses

This section presents the posttest social interaction score of primary school pupils by treatments and parents' digital divide. It clearly shows the result of the main effects of treatment, interaction effects of treatments and self-efficacy, treatment and parents' digital divide as well as the composite effect of treatment, self-efficacy and parent digital divide on social interaction. Tables in the section also reflects the degree of frequency (df), mean square, frequency ratio (F), partial Eta squared and denotes (*) significant difference at 0.05 level of significance.

4.2.1   Effect of treatment (social media instruction) on pupils' Social interaction

H_{01a} There is no significant main effect of treatment (social media instruction) on pupils' Social interaction

Table 4.2.1: 3x2x3 ANCOVA of posttest social interaction score of primary school pupils by treatments (social media instruction), social media self-efficacy and parents digital divide

Dependent Variable: Post Social Interaction

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6589.173	14	470.655	20.288	.000	.830
Intercept	2714.934	1	2714.934	117.031	.000	.669
Pre Social Interaction	1672.046	1	1672.046	72.076	.000	.554
Treatments	2368.671	2	1184.335	51.053	.000*	.638
Self-Efficacy	17.209	1	17.209	.742	.393	.013
Parents Digital Divide	66.224	2	33.112	1.427	.248	.047
Treatments * Self Efficacy	111.079	2	55.540	2.394	.100	.076
Treatments * Parents Digital	20.601	3	6.867	.296	.828	.015
Self-Efficacy * Parents Digital divide	29.686	2	14.843	.640	.531	.022
Treatments * Self Efficacy * Parents Digital Divide	18.298	1	18.298	.789	.378	.013
Error	1345.512	58	23.198			
Total	196484.000	73				
Corrected Total	7934.685	72				

R Squared = .830 (Adjusted R Squared = .789) * denotes significant difference at 0.05 level of significance.

Table 4.2.1 shows that there is a significant main effect of treatment [$F_{(2, 58)}$ = 51.053 partial; $p<0.05$; partial; $\tilde{\eta}^2$ = .638] on pupils' social interaction. The treatment has an effect size of 63.8%. This implies that the treatment has a significant main effect on primary school pupils' social interaction. Therefore the null hypothesis H_0 (1a) is rejected. In order to determine the group with the highest mean score, estimated marginal means were computed, this is presented in table 4.2.2

Table 4.2.2: Estimated marginal means of posttest scores of primary pupils' social interaction according to treatment groups

Treatments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experiment 1 (Schoology)	57.595	1.840	53.911	61.278
Control	56.155	0.967	54.219	58.090
Experiment 2 (Whatsapp)	39.546	1.190	37.164	41.929

The outcome in table 4.2.2 demonstrates that pupils presented to Schoology had a more noteworthy posttest mean score of (57.59) than those presented to WhatsApp (39.54) in pupils' social communication. Conversely, pupils in control group additionally had great posttest mean score of (56.15).

Table 4.2.3: Pairwise Comparisons of Post-Social interaction of Treatment using Bonferroni

(I) Treatments	(J) Treatments	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference[d]	
					Lower Bound	Upper Bound
Control	Experiment 1 (Schoology)	.303	2.791	1.000	-6.553	7.159
	Experiment 2 (Whatsapp)	14.802[*]	2.764	.000	8.013	21.591
Experiment 1 (Schoology)	Control	-.303	2.791	1.000	-7.159	6.553
	Experiment 2 (Whatsapp)	14.499[*]	3.661	.001	5.505	23.493
Experiment 2 (Whatsapp)	Control	-14.802[*]	2.764	.000	-21.591	-8.013
	Experiment 1 (Schoology)	-14.499[*]	3.661	.001	-23.493	-5.505

Table 4.2.3 revealed that the posttest social interaction mean score of primary school pupils exposed to whatsApp social media instruction and Control Group were different from those exposed to schoology social media instruction, while primary school pupils taught using schoology social media instruction on post-social interaction score was not significantly different from those in the control group. This implies that primary school pupils using whatsApp as a means of social instruction will interact better than those using schoology social instruction.

4.2.2 Effect of treatment (social media instruction) on pupils' attitude towards extended learning

Ho₁b There is no significant main effect of treatment (social media instruction) on attitude towards extended learning

Table 4.3: 3x2x3 ANCOVA of posttest attitude towards extended learning of primary school pupils by treatments (social media instruction), social media self-efficacy and parents digital divide

Dependent Variable: Post Attitude

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6334.730[a]	14	452.481	30.137	.000	.879
Intercept	1153.996	1	1153.996	76.860	.000	.570
Pre Attitude	23.052	1	23.052	1.535	.220	.026
Treatments	3229.927	2	1614.963	107.561*	.000	.788
Social media Self Efficacy	7.201	1	7.201	.480	.491	.008
Parents Digital Divide	12.090	2	6.045	.403	.670	.014
Treatments * Self Efficacy	45.996	2	22.998	1.532	.225	.050
Treatments * Parents Digital Divide	21.461	3	7.154	.476	.700	.024
Self-efficacy * Parents Digital Divide	3.893	2	1.947	.130	.879	.004
Treatments * Self Efficacy * Parents Digital Divide	6.709	1	6.709	.447	.506	.008
Error	870.832	58	15.014			
Total	108479.000	73				
Corrected Total	7205.562	72				

R Squared = .879 (Adjusted R Squared = .850) * denotes significant difference at 0.05 level of significance.

Table 4.3 shows that there is a significant main effect of treatment [F (2, 58) = 107.56 partial; p<0.05; partial; ῆ2 = .788] on pupils' attitude towards extended learning. The treatment has an effect size of 78.8%. This implies that the treatment has a significant main effect on primary school pupils' attitude towards extended learning. Therefore the null hypothesis Ho (1b) is rejected**.**

Table 4.3.1: Estimated marginal means of posttest scores of primary pupils' attitude towards extended learning according to treatment groups

Treatments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	43.065	0.715	41.633	44.497
Experiment 1 (Schoology)	45.822	1.488	42.844	48.800
Experiment 2 (Whatsapp)	23.898	0.960	21.977	25.819

Additionally, estimate marginal means scores of the groups were determined in order to discover group with the most elevated mean score, as displayed in table 4.5: The outcome demonstrates that pupils presented to Schoology and control group had more prominent posttest mean scores of (45.82), (43.06) than those presented to WhatsApp (23.89) in primary pupils' attitude towards extended learning.

Table 4.3.2: Bonferroni Pairwise Comparisons of Post-Attitude towards extended learning by Treatment and Control Group

(I) Treatments	(J) Treatments	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval or Difference	
					Lower Bound	Upper Bound
Control	Experiment 1 (Schoology)	-2.757	1.656	.304	-6.841	1.326
	Experiment 2 (Whatsapp)	19.167	1.195	.000	16.221	22.114
Experiment 1 (Schoology)	Control	2.757	1.656	.304	-1.326	6.841
	Experiment 2 (Whatsapp)	21.925	1.783	.000	17.528	26.321
Experiment 2 (Whatsapp)	Control	-19.167	1.195	.000	-22.114	-16.221
	Experiment 1 (Schoology)	-21.925	1.783	.000	-26.321	-17.528

Table 4.3.2 demonstrates that the post-attitude towards broadened learning of grade school understudies presented to WhatsApp social media instruction was significantly different from their counterparts taught using schoology social media instruction and those in the control group. Furthermore, primary school pupils that were taught using schoology social media instruction on post- attitude towards extended learning score was significantly different from those in the control group. This implies that schoology and WhatsApp social media instructions were the main sources of significant differences in treatment.

4.2.3 Effect of treatment (social media instruction) on pupils' Achievement in Basic Science

Ho₁c There is no significant main effect of treatment (social media instruction) on Achievement in Basic Science

Table 4.4: 3x2x3 ANCOVA of posttest Achievement in Basic Science score of primary school pupils by treatments (social media instruction), social media self-efficacy and parents digital divide

Dependent Variable: Post Achievement

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	27369.194[a]	14	1954.942	157.658	.000	.975
Intercept	1651.460	1	1651.460	133.184	.000	.700
Pre test achievement	94.079	1	94.079	7.587	.008	.117
Treatment	17992.023	2	8996.011	725.492*	.000	.962
Social media self-efficacy	31.265	1	31.265	2.521	.118	.042
Parents Digital Divide	34.519	2	17.260	1.392	.257	.047
treatment * self-efficacy	182.383	2	91.192	7.354*	.001	.205
treatment * parents digital	245.335	4	61.334	4.946*	.002	.258
Self-efficacy * parents digital	.096	1	.096	.008	.930	.000
treatment * self-efficacy * parents digital	4.377	1	4.377	.353	.555	.006
Error	706.793	58	12.400			
Total	226631.000	73				
Corrected Total	28075.986	71				

R Squared = .975 (Adjusted R Squared = .969)

Table 4.4 shows that there is a significant main effect of treatment [$F_{(2, 58)}$ = 725.49; p<0.05; partial; $\tilde{\eta}^2$ = .962] on pupils' Achievement in Basic Science. The treatment has an effect size of 96.2%. This implies that the treatment has a significant main effect on primary school pupils' Achievement in Basic Science. Therefore the null hypothesis H_0 (1a) is rejected. In order to determine the group with the highest mean score, estimated marginal means were computed.

Table 4.4.1: Estimated marginal means of posttest scores primary pupils' Achievement in Basic Science according to treatment groups

Treatments	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Experiment 2 (WhatsApp)	70.410	0.991	68.426	72.394
Experiment 1 (Schoology)	64.010	0.895	62.219	65.802
Control	31.335	0.796	29.740	32.929

The outcome in table 4.4.1 demonstrates that pupils presented to WhatsApp had a more noteworthy posttest mean score of (70.41) than those presented to in Schoology (64.01). Be that as it may, pupils in control group had a lower posttest mean score of (31.33) pupils' achievement in basic science.

