INTERNATIONAL JOURNAL OF RESEARCH AND SCIENTIFIC INNOVATION (IJRSI)
ISSN No. 2321-2705 | DOI: 10.51244/IJRSI |Volume XIII Issue IV January 2026
Special Issue Multidisciplinary Journal of Graduate School of the University of Uyo, Nigeria

Basic Science Study Skills and Technology Students' Academic Achievement on Renewable Energy in Junior Secondary Schools in Uyo Local Government Area of Akwa Ibom State

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DOI: https://doi.org/10.51244/IJRSI.2026.13014006

Received: 16 December 2025; Accepted: 23 December 2025; Published: 29 January 2026

ABSTRACT

The study investigated study skills and Basic Science and Technology Students' Academic Achievement in Junior Secondary Schools in Uyo Local Government Area of Akwa Ibom State. The population of the study included all JSS1 students in public Secondary Schools in Uyo Local Government Area. A sample size of 100 JSS1 students was drawn using simple random sampling technique. Three research questions and three research hypotheses were formulated to guide the study. The research design used was the cross sectional survey research design. Two instruments were used for the study which include; the students' study skills questionnaire (SSSQ) and the Basic Science and Technology Achievement Test (BSTAT) which was prepared from the lesson package on renewable energy with reliability coefficients of 0.82 and 0.75 respectively. The experiment was carried out in two schools at different time intervals which lasted for two weeks. Mean and standard deviation were used to provide answers to the research questions and independent t-test was used to analyse the hypotheses formulated at 0.05 level of significance. The results obtained showed that there is no significant difference in the academic achievement of male and female students using time management skills when taught concept of renewable energy in basic science and technology. The findings also indicated that there is no significant difference in the academic achievement of male and female students using concentration skills when taught the concept of renewable energy. The result also indicated that gender has no significant difference on the academic achievement of students making use of library skills when taught the concept of renewable energy. Based on the findings of this study, it was concluded that time management skills, concentration skills and use of library skills are effective study skills that can yield high academic achievement amongst students irrespective of their gender difference. The study therefore, recommends and encourages the use of these study skills by all students in all secondary schools that offers basic science and technology and other disciplines in Akwa Ibom State and other states in Nigeria; also teachers and counsellors should organize workshops and seminars for students on appropriate and effective use of study skills in the learning process.

Keywords: Basic, Science, Study, Skills, Technology, Students, Academic, Achievement, Renewable, Energy

INTRODUCTION/Review

Science is regarded as the bedrock of modern day of technological breakthrough. Nowadays, countries all over the world especially the developing ones like Nigeria are striving hard to develop technologically and scientifically, since the world is turning scientific and all proper functioning of lives depend greatly on science (Jack, 2018). According to Ezeudu (2011), Science is defined as a systematic process of obtaining verifiable knowledge and experimentation about the universe, the structure and reaction of matter. Science is also defined as a dynamic human activity concerned with understanding the working of the world; which helps man to explore his environment and other planets of the universe (Ogunleye, 2016). From the definitions above, science is the sum up of intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experimentation. Science is categorized into two dimensions; the process, Methods and the product dimensions that make life easy and stress free. The process of science involves methods or approaches employed and the activities engaged by scientists in order to arrive at the products. These includes observing, classifying, measuring, interpreting data hypothesing, formulation of models, experimentation, recording of data and making operational definitions.

These processes are called the science process skills. The product of science involves knowledge, laws facts, principles generation, concept and theories obtained from the processes of science (Akinbobola and Afolabi, 2010). Okoro (2013), considered science as a systematic investigation of nature with a view to under study and harnessing them to serve human needs. Furthermore, science comprises of the basic disciplines such as physics, chemistry, mathematic and biology. Science contributes to the improvement of the quality of life in areas of health, nutrition, agriculture, transportation, energy production, transfer and conservation. These contributions have led to the economic growth and sustainability of a country. The learning of science stimulates curiosity, awakens natural talents, nature creativity and develops a thirst for problem solving among learners and citizens of the society (Igwe, 2013). Due to the relevance of science to increasing man's understanding of himself other living and non-living things around him as well as the environmental in which they co-exist, there has risen the need to organize the study of science in a way that it can be learnt and transferred from one generation to another. This is carried out through the study of science education (Ekokotu and Okeh, 2011).

