

# A Web Based Career Guidance Information System for Pre-Tertiary Institution Students in Nigeria

Abisoye Opeyemi A.<sup>1</sup>, Alabi I. O.<sup>2</sup>, Ganiyu Shefiu O.<sup>3</sup>, , Abisoye Blessing O<sup>4</sup>, Omokore Josiah<sup>5</sup>

<sup>1</sup>MSc. (Computer Science), Federal University of Technology, Department of Computer Science, Minna, Niger State, Nigeria.

<sup>2</sup>MSc. (Info. Tech), Federal University of Technology, Department of Information and Media Technology, Minna, Niger State, Nigeria.

<sup>3</sup>MSc. (Inf. Sc), Federal University of Technology, Department of Information and Media Technology Minna, Niger State, Nigeria.

<sup>4</sup>MEng. (Electrical Engineering), Federal University of Technology, Information Technology Services, Minna, Niger State, Nigeria.

<sup>5</sup>BSc. (Computer Science), Department of Computer Science, Federal University of Technology, Minna Niger State, Nigeria.

## ABSTRACT

Web Based Career Guidance is very important to our Educational System. We have an existing Manual Career Guidance System with human counselors in charge, but this system is plagued with the following problems: few number of human counselors, unavailability of a counselor in a good number of schools, few number of counselors attending to students during school hours and the office of a counselor in schools are so unpopular that students hardly meet them for career counseling. We have been able to design an Online Career Guidance Information System targeting students in pre tertiary institutions in Nigeria to solve the afore- mentioned problems. The Online Web Based Career Guidance system was designed and implemented using data collected from interviewing human counselors and surveys. The following scripting languages were employed: PHP, MySQL, HTML, Java Script and CSS. The system was implemented and tested with 50 students and 76% of them found the career system very useful.

**Keywords:** Web, Career, Guidance, information system, Educational System, Counselors

## I. INTRODUCTION

Guidance is a term sometimes used broadly to refer to advising or helping an individual with any kind of educational, vocational or personal problem. It can also be referred to as a service provided by the particular school to help young persons in making clever decision and changes so as to develop their potentials as an individual and a contributing member of the society. Guidance activities are usually associated with educational professionals known as counselors as well as the involvement of parents, relatives, teachers, administrators, other educational specialists, spiritual leaders etc. The meaning is so broad that it does not deal with education alone but also aspects of life that affects an individual, therefore we can say that guidance is also a process of helping a person to realize and grow his/her vocational, educational, and psychological potentials and also

achieving an the best level of individual happiness and societal usefulness.

Career guidance consists of services that help people successfully manage their career development. Although this aspect of human development occurs on its own as we mature, everyone can benefit from assistance navigating through this process.(Dawn, 2012). Career guidance is a set of intervention strategies designed to ease the career development of the individual. Career guidance is a broad term, which includes the development of job search, on interview skills, placement into a chosen vocation, and follows up the placement to ensure effectiveness. In career guidance, counseling is used as one of the interventional strategies.

The British Association of Counselors (BAC) now the BACP, were the very first professional association that adopted a definition of

professional counseling (Dawn, 2012), in 1986 they published this definition:

“Counseling is the skilled and principled use of relationship to facilitate self- knowledge, emotional acceptance and growth and the optimal development of personal resources. The overall aim is to provide an opportunity to work towards living more satisfyingly and resourcefully. Counseling relationships will vary according to need but may be concerned with developmental issues, addressing and resolving specific problems, making decisions, coping with crisis, developing personal insights and knowledge, working through feelings of inner conflict or improving relationships with others.” (BASP, 1986)

The counselor’s role is to facilitate the clients work in ways that respect the client’s values, personal resources and capacity for self-determination.

‘Why do we need a web based career system’ some may ask. It has become absolutely necessary because:

- i. The internet has become a place where students(youths) visit often to interact(social network), shop(online shopping), be entertained(online video, music and radio services) etc. its only proper that the internet is also used for something as productive and as important as interacting with an information system that helps them chose the best career possible for them.
- ii. If properly designed and implemented, an online career counselor can be more effective and accessible than a real life counselor.
- iii. It can be used to complement real life counselors; it can serve as a tool used by them.

