DEVELOPMENT AND VALIDATION OF COMPUTER-ASSISTED INSTRUCTIONAL PACKAGE FOR TEACHING SOCIAL STUDIES AT JUNIOR SECONDARY SCHOOL (JSS) IN ABUJA, NIGERIA

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Abstract

The emergence of Information and Communication Technology (ICT) revolution in the nation generally calls for an update in teaching strategies. This study, therefore, developed and validated a Computer- Assisted Instructional Package (CAIP) for teaching Social Studies concepts in Abuja, Nigeria. The package was based on the Ina-Fourier (1994) instructional design model. Validation was done in line with the Dick, Carey and Carey's (2005) validation model. Ten Social Studies specialists were involved in the content validation of Computer-Assisted Instructional Packages. Three Social Studies lecturers, three Social Studies teachers three Social Studies subjects officers and one test and measurement officer from the National Examination Council (NECO) participated in the validation of the content area. Three Computer Specialists and three Educational Technology experts were engaged in the validation of Computer-Assisted Instructional Packages. Thirty-five students were engaged for the field trial validation with the total positive response of 90.88% on content in the package, 94.30% on the interactivity of the package and 93.30% on navigation of the packages respectively. Three instruments were employed: the expert validation form, the field trial validation questionnaire, and the two Computer-Assisted Instructional Packages. All the instruments were face and content validated. Cronbach Alpha was used to find the reliability coefficient of the field trial validation questionnaire which yielded 0.86. The overall reaction from the validating team was that the developed packages (CAIP) were valuable for learning Social Studies concepts. It is therefore recommended that Tutorial mode of CAIPs should be produced to teach Social Studies concepts at Junior Secondary Schools in Abuja in particular and Nigeria at large.

Keywords: *Development, Validation, Tutorial, CAIPs, Field Trial, Social Studies*

Introduction

Social studies is one of the core subjects which if effectively taught, has the potential to influence the intellectual, social development and personal growth of youth. Mezieobi and Meiziobi (2011) noted that the purpose of social studies education is to prepare citizens who will perpetuate and improve their society, while that of personal education is to help the youth sort out the confusion of the social world and thus find meaning for his life. Social studies was perceived by Kara and Kahraman (2008) as the study of man and his physical and social environments and how man interacts with others while Babatunde, Benedict, and Adu (2016) sees it as a discipline through which man studies and learns about the problems of interaction and adjustment to the changing world. The status of a core subject accorded social studies at both primary and post-primary levels of education in Nigeria is also given credence by the National policy on education (FRN, 2013).

In spite of the important place of social studies in the educational system, students' performance in the subject shows growing decline and fluctuation in Junior School Certificate Examination (JSCE). For example, in Abuja, JSCE results of social studies indicated that about 48.60% of the students failed between 2014 to 2018. Social studies educationists and educators have given some reasons for the increasing poor performance of students in the subject. Gambari and Fagbemi (2008) and Yusuf (2004) attribute the poor performance of

students to poor teaching methods employed by teachers while, Iyewarun (2007) states that, lack of the use of appropriate methods in the teaching of social studies contributes to the poor performance of students in the subject. Okunloye (2001) corroborates this view when he acknowledges the non-utilization of the necessary techniques in teaching social studies.

There has been a global proliferation in the use of computers in schools as an instructional, communicative and informational resources tool. Onwioduokit (2000) states that using computers could revolutionize an outmoded educational system; better prepare students for the information age and accelerate national development efforts. Cuban (2001) considers computers as a vehicle for reforming educational practices, to be used as an instructional tool by teachers at all levels of education. McAllister and Mitchell (2002) add that using computers will make the learning process exciting for both students and teachers. In 1988, the Federal Government of Nigeria launched the National Policy on Computer Literacy at primary, secondary and tertiary levels of education. The committee on computer literacy emphasized on the use of computer education in all levels of education in Nigeria.

Several kinds of research had shown that using Computer-Assisted Instruction (CAI) has a positive effect on students' achievement compared to traditional methods. For instance, Kara and Kahraman (2008) have revealed the effectiveness of computer-assisted instructional package over other traditional methods in social studies. In Nigeria, Ajelabi (1998), Yawa (2006) and Gambari and Fagbemi (2008) found students taught social studies using computer-assisted instructional package performed better than those taught using conventional method. Similarly, Egunjobi, (2002) in geography, Ash (2005) in mathematics, Basturk (2005) in statistics and Okoro, and Etukudo, (2001) in chemistry, Gambari (2010) in physics and Karper, Robinson, and Casado-Kehoe (2005) on counselling education confirmed that CAI has been effective in enhancing students' performance in other subjects than the conventional classroom instruction.