Science Education is defined as the organized structure of science content, process and product taught to the learners in order to develop in them, the process skills needed to solve problems encountered in everyday life and enhance critical thinking. Science Education is more than presentation and acquisition of scientific facts and skills. It involves the development of new ways of thinking, reacting and behaving. It is a development that reveals itself in increased skills, knowledge and thinking capacities to tackle problems of life (Igbaji *et al*., 2017). Science Education plays vital roles in the levels of individuals and the development of a nation scientifically and technologically. It is concerned with sharing science content and process with individuals as well as training the mind of the learners (Alebiosu, 2015). Thus, science Education helps to inculcate in young people the right scientific skills and attitude to purse science based careers such as medicine, engineering, computer science, survey, agriculture and pharmacy. It enables learners acquire the basic knowledge, skills, attitudes and understanding needed for individual's efficient performance in chosen careers for self-reliance and national development (Ekokotu and Okeh, 2011).

Consequently, science Education is one of the most important courses of study in school due to its relevance to students‟ life and the universally applicable process skills it develops and utilizes. These are lifelong skills that allow students to generate ideals weigh decisions intelligently and understand the evidence behind public policy making on education (Mshelbwala, 2015). The survival of a nation scientifically and technologically therefore depends on the level of scientific literacy among the members of the society; this is achieved through science Education. The Preparation of students at the lower and upper level of basic education for acquisition of advance scientific knowledge has led the Federal Ministry of Education through the Nigerian Educational Research and development council (NERDC, 2012) to develop and introduce into the school curriculum and a new and revolutionary subject known as Basic Science and Technology. Basic Science and Technology is a science discipline that provides unique training for students in observing, reasoning and experiment in different fields of science. It enables students to be systematic and objective in taking decisions and making judgment. Basic Science and Technology equip students with the necessary introductory and foundational scientific and technological knowledge and skills necessary to build a progressive society (Ochu and Haruna, 2016).

Basic Science and Technology is a core subject that lays foundation and prepare young scientist for specialist studies in science related fields. The basic science and technology curriculum is developed around the objective that it would enable learners to; (a) Develop interest in science and technology (b) Acquire basic knowledge and skills in science and technology (c) Apply scientific knowledge and skills to meet contemporary societal needs (d) Take and advantage of the numerous career opportunities provided by science and technology (e) Become prepared further studies in science and technology (f) Avoid drug abuse and social vices (g) Be safe and security conscious. (NERDC, 2012). Basic Science and Technology emphasize scientific literacy and research oriented learning. It encourages exploration of students‟ environment and as a result of this, the teacher as well learns along with their students. The teaching of basic science and technology encourage students to learn by constructing their own knowledge from experience and prior knowledge as they make connections between new information and old information. This is because; the experiences they gather make the learning contents and tasks relevant to their needs and aspirations. The more relevant the learning is

to the learners, the more the learners have motivation and interest in mastering the contents, skills, and also the learning task will be made easier for the learners (Njoku, 2009).