Before the late 19th century, there was practically little or nothing in existence in the form of career guidance for persons considering getting a job. When it all started, career guidance was referred to as vocational guidance. Work prospects started from nearby communal associates such as family, friends and also the church. The beginning of the 20th century saw a rise in immigration, follow-on is an increase in the need for a more structured means to assist people in getting jobs.

Although the categories of professions have improved significantly in the previous century, some of the basics of career guidance endure. The principal

themes still is the development of an awareness of individual skills, ability and interests, also being educated about career openings and demands. Conversely, career guidance in the present day is viewed as a continuous process. Unlike before age is no longer a driving force, this has brought about an increase in the emphasis on the self at work and work-life balance. (Julia, 2014).

In this paper section 2 explains the statement of the problem, Aim and objective in section 3, Significant of study in section 4, Analysis of the existing system in section 5, Possible solutions in section 6, Justification of the new system on section 7, Methodology in section 8, Proposed Design System in section 9 and Results in section 10 and Conclusion.

## II. METHODS AND MATERIAL

### A. Statement of the Problem

This paper intends to solve the following problems:

1. Unavailable human counselors in some schools. This has resulting in many students making wrong career choices and then regretting for the rest of their lives.
2. Where the counselors are available, there are mostly not enough to cater for all the students.
3. Real life counselors are only available to students at working hours of the day, but an online career counselor is available at any time and just a click away.

### Aim And Objectives

**Aim:** The aim of this research is to deploy a web site that helps pre-tertiary students make a better career choice, with the following objectives.

- i. To explore the problems encountered by the existing manual system
- ii. To design a web based career guidance system that will improve upon the existing manual/ human career guide.
- iii. To implement a web based application that will help young ones get a good understanding of themselves and advise them on the career path that best suits them. And also serve as a complementary tool for career guide and counselors

## B. Significance of the Study

This paper will be beneficial to the society at large, but more specifically to secondary school leavers and counselors. The secondary school students will benefit in the sense that the information system will help and guide them in making wise and appropriate career choices and also inform them understand basically what each career is about, what it entails, and the required subjects they need to focus on to succeed in that field. Counselors likewise can benefit from the information system as it can serve as a tool for them to use in making more accurate judgment.

The student will get to benefit front the information system when they visit the web site, register, take a career quiz and view the advisor page that intends to intimate them with the career path in which the test has deemed fit for them. Counselors can benefit by asking students to take the career quiz and the outcome of the career quiz can help the counselor give better advice to the students.

In summary, this paper will to a large extent help to provide a solution to the subject of career choice, it will try to provide an alternative and complement human councilors, in that it will be readily available to anyone with a device that has a functional browser and access the internet.

## C. Analysis Of The Existing System

The analysis of the existing system is divided into two parts:

- I. The analysis of the manual system.
- II. Analysis of the few existing online career websites.

### ➤ Analysis of the Manual System.

In analyzing the area of career guidance and counseling from the general view, we will see that or deduce that its goal is basically to assist students in developing the individual growth of which there are certain procedures that the guidance counselor uses during the course of his work, such procedures are:

- i. **Test:** these ae being developed to judge interest, abilities and personality traits , such tests are:

- a) Intelligence tests which are given to measure intellectual ability. The result of intelligence tests is called Intelligence Quotient (IQ).
- b) Achievement tests which are given to see the level students have reached in verbal and mathematical skills as well as in specific areas such as social studies, sciences and foreign languages.
- c) Aptitude test, these are tests designed to predict a student's ability in a particular field.
- d) Personality tests, they intend to reveal a student's feeling, problem, attitudes, likes and dislikes in which also determines what area of work a student will enjoy the most.
- e) Interest inventories, which help students think clearly about career preferences in which on the basis of the results of these inventories, counselors may suggest careers the student had never considered before.

ii. **Group Guidance:** This includes those guidance activities which can be carried on economically and effectively with group of pupils. The group methods are used primarily to convey information as in orientation to a new school, in occupation classes, or in career conferences

iii. **Individual Interview/Counseling:** By means of personal interviews the counselor helps the students with many of the typical problems of growing up. It involves intimate personality relationship between a pupil and the counselor to which both of them discuss having an objective attitude as well as careful plans for the pupil in order to help him make decisions.

iv.