Computer-Assisted Instruction (CAI) is an interactive instructional technique in which a Computer is used to present instructional material, monitor learning, and select additional instructional material in accordance with individual learner's needs. There are different modes of CAI designed to achieve different objectives. Teachers are often confused about which Computer Assisted Instructional mode to use or to employ in the teaching of students in any course. Gambari (2010) and Achuonye (2004) identify modes of CAI as Drill and practice, Games, Simulation, Discovery, Modelling, Dialogue, Problem-solving, and Tutorial.

Tutorial mode of CAI is structured to present information in small hierarchical steps which incorporate theoretical explanations as well as the practice of the content. In tutorial mode, information is presented and explained, questions are asked to which learners respond. The programme assesses the responses, gives feedback and makes a decision as to whether or not to give added information to improve comprehension and future performance. The cycle continues until the lesson is completed. The tutorial mode can adopt different strategies. Two strategies of tutorial mode include pictorial aural which consists of text, pictures, and audio codes and, non-pictorial aural which consists of text and audio codes. In the first mode, the Computer will present the learning content in textual, pictorial, and audio media format while in the second mode, the Computer will present the content in textual and audio media format without diagrams, photographs, charts, drawings, sketches or paintings. The traditional strategy of tutorial mode consists of presentation only in text. The need arises to find out the effect of these strategies on students achievement in Social Studies.

Development of software occurs in three phases. They are designed, develop and evaluation (validation) (Brandie et al 2000). To develop a package, models are selected (adopt) or

combined/modify (adapt) to bring out the desired results. Several models have been developed for managing software development. One model developed by the Ina Fourie model developed 1994 on the design of multimedia packages for distant teaching which consisted of seven phases. They are (1)determination of the need and situation analysis; (2) Determination of aims and performance objectives and development of items for evaluation; (3) Design of study material, including development of a teaching strategy and media selection and integration (e.g. the inclusion of sound and video); (4) Development and preparation (this includes storyboarding and programming); (5) Implementation and use; (6) Assessment of student progress; and (7) Formative and summative evaluation on a continuous basis throughout all phases. (Fourier, 1994:220).

Several researchers have developed and validated packages in many subject areas. Among them were Philip and Moss (1993) on Biology, Afolabi (2006) on Biology, Oyelekan and Olorundare (2009) on Chemistry and Mahmud et al (2009) and Usman, Wushishi, Gambari, and Olayinka (2017) on Mathematics. Laleye (2016) carried out a study on the development and validation of a computer-assisted instructional package for learning basic science in Nigeria. Similarly, Özkök (2013) conducted a study designed to test the validity and reliability of the Web-based Learning Environment Instrument (WEBLEI). In addition, Fakomogbon, Shittu, Omiola, and Morakinyo (2012) conducted a study on design, development, and validation of a web-based instructional package for teaching ceramics concepts in basic technology for junior secondary school students in Nigeria. Anunobi, Gambari, Alabi, and Abdullahi (2017) developed and validated web-based courseware for junior secondary school basic technology students in Nigeria. All the developed packages were validated and field-tested and the validation reports were positive. However, none of the study has the same premise with the present study, therefore, this study developed and validated the two modes of Computer-assisted Instructional packages for learning Social studies at junior secondary schools in Abuja.

Statement of the Problem

Socials Studies, a core subject at Primary and Junior Secondary School levels in Nigeria, has been bedeviled by the poor performance of students in the FCT, Abuja. This is evident from the results of the Junior Secondary School Certificate Examination for Social Studies in Abuja for the year 2014 – 2018. The average performances of candidates in June/July 2011-2016 NECO JSS examination in Social Studies was between 41.48% pass to 58.52% at credit level.