One of the important concepts in the Basic Science and Technology curriculum is the Renewable Energy. This concept equips the learners with knowledge on how to generate, store and convert clean and sustainable energy. Renewable Energy is the energy which can be replenished within a short period of time. This energy is obtained from sources that are naturally replenished such as solar energy, hydro energy, wind energy, biomass and geothermal energy. These sources of energy are clean, harmless, sustainable, and readily available and evenly distributed everywhere. This energy is employed in production of light, heat and electricity thus reduces the demand for fossil fuels; and also reduces the emission of greenhouse gases and pollutants. The need for energy in the world has increased because of the natural growth and the use of modern technology. The sources of non-renewable energy such as coal, fossil fuel, natural gas, which human depend upon has led to greenhouse effect emitting gases into the atmosphere which has raised more societal issues like climate change and global warning. These non-renewable energy sources are finite and running out of supply. Due to the decreasing supply of the non-renewable energy and inverse increase in demand for energy supply, it is necessary to discover, develop and utilize alternative energy sources which are the renewable energy. Teaching of the concept renewable energy will therefore help students to understand its relevance, importance, how to develop and utilize the renewable energy source. (Science Teachers Association of Nigeria, Nigerian Basic Science Project Pupils‟ Textbook One 2010).

The mastery of the concept, renewable energy can be achieved through the use of skills fundamental for study and academic achievement known as study skills. These skills help students in developing scientific and technological attitudes, acquire skills that are necessary and important for problem solving, decision making, drawing conclusions and be productive in a changing science world (Etiubon, 2017). Waseka and Simatwa (2015), Opines that the most important factor that influence students‟ academic achievement is the students‟ themselves. Students are at the forefront of learning; they are expected to affect their learning process positively or negatively. For this reason, the skills used by the students when studying are associated with the positive or negative outcomes across multiple academic areas and for diverse learning. The students‟ study skills are fundamental to academic achievement in their areas of studies. These study skills are needed by students to excel in any area of scientific inventions and innovations (Gettinger and Sibert, 2014). Study skills are those skills applied to learning that leads to academic success. According to Katelyn (2013), study skills are defined as productive and productive skills containing pleasant study methods and approaches which have the tendency to improve students' academic achievements and also produce good results. They are techniques that make students successful in their studies after developing and applying them throughout their academic pursuit and career. He further elaborates that good study skills occurs as a result of continuous practice and knowledge of study methods that are most effective to individual student.

Dehghaniand and soltanlgharaei (2014), also defined study skills as an array of positive techniques which tackle the processes of organizing, taking new information, processing the new information and retention of the processed information. These skills are critical to success, therefore proper study skills entails proficiency as well as high quality of learning. The skills include; use of mnemonics which aids retention of list of information, concentration, effective reading and efficient, note taking. Adeninyi, (2011), however emphasized that study skills are those techniques that allows the students to study independently at home or in a group and aspire for higher educational career. The formulation of group study skills serves as the basic for students' excellent academic achievement. Keli (2009), affirms that for students to succeed in their studies they must be able articulate the information in written or oral form, reflect on it, appropriately assimilate the course content and digest it; through the effective use of their study skills. Braide (2018), observes that a student's learning character is reflected by his or her study skills. The study however described study skills as the strategies which individual student adopts while studying. Individual behaviour is guided by skills therefore in the process of studying; the various skills adopted by students determine their academic achievement. Study skills therefore functions as a propeller of learning. Hashemian and Hashemian (2014), maintain that productive study requires conceptualization and intention; it also includes skills such as note taking, observation, thinking, listening and concentration. Learners should be able to apply these needed skills and also display interest in learning. On the other hand, they posit that inefficient study skills lead to waste of time and energy. Udoh

(2011), posits on poor study skills, observed that the remote cause of examination malpractice and low academic achievement is the inefficient utilization of good study skills. Poor study skills are undesirable and counter-productive to students' academic achievement which if developed and used by the students can influence negatively the academic objectives and programme. The study identified poor study skills to include; poor time management, procrastination, lack of concentration inefficient note taking, ineffective use of library and inefficient listening skills. These poor study skills can be corrected when the students‟ develop good study skills like effective use of library, proper time management, concentration, note taking and good discipline. These skills bring about students‟ action, interest and motivation towards their studies. Of interest to this study, study skills considered includes; time management, concentration and use of library.