### ➤ Limitations Of The Existing Manual System

The Manual career guidance is limited in the following ways

- a) Guidance and counseling has been limited to secondary schools in most cases. The bed rock of education i.e. the primary schools has been completely neglected.
- b) Though counselors are found in secondary schools, but the numbers of full time counselors are highly insignificant and cannot cater for the number of students.
- c) Some counselors are not committed or diligent and can sometimes be unapproachable.
- d) Counselors can only attend to students during working hours of the day.

- e) The problem of generation gap: the general idea among students is that the guidance and counselor is a middle aged man or woman who is perceived to be 'old school' thus can only offer suggestions or solutions in like manner.
- f) Counselors are humans with their own emotions, personal responsibilities and pressures, therefore, the tendency of emotional eruption and absence from the office when needed is inevitable. This discourages students from approaching them.

The unpopularity and unawareness of the guidance and counseling department in our secondary schools makes the system under used, thereby making it inefficient.

Some students could find the counseling session a torture and boring therefore they avoid it.

Lack of standardized and locally adapted career quiz or questionnaire.

➤ **Analysis of existing online Career Guidance website.**

At the advent of the 21<sup>st</sup> century, the internet has brought us so any possibilities. Career guidance is not an exception, below are some existing online career guidance websites and their limitations.

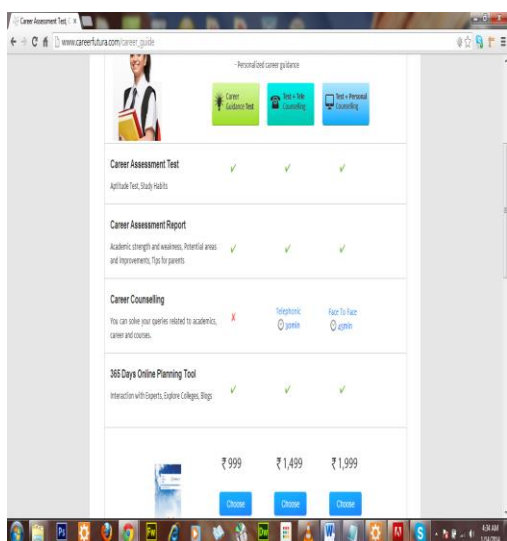


Figure 1: A Paid Career Guide Website

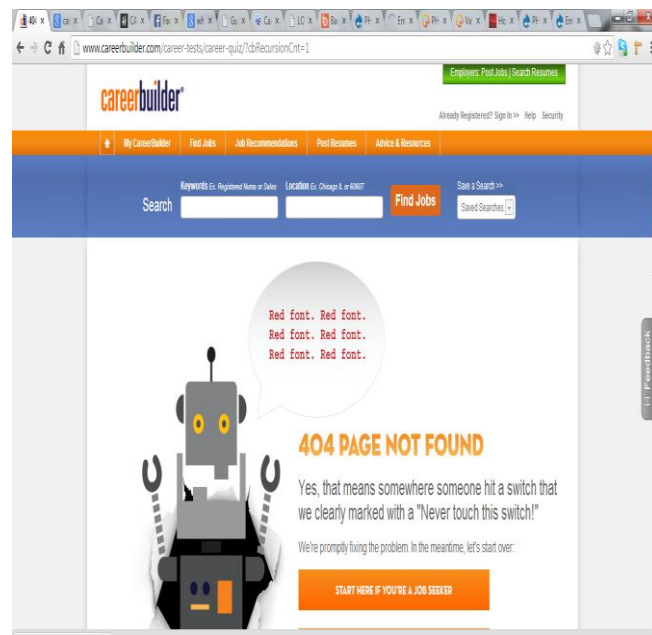


Figure 2. A Discontinued/Broken Career Resources Guide Website

Fig 1 above shows the website with the url:www.careerfutura.com which demands that those who want to use the career guidance service must pay a reasonably large amount of money. Thereby making it not accessible to those who are not financially buoyant. No provision for free trial at all. An objective of this research is to deploy a FREE career guidance information system.