The poor performances of students in Social Studies can be attributed to many factors which include inappropriate use of teaching strategies and ineffective use of media. It will be improper to continue with the conventional method of teaching and learning which has not been helpful in promoting meaningful learning. Ideally, there should be a paradigm shift from the conventional method of teaching to innovative instructional strategies as well as instructional media that will bring about meaningful learning of Social Studies. Therefore, Computer-Assisted Instruction (CAI) as one of the innovative teaching strategies has the potential to improve learning. It can be used in the classroom in teaching Social Studies effectively. Several factors have been attributed to the poor performance in Social studies at the JSS level, the present study intends to solve the problem of poor teaching methods and poor utilization of instructional media.

Most of the previous researches on CAI have not investigated the effects of using different strategies of computer-assisted instructional modes for social studies instruction within the Nigerian socio-cultural system. Also, most of the researches on the use of CAI cut across different discipline and levels of education in Nigeria. However, studies on the use of two modes of Tutorial CAI for Social Studies in Nigerian schools are unavailable. Therefore, this

study developed and validated the two modes of Computer-assisted Instructional packages for learning Social studies at junior secondary schools in Abuja.

Research Questions

The following research questions were raised to guide the study:

(i)   What are the steps involved in the development stage of Computer-Assisted Instructional Packages?

(ii)   How was the developed Computer-Assisted Instructional Package validated?

Research Design

This study adopted the design model provided by Ina, Fourie (1994) and the social constructivist learning theory to develop the package. The design model put into consideration the age of the subjects that are meant to use the package, aims and objectives of teaching the selected topics. The researcher developed the CAI packages with the assistance of a professional computer programmer. The packages were validated by subject specialists, computer and educational technology experts while field trial validation was conducted on JSSIII social studies students. The design framework is shown in figure 1.
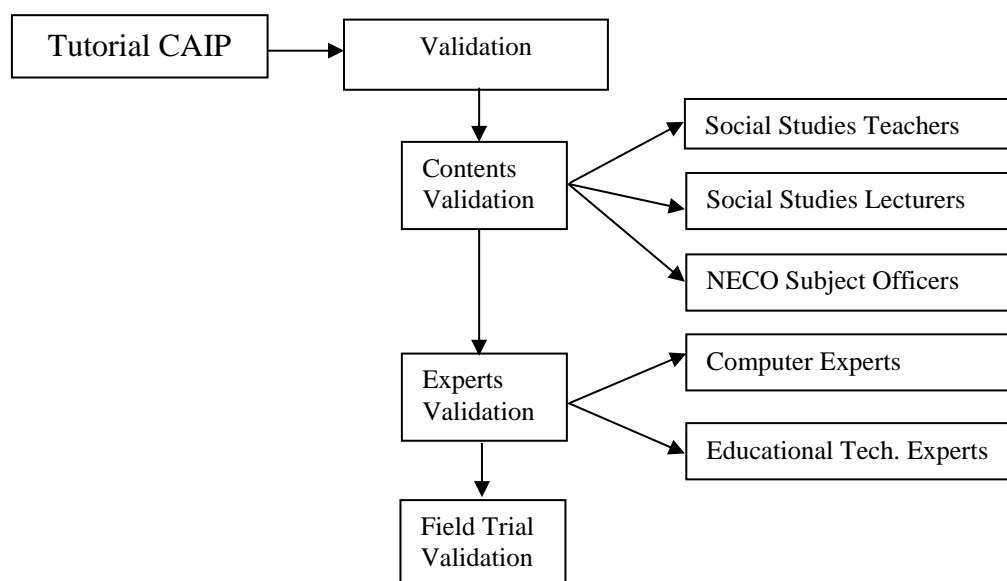
Fig 1: Design Framework for the Study

Sample and Sampling Technique

The target population for validating of the Tutorial modes of CAIP include Social Studies teachers, Social Studies lecturers, computer programmers, educational technology experts from different universities within Abuja and Niger State, Nigeria. Purposive sampling technique was used to select three experienced computer programmers, three Social Studies teachers at public secondary schools, three Social Studies lecturers from tertiary institutions, three lecturers in Educational Technology, while simple random sampling technique was used to select 35 Social Studies students from junior secondary school class three (JSSIII) for field trial validation. The criteria for selecting samples for this study was that students and their teachers were computer literate and there are enough set of computers to serve participants.

Research Instruments

Six instruments were used to validate the two tutorial CAI packages, these include: (i) Content Expert Validation Report (CEVR); (ii) Computer Expert Validation Report (CEVR); (iii)

Educational Technology Experts Validation Report (ETEVR), and (iv) Field Trial Validation Questionnaire (FTVQ).