Time management, is an important study skills and component for science learning. Time management is defined as a cluster of behaviour sets that are important in an organization (Carolyn *et al*., 2012). It is a means of systematic planning, controlling, and using of time in the most effective and efficient manner. This include performing activities whereby the students plan in advance such as lecture preparation, studying of resources materials ahead of the teacher and setting priorities (Mark, 2017). This skill is valuable in carrying out tasks such as completion of home works and assignments, revision for test and examination on time. This sometimes may seem that there is not enough time to do everything the students need to do which can lead to undue stress and breakdown in health of the student, thereby causing the student to learn course content by memorization instead of mastery of concepts taught in classroom. Whereas procrastination on the other hand, is the outcome of poor time management that steals away students‟ time as well as hinder the achievement of their set goals (Fontana, 2015). A good science student should know that time is a scarce resource and time lost cannot be regained. For excellence in academic achievement, effective time management will ensure that students take control of their time spent on leisure study and avoid procrastination. Time management requires concentration in order to achieve and carry out set out plans.

Concentration is an important skill that aids study as well as improve academic achievement of students. Concentration is defined as an act of keeping the mind focused on the activity being performed at a particular time. It involves two major strategies; these are exclusion from distractors and focusing on plans. A concentration skill helps students to learn maximally and increase their learning ability. This skill however, requires focus, ignoring distractions and amplifying desired behaviour by forming task facilitating plans. Concentration skill reflects students' ability to think critically, analyse situations of scientific information. It also involves keeping one's mind and attention with all diligence for quick assimilation of facts while studying (Kathleen,2014). Concentration skill therefore requires techniques such as maintaining good sitting posture during active period of study, taking notes during study and studying in a quiet place like a library. A library is an organised collection of books and non-books materials available for retrieval and use by people who seek for information, read learn and carry out research. It is a collection of books and other materials for consultation and borrowing (Fakomogbon *et al*., 2012). Use of library as part of the study skills is very important in improving academic achievement of students, in that it helps the learners concentrate effectively, in a quiet and conducive environment while studying. It helps learners manage their time and complete their set out plans on time. Students who are unequipped with good study skills lack the capacity to utilize available learning resources in the library. Thus the ability to use library materials is the function of the skills the students acquire in their educational pursuits. The skills of reading, note taking, goal setting, time management and concentration are required while developing the use of library skills because the depth of understanding of a student reveals the depth of concentration of that student. The persistent and frequent use of library is a predictor of students‟ retention of information, in that a library more than any other place, provides an ideal environment and vital information resources for students and also sustains other study skills. The use of library skills helps students to concentrate, reflect on information, and build up sense of scientific vocabulary and a desire to continue on scientific exploration. It also reinforces active reading, constructive study, helps understand and retain ideas. By this means, scientific concepts are made more meaningful for students‟ scientific literacy and skill acquisition (Jato *et al*., 2014).

The teaching and learning of science can be made more meaningful for students by the development and utilization of the skills of time management, concentration and use of library. These study skills are needed by learners to effectively comprehend and communicate scientific information accurately. Utilizing these skills

will properly position and equip the Basic Science and Technology students to face the realities of the scientific world and fit in properly into the world of work and lifelong productivity in any chosen career (Etiubon, 2017). Hence, these study to investigate the influence of study skills on Basic Science and Technology students‟ academic achievement on the concepts of renewable energy in Junior Secondary Schools in Uyo Local Government Area of Akwa Ibom state.

Statement of Problem

The issue of poor study skills due to the avoidance of the rightful study techniques has been a reoccurring issue among so many students in various institutions of learning. This has led to massive failure, examination malpractice, frustration, school dropout and truancy. This has been an issue of immense concern to teachers, parents' counsellors and educationally concerned authorities. Efforts have been made to tackle poor study skills like introduction of state and federal scholarships, increase of manpower, introduction of functioning guidance and counselling services. Yet all these efforts have not really yielded much in tackling the issue of poor study skills amongst the students.