The figure 2 above shows a non-functional or discontinued career guidance website. The URL of the site is careerbuilder.com. It evidently can no longer serve the purpose for which it was built.

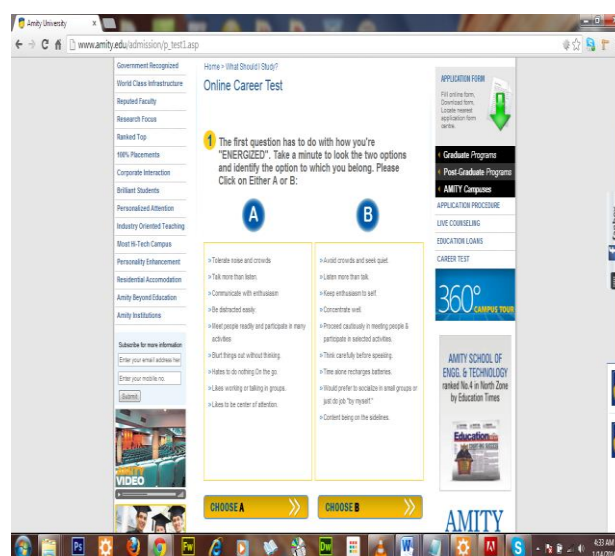


Figure 3. An Online Career Test Site With A Difficulty To Understand Interface.

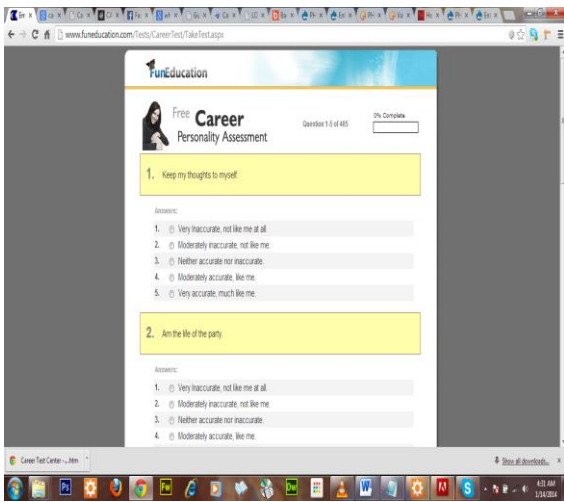


Figure 4 A Career Guidance site.

The Fig 3 above shows the screen shot of an existing career guidance system. The interface is noticeable clumsy and that makes navigating and using the services of the site and Fig above 4 shows the screen shot of an existing web based career guidance system, the draw back with the site is that it has too many questions to be answered. There are 485 questions for the student to answer

#### ➤ Problem of the Existing Online System

One of the most significant decisions a young person has to make in life has to do with a future career. The choice of an career is seen as the second most important decision, next to the choice of a spouse in marriage. The choice of an career becomes significant because it could determine the overlook of our success in life, our group of friends, business associates, recreational activities, opportunities, salary status and general life style seemed to be determined or influenced by our career. The choice of a career has become more complex in this modern time for the following reasons:

- i. Nigeria is a developing nation going through severe economic and financial problem resulting to unemployment in various categories of occupation.
- ii. The development in science and technology has led to new careers of which most people are not aware.
- iii. Many people lack competence to assess themselves for a realistic choice of career.

