WEBQUEST INSTRUCTIONAL PACKAGE AND SECONDARY SCHOOL STUDENTS LEARNING OUTCOMES IN BASIC SCIENCE AND TECHNOLOGY IN AKINYELE LOCAL GOVERNMENT AREA, OYO STATE

BY

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EDP11/12/H/1354

A THESIS SUBMITTED TO THE DEPARTMENT OF EDUCATIONAL TECHNOLOGY AND LIBRARY STUDIES, FACULTY OFEDUCATION, OBAFEMI AWOLOWO UNIVERSITY, ILE-IFE, NIGERIA.

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF ARTS DEGREE IN EDUCATION (EDUCATIONAL TECHNOLOGY)

2015

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TITLE: WebQuest Instructional Package and Secondary School Students Learning Outcomes in Basic Science and Technology in Akinyele Local Government Area, Oyo State.

DEGREE: M.A.Ed. (Educational Technology)

YEAR: 2015

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DEDICATION

This work is dedicated to the Almighty God

ACKNOWLEDGEMENTS

My ultimate gratitude and appreciation goes to the Almighty God, the Alpha and the Omega, for giving me the grace to commence this programme and wisdom, knowledge and understanding till the end. All glory to His name.

I am very grateful to my supervisor, Professor J. O. Adeyanju for his motivation, attention and untiring support to ensure that this work was completed successfully. I appreciate the support of the Acting Head of the Department, Dr. O.A. Sofowora for the encouragement and his full support that led to the completion of this work. I also want to appreciate Dr. A.A. Adekomi, Dr. L.M. Oyewusi and Dr. T.A. Bada for the purposeful support and encouragement given during course. I appreciate the efforts of Dr.A.O. Egbedokun for his time, advice and his purposeful support during the course of my work and his encouragement even when it was tough. I must not forget to thank Mr. L. Idowu and Mrs. F.M.Oyeniran for sharing their experiences. I am grateful to all the non-academic staff of the Department of Educational Technology and Library Studies. I also want to thank my colleagues with whom we started this work together for their contribution.

Similarly, I also appreciate the efforts of Dr (Mrs)Y.A. Ajibade for ensuring that my forms were attended to on time. I recognize the contributions of all the authors and researchers cited in this work.I must thank my parents, Mr&MrsAjamu for their financial support, prayers and words of encouragement. To my siblings; Adebayo, Temitope, Olajide and OluwasolaAjamu, I appreciate you all. I am also grateful to my Uncle, MrOlatunbosunAjala and also Mr&Mrs David Alalade for their prayers, encouragement and efforts towards the

completion of this work. I thank the authorities of the schools used for the study and all the research assistants.

Finally, I want to show my appreciation to all my extended family members and to my friends Chuks, Grace, Oyin, Aishat,Keji, Lanre, Tayo, Laide, Tola, Boye,Ibiyemi and to many other loved ones too numerous to mention. May God abundantly reward you all for your love advice and support towards the completion of this work.

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ABSTRACT

This study developed a WebQuest Instructional Package for teaching Basic Science and Technology in secondary schools in Akinyele Local Government Area of Oyo State. It also determined the effect of Webquest Instructional Package (WIP) on students' performance in Basic Science and Technology in the study area. Furthermore, the study investigated the effect of the package on students' retention and examined its effect on students' attitude to Basic Science and Technology in the selected schools in the area. These were with a view to enhancing students' performance and attitude to Basic Science and Technology in secondary schools.

The study adopted the pretest posttest control group design. The population for the study consisted of all Junior Secondary School (JSS) students in Akinyele Local Government Area of Oyo State. The sample comprised 60 JSSII students in Akinyele Local Government Area (LGA). Two intact J.S.S II classes were purposively selected from two junior secondary schools in the LGA based on availability of computers, computer laboratory and Basic Science and Technology workshop. Two instruments used for data collection were Basic Science and Technology Achievements Test (BSTAT) and Students' Attitude Towards Basic Science and Technology (SATBSAT). The study lasted eight weeks. Data obtained was analysed using mean, standard deviation and t-test.