Most student engage most after school hours in leisure, activities such as watching movies, playing games, keeping company with friends instead of individuals private studying for better understanding. When a student excels in his or her academic activities, it depends on the kind of study skill he or she develops and utilizes. Study skills like proper management of time; effective use of library and efficient concentration on given activities. Improve academic achievement whereas, a student who fails to possess competencies to organize his time effectively, concentrate on his study as well as efficiently utilizing the available library resources will not succeed academically. It is therefore necessary for students to be acquainted with study skills such as time management, concentration and use of library skills and their benefits to academic achievement of students. Hence, this study seeks to examine the influence of study skills on Basic Science and Technology students‟ academic achievement on the concept of renewable energy in Uyo Local Government Area.

Purpose of the Study

The purpose of the study is to examine the influence of study skills on Basic Science and Technology students‟ academic achievement on the concept of Renewable Energy in Junior Secondary School Uyo Local Government Area. Specifically, this study intends to;

1. Examine the difference in the academic achievement of male and female students using time management skill when taught the concept of renewable energy in Basic Science and Technology.

2. Compare the difference in the academic achievement of male and female students using concentration skill when taught the concept of renewable energy in Basic Science and Technology.

3. Ascertain the difference in the academic achievement of male and female students making use of library skill when taught the concept of renewable energy in Basic Science and Technology.

Research Questions

The following research questions guided the study

1. What is the difference in the mean achievement score of male and female students using time management skill when taught the concept of renewable energy in Basic Science and Technology?

2. What is the difference in the mean achievement score of male and female students using concentration skill when taught the concept of renewable energy in Basic Science and Technology?

3. What is the difference in the mean achievement score of male and female students making use of library skill when taught the concept of renewable energy in Basic Science and Technology?

Research Hypotheses

The following research hypotheses were formulated to guide the study

1. There is no significant difference in the academic achievement of male and female students using time management skill taught the concept of renewable energy in Basic Science and Technology.

2. There is no significant difference in the academic achievement of male and female students using concentration skill taught the concept of renewable energy in Basic Science and Technology.

3. There is no significant difference in the academic achievement of male and female students making use of library skill taught the concept of renewable energy in Basic Science and Technology.

METHODOLOGY

The cross sectional survey research design. The research was carried in Uyo Local Government Area of Akwa Ibom State. It is bounded by Abak, Itu, Uruan Ibesikpo Asutan and Etinan Local Government Area. The population of the study comprises of all junior secondary school one students (JSS1) in Uyo Local Government Area. The Population size was 2,457 students studying basis science and technology. The sample size of one hundred (100) JSS1 students was drawn from two co-educational public secondary schools. The two schools were selected using simple random sampling technique. Two instruments were used for collection of data thus: Student's Study Skills Questionnaire (SSSQ) and Basic Science and Technology Achievement Test (BSTAT). The instrument was validated by three experts, which includes the researcher's supervisor, an integrated science specialist and basic science and technology teacher from one of the selected schools. The reliability of the study skills questionnaire was obtained using Cronbach alpha with a coefficient of 0.82 while the reliability of the basic science and technology achievement test was established by administering the instrument to twenty students who were part of the population but not part of the sample. The two set of scores were used in computing a correlation coefficient using Pearson product moment correlation with a reliability Coefficient of 0.75. The data collected for the study was analysed using mean, and standard deviation, while the independent t-test was used to test the null hypotheses at 0.05 level of significance.

RESULTS AND DISCUSSION

What is the difference in the mean achievement score of male and female students using time management skill when taught the concept of renewable energy in Basic Science and Technology?

Table 1: Mean and standard deviation of male and female students using time management skill when taught the concept of renewable energy.