- iv. Information about various occupations does not readily get to those who are contemplating the choice of career.
- v. Absence of job satisfaction is one more issue that has thrown many people out of job.
- vi. Parents, sometimes out of ignorance force careers on their children which become a problem or serves as a temporary setback for the children.
- vii. The peer group has a great deal of influence on youth career choice. Many youth choose occupation simply because their friends have chosen such and they do not want to do anything different from their friends.
- viii. Many youth set high vocational aspirations for themselves without possessing the necessary personal qualities to pursue such an occupation, and
- ix. Inability of some youth to keep their career choice flexible has led to delays in getting admission and frustrations in meeting the requirements for the career of their choice. (Mopelola & Benjamin, 2013).

#### D. Possible Solutions

The web system being designed in this paper to solve aforementioned problems falls roughly under Expert system.

##### i. Expert System

An expert system is an interactive computer based decision tool that uses both facts and heuristics in solving difficult decision making problems, based on knowledge acquired from an expert (Alhassan, 2013)

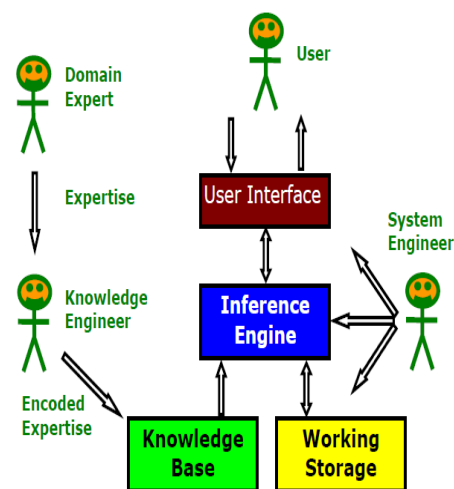


Figure 5. Components of Expert system

The Fig 5. above shows a diagrammatic representation of an expert system, considering the research in view, the students visiting the site in view of getting career guidance are the user, I, the developer is both the knowledge engineer and system engineer. The website interface serves as the user interface. The inference engine is the PHO driven function that works on the input of the user through the answers to the quiz taken, the knowledge base and working storage are both stored in the database.

**ii. Justifications of the New System**

In light of the limitations stated above, it is expedient that an online career guidance system be made available for the Nigerian students. Here are some of the inherent advantages:

- A web based career guidance system promises to be available and accessible by students at any time, any day and at their convenience (just a click away).
- This information system can serve as a complimentary tool for real life counselors.
- The system intends to be tailored for Nigerian students.

**iii. Methodology.**

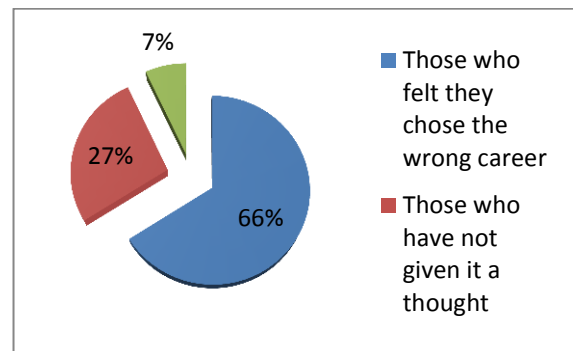
**Investigations**

In 2007, a study was done to evaluate how well professionals' are fulfilled or contented with the kind of career they are presently into, 314 professionals were interviewed. Those interviewed were over 35years of age and from 16 different professions around Benin city. The results are represented in Table 3.1 and Fig. 3.6 here below.

S/ N	Opinion	Number And Percentage
1	Those who felt they chose the wrong career	207(66%)
2	Those who have not given it a thought	84(27%)
3	Those certain they chose right	23(7%)

**Table 1.** Extent of Satisfaction with Vocation

The table above shows the tabular result of the statistics taken, it shows that very few people get to choose the right career. Hence the need for this research work.



**Figure 6.** Pie Chart showing the extent of satisfaction with vocation.

As depicted above in Table 1 and Fig. 6, merely 7% of survey participants were pleased with the tasks and nature of their vocation, 66% were not satisfied. This survey established that there is a discrepancy between the careers most secondary school leavers choose and the ones of their natural interest. ( Ojenge & Muchemi, 2013)

In order to design and implement a functional web based career guidance system, the following approaches will be used.