Table 4.4.2: Bonferroni Pairwise Comparisons of Post-Achievement in Basic Science by Schoology, WhatsApp and Control groups

(I) Treatments	(J) Treatments	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Control	Experiment 1 (Schoology)	-32.676[*,]	1.162	.000	-35.542	-29.810
	Experiment 2 (Whatsapp)	-39.075[*]	1.254	.000	-42.169	-35.982
Experiment 1 (Schoology)	Control	32.676[*,]	1.162	.000	29.810	35.542
	Experiment 2 (Whatsapp)	-6.400[*,]	1.315	.000	-9.644	-3.155
Experiment 2 (Whatsapp)	Control	39.075[*,]	1.254	.000	35.982	42.169
	Experiment 1 (Schoology)	6.400[*,]	1.315	.000	3.155	9.644

Based on estimated marginal means   *The mean difference is significant at the $p<0.05$ level

Table 4.4.2 revealed that the post-achievement in basic science score of primary school pupils exposed to Schoology social media instruction were considerably different to the groups exposed to WhatsApp and Control group. Furthermore, primary school pupils taught using WhatsApp social media instruction post-achievement score was also expressively different from control strategy. This implies that WhatsApp social media instructional platform was the main sources of significant differences in treatment.

4.2.4   Effect of social media self-efficacy on pupils' social interaction

H02a There is no significant main effect of social media self-efficacy on pupils' social interaction

Table 4.2.1 reveals that social media self-efficacy has no significant main effect on social instruction [$F_{(1, 58)} = 74$; $p > 0.05$]. Hence, hypothesis H_0 (2a) is not rejected. This implies that social interaction of the participants is not sensitive to their social media self-efficacy.

4.2.5   Effect of social media self-efficacy on pupils' attitude towards extended learning

H02b There is no significant main effect of social media self-efficacy on pupils' attitude towards extended learning.

Again, the outcome in table 4.2.3 shows that main effect of social media self-efficacy [$F_{(1, 58)} = 48$; $p > 0.05$] on pupils' attitude towards extended learning is not significant. Therefore the null hypothesis H_0 (2b) is not rejected. This implies that attitude towards extended learning of the participants does not depend on the pupils social media self-efficacy.

4.2.6   Effect of social media self-efficacy on pupils' achievement in basic science

H02c There is no significant main effect of social media self-efficacy on pupils' achievement in basic science.

Also, the result in table 4.2.6 uncovered that there is no noteworthy principal impact of social media self-efficacy [$F_{(1, 58)} = 2.52$; $p > 0.05$] on pupils' achievement in basic science. Therefore the null hypothesis H_0 (2c) is likewise accepted. This implies that pupils' achievement in basic science of the participants has nothing to do with the pupils' social media self-efficacy.

4.2.7   Effect of parent's digital divide on pupils' social interaction

H03a There is no significant main effect of parent's digital divide on pupils' social interaction

Table 4.2.1 shows that there is no significant main effect of parent's digital divide [$F_{(1, 58)} = 1.43$; $p > 0.05$] on pupils' social interaction. Therefore the null hypothesis H_0 (3a) not rejected.

This implies that social interaction of the participants is not sensitive to their parent's digital divide.

4.2.8 Effect of parent's digital divide on pupils' attitude towards extended learning

H_{03b} There is no significant main effect of parent's digital divide on pupils' attitude towards extended learning

Once more, the outcome in table 4.2.3 uncovered that there is no huge principal impact of parent's digital divide [$F_{(1, 58)} = 40$; $p > 0.05$] on pupils' attitude towards extended learning. Therefore the null hypothesis H_0 (3b) is also not rejected. This implies that attitude towards extended learning of the participants does not depend on the pupils parent's digital divide.

4.2.9 Effect of parent's digital divide on pupils' achievement in basic science

H_{03c} There is no significant main effect of parent's digital divide on pupils' achievement in basic science

Likewise, the outcome in table 4.2.6 uncovered that there is no critical principal impact of parent's digital divide [$F_{(1, 58)} = 1.39$; $p > 0.05$] on pupils' achievement in basic science. Therefore the null hypothesis H_0 (3c) is likewise accepted. This implies that pupils' achievement in basic science of the participants has nothing to do with the pupils' parent's digital divide.

4.2.10 Effect of treatment (social media instruction) and social media self –efficacy on pupils' social interaction

H_{04a} There is no significant interaction effect of treatment (social media instruction) and social media self –efficacy on pupils' social interaction.

Table 4.2.1 shows that the treatment and social media self-efficacy has no significant interaction [$F_{(2, 58)} = 7.35$; $p < 0.05$] on pupils' social interaction. Thus, the null hypothesis H_0 (4a) is accepted. This implies that effect of treatment on pupils' social interaction is not sensitive to their social media self-efficacy.

4.2.11 Effect of treatment (social media instruction) and social media self –efficacy on pupils' attitude towards extended learning

H_{04b} There is no significant interaction effect of treatment (social media instruction) and social media self –efficacy on pupils' attitude towards extended learning.

Table 4.2.3 shows that the treatment and social media self-efficacy has no significant interaction [$F_{(2, 58)}$ = 1.53; p>0.05] on pupils' attitude towards extended learning. Therefore the null hypothesis H_0 (4b) is also accepted. This implies that effect of treatment on pupils' attitude towards extended learning does not depend on the participants' social media self-efficacy.

4.2.12 Effect of treatment (social media instruction) and social media self –efficacy on pupils' achievement in basic science

H_{04c} There is no significant interaction effect of treatment (social media instruction) and social media self –efficacy on pupils' achievement in basic science.

Table 4.2.6 shows that the treatment and social media self-efficacy has significant interaction [$F_{(2, 58)}$ = 7.35; p<0.05: partial; $\tilde{\eta}^2$ = .205] on pupils' achievement in basic science. Therefore the null hypothesis H_0 (4c) is rejected. This suggests the impact of treatment on the pupils' achievement in basic science has something to do with social media self-adequacy. (see graph figure 4.2.1)
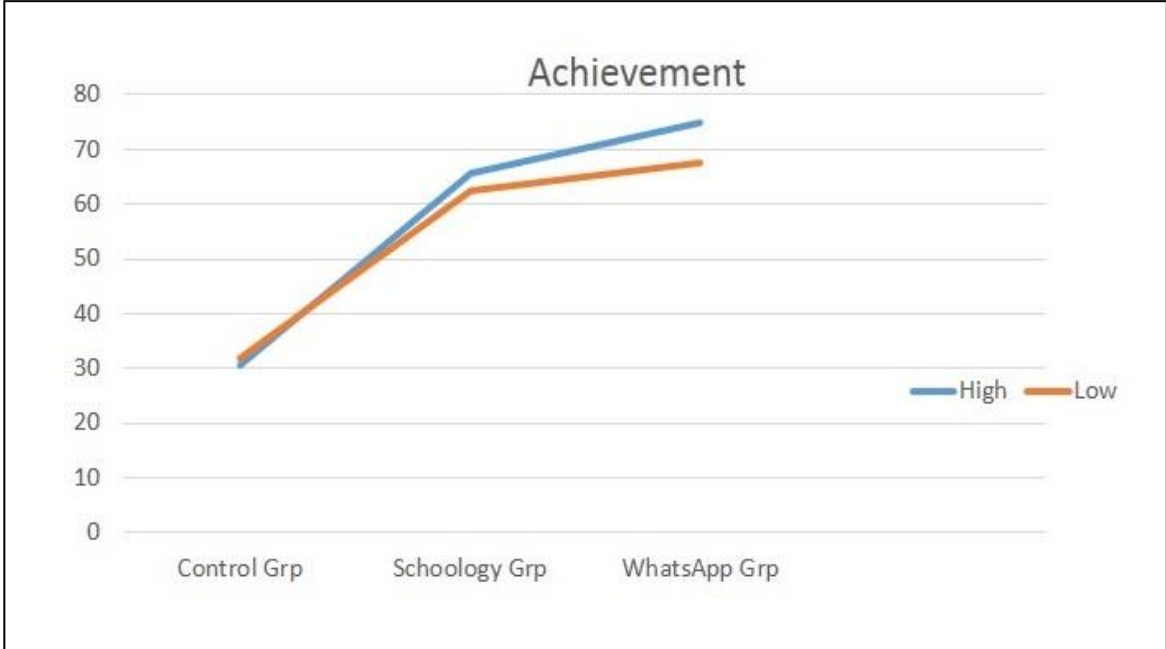
Achievement

Figure 4.1: Graph showing the interaction between treatment and self-efficacy of the participants on pupils' achievement in basic science

The graph shows that the participants with low self-efficacy responded to treatment (schoology and whatapps) higher than the participants with high self-efficacy. The mean score of participants in the whatapp treament group with low self-efficacy was (74.83), while those with high self-efficacy was (67.43). Also, participants in schoology group with low self-efficacy had mean score of (65.53), while those with high self-efficacy had mean score of (62.48). However, the participants in the control group reported low mean score: high self-efficacy mean = (31.81), and low self-efficacy (30.60).

4.2.13 Effect of treatment (social media instruction) and parents digital divide on pupils' social interaction

$H_{05}a$ There is no significant interaction effect of treatment (social media instruction) and parents digital divide on pupils' social interaction.

Table 4.2.1 shows that the treatment and parents digital divide has no significant interaction [$F_{(3, 58)}$ = .29; p>0.05] on pupils' social interaction. Hence, the null hypothesis H_0 (5a) is not rejected. This implies that effect of treatment on pupils' social interaction is not sensitive to their parent's digital divide.

4.2.14 Effect of treatment (social media instruction) and parent's digital divide on pupils' attitude towards extended learning

$H_{05}b$ There is no noteworthy communication impact of treatment (social media interaction) and parent's digital divide on pupils' attitude towards extended learning.

Table 4.2.3 shows that the treatment and parents digital divide has no significant interaction [$F_{(3, 58)}$ = .48; p>0.05] on pupils' attitude towards extended learning. Therefore the null hypothesis H_0 (5b) is also accepted. That is the effect of treatment on pupils' attitude towards extended learning does not depend on the participants' parent's digital divide.