Variables	**Pre-test**			**Post-test**			**Mean Gain Score**
	N	X	S.D	N	X	S.D	
Male	24	6.75	1.77	24	14.83	2.49	8.08
Female	26	7.42	1.86	26	14.73	2.97	7.31

The answer to research question 1 is presented in table 1. The pretests mean scores of male students using time management skill when taught the concept of renewable energy was 6.75 while the post-tests mean score was 14.83. The standard deviations of students for pretest and post-test were 1.77 and 2.49 respectively. Female students using time management skill had pretest and post-test mean scores of 7.42 and 14.73 with standard deviations 1.86 and 2.97 respectively. This shows that both the male and female students using time management achieved the same when taught the concept of renewable energy.

Research Question 2: What is the difference in the mean achievement score of male and female students using concentration skill when taught the concept of renewable energy in Basic Science and Technology?

Table 2: Mean and standard deviation of male and female students‟ using concentration skill taught the concept of renewable energy.

Variables	Pre-test			Post-test			Mean Gain Score
	N	X	S.D	N	X	S.D	
Male	15	6.60	1.4	15	14.26	2.83	7.60
Female	15	7.26	2.12	15	14.46	2.99	7.20

From table 3; the pretest score of male students using concentration skill was 7.26 while the post-test mean score was 14.46. The standard deviation for the pretest and post-test was 2.12 and 2.99 respectively. Female students using concentration skill when taught the concept of renewable energy had a pretest mean score of 6.60 and post-test means score of 14.26. The standard deviation for the pretest and post-test was 1.40 and 2.83 respectively, shows that both the male and female students academic achievement are influenced equally by concentration skill when taught the concepts of renewable energy.

Research Question 3: What is the difference in the mean achievement score of male and female students making use of skill when taught the concept of renewable energy in Basic Science and Technology?

Table 3: Mean and standard deviation of male and female students using use of library skill when taught the concept of renewable energy.

Variable	Pre-test N	Pre-test Mean (X)	Pre-test S.D	Post-test N	Post-test Mean (X)	Post-test S.D	Mean Gain Score
Male	10	7.2	1.60	10	15.2	2.39	8.00
Female	10	7.6	1.49	10	14.5	2.87	6.90

From table 3 above, the pretest and post-test mean score of male students using use of library was 7.20 and 15.20 with standard deviation of 1.62 and 2.39 respectively; while the pretest and post test mean scores of female students using use of library skill were 7.60 and 14.50 respectively and the standard deviation was 1.49 and 2.87. This indicates that male students achieved significantly equal with the female students using use of library skill when taught the concept of renewable energy.

Hypothesis 1: There is no significant difference in the academic achievement of male and female students using time management skill when taught the concept of renewable energy.

Table 4: t-test analysis of male and female students‟ academic mean achievement score using time management skill when taught the concept of renewable energy.

Variables	N	$\bar{X}$	S.D	df	t-cal	tcrit	Decision ($p < .05$)
Male	24	14.83	2.49	48	0.13	2.02	NS
Female	26	14.73	2.97				

From table 4 above, the calculated t-value of 0.13 is less than the critical t-value of 2.02 at 0.05 level of significance. Therefore, the null hypothesis is accepted. This implies that there is no significant influence in the mean achievement score of male and female student using time management skill when taught the concept of renewable energy.

Hypothesis 2: There is no significant difference in the academic achievement of male and female students using concentration skill when the concept of renewable energy in Basic Science and Technology.

Table 5: t-test of male and female students‟ academic mean achievement scores using concentration skill when taught the concept of renewable energy.

Variables	N	$\bar{X}$	S.D	df	t-cal	tcrit	Decision ($p < .05$)
Male	15	14.46	2.99	28	0.19	2.04	NS
Female	15	14.26	2.83				

From table 5, the calculated t-value of 0.19 is less than the critical t-value of 2.04 at 0.05 level of significance. Therefore, the null hypothesis two is accepted. This means that there is no significant influence in the mean achievement scores of male and female students using concentration skill when taught the concept of renewable energy.

Hypothesis 3: There is no significant difference in the academic achievement of male and female students using use of library skill taught the concept of renewable energy in Basic Science and Technology.