- Understand fully what the research is about and what is required of the proposed system , define the scope of the research
  - Study the existing manual system and draft out a way of computerizing an improved manual system.
  - Designing the web interface using HTML and CSS.
  - Creating a database for the research using WAMP
  - Designing the career quiz page
  - Linking the page with the database
- Bottom-Top methodology was used in designing this research

**iv. Data Collection.**

The data used in formulating the career quiz for this research was obtained by interviewing career counselors and adaptation of career questionnaires.

At the course of testing this system 20 students actually registered on the web site, providing the following information: First Name, Last Name, Email address, Phone number, State of origin, Date of Birth and Educational status. Below is a table that captures where the information is stored in the database

student_id	date	fname	lname	pass	email	gender	primary	junior	senior	state	today	bmonth	byear	phone
1	1-21-1-2014 8:00:11 AM	Jesus	Christ	827cc0ee0e705e4c34a028194a7b70xx@yy.zz		Male	Yes	Yes	Yes	FCT	20	1	2014	1234567890
2	2-21-1-2014 1:01:42 AM	Huly	Spint	af3ae20f5ae7c23d014a07a0e0f	ahes@yade.com	Male	Yes	Yes	Yes	FCT	20	1	2014	103245
3	3-23-1-2014 10:10:44 AM	Ayo	Jash	a950e41c26f9381694400c229e500	omokore.ayode@gmail.com	Male	Yes	Yes	Yes	ADAMAWA	10	11	1997	0806742495
4	4-27-1-2014 8:08:23 AM	Isaac	ayobesomolore@gmail.com	af3ae20f5ae7c23d014a07a0e0f	ayobesomolore@gmail.com	Male	Yes	NO	NO	BAVELSA	10	8	1997	0806742495
5	5-12-3-2014 12:12:37 PM	John	Omokore	a950e41c26f9381694400c229e500	omokore.phn@gmail.com	Male	NO	NO	Yes	XOGG	15	10	1944	0803941236
6	6-12-3-2014 2:21:29 PM	Isidan	oludayo	a950e41c26f9381694400c229e500	oludayo@gmail.com	Female	NO	NO	Yes	XIWARA	15	1	1997	0810022935

**Table 2.** A Database Capture of the Data Collected From Students

The above table shows the phpa dmin database capture of the data collected and managed by the system. This data are stored and will be made available at the profile of the student, this will be shown later on in this report

### v. The Proposed Designed System

The development of career guidance and counseling system lies on one of the roots of expert system which is also one of the major roots in expert systems called ‘cognitive science’ i.e. the area of human information processing.

The study of cognition is very important due to the fact that the human expert has to be available for the knowledge engineer to encode his knowledge into the programs so as to make the computer emulate the human. In the case of this particular research the knowledge was acquired from the human experts (career counselors) by the means of interview with them.

### Input Design

The input of this system from the user point of view is basically his actions on the pages of the site which make up the system, these pages will be implemented by encoding them with HTML (Hyper Text Markup Language) and the page layout and design done with CSS (cascade style sheet). The user will interact with the system by clicking on menus an hyperlinks as well as selecting the answers on the quiz page, the quiz answers will be implemented using radio buttons whereby only one option out of the four (4) can be picked.

### Storage Design

The proposed system will have a fully dynamic and functional database. The database will be created using WAMP and queried using SQL. The following data about the student will be collected and stored in the database:

1. First Name (Input type= Text)
2. Last Name (Input type= Text)
3. Email address (Input type= Text)
4. Password (Input type= Password)
5. State of origin (Input type= Option)
6. Phone number (Input type= Text)
7. Date of Birth (Input type= Option)
8. Gender (Input type= Radio)
9. Educational status (Input type= Checkbox)

The quiz questions also will be stored in the database and subsequently retrieved using PHP and SQL commands, the result of the quiz will also be stored in the database and can be retrieved any time the student revisits the site. A student can take the quiz several times and the result of each quiz will be stored for future use or reference.