4.2.15 Effect of treatment (social media instruction) and parent's digital divide on pupils' achievement in basic science

$H_{05}c$ There is no significant interaction effect of treatment (social media instruction) and parent's digital divide on pupils' achievement in basic science.

Table 4.2.6 shows that the treatment and parents digital divide has significant interaction [$F_{(3, 58)}$ = 4.95; p<0.05; partial; $\tilde{\eta}^2$ = .258] on pupils' achievement in basic science. Therefore the

null hypothesis H_0 (4c) is rejected. This infers impact of treatment on pupils' accomplishment in essential science has something to do with their parent's digital divide. (see graph in figure 4.2.2)

Achievement

Legend: Low, Moderate, High

X-axis: Control Grp, Schoology Grp, WhatsApp Grp
Y-axis: 0, 10, 20, 30, 40, 50, 60, 70, 80
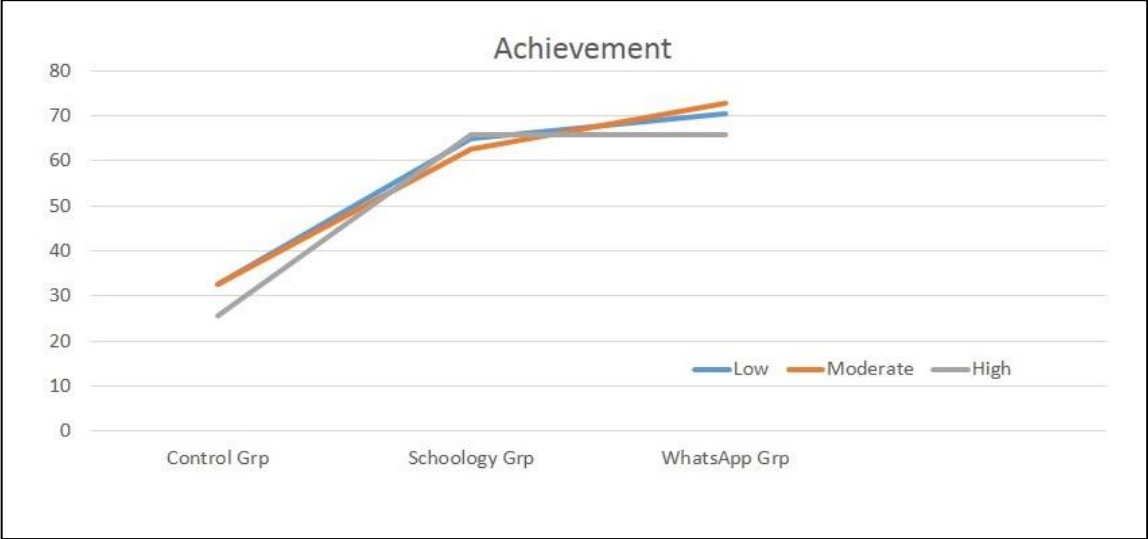
Figure 4.2: Graph revealing interaction effects between Schoology, WhatsApp also Control and parental digital divide of the participants on pupils' achievement in basic science

The figure revealed that the participants with moderate parental digital divide responded to treatment (schoology and whatapps) higher than the participants with high and low parental digital divide. Whatapp treament group with moderate parental digital divide mean =(72.77), low mean = (70.35), high parental digital divide was (65.78). Interestingly, participants in schoology group with both high and low parental digital divide had almost equall mean score high (65.98) and low (65.00), while those with moderate had mean score of (62.53). In the same vain, the participants in the control group with moderate and low parental digital divide had low means values as compared with those in the treatment group; moderate mean = (32.75); low mean (32.75), while high parental digital divide had mean score of (25.65) respectively.

4.2.16 Effect of social media self-efficacy and Parent's digital divide on pupils' social interaction

H_06a There is no significant interaction effect of social media self-efficacy and Parent's digital divide on pupils' social interaction.

Table 4.2.1 indicate there is no significant interaction effect [$F_{(3, 58)}$ = .64; p>0.05] of social media self-efficacy and parents digital divide on pupils' social interaction. Then, the null hypothesis H_0 (6a) is not rejected. That is primary pupils' social interaction is not affected by their social media self-efficacy and parents digital divide when taken together.

4.2.17 Effect of social media self-efficacy and Parent's digital divide on pupils' attitude towards extended learning

H_06b There is no significant interaction effect of social media self-efficacy and Parent's digital divide on pupils' attitude towards extended learning.

Table 4.2.3 demonstrates that there is no huge connection impact [$F_{(3, 58)}$ = .13; p>0.05] of social media self-adequacy and guardians computerized partition on pupils' mentality towards expanded learning. Accordingly the invalid theory H0 (6b) is additionally not rejected. This implies the pupils' frame of mind towards broadened learning isn't influenced by their web based life self-adequacy and guardians advanced gap when taken together.

4.2.18 Effect of social media self-efficacy and Parent's digital divide on pupils' achievement in basic science

H_06c There is no significant interaction effect of social media self-efficacy and Parent's digital divide on pupils' achievement in basic science.

Table 4.2.6 shows that the treatment and parents digital divide has no significant interaction [$F_{(3, 58)}$ = .01; p>0.05] on pupils' achievement in basic science. So, the null hypothesis H_0 (6c) is accepted. This implies that pupils' accomplishment in essential science is not affected by their social media self-efficacy and parents digital divide when taken together.

4.2.19 Effect of treatment, social media self- efficacy and Parent's digital divide on pupils' social interaction

H_0 **7a** There is no significant interaction effect of treatment, social media self- efficacy and Parent's digital divide on pupils' social interaction.

Table 4.2.1 shows that there is no significant interaction effect of treatment social media self-efficacy and parents' digital device [$F_{(1, 58)}$ = .79; p>0.05] on pupils' social interaction. Therefore the null hypothesis H_0 (7a) is not rejected. It is indicated that primary pupils' social interaction is not affected by the treatment, social media self-efficacy and parents digital divide when taken together.

4.2.19 Effect of treatment, social media self- efficacy and Parent's digital divide on pupils' attitude towards extended learning

H_0 **7b** There is no significant interaction effect of treatment, social media self- efficacy and Parent's digital divide on pupils' attitude towards extended learning.

Table 4.2.3 shows that there is no significant interaction effect of treatment social media self-efficacy and parents' digital device [$F_{(1, 58)}$ = .45; p>0.05] on pupils' attitude towards extended learning. Therefore the null hypothesis H_0 (7b) is not rejected. This implies that primary pupils' attitude towards extended learning is not affected by the treatment, social media self-efficacy and parents digital divide when taken together.

4.2.20 Effect of treatment, social media self- efficacy and Parent's digital divide on pupils' achievement in basic science

H_0 **(7c)** There is no significant interaction effect of treatment, social media self- efficacy and Parent's digital divide on pupils' achievement in basic science.

Again, table 4.2.6 shows that there is no significant interaction effect of treatment social media self-efficacy and parents' digital device [$F_{(1, 58)}$ = .35; p>0.05] on pupils' achievement in basic science. Therefore the null hypothesis H_0 (7b) also is not rejected. This implies that primary achievement in basic science is not affected by the treatment, social media self-efficacy and parents digital divide when taken together.

4.3 Discussion of Findings

4.3.1 Effect of Treatment (Schoology and WhatsApp) on Pupils' Social Interaction

The findings of the investigation demonstrate that the treatment had a significant main effect on pupils' social interaction. This indicates that social media platforms (Schoology) positively improve primary school pupils' social interaction, thus the use of social media platforms (Schoology) is effective in enhancing social relationship among primary pupils. This social media platforms will make meeting new friends, discussing seemingly issues relating to both academic and social matters as well as various ways of solving such issues via peer relationship possible and easy. In essence, implication of the reports could be as a result of the nature of schoology platform which is one of resource for utilisation. The social platform (schoology) was design for learning purposes with a lot of learning resources that enhance collaboration, interaction and communication skills of elementary learners. Similarly, it allows pupils access to resources that can help to solve academic problems there by, improve creativity among learners. On like other social platforms (WhatsApp) that meant for social engagement, elementary learners could be easily, distracted while engaging on the platform for extended learning. Below graphic indicate the comprising of elementary learners interaction on Schoology and WhatsApp social platforms.
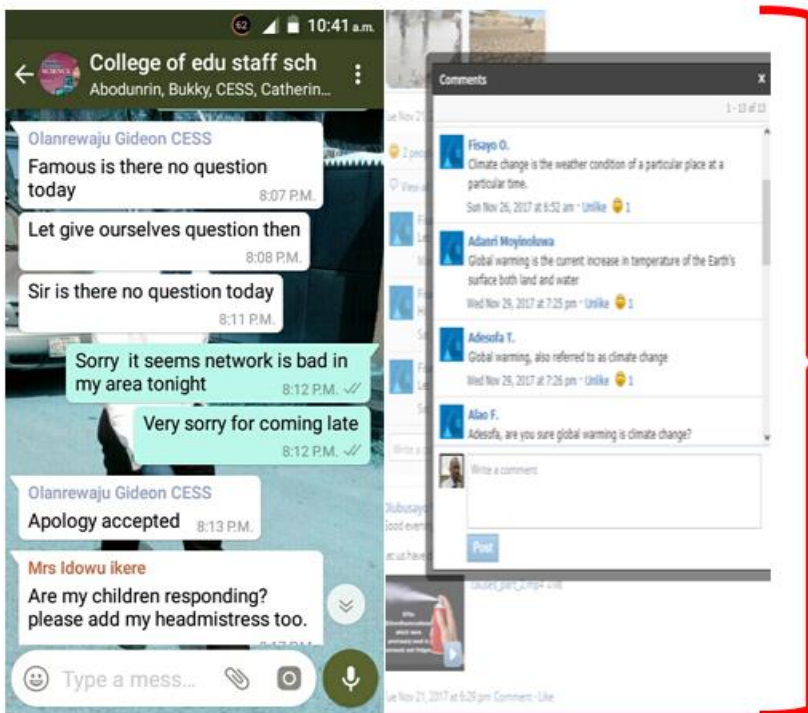
Pupils interaction on WhatsApp and Schoology Platforms

Figure. 4.3 Interaction of pupils on WhatsApp and Schoology Platforms. Field work 2017

Social interaction of pupils when improved creates a positive studying environment. Using this social media platform (Schoology) as tools for critical reasoning and problem solving as well as interacting with other pupils outside the school or classroom have found to be greatly contributes to pupils' learning process. This is supported by the finding of Vacca and Mraz (2011) who found out that socially interactive pupils are engaged learners, and that pupils learn and feel more comfortable when they are collaborating, discussed and involved, assertive in learning process through the use of social media platforms than what learning process used to be in the classroom settings where interaction and learning collaboration are limited and time conscious. This may be traced to the fact that social media platforms provide the pupils with opportunity to interact, collaborate and communicate with peers and teachers after school activities.