The Validity of the Instruments

Manuscript of CAIP was given face, content and constructs validity by specialists in Social Studies from secondary schools, colleges of education, University of Abuja and National Examinations Council (NECO), Minna. Observations, corrections, and suggestions pointed out were effected before given to programmers for development of the packages. The same group of experts went through the packages after the production. Students within the study areas validated the packages. Three sets of validation forms and a questionnaire were designed to validate CAIP after production, these include: (i) Content Expert Validation Report (CEVR); (ii) Computer Expert Validation Report (CEVR); (iii) Educational Technology Experts Validation Report (ETEVR), and (iv) Field Trial Validation Questionnaire (FTVQ). Observations and recommendations from the experts and students were recorded and corrections were effected to produce the final copy of the packages.

Reliability of the Instruments

Field-trial validation questionnaire was subjected to pilot testing using 15 selected junior secondary school students offering Social Studies. An equivalent school outside the research zone was used for the pilot study. The selected students were within the population but not part of the samples school. The data obtained from the pilot study was analysed using Cronbach alpha. The results obtained were 0.78, 0.75 and 0.76 respectively which indicate that the instrument is reliable for the study.

Results

The reports from experts were collated and summarized and presented while the data obtained from field-trial validation were analyzed descriptively using frequency and simple percentage.

Research Question One: What are the steps involved in the developmental stage of CAIP?

Development of CAIP

The study adopted the design model provided by Ina, Fourie in (1994) and the social constructivist learning theory. This is a traditionally designed model which is linear and sequential in nature. It emphasized the role of the designer as an expert. The design model put into consideration the age of the subjects that are meant to use the package, aims and objectives of teaching the selected topics as recommended by the National Education Research and Development Council (NERDC) Curriculum on Social Studies.

The development started with the development of the Social Studies manuscript for JSSIII students. This was typed out from the curricula and developed, using a viable teaching strategy including selection and integration of media, and copies were made for Social Studies teachers in three different schools for verification and validation. This is to ensure that nothing important has been left out and that there was no misinterpretation of concept. Useful ideas raised by the teachers were given consideration before the final scripts were made for the production of the packages. There were six modules with various topics put into six scripts with each of the scripts lasting 30 minutes for an average student. The scripts dealt with the following topics: Human trafficking, Meaning of human trafficking, Factors responsible for children and women trafficking, Consequences of trafficking in children and women, Ways of preventing human trafficking, Harmful traditional practices, Consequences of some harmful traditional practices, Promoting peaceful living in our society, Types of peace, Importance of living in peace with another, Ways of promoting peace in our society. Other topics were

maintaining peace in our town, Social conflict, the meaning of conflicts, types of conflicts, examples of conflicts, causes of conflicts, Consequences of conflicts on society, managing and resolving conflicts; Non-violent methods of resolving conflicts, Attributes required for conflict resolution.

At the production stage, the scripts were made suitable for classroom instruction. The basic markup language used in describing the fonts, colour, graphics, and texts in the package is called Hypertexts Mark-up Language (HTML). HTML gives users a way to identify the structural part of a document. The Editor used, where the source codes are typed before further processing was the Macromedia dream weaver 8. Macromedia firework 8, Macromedia Flash 8, Coreldraw and Swishmax applications were used for the graphic and animation works in the package. Hypertext processor (Php) was the server-side language used for processing and validating the questions after each of the scripts in the package. Microsoft word was used for the texts while CorelDraw was used for the graphics. The digital camera was used for snapping some of the images in the package while the image scanner was used to scan some images got from websites into the work. Laptops, desktops and notebook systems, headphone and empty CD-ROMs were also used for the production. CD-ROM was the tool that houses the developed package for its availability, accessibility, and efficiency.

To access information on the software product (the prepared package); insert the CAIP software (CD-ROM) into the system, five files will be displayed. The files are CAIP, Answers, install_flash_play_ax, Installation guide of CAIP. User clicks on the installation guide of CAIP which presents the steps to be followed for successful installation, nine steps to be followed will be displayed on the monitor. The work is made so flexible that it can be launched and used on any platform of the operating system. It is interactive in nature. However, to use the developed package, users do not need any prior knowledge of the languages used to develop the package. The package is just like any other software products and need to be handled with care. It should not be scratched or rubbed on any rough surface and needs to be kept in a dust-free shelf. It is a self-instructional interactive package.