## III. RESULTS AND DISCUSSION

The output of the system is typically the result of the quiz and the accompanying guidance tips that comes with the quiz result.

## The System Main Menu Implementation

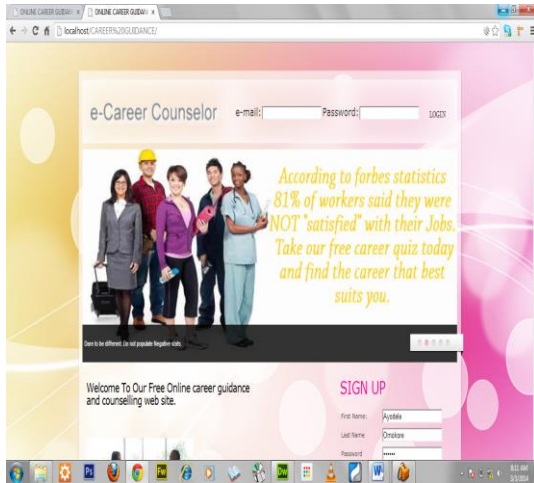


Figure 7 The Websites Home page



Figure 8 The Websites Sign Up Page

The figure 7 and 8 above shows a top and bottom screenshot of the website home page, the homepage takes after popular sites such as facebook in that it has both the LOG IN and SIGN UP part on the same page, the makes it more attractive for users to SIGN UP and also allows them LOG IN without having to leave the page. The Home Page has a JavaScript image slider plugged in which provides an overview of the functions of the site in a captivating graphical format.

## Results

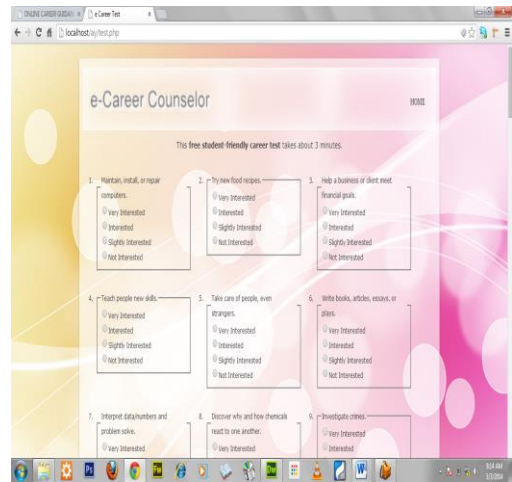


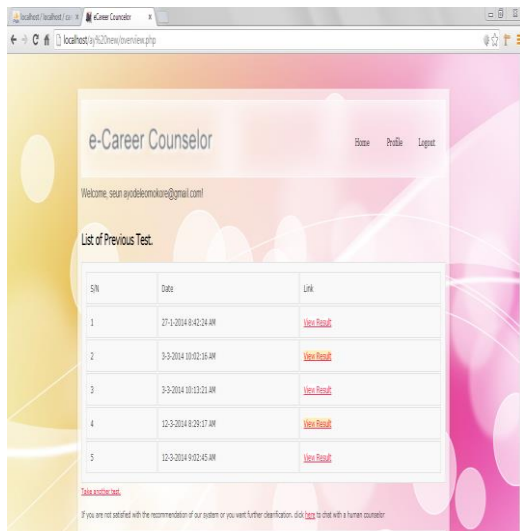
Figure 9. Cross section of the quiz page:



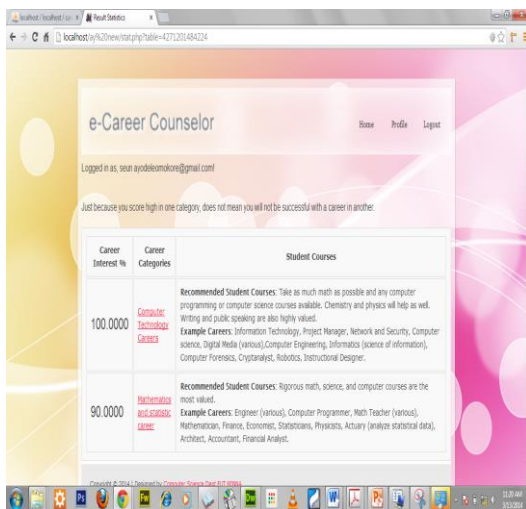
Figure 10. Bottom section of the quiz page