Also, teachers can leverage on uses of Schoology to further engage pupils and monitor their learning activities outside the classroom. This suggests that engagement of learners should go beyond classroom activities. Learners should also experience and practice the theoretical aspect being exposed to in the classroom.

On the contrary, looking at the report of social interaction of pupils exposed to practices extended learning, it was found to be noteworthy better than contemporary in WhatsApp social platform. This could be as a result of physical contact of the learners involved, elementary learners in practice extended learning have opportunity to interact with one another collaborate and involve in learning activities given to them after classroom time. However, the finding is not in support of the study of Adedoja (2016) who found that social interaction is enhanced through social media learning platforms. That is, through social media learning platforms, pupils have opportunities to socialize and interact with each other, listen and ask questions from each other, and share learning experiences. This connotes, learners can actually collaborate, interact and socialize regardless of any social platforms used for extend learning. As far as learning activities giving to elementary learners beyond classroom is engaging and there is close monitoring of pupils activities beyond classroom environment.

The finding is additionally in accordance with the discoveries of Ciani, Middleton, summers, and Sheldon (2010), Martin and Dowson (2009) and Furrer and Skinner (2003) who found that interactions among elementary pupils create a climate of comfort that assists pupils to meet the academic need. In other words, it helps pupils to relate contents with real life experience.

4.3.2 Effect of Treatment (Schoology and WhatsApp) on Attitude towards extended Learning

Furthermore, the treatment is effective in improving the attitude of pupils towards extended learning. This implies that social media platform (Schoology) positively reinforce attitude of pupils towards extended learning. That is positive attitude of primary school pupils towards extended learning is enhanced when exposed to Schoology platform. The finding of this study leads credence to the study of Tasir (2012) and Liu (2010) who found that pupils' attitude towards learning is enhanced through social media platforms. Furthermore, the positive attitude of pupils towards extended learning that is improved due to the use of mobile technology such as tablet, android phone and computer for learning. However, Santovec (2006) found that social media outlets such as whatsApp are effective engagement tools that make pupils develop a special attitude towards use of technology most especially social platforms after learning period or school setting. The platforms was meant to be a social platform designed for social engagement as such, learners preferred to be engaged on this type of platform (WhatsApp) socially than for learning activities. This have found to be negatively affect pupils attitude towards extended learning using WhatsApp instructional platform. The finding equally supports that of Hille (2009) who found out that pupils who are exposed to online social media gaming, chatting or other online entertainment have attitude towards social engagement rather than learning engagement as a result of their experience of social media, because it is inciting and user friendly.

4.3.3 Effect of Treatment (Schoology and WhatsApp) on Pupils Achievement in Basic Science

The finding of this study indicated that social media platforms (Schoology and WhatsApp) have a significant effect on the pupils' achievement in Basic Science. This implies that pupils who are exposed to social media platform (Schoology and WhatsApp) will achieve better in Basic Science. That is, Schoology and WhatsApp as social media platform are effective in improving pupils' achievement in Basic Science. This finding agrees with the study of Irawan, (2017) and Indrayasa (2015) who found out that schoology and whatsApp are effective since they are affordable for asynchronous communication and multiple interaction modes without missing conversation flows also directly impacted pupil achievement in basic science.

The comparisons of post-achievement in basic science, the post-achievement in basic science score of primary school pupils exposed to Schoology social media instruction were essentially not quite the same as their counterparts exposed to the use of WhatsApp and Control groups. Furthermore, pupils taught using WhatsApp social media instruction post-achievement score was significantly different from those taught in a conventional method approach which is control group. Though, WhatsApp social platform had the highest post-achievement in basic science score, this suggests that WhatsApp social media instruction was the main sources of significant differences in the treatment.

This may be due to the nature of Whatsapp as social engaged free web-based application that allows the teacher to provide or present lessons digitally, time to time feedback also revealed pupils learning progress (Irawan, 2017). Similarly, Indrayasa (2015) mentioned that WhatsApp provides some features that are easy to use for pupils. For instance, its help in discussion, capability to view video and audio learning contents also help the teacher in managing learning and the pupils' activities. Similarly, schoology platform was not far from capability of improving elementary pupils' achievement in Basic Science. It is a platform that designed for learning activities which have varieties of features that help learner's outcomes in assignments and quiz as well as ability of teachers and parents to monitor pupils' activities while online.

Screenshot 1 (10:45 a.m.)

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

Monday. There should be no
more discussion for now. 7:57 P.M.

Olanrewaju Gideon CESS
Ok 8:02 P.M.

3 DECEMBER 2017

Olagoke Semilore CESS
It is an astronomer 2:08 P.M.

oh, I forgot that there is an
examination on Monday.
see you on Monday. 2:08 P.M.

I am gonna have to read again
this night 2:08 P.M.

Olagoke Semilore CESS
2.9 KB 2:24 P.M. 00:01

Type a mess...

Screenshot 2 (10:50 a.m.)

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

02:24 5:25 P.M. ✓

Olasehinde Famous CESS
The video is about force,gravity
and work 5:28 P.M.

Gravity, Force, and Work

01:33 5:29 P.M.

Type a mess...

Screenshot 3 (10:52 a.m.)

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

Good 7:07 P.M.

Am yet to see responses as
regards your experience on force
7:08 P.M.

This is one of my experience on
force:
 my daddy's car broke down so
daddy asked me to help **push** the
car, so I **pushed** the car with all
my strength and the car move
forward and started working.
7:10 P.M.

So I need your experience too on
force 7:11 P.M.

Olasehinde Famous CESS
the door hooked, I went out
passing another door,I run with all
my power and I pushed the door
and it opened 7:32 P.M.

Type a mess...

108

Figure 4.4 Pupils' outcome in assignments on WhatsApp Platform. Field work 2017

4.3.4 Effect of Social Media Self-efficacy on Pupils' Social Interaction, Attitude towards Extended Learning and Achievement in Basic Science

The result indicates the reflection of no noteworthy primary impact of web based life self-efficacy on pupils' social cooperation. The examination moreover reveals that there is no imperative major effect of web-based social networking self-efficacy on pupils' attitude towards extended learning. This implies that attitude towards extended learning of the participants does not depend on pupils' social media self-efficacy. In other words, efficacy of pupils to use social media does not depend on their disposition towards extended learning because pupils were actually interested in learning that take place outside the conferment of the four wall of the classroom whereby they will experience new things and real learning situation. Essentially, the result furthermore revealed that there is no noteworthy focal impact of online long range informal communication self-practicality on pupils' accomplishment in fundamental science. This prescribes that pupils' accomplishment in fundamental examination of the people has nothing to do with the pupils' social media self-efficacy. In any case, web based self-adequacy is the conviction of a person in their capacity to start social contact and grow new participation with the usage of media advancement (Fan, 2010; Lin and Betz, 2009). However, the result of the study negates the assertions of Fan (2010) and Lin and Betz (2009). This may lead to restraining pupils from using social media platforms for learning by teachers and parents at home to avoid exposure to wrong sites. Therefore, it is obvious social media self-efficacy has no significant effect on pupil's social interaction, attitude towards extended learning and pupil's achievement in basic science.

4.3.5 Effect of Parent's Digital Divide on Pupils' Social Interaction, Attitude towards Extended Learning and Achievement in Basic Science

The findings indicated that there is no significant main effect of parent's digital divide on pupil's social interaction. This implies that pupil's digital divide has nothing to do with pupil's social interaction. The result reflects the disposition of learners towards social interact with their peers. Either their parents are digital inclined or not has nothing to do with pupils social interaction. In like manner, it is discovered that there is no noteworthy fundamental impact of parent digital divide on pupil's attitude towards extended learning. This indicate that parent digital divide does not affect the attitude of pupils towards extended learning. In the same vein, table 4.2.3 showed that there is no significant main effect of parent's digital divide on pupils'

achievement in basic science. The finding also indicate that pupil's achievement in basic science has nothing to do with the pupils' parent's digital divide.

However, Aarsand (2007) hypothesized that advanced separation is an age hole between the individuals who ace and do not ace computerized innovation. Basically, an advanced gap is the contrast between the individuals who know likewise can manage the cost of innovation gadget and the individuals who cannot bear the cost of just as expertise to act in a computerized situation. Nonetheless, the suspicious kids are routinely utilize online life stages mostly for social commitment, which has help built up a more extensive and progressively significant learning base in how to utilize them from their folks, grandparents and direction gadgets. Students may utilize this web-based social networking as an approach to isolate exercises as "non-grown-up spaces" where guardians and direction grown-ups do not approach or ready to utilize social innovations. Thus, parent's digital divide may not have a significant effect on pupil's social interaction, attitude towards extended learning and achievement in basic science.

4.3.6 Interaction Effect of Treatment and Social Media Self-Efficacy on Pupils' Social Interaction, Attitude to and Achievement in Basic Science

The results reveal that there is no significant interaction effect of treatment and social media self-efficacy on pupil's social interaction. There is no significant interaction effect of treatment and pupils' social interaction on attitude towards extended learning. Similarly, there is no significant interaction effect of treatment and social media self-efficacy on pupil's achievement in basic science. This infers impact of treatment and web based life self-efficacy does not essentially collaborate with students' social communication, attitude towards extended learning and understudies' accomplishment in fundamental science. In other words, effects of schoology and whatsApp instruction have no direct link on efficacy, disposition of pupils towards extended learning and pupils' achievement in basic science respectively.