The three packages follow the same procedure. The difference was that: (i) voice, picture and animation tutorial package; (ii) text with animation tutorial package; and (iii) voice with text tutorial package. After the installation of the package, the user clicks on the shortcut icon and the main menu appears with the content of the CAIP. The main menu or homepage is the entry point to the content CAIP presents. The main menu implies some type of top-level index. It is the starting point to begin the program. It also presents the sequential order for content presentation. User clicks on "instruction" and selects the module to study. The modules are arranged in sequential order. At the end of each script, there are questions based on the preceding text in the scripts followed with options (A) to (D) out of which the student picks one. Feedback of "correct" or wrong will be given by the computer. Students can go back to the text and the diagrammatic illustrations to re-study them if any of the supplied answers are wrong. He then makes another attempt. The sequence of text display, question, answer options, feedback continues until all the contents of the package have been covered. The student cannot proceed to the next script unless he/she understands the previous script and get all the questions that followed correctly.

Research Question Two: How was the developed package CAIP validated?
Association for Educational Communication and Technology (AECT) 2007 recommended that for any instructional media designed and developed to be selected and approved for use, experts that are relevant to the work and the intended end-users must be involved in the validation processes. As a result of this, Validation of the developed packages (CAIP) was

done in line with Dick, Carey, and Carey (2005)'s recommendations. According to them, validation of developed packages took the following forms:
(i)   Content Expert validation;
(ii)   Computer Expert Validation;
(iii)   Educational Technology Expert Validation
(iv)   Field-trial Validation with students (thirty students at least).

This method of validation was considered appropriate because it corresponds to the AECT's recommendations that the process must involve experts and students who are the end-users. Manuscript prepared by the researcher was given to three Social Studies teachers from public secondary schools in Abuja for content validation. Three lecturers from the University of Abuja and College of Education, Zuba-Abuja also validated the manuscripts (contents) of the packages. The subject specialists conducted the face and content validity of the manuscripts. Corrections and suggestions were made and effected before it was given to the programmers for production. After production, the same group of Social Studies specialists, computer another programmers, and Educational Technology experts went through it and necessary corrections were made. Input and feedback from students and experts which include the teachers are important components of the developmental process.

Three validation report forms were designed to validate the CAIP after production while the field-trail validation questionnaire was developed by the researcher. At the end of each of the form, there was room for comments where observations could be written apart from the ones mentioned in the report form. The field-trial validation questionnaire was made up of statements unto which options of strongly agree (4 points), agree (3 points), disagree (2 points) and strongly disagree (1 point) responses were given. The report form and questionnaire are:

(i)   Content Expert Validation Report (CEVR): This is made up of seven statements and was given to three Social Studies teachers in the Junior Secondary Schools within the target population, three Social Studies lecturers from University of Abuja and FCT College of Education, Zuba; and three subject officers from NECO, Minna. The CEVR was given to them to ascertain the adequacy of the developed CAIP in line with the recommendations of the NERDC in the UBE scheme of the Social Studies curriculum for Nigerian Junior Secondary Schools. They considered the content in terms of tense and grammar used, legibility and clarity, nature of the contents and questions after each of the scripts among others.

(ii)   Computer Experts Validation Report: This instrument contained eight statements which respondents were required to write their comments after using the tutorial Computer-Assisted Instructional Packages in two modes. The report include: Appropriateness of the programming language used; typography errors in the packages; legibility of the contents in the packages; the navigation; the interface; the animations in the packages; functionality of the packages; the storage, speed and durability of the packages; and the appropriateness of the applications in the packages. CEVR was given to three (3) lecturers from Computer Science and Cyber Security (programmers) Departments, Federal University of Technology, Minna for experts' validation after they had gone through the packages. The comments, observations, and suggestions made by the experts were taken into consideration in producing the final version of the packages.