The figure 9 above shows the first top part of the quiz/test page. The top of the page gives an estimate of the amount of time it will take to complete the test. It also enjoins the students to take the test truthfully and seriously, because it is their input that will be used to generate the counselling section. The figure 8.2 above shows the bottom part of the quiz/test page and the latter part of the page shows the SUBMIT BUTTON





**Figure 9.** A Landing Page for An Already Registered Student



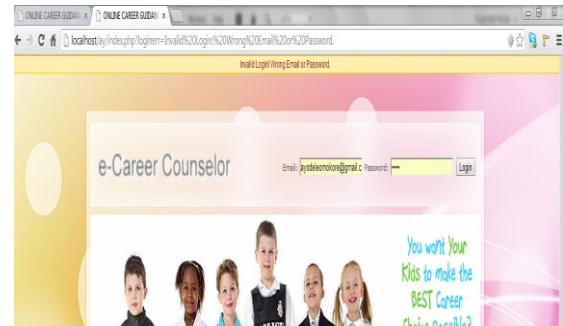
**Figure 10** An Example of a Quiz Result

Fig 11 is a landing page for an already registered student showing that his previous test records can be viewed or he/she can take another test The figure 12 above shows the landing page and also the HOME PAGE for a user who is logged into the system. It outlines the previous tests taken by the user and also has a link to LOGOUT and to view the user profile. The profile page shows information inputted by the user during registration. It also has a link for the user to take a new test. At the top left corner the user sees his or her name and also sees the email address he or she logged in with.

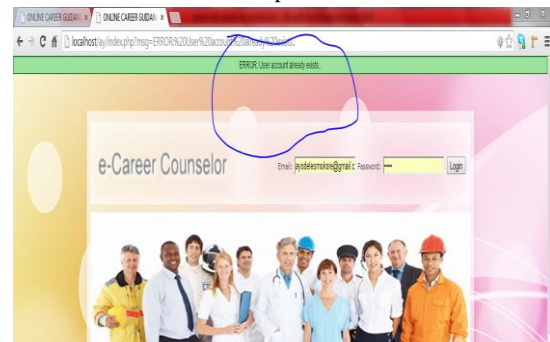
Fig 11 above shows the test/quiz result of a user. It shows a tabular representation of the result in 3

tabs. The first shows the career interest advised by the system shown in percentage, the 2<sup>nd</sup> tab shows the career category, the 3<sup>rd</sup> shows the recommendations and example career advised by the system.

### Query Subsystem Implementation



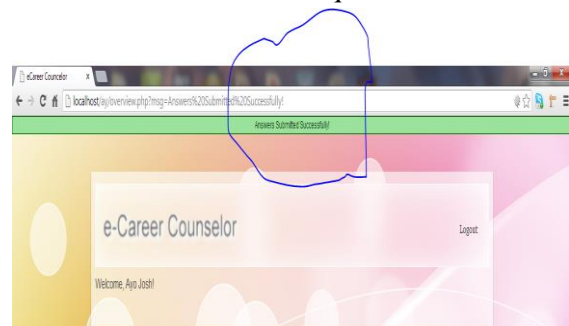
**Figure 11.** What happens when wrong login information is input.



**Figure 12.** The error report generated when a user who is already registered tries to register again

The fig 11 above shows the error message displayed when a wrong email or password is entered by the user. The error report is kept ambiguous so that malicious visitors cannot second guess what LOG IN criteria they are getting wrong

The 12 above shows the error report generated when a user tries to register with an email that is already in use by another user, the email address is the primary key of user records and it is unique.



**Figure 13.** The Alert Shown When An Already Existing Member Takes Another Test.