4.3.7 Interaction Effect of Treatment and Parents' Digital Divide on Pupils' Social Interaction, Attitude to and Achievement in Basic Science

The findings of this study showed that the effect of treatment and parent's digital divide has no significant interaction effect on pupil's social interaction and attitude towards extended learning This may be traced to the fact that the pupil's social interaction and attitude towards extended learning did not in any way enhance the effectiveness of the treatment. Hence, the treatments and parents digital divide has critical collaboration on pupils' achievement in basic

science. This suggests impact of treatment on understudies' accomplishment in basic science has nothing to do with their parents' digital divide. Thus, parent' digital divide factor has nothing to do with pupils mediation with media technologies such as Schoology and Whatsapp platform for instructional purpose in Basic Science.

4.3.8 Interaction Effect of Social Media Self-Efficacy and Parents' Digital Divide on Pupils' Social Interaction, Attitude to and Achievement in Basic Science

The discoveries of the investigation demonstrated that there is no huge association impact of social media self-efficacy and parents digital divide on pupils' attitude towards extended learning that is primary pupils' social communication is not influenced by their social media self-efficacy and parents digital divide. Similarly, reports, shows that there is no significant interaction of social media self-efficacy and parents digital divide on pupils' attitude towards extended learning. And the treatments and parents digital divide has no substantial interaction on pupils' achievement in basic science. This implies that pupils' achievement in Basic Science is not affected by their social media self-efficacy and parents digital divide.

4.3.9 Interaction Effect of Treatment, Social Media Self-Efficacy and Parents' Digital Divide on Pupils' Social Interaction, Attitude to and Achievement in Basic Science

The result indicated that the treatment, social media self-efficacy and parents' digital divide do not interact to affect pupils' social interaction, attitude towards extended learning and pupil's achievement in Basic Science. This implies that the treatment is effective irrespective of the status of parent digital divide as well as the social media self-efficacy. According to the levels of the parents divide in terms of technology usage, it is therefore connotes that the social media self-efficacy interaction with parents' digital divide does not give any advantage or disadvantage to the impact of the treatments.

CHAPTER FIVE
SUMMARY, RECOMMENDATIONS AND CONCLUSION

This chapter presents the summary of findings of the study, conclusion and the recommendations.

5.1   Summary of Findings

Based on the analysis and interpretation, the summary of the findings are stated as following:

1.   There is a significant main effect of treatment on pupils' social interaction. The treatment has an effect size of 63.8%. This implies that the treatment has a significant main effect on primary school pupils' social interaction.

2.   There is a significant main effect of treatment on pupils' attitude towards extended learning. The treatment has an effect size of 78.8%. This suggests the treatment has a huge principal impact on pupils' attitude towards extended learning.

3.   There is a significant main effect of treatment on pupils' achievement in basic science.The treatment has an effect size of 96.2%. This implies that the treatment has a significant main effect on pupils' achievement in Basic Science.

4.   There is no significant main effect of social media self-efficacy on pupils' social interaction, pupils' attitude towards extended learning and pupils' achievement in basic science.

5.   There is no huge fundamental impact of parents' digital divide on pupils' social interaction, pupils' attitude towards extended learning and pupils' progress in Basic Science.

6.   There is significant two-way interaction effect of treatment, social media self-efficacy and parents' digital divide on pupils' social interaction, pupils' attitude towards extended learning and pupils' accomplishment in Basic Science.

7.   Lastly, there is significant three-way interaction effect of treatment, social media self-efficacy and Parents' digital divide on pupils' social interaction, pupils' attitude towards extended learning and pupils' attainment in Basic Science.

5.2   Conclusion

This study has shown that Schoology and WhatsApp social media instructional platforms are effective in enhancing elementary learner's social interaction and pupils' attitude towards extended learning. Furthermore, WhatsApp instructional platform found to be very effective improving pupils achievement in basic science as well as social interaction skills irrespective of their level of social media self-efficacy in extended learning settings. The study therefore indicated that, the introduction of new approach to extended learning helped pupils to relate what they have been taught in the classroom into their environment. In addition, the platforms also provide the opportunity for teachers to further engaged pupils after school activities and for both teachers and parents to able to monitor learning activities even after regular class activities.

5.3   Educational Implications of the Findings

The findings of this study have numerous implications:

1.   The study shows that social media instructional platforms are effective in furthering pupils' engagement in extended learning settings as viable alternative to the traditional method of engaging pupils after school learning activities.

2.   The study shows that engaging pupils in the use of social media instructional platform in extended learning settings would enable pupils to acquire technology and social skills needed for success in the twenty-first century and beyond.

3.   The study provides empirical evidence that social media instructional platforms affect both cognitive and affective domains of pupils, thereby this improving the way pupils interact and learn at their own pace.

4.   It shows increased interaction between learners and teachers as well as among the pupils and learning content.

5.   Social media instructional platforms offer pupils the opportunity to be actively engaged in the learning process, receive instruction through a variety of multimedia, work at their own pace and to receive accurate feedback.

5.4   Recommendations

The following recommendations were made:

1.   Use of social media instruction strategies should be employed to engage primary school pupils in extended learning settings.

2. There should be a social media policy to guide the use of social media instruction most especially at primary school level of education.

3. Teachers at primary school level of education should be adequately sensitised through workshops, seminars and specialised conferences on the use of social media platforms for instruction.

5.5   Contributions to knowledge

1. The study provides empirical evidence that social media instructional platforms can affect both cognitive and effective domain of pupils, thereby improving the way pupils interact and learn at their own pace.

2. he study suggests ways that of handling extended learning with the employment of social technology to any interact pupils and strengthen interaction between pupils and also the teacher once college activities.

3. The study suggest that using social media instructional platform gives learners opportunity to access learning resource online and ability to prepare ahead of class activities.

4. The study also addressed the challenge of pupils' lack of interest in the extended learning settings which was giving of assignment to practise at home as pupils in treatment groups recorded improved attitude towards extended learning.

5.6   Limitation to the Study

The study focuses on the use of social media instructional platforms. Schoology and WhatsApp platforms were used in the delivery of three topics in Basic Science. The two moderator variables in the study are social media self-efficacy and parents' digital divide. Certain factors served as limitation to the generalization of the results of the study. The study involved only demonstration primary schools in Ekiti State. Furthermore, only pupils whose parents consented to participate in the research formed the sample size. However, technical challenges such as network failure, power supply and loss of data limited the smooth implementation of the study. Finally, because of the nature of school, taking of snapshots and video recording was restricted.

5.7 Suggestions for Further Studies

Based on the limitations to the study, the following suggestions are made for further research:

1. Social media instruction platforms have been affirmed as an effective strategy to engage learners most especially at primary levels of education. Therefore, this study could be replicated at secondary and tertiary levels of education.

2. The strategy was effective looking at achievement of primary five pupils in basic science. Therefore, it could be used for other subjects at primary school level of education.

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3.4.1 PUPILS' ONLINE INTERACTION OBSERVATION SCALE (POIOS)

Points =   0   1   2   3

Scores =   0   10   20   30

Total   = 50%

PUPILS' ONLINE INTERACTION OBSERVATION SCALE					
Pupils Name					
Standards	**Unacceptable** **0 Points**	**Acceptable** **1 Point**	**Good** **2 Points**	**Excellent** **3 Points**	**Points**
Frequency	Doesn't show interest by any means	Participates but once in a week.	Participates by respond to question but not comment on others write up	Participates often and always contributing by comment on others write up	
Content Commitment	Posts incorrect answer	Add information but not applicable to the point of discussion.	Posts correct answer with relevant examples	Posts factually correct information, insightful and practical input; advances discussion, illustration of image/ video/ audio	

Pupils Activities Posting	No response to activities on the lesson	Pupils respond but information/answer provided is incorrect	Pupils reply and offer correct answer on some aspects of the activities	Pupils reply and offer correct answer on all aspects of the activities	
Pupil –Pupils Interaction	Not comments/post to others contribution	Posts shallow input to discussion of other	Develops a current posting with further remark or perception.	Exhibits investigation of others' posts; expands significant discourse by structure on past posts.	
Total					

PUPILS' OFFLINE INTERACTION OBSERVATION SCALE

(POIOS)

Points =   0   1   2   3

Scores =   0   10   20   30

Total   = 50%

PUPILS' OFFLINE INTERACTION OBSERVATION SCALE					
Pupils Name					
Criteria	**Unacceptable** **0 Points**	**Acceptable** **1 Point**	**Good** **2 Points**	**Excellent** **3 Points**	**Points**
Frequency	Does not Participates at all	Participates 1-2 times in a week.	Participates 3-4 times but not comments on other posting throughout in a week.	Participates 4-5 times throughout the week and comments on others posting.	
Content Contribution	Posts information that is off-topic, incorrect, or irrelevant to discussion.	Add information but not substantive to the point of discussion.	Posts information about the topic that is factually correct with images	Posts factually correct information, reflective and substantive contribution; advances discussion, illustration of image/ video/ audio	

Pupils Activities Posting	No response to activities on the lesson	Pupils respond but information/answer provided is incorrect	Pupils reply and offer accurate answer on some aspects of the activities	Pupils reply and offer accurate answer on some aspects of the activities	
Pupil –Pupils Interaction	Not comments/post to group contribution	Posts shallow input to conversation of other	Enlarges on an existing posting with further comment or observation.	Demonstrates analysis of others' posts; extends meaningful discussion by building on previous posts.	
Total					

PUPILS ATTITUDE TOWARDS EXTENDED LEARNING QUESTIONNAIRE

(PAELQ)

SECTION A
Background Information
Please give your details below by ticking (√**)** the corresponding box

SCHOOL: _____

 GENDER: Boy   ( ) Girl ( )

 AGE: 8 – 10 ( ) 11 – 13 ( )