(iii)   Educational Technology Expert Validation Report (ETEVR): This instrument consists of seven statements which respondents were required to write their comments after using the two modes of tutorial Computer-assisted Instructional packages. The statement include: suitability of the packages for instruction; clarity and simplicity of the packages; unity

among illustrations; emphasis on key concepts; the use of colours (background and font colours); the legibility of the text (font type and size); and others such as audibility of the audio, animation, etc. ETEVR was given to three Educational Technology experts from the Educational Technology Department, Federal University of Technology, Minna for the purpose of finding out whether the packages conform with acceptable standards in educational technology. The comments, observations, and suggestions made by the experts were taken into consideration in producing the final version of the packages.

(iv) ***Field Trial Validation Questionnaire (FTVQ):*** The instrument contained three sections (A-C) and each section contained five statement items which respondents were required to state whether they are strongly agreed, agreed, disagreed, strongly disagreed respectively. Section A contains five-item on content in the packages; section B has five-item on the interactivity of the packages; Section C consists of five-statement navigation of the packages. FTVQ was administered on 35 students who were randomly selected for the field trial validation of packages. The data obtained from the respondents were analysed using frequency and percentages as shown in Table 1, 2, and 3.

Table 1: Frequency and percentage results of the respondents on the content of the CAI packages

S/No	Statement	Response			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	The messages in the package are easy to understand	16 (45.7)	17 (48.6)	1 (2.9)	1 (2.9)
2	The contents in the package are well organized (arranged in order)	19 (54.3)	14 (40.0)	1 (2.9)	1 (2.9)
3	The illustrations in the package are very clear to me.	15 (42.9)	15 (42.9)	4 (11.4)	1 (2.9)
4	The examples used in the various sections of the lessons in the package are relevant.	15 (42.9)	18 (51.4)	1 (2.9)	1 (2.9)
5	It was very easy to understand the lessons because information was presented from simple to more difficult one.	20 (57.1)	10 (28.6)	2 (5.7)	2 (5.7)
	Total	**48.58**	**42.30**	**5.16**	**3.46**
	Summary of Agree & Disagree	**90.88**		**8.62**	

Table 1 revealed that one to one validation result of students shows that students are willing to learn through the use of Computer Assisted Instructional Package. To analyze the responses on the questionnaire, frequency counts and simple percentage was used. From the questionnaire given to the 35 students selected for this purpose, 45.7% and 48.6% of the students strongly agreed and agreed that the messages in the content of the package are easy to understand while 2.9 of the students disagree and other 2.9% of the students strongly disagree respectively. 54.3% and 40.0% strongly agreed and agreed that the contents in the package are well organized, while 2.9% strongly disagree and 2.9% again disagree respectively. Majority of the students that used the package strongly agreed (42.9%) and another set of students (42.9%) also agreed that the illustrations in the package are very clear, while 11.4% and 2.9% were disagree and strongly disagree respectively. 429% strongly agree and 51.4% agreed that the examples used in the various sections of the lessons in the package are relevant. However, 2.9% disagree and another 2.9% of the students strongly disagree with that assertion. Most of the students (57.1% and 28.6%) that used the package

confirmed that it was very easy to understand the lessons because information was presented from simple to more difficult one while 5.7 strongly disagree and another set of 5.7% of the students strongly disagree on the statement. In summary, 90.88% of the students agreed while 8.62% disagree respectively.

Table 2: Frequency and percentage results of the respondents on the interactivity of the CAI packages

S/No	Statement	Response			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	It is easy to operate the package with computer keys and mouse.	16 (45.7)	17 (48.6)	2 (5.7)	0 (0)
2	This package permits me to repeat the section and exit the lesson at any point in time.	20 (57.1)	15 (42.9)	0 (0)	0 (0)
3	The frequent display of questions to the learners does not interrupt the learning process.	21 (60.0)	12 (34.3)	2 (5.7)	0 (0)
4	This package enables me to apply what I have learnt rather than memorize it.	18 (51.4)	12 (34.3)	3 (8.6)	1 (2.9)
5	This package allows me to discover information through active learning.	26 (74.3)	8 (22.9)	0 (0)	1 (2.9)
	Total	**57.70**	**36.60**	**4.00**	**1.16**
	Summary of Agree and Disagree	**94.30**		**5.16**	

Table 2 revealed that most of the students 45.7% that participated in the field trial validation strongly agreed and 48.6% of them agreed that it is easy to operate the package with computer keys and mouse while 5.7% disagree to the assertion. 57.1% and 42.9% strongly agreed and agreed that the package permits me to repeat the section and exit the lesson at any point in time while none of them disagree and strongly disagreed. Majority of the students that used the package strongly agreed (60.0%) and another set of students (34.3%) also agreed that the frequent display of questions to the learners does not interrupt the learning process, while 5.7% disagree. 51.4% strongly agree and 34.3% agreed that the packages enable them to apply what they have learnt rather than memorizing it. However, 8.3% and 2.9% of the students disagree and strongly disagree with the statement. Most of the students (74.3% and 22.9%) that used the package attested that it allows me to discover information through active learning while 2.9% strongly disagree on the statement. In summary, 94.30% of the students agree, while 5.16% disagree respectively.