Table 6: t-test analysis of male and female students‟ academic mean achievement score using use of library skill when taught the concept of renewable energy.

Variables	N	$\bar{X}$	S.D	df	t-cal	tcrit	Decision ($p < .05$)
Male	10	15.2	2.39	18	0.59	2.1	NS
Female	10	14.5	2.87				

From table 6, the calculated t-value of 0.59 is less than critical t-value of 2.10 at 0.05 level of significance. Therefore, the null hypothesis is accepted. This implies that there is no significant influence in the mean achievement score of male and female students using use of library skill when taught the concept of renewable energy.

Summary of the Findings

Results obtained from the findings of this study revealed that:

1. There is no significant difference in the mean achievement scores of male and female students using time management skill when taught the concept of renewable energy in Basic Science and Technology

2. Gender has no significant difference in students’ achievement scores using concentration skill when taught the concept of renewable energy in Basic Science and Technology.

3. There exist no significant difference in the mean achievement scores of male and female students using use of library skill when taught the concept of renewable energy in Basic Science and Technology.

DISCUSSION OF RESULTS

Time Management Skill and Students'

The findings of the study showed that both male and female students who used time management skill performed significantly equal in Basic Science and Technology when taught the concept of renewable energy. This result is not significant as shown in table 2 where the calculated t-value of 0.13 is less than the critical value of 2.02 at 0.05 level of significant. This finding is in line with that of Aduke (2013), who posits that gender has no significant influence on students' performance in science that use time management skill. Male and female students when exposed to the same study methods and techniques in the same environment and are effectively making use of the study skills will perform excellently in his/her studies.

Concentration Skill and Students' Academic Achievement

The results in relation to the second hypothesis indicated that there is no significant difference in the mean achievement scores of male and female students using concentration skill when taught the concept of Renewable Energy in Basic Science and Technology. This finding Corroborates Beena and Sundra (2013), who observed that both male and female students performed better when they are focused and concentrate on their studies. The study concluded that for students to excel in their academic they should pay adequate attention and focus while studying.

Use of Library Skill and Students' Academic Achievement

The result according to hypothesis three, presented in table 6, showed that there is no significant difference in the mean achievement score of male and female students using use of library skill when taught the concept of Renewable energy in this study is in line with Philomena (2016), who reported that there is a significant association between library use skill and students‟ academic achievement. This finding argues that students who regularly use the library often put up better academic achievement irrespective of the students' gender difference.

CONCLUSION

Based on the findings of the study, it is concluded that both male female basic science and Technology students-using the management skill when taught the concept of renewable energy do not differ significantly in their academic achievement. It is also concluded that there exists no difference achievement of male and female students using concentration skill when taught the concept of renewable energy. Furthermore, it is also concluded that there is no significant influence in the academic achievement of male and female students using time management skill taught the concept of renewable energy in Basic Science and Technology.

IMPLICATIONS OF THE FINDINGS

This study implies that study skills play an important role in the academic achievement of Basic Science and Technology students. It also works at promoting the understanding of Basic Science and Technology concepts in students. Results obtained from gender analysis implies that male and female Basic Science and Technology students stands equal chances of benefitting when taught the concept of renewable energy when the right study skill is being applied by the students.

RECOMMENDATIONS

Based on the findings of this research, the following recommendations are made:

1. Basic Science and Technology students should take control and direct their own learning in order to attain their goals by developing and utilizing good study skills.

2. Basic Science and Technology teacher in secondary schools should help students develop good study habits and skills by encouraging students to study regularly.

3. There should be regular workshops on the implementation of study skill to update and improve academic achievement of basic science and technology students.

4. The curriculum planners should recognize and include activities and information that motivate learners to develop good study skills when designing a new curriculum in Basic Science and Technology.

5. Government should provide necessary materials and infrastructure that help the students develop good study skills.

6. The parents should encourage their children on the best study skill to adopt for better achievement in all school subjects.

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