PARENTAL OCCUPATION: civil servant ( ) Trader ( ) farmer ( )

S/N	Items	Yes	No
1	I understand better what my teacher teaches me in the classroom, when I practice it more at home.		
2	Learning after school gives me more time to practice what the teacher taught us in the classroom.		
3	Learning after school hours gives me opportunity to mix with my mates.		
4	Learning after school helps me to prepare for class activities the next day.		
5	I like learning after school hour because it helps me to learn about my environment.		
6	I learn new ways of doing what my teacher taught me in the classroom when I practice outside school.		
7	Learning after school discourages me from going to school every day.		
8	Learning after school does not allow me to play at home.		
9	It is always difficult for me to learn after school hours.		
10	I feel tired learning after school hours.		
11	Learning after school helps me to understand more subjects.		
12	When I work together with my classmate after school hours, I discover new things.		
13	Learning after school helps me to express my skills in different subjects		
14	I learn better when I practice alone after school activities		

SOCIAL MEDIA SELF EFFICACY QUESTIONNAIRE (SMSEQ)

SECTION A

Please give your details below by ticking (√) the corresponding box

SCHOOL: _____

GENDER: Boy   ( ) Girl ( )

AGE: 8 – 10 ( ) 11 – 13 ( )

What class are you?   Primary 4 ( ) Primary 5 ( )

 PARENTAL OCCUPATION: civil servant ( ) Trader ( ) farmer ( )

SECTION B

S/n	Items	Yes	No
1	I am capable of using social media.		
2	I am self-assured I will study how to use social media.		
3	I am capable of registering email account.		
4	I can confidently browse the internet.		
5	I am capable of registering whatsApp account.		
6	I am proficient of using whatsApp for studying after school hours.		
7	I am proficient of using schoology for learning after school hours.		
8	I find it easier to interact with my teacher/tutors on whatsApp platform after school hours.		
9	I find it easier to interact with my teacher/tutors on schoology platform after school hours.		
10	I find learning on whatsApp difficult.		
11	I find learning on schoology difficult.		
12	I don't understand how to interact with other pupils on whatsApp.		
13	Group discussion on schoology is difficult.		
14	I hastily figure out how to use whatsApp.		
15	I quickly figure out how to use schoology.		

3.4.4   PARENT'S DIGITAL DIVIDE QUESTIONNAIRE (PIDDQ)

SECTION A

Please give your details below by ticking   (√)   the corresponding box

GENDER: male ( )   female ( )

AGE: 25 – 30 ( ) 31 – 35 ( ) 36 – 40 ( ) 45 and above

RELIGION: Christianity ( ) Muslim ( )

PARENTS' OCCUPATION: civil servant ( ) Trader ( ) farmer ( )

LEVEL OF EDUCATION: SSCE ( ) Bsc/HND ( ) Msc ( ) Phd ( ) None ( )

TYPES OF DEVICE YOU USE: Android ( ) Smart phone ( ) Tablet/ipad ( ) Cell phones ( )
Computer ( ). Other, please specify ……………………………………

HOW OFTEN DO YOU ACCESS ONLINE USING YOUR DEVICE: Daily ( ) Weekly ( ) Twice
a week ( ) Monthly ( ) Never ( )

SECTION B

     Key: Yes, No, Uncertain

S/N	Items	Yes	No	UN
1	I browse the internet using my phone device everyday.			
2	I use the internet via my phone device twice or more than twice in a week.			
3	I allow my child to browse the internet using my phone device or other technology devices.			
4	I allow my child to study online using my phone or other technology devices.			
5	I subscribe for a data often.			
6	I use social media platform (e.g. WhatsApp, Facebook etc.)			
7	I cannot browse the internet because of the type of phone I have.			
8	I don't have the knowledge how to use social media platforms on my parents phone to interact with my friends			
9	I do not allow my child to use my device			
10	I don't permit my child to use social media platform (e.g. WhatsApp, Facebook etc.)			

BASIC SCIENCE ACHIEVEMENT TEST

Instruction: please indicate the correct answer to the following question by ticking ( ) the appropriate option. Use only pencil.

Name of school ………………………………………

Gender ………………………………………………..

Class …………………………………………………

Time: 45 minutes

1. --------------------- is a strength or an attribute of physical action or movement

   (a) Force (b) Gravitation (c) Motion (d) Magnetic

2. There are ----------------- types of force

   (a) 10 (b) 4 (c) 8 (d) All of the above

3. ----------- is the type of force applied to something so that it can move faster

   (a) Gravitational force (b) Applied force (c) Drag force (d) Spring force

4. ---------------------is needed to make an object move from one place to another

   (a) Motion (b) Spring (c) Force (d) All of the above

5. --------------------- is a force of resistance

   (a) Friction (b)Motion (c) Magnetic (d) None of the above.

6. …………….. is 150 million kilometers away from the earth

   (a) Star (b) Sun (c) Mars (d) All of the above

7. ……………. is the place we look up to from earth

   (a) Mars (b) Moon (c) Sky (d) None of the above

8. Space travel is the journey of space travellers, otherwise known as ……………

   (a) Astronomers (b) Astronauts (c) Universe (d) All of the above.

9. The………………is the closest to the sun

   (a) Venus (b) Moon (c) Mercury (d) None of the above

10. Global warming is caused by…………….

    (a) absorption of solar radiation (b) high heat in the atmosphere

    (c) too much sunshine reaching earth (d) All of the above.

11. Which natural event affects climate change?

(a) Volcanic eruption   (b) path of the earth around the sun

(c) Bush burning   (d) None of the above

12. Solar system consists of ……………… planets

    (a) Seven planets (b) Six planets

    (c) Nine planets (d)Ten planets

13. The sun is a………… to the earth

    (a) a star that produce light (b) a star that gives darkness at night

    (c) a star that gives life on earth (d) All of the above.

14. Planets are not stars because they do not produce light like the sun. They are seen

    at …………….. (a) morning because they do not produce light

    (b) night because they reflect light from the sun

    (c) none of the above (d) All of the above

15. The solar system is made up of   …………… and …………… (a) Moons and solar (b) Sun and everything that goes around it (c) Circle and rock (d) None of the above

16. The body that moves round the planets are called …………

    (a) Stars (b) Moon (c) Satellites (d) Sun

17. Climate change is believed to be caused by -------------------- and --------------- (a) heat and cold (b) global warming and greenhouse effect (c) volcanic and bush burning (d) All of the above

18. ………… is the natural trapping of long wave radiation by gases in the atmosphere (a) volcanic eruption   (b) greenhouse effect

    (c) global warming (d) all of the above

19. One of the artificial causes of global warming is …………

    (a) landfill disposal (b) Volcanic eruption

    (c) volcanic and bush (d) all of the above

20. ……………… results when the earth temperature rises due to chemicals from factories and the burning of fossil fuel or harmful chemical substances are

released into the atmosphere (a) greenhouse effect (b) global warming (c) climate change (d) none of the above

SOCIAL MEDIA LESSON PLAN TEMPLATE (SCHOOLOGY AND WHATSAPP)

(SMLPT)

Module One: Solar System

Objectives: At the end of the lesson learner are expected to:

1. Identify and name natural bodies in the sky

2. State the relationship among the earth, sun moon and star

3. Demonstrate that the earth exerts a pull n objects and bodies

4. Identify the components of solar system and their location

Schoology	WhatsApp
Pupils' responses to posts by the teacher about their knowledge on **Solar System**.	Pupils' answers to the post by the teacher about their knowledge on **Solar System**
Uploaded images of the **Solar System** in a course folder	Uploaded images of the **Solar System** on WhatsApp page
Teacher's questions about the **Solar System** *The pupils' responses to the questions raised by the teacher*	*Teacher's questions about the* **Solar System** *Pupils' reply to questions asked by the teacher*
Step 1- Identification and names of natural bodies in the sky	**Step 1- Identification of names of natural bodies in the sky**
Teacher comments on the pupils responses	*The teacher comments on the pupils responses*
Step 2- Pupils' discussion of their observation on earth, sun, moon and star	**Step 2-** Pupils discuss their observation on earth, sun, moon and star
- Teacher uploads 10 second video and pictures of the earth, sun, moon and star to aid pupils' understanding	**-** Teacher uploads 10 second video and pictures of the earth, sun, moon and star to aid pupils' understanding
Step 3- Pupils demonstrate their skills by drawing the earth, sun, moon and solar system.	**Step 3-** Pupils demonstrate their skills by drawing the earth, sun, moon and solar system.
-pupils upload individual activities on the platforms.	- pupils upload individual activities on the platforms.
The teacher comments on pupils activities	*The teacher comments on pupils activities*
Step 4- Teacher upload the video of nine planets	**Step 4- Teacher uploads the video of nine planets**
Pupils identify the components of solar system and their location	*Pupils pinpoint the components of solar system and their location*
Teacher comments on pupils activities	*Teacher comments on pupils activities*

Module Two: Global Warming

Objectives: learners should be able to do the under listed activities after interacting with the lesson on the social platform:

1. Define global warming

2. List common effects of global warming

3. Describe how to control effects of global warming

Schoology	WhatsApp
Pupils' responses to posts by the teacher about their knowledge on **Global Warming**	Pupils' responses to the posts by the teacher about their knowledge on **Global Warming**
Uploaded images of **Global Warming** in a course folder	Uploaded images of **Global Warming** on WhatsApp page
Teacher's questions about **Global Warming** *Pupils' reply to the question raised by the teacher*	*Teacher's questions about* **Global Warming** *Pupils' response to the questions raised by the teacher*
Step 1- *Teacher's comment on the pupils responses*	**Step 1-** *Teacher's remarks on the pupils responses*
Step 2- -Pupils upload individual activities on the platforms.	**Step 2-** -pupils upload individual activities on the platforms.
Step 3- *Teacher remarks on pupils activities*	**Step 3-** *Teacher comments on pupils activities*
Step 4- *Teacher comments on pupils activities*	**Step 4-** *Teacher comments on pupils activities*