WIP was developed using Adobe Dreamweaver having a homepage. From the homepage, the students were to navigate in the WIP. It had text, graphics, pictorial features for learning Basic Science and Technology. The contents contained topic on woodwork joints with subtopics such as butt joints, halved joints, mortise and tenon joints, bridle joints, dovetail joints, tongues and groove joints. The results showed that students' performance in Basic Science and

Technology increased significantly when they were taught using WIP ($t = 5.03$, $p < 0.05$). The results also showed that there was a significant improvement in the retention ability of students exposed to WIP ($t = 8.69$, $p < 0.05$). Finally, the results also showed that there was a significant improvement in students' attitude to Basic Science and Technology when exposed to WIP ($t = 5.12$, $p < 0.05$).

The study concluded that Webquest Instructional Package was effective in enhancing students' performance and attitude to Basic Science and Technology in secondary schools.

CHAPTER ONE

INTRODUCTION

1.0 Background to the Study

Basic Science and Technology subject, formally known as Introductory Technology existed before the introduction of the nine (9) year Basic Education Curriculum. Its inclusion in the school's Curriculum was warmly embraced as a result of the deficiency that plaguedin the then 6- 5-2-3 Educational System.Basic Science and Technology is a subject that comprises of Woodwork, Metalwork, Building Technology, Auto Mechanic, Electrical / Electronics and Technical Drawing. The subject is offered at the junior secondary school level as documented in the National Policy on Education (NPE, 2004). The policy states that

> ''the junior secondary school shall be both pre-vocational and academic. It shall teach basic subjects which will enablepupils to acquire further knowledge and skills a minimum of 10and a maximum of 13subjects which shall include IntroductoryTechnology as a core subject"(p.14).

Basic Science and Technology shouldbe regarded as one of the core subjects to be offered by students in the junior secondary school and the objectives of the subject according to the National Policy on Education (NPE, 2004) are to:

a) provide student with technological literacy required for everydayliving;

b) provide pre-vocational orientation for future developmentofemployable skills and training in technology; and

c) stimulate creativity.

Uwaifo (2011) observed that if Basic Science and Technology curriculum must achieve the stated objectives, its teaching and learning must involve both theory and practice. Students must be able to transfer the theoretical knowledge to the real practice after classroom interaction.

However, teachers only emphasize the theory at the expense of practical, which is a major problem for the learners. This invariably contributes to the non-impressive performance of students in junior secondary school certificate examination as shown in the appendix. National Examination Council (NECO) Report (2004-2012) has shown that the students who offered the subject do not perform well in the junior secondary school examination (Table 1.0 presents a detail representation of students' performance in Basic Science and Technology within a period of 9years). The tableis divided into six columns. The first column shows the year the students sat for the exam. The second column shows the total number of students who sat for the examination in a year, followed by those who had distinction and credit. The fifth column shows those who had pass, while the sixth shows those who failed. It shows that the percentage of those who had Distinction and credit was lower than those who had pass and fail. This is as an indication of declined performance.

Performance of Students at National Examinations Council in

Basic Science and Technology 2004-2012

YEAR	NO OF CANDIDATES THAT SAT	DISTINCTION A	CREDIT C	PASS P	FAIL F
2004	57,988	5,275	21,121	27,294	4,298
		9.10%	36.42%	47.07%	7.41%
2005	58,450	5,089	22,705	26,667	3,989
		8.71%	38.85%	45.62%	6.82%
2006	62,734	6,383	22,730	29,061	4,560
		10.17%	36.23%	46.32%	7.27%
2007	66,293	5,480	25,098	31,439	4,276
		8.27%	37.86%	47.42%	6.45%
2008	77,3222	7,403	34,895	29,942	5,082
		9.57%	45.13%	38.72%	6.57%
2009	68,690	5,628	32,948	24,026	6,088
		8.19%	47.97%	34.98%	8.86%
2010	71.487	7,477	24,952	33,309	5,749
		10.46%	34.90%	46.59%	8.04%
2011	3,172	114	2,305	687	66
		3.59%	72.67%	21.66%	2.08%
2012	111,295	418	57,684	48,698	4,495
		0.38%	51.83%	43.76%	4.04%

Source: NECO Office,Osogbo

For instance in 2004, 45.52% had A and C, while 54.72% had P and F; 2006, 46.40% had A and C while 53.59% had P and F; 2010, 45.36% had A and C while, 54.63% had P an

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