Table 3: Frequency and percentage results of the respondents on the navigation of the CAI packages

S/No	Statement	Response			
		Strongly Agree	Agree	Disagree	Strongly Disagree
1	From the main menu, learners are allowed to login with their details.	12 (33.3)	17 (47.2)	4 (11.1)	3 (8.3)
2	The EXIT key enables me to exit from the lesson.	27 (75.0)	8 (25.0)	0 (0)	0 (0)
3	The PREVIOUS key enables me to revisit the previous section(s) of the lesson.	29 (83.3)	5 (13.9)	1 (2.8)	0 (0)
4	The NEXT key directs me to go to the next section of the lesson.	29(83.3)	4(11.1)	0(0)	2 (5.6)
5	The OPTION keys allow me to select the correct option.	25 (72.2)	8 (22.2)	2 (5.6)	0 (0)
Total		**69.42**	**23.88**	**3.9**	**2.78**
Summary of Agree and Disagree		**93.30**		**6.68**	

Table 3 revealed that most of the students 33.30% that participated in the field trial validation strongly agreed and 47.20% of them agreed that they can easily login from the main menu while 11.1% disagree and 8.3 strongly disagree on the statement. 75.0% and 25.0% strongly agreed and agreed that the exit key in the packages enables them to exit from the lesson while none of them disagree and strongly disagreed with the statement. Majority of the students that used the package strongly agreed (83.3%) and another set of students (13.9%) also agreed that the 'Previous Key' PREVIOUS key enables me to revisit the previous section(s) of the lesson, while 5.60% strongly disagree. 83.3% strongly agree and 11.1% agreed that the 'Next Key' directs them to go to the next section of the lesson. However, 5.6% of the students strongly disagree with the statement. Most of the students (72.2% and 22.2%) that used the package attested that the 'Option Keys' allows them to select the correct option while 5.6% disagree on the statement. In summary, 93.30% of the students agreed while 6.68% disagree respectively.

Discussion

Two research questions were raised to guide this study. The development of CAIP was based on Ina Fourie (1994), design and the behaviourist learning theory. The model provided the opportunity of mastering the script step by step. All steps identified by Ina Fourie were considered during the developmental stage of this study. The finding also revealed that the validations of the two modes of tutorial computer instructional packages were found to be positive after field trial validation. This developmental pattern and results from validation processes were supported by the findings of Oyelekan (2008) who developing Computer-Assisted Instructional Package on electrochemistry for Secondary Schools in Nigeria, Laleye (2016) who carried out a study on development and validation of a computer-assisted instructional package for learning basic science in Nigeria. Similarly, Özkök (2013) conducted a study designed to test the validity and reliability of the Web-based Learning Environment Instrument (WEBLEI). Further, it supported the finding of Fakomogbon, Shittu, Omiola, and Morakinyo (2012) conducted a study on design, development, and validation of a web-based instructional package for teaching ceramics concepts in basic technology for junior secondary school students in Nigeria. Similarly, the development stage was in line with that of Anunobi, Gambari, Alabi, and Abdullahi (2017) that developed and validated web-based courseware for junior secondary school basic technology students in Nigeria. All these studies were found positive using various instructional design model.

Recommendations

Based on the findings of this study, it is recommended that the developed package be used to augment the classroom instruction for learning Social studies in Abuja in particular and Nigeria in general. Best results would be achieved if teachers could monitor and assist students when using the package to learn Social Studies. Also, the contents of the package are selected from the JSSIII curriculum contents. Therefore, it is recommended that the package should be used for revision and remediation especially when working towards improvement in performance in the Junior Secondary School examinations. The package of this nature that enhanced students achievement, motivation and retention should be encouraged in all subjects at secondary schools in Nigeria.

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