Module Three: Force

Objectives: At the end of the lesson learner should be able to:

1. *Explain force as a push or pull*
2. *Give example of forces – gravity, friction, magnetic etc*
3. *Demonstrate the effect of force on objects*

Schoology	WhatsApp
Pupils' responses to posts by the teacher about their knowledge on **Force**	Pupils' responses the posts by the teacher about their knowledge on **Force**
Uploaded images on **Force** in a course folder	Uploaded images on **Force** on WhatsApp page
Teacher's questions on **Force** *Pupils' reactions to the inquiries raised by the instructor*	*Teacher's questions on* **Force** *Pupils' reply to the questions asked by the teacher*
Step 1- *Teacher's comments on the pupils' responses*	**Step 1-** *Teacher's comments on the pupils responses*
Step 2- -Pupils upload individual activities on the platform	**Step 2-** - Pupils upload individual activities on the platform.
Step 3- *Teacher's comments on pupils activities*	**Step 3-** *Teacher's comments on pupils activities*
Step 4- *Teacher's comments on pupils' activities*	**Step 4-** *Teacher's comments on pupils' activities*

CONTROL GROUP LESSON GUIDE (CGLG)

Subject: Basic Science and Technology

Topic: Solar System

Duration: 40mins

Time: 8:40- 9:20

Date: 15-09-2018

Period: Second Period

Class: Primary 5

INSTRUCTIONAL MATERIAL: A Picture illustrating the moon, sun, some planets and the cloud

TEACHING METHODOLOGY: Demonstration Method, Discussion Method,

REFERENCE BOOK: STAN Basic Science And Technology For Primary School Book 5, UBE Basic Science And Technology For Primary School Book 5, Modular Basic Science And Technology For Primary School Book 5

PREVIOUS KNOWLEDGE: Pupils are familiar with the understanding that humans live on the earth.Also, the planets, animals, hills, mountains, rocks rivers etc. are all on the earth.

INTRUCTIONAL OBJECTIVES: At the end of the lesson, pupil should be able to:

1. identify and name natural bodies in the sky.

2. state the relationship among the earth, sun moon and star.

3. demonstrate that the earth exerts a pull on objects and bodies.

4. identify the components of solar system, their location and importance.

CONTENT:

WHAT IS A SKY?

The space above the earth is called the sky. We all live on the earth. The plants, animals, hill, mountains, rocks, rivers e.t.c. are all on the earth.

NATURAL BODIES IN THE SKY

Natural bodies in the sky are; the sun, the moon, some plants and the cloud.

NOTE: Illustration of the sun and the moon
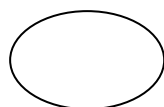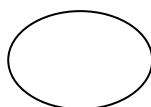
THE SUN   THE MOON

HOW THE EARTH, SUN MOON AND STAR ARE RELATED

In day light, it is impossible to see the moon and other planets because of the powerful light of the sun. At night, the sun sets and the moon, stars and other planets can be seen clearly. The sun rotates and revolves around the earth.

THE STARS

On a very clear night, if you look at the sky you will see many stars. Planets and stars look very similar; the only difference between them is that stars twinkle while planets do not.

THE COMPONENTS OF SOLAR SYSTEM

The solar system comprises of the sun and all the nine planets moving round it. The earth where we live is one of the nine planets. Other planets are The Mercury, Venus, Mars, Jupiter, Saturn, Uranus, Neptune and Pluto. The universe comprises of all other heavenly bodies.

GRAVITY

The force of gravity is the force that causes an object thrown up to return to the 'ground'

THE EARTH MOVEMENT

The earth moves round the sun. There are two types of movement of the earth; they are:

1. Rotation of the earth
2. Revolution of the earth

ROTATION OF THE EARTH

Rotation of the earth is the turning of the earth around the axis. The earth takes 24 hours to complete a rotation about its axis.

REVOLUTION OF THE EARTH

Revolution of the earth is the turning of the earth round the sun. The earth takes one year (365 days) to completely turn around the sun.

PROCEDURE

Step1: Teacher asks questions on the pupils' previous knowledge on natural bodies in the sky.

Step2: Teacher explains:

(a) the solar system and displays the pictures of the nine planets.

(b) Teacher discusses the rotation and revolution of the earth.

Step3: Teacher allows the pupils to ask questions

Step4: Teacher asks questions from the pupils for feedback

CONCLUSION: Teacher guides the pupils on the review of the content

APPENDIX VIII

SCHOOLOGY INSTRUCTIONAL PLATFORM ACTIVITIES (SIP)

Comments

1 - 13 of 13

Alao F.
Adesofa, are you sure global warming is climate change? climate change is belived to be caused by global warming
Wed Nov 29, 2017 at 7:37 pm · Unlike 1

Alao F.
Global warming is the unusually rapid increase in Earth's average surface temperature
Wed Nov 29, 2017 at 7:38 pm · Unlike 1

Olofin T.
Global warming means climatic change of temperature.
Mon Dec 4, 2017 at 9:59 pm · Like

Fisayo O.
Climate change is mainly caused by the activities of the man.
Sun Dec 10, 2017 at 5:10 pm · Like

Write a comment

Post

Information   Edit

This platform would help learners to interact with their teachers on what the teachers have taught them in the classroom in Basic science.Learners are expected to respond to the questions posting by the teachers.

Category
Projects/Study Groups

Leave this group

Tue Nov 21

2 people

View a

causes_part_2.mp4 4 MB

Tue Nov 21, 2017 at 6:29 pm Comment · Like

Olubusayo
Good evening

Let us have

Olubusayo Victor
Good evening, how was your day? hope School and class activities was intresting?

Let us have discussion on causes of global warming!

causes_part_2.mp4 4 MB

Tue Nov 21, 2017 at 6:29 pm Comment · Like

Jenifer O.
Burning of fossil fuels, landfill disposal, deforestation, volcanic eruption, nitrous oxide from vehicles etc.
Thu Nov 23, 2017 at 5:24 pm · Unlike 1

Fisayo O.
Global warming can be caused by the green house gases .
Fri Nov 24, 2017 at 7:18 am · Unlike 1

Omokaro A.
global warming is when there is too much temperature
Wed Nov 29, 2017 at 7:47 pm · Like

Olofin T.
Global warming is caused by the increase in the increase in the atmosphere.

Mon Dec 4, 2017 at 9:55 pm · Like
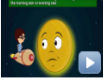
Write a comment

Olubusayo Victor
Say something about the video uploaded

Olubusayo Victor
Say something about the video uploaded

Solar_system.mp4 9 MB

Sun Nov 19, 2017 at 1:37 pm Comment · Like

3 people liked this

Odunayo O.
the earth is the third planet to the sun and it is called the blue planet. 70% of the earth is covered with water. it is the only planet that there is life.
Mon Nov 20, 2017 at 8:30 pm · Unlike 1

Olubusayo Victor
Odunayo please clap for yourself.
Mon Nov 20, 2017 at 8:39 pm · Like

Olubusayo Victor
@Odunayo, What else can you tell your friends about planet?
Mon Nov 20, 2017 at 8:49 pm · Like

Jenifer O.
The first planet is mercury. It is the closest to the sun. Very hot in the morning and very cold at night.
Edited · Tue Nov 21, 2017 at 6:25 am · Like

Write a comment

Olubusayo Victor
Look around your environment, identify and describe any thing that relate to solar system.

Olubusayo Victor
Look around your environment, identify and describe any thing that relate to solar system.

Tue Nov 14, 2017 at 6:53 pm Comment · Unlike

Liked by You and 2 people

Odunayo O.
sun. moon. stars
Mon Nov 20, 2017 at 8:17 pm · Unlike 1

Jenifer O.
Sun, Stars, Moon, comets
Tue Nov 21, 2017 at 6:28 am · Unlike 1

Fisayo O.
It is very good and I like it
Tue Nov 21, 2017 at 6:32 am · Unlike 1

Olofin T.
The solar system is the sun and everything that move round it,the things that move round the sun are the planets,moons,gas and dust.
Olofin toluwani
Mon Dec 4, 2017 at 9:25 pm · Like

Olofin T.
Moons,star,sun,planet.
Mon Dec 4, 2017 at 9:42 pm · Like

Write a comment

Albums
Members (36)
Resources

Access Code
4DHK8-J34CH
Reset
Students under 13

Information   Edit
This platform would help learners to interact with their teachers on what the teachers have taught them in the classroom in Basic science.Learners are expected to respond to the questions posting by the teachers.

Category
Projects/Study Groups

Leave this group

Title

Added by You · Dec 4, 2017 · 5 questions

Global_Warming_-_Causes_and_Effects.mp4   ×

Burning Fossil Fuels

Global Worming
Added by You · D...

Global Worming
Added by You · D...
INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE

Solar System A...
Added by You · D...

Platform Obser...
Added by You · D...

Global Warming
Added by You · Dec 4, 2017 · 5 questions

Global Worming
Added by You · Dec 4, 2017

Global Worming
Added by You · Dec 4, 2017
INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE

Albums
Members (36)
Resources

Access Code
4DHK8-J34CH
Reset
Students under 13

Information   Edit
This platform would help learners to interact with their teachers on what the teachers have taught them in the classroom in Basic science.Learners are expected to respond to the questions posting by the teachers.

Category
Projects/Study Groups

Leave this group

Title

Added by You · Dec 4, 2017 · 5 questions

Global Worming
Added by You · Dec 4, 2017

Global
Added by

INTER

Assignment   ×

Solar System Assignment

Take a sheet of paper and your pencil, draw movement of moon and earth round the sun, after drawing take a snapshot and upload it on the platform

Solar System Assignment
Added by You · Dec 4, 2017

Platform Observation
Added by You · Dec 4, 2017 · 4 criteria · 20 total points

Global Warming
Added by You · Dec 4, 2017 · 5 questions

Global Worming
Added by You · Dec 4, 2017

Global Worming
Added by You · Dec 4, 2017
INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE

Albums

Members (36)

Resources

Access Code ×

4DHK8-J34CH

Reset

⚠ Students under 13

Information   Edit

This platform would help learners to interact with their teachers on what the teachers have taught them in the classroom in Basic science.Learners are expected to respond to the questions posting by the teachers.

Category
Projects/Study Groups

Leave this group

Added

☑ Globa
Added

☑ Globa
Added

INTER...   ...TION OBSERVATION SCALE

☑ Solar S
Added

☑ Platfo
Added

☐ Globa
Added

☐ Global Worming
Added by You · Dec 4, 2017

☐ Global Worming
Added by You · Dec 4, 2017

INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE   INTERACTION OBSERVATION SCALE

Test/Quiz   ✕

Global Worming

Question 1 (5 points)

……………… is when the earth temperature rises due to chemical being processed in factories and the burning fossil fuel or harmful chemical substances are release into the earth surface

○ a   greenhouse effect

○ b   global warming

○ c   climate change

○ d   none of the above

Question 2 (1 point)

S

WHATSAPP INSTRUCTIONAL PLATFORM ACTIVITIES (WIPA)

EKSS Extd. learning grp1
Egbeyemi, Folakemi, Miracle, Mrs...

Tumilara kehinde eksu
No sir, there are some more effect

OK tell us   7:52 P.M. ✓

Tumilara kehinde eksu

You
OK tell us

It can be harmful to our health, reduce in 💧 water resources

7:54 P.M.

👍👍👏   7:55 P.M. ✓

Tumilara kehinde eksu

You
👍👍👏

Thank you sir 😊😊😊😊😊😊
😊😊😊😊😊😊😊😄😄😄

Type a mess...

165

EKSS Extd. learning grp1
Egbeyemi, Folakemi, Miracle, Mrs...

What can you say about global warming
8:15 P.M.

22 NOVEMBER 2017

Tumilara kehinde eksu

Global warming is the raise in temperature in the atmosphere.
6:10 P.M.

Tumilara kehinde eksu

> **Tumilara kehinde eksu**
> Global warming is the raise in temperature in the atmosphere.

It causes rise in Sea level
6:14 P.M.

Tumilara kehinde eksu

> **Tumilara kehinde eksu**
> It causes rise in Sea level

Global warming causes burning fossil fuels .
6:18 P.M.

Type a mess...

EKSS Extd. learning grp1
Egbeyemi, Folakemi, Miracle, Mrs...

Are we ready? 😊   7:31 P.M.

Olamigoke Gators eksu
Yes, we are ready   7:33 P.M.

Folakemi eksu
Global warming is also referred to as climate change   7:35 P.M.

Folakemi eksu

▶

📹 00:42   7:35 P.M.

😊 Type a mess...   📎   📷   🎤

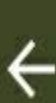**EKSS Extd.Learning grp 2**
Falade Adeola, Fashola Peculiar,...

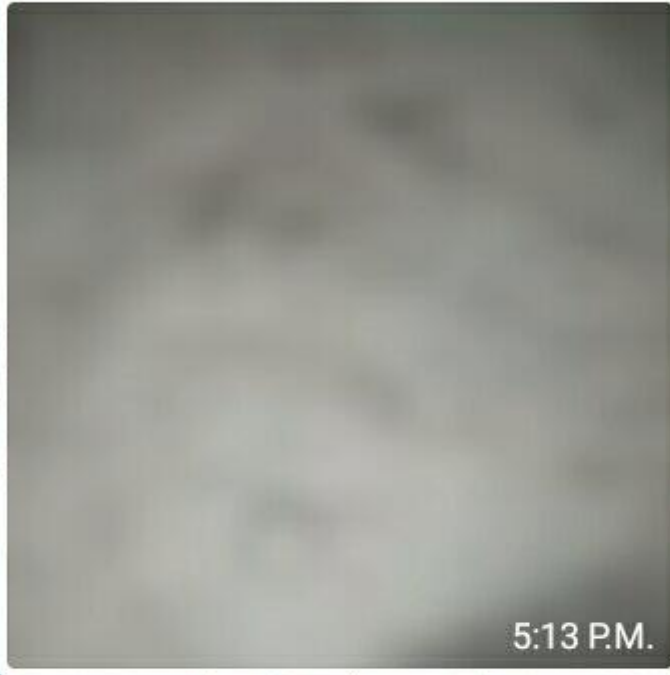365 1/4days.   8:28 P.M.

Fashola Peculiar eksu 2

9:24 P.M.

EKSS Extd.Learning grp 2
Falade Adeola, Fashola Peculiar,...

Ogooluwa Atunase eksu 2

5:13 P.M.

Ogooluwa Atunase eksu 2
📷 Photo

Whaooooo 👍👏👏👏👏

5:31 P.M. ✓

I wish all my learning friends a
successful exam as they start

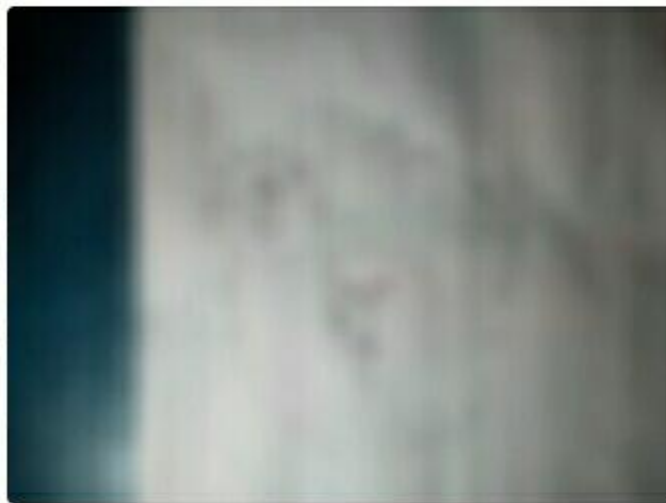😊 Type a mess...   📎   📷   🎤

EKSS Extd.Learning grp 2
Falade Adeola, Fashola Peculiar,...

snapshot and upload it here so
that we can see what you have
done.
5:47 P.M. ✓

Falade Adeola eksu 2

Moon and earth movement
round the sun
8:49 P.M.

30 NOVEMBER 2017

Waooooooh 👏
5:31 A.M ✓

Onasile Belove eksu 2

☺ Type a mess... 📎 📷 🎤

EKSS Extd.Learning grp 2
Falade Adeola, Fashola Peculiar,...

Onasile Belove eksu 2

You
Video (00:42)

Causes of global warming are droughts, floods, working factories, and burning fossil fuels.

5:16 P.M.

Onasile Belove eksu 2

You
Good morning Belove, 👏 for yourself. We shall continue our class after school today.

What is happening?

5:18 P.M.

What is happening? 5:31 P.M.

Good afternoon everyone, there are eight planet in the solar system, they are Mercury, Venus, Earth, Mars, Jupiter, Saturn, Uranus and Neptune.

5:32 P.M.

Type a mess...

10:54 a.m.

EKSS Extd.Learning grp 2
Falade Adeola, Fashola Peculiar,…

Falade Adeola eksu 2

> **Falade Adeola eksu 2**
> Let's interact on the earth movement

I am still waiting sir
6:16 P.M.

◼◀ 03:53
6:17 P.M. ✓

OK, tell me about the earth movement from the video uploaded
6:21 P.M.

😊 Type a mess…

◼◀ 02:24   5:25 P.M. ✓

Olasehinde Famous CESS

The video is about force,gravity and work

5:28 P.M.

Gravity, Force, and Work

◼◀ 01:33   5:29 P.M.

Type a mess...

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

Monday. There should be no more discussion for now. 7:57 P.M.

Olanrewaju Gideon CESS

Ok
8:02 P.M.

3 DECEMBER 2017

Olagoke Semilore CESS

It is an astronomer 2:08 P.M.

😱oh, I forgot that there is an examination on Monday.😜✋ see you on Monday. 2:08 P.M.

😡I am gonna have to read again this night🤧👿🤠 2:08 P.M.

Olagoke Semilore CESS

⬇ 🎧

2.9 KB 2:24 P.M. 00:01

☺ Type a mess... 📎 📷 🎤

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

You added Catherine P. hD

Olasehinde Famous CESS

Evening to you all   8:22 P.M.

I am famous   8:22 P.M.

sir let's watch the video   8:27 P.M.

is network effective there   8:28 P.M.

Olasehinde Famous CESS

8:32 P.M.

Mrs Idowu ikere

How are you today?   9:14 P.M.

17 NOVEMBER 2017

Type a mess...

College of edu staff sch
Abodunrin, Bukky, CESS, Catherin...

03:29   8:20 P.M.

To night I want us to watch the
video and say something about it
8:22 P.M.

We would start discussing force
and types of force on Saturday
8:23 P.M.

Olasehinde Famous CESS

climate is the condition of the
atmosphere of a particular area

Type a mess...

APPENDIX X

CONTROL GROUP (PRACTICE EXTENDED LEARNING) ACTIVITIES

Pupils activities in extended learning (Control group)

Pupils activities in extended learning (Control group)

Pupils Activities on solar system in extended learning (Control Group)

Pupils Activities on solar system in extended learning

Pupils Administer Questionnaire

Pupils Administer Questionnaire

Pupils Administer Questionnaire

APPENDIX XI

PARENT CONSENT FORM (PCF)

Dear Parent,

      I am a PhD. research student of the Department of Science and Technology Education, Faculty of Education, University of Ibadan. As part of my thesis preparation, I am carrying out a research on how pupils can use social media instructional platforms for extended learning. They will be required to use their parents'/ Guardians' device to further engage them in their homework. They will need to share information on learning among peers and their teacher after school hours.

      It is anticipated that the data derived from this research will help suggest ways through which schools can solve the problem of limited time available for engaging pupils after school. I wish to request for your consent to allow your child take part in the research. You may wish to append your signature to permit your ward.

I ……………………………………………………………consent to permit my
child/ward……………………………………………………. to
partake in the research study supervised by Mr. FAKUADE, O. V.

Thank you.

Signature of Parent or Guardian:

…………………………………..

Phone No: ………………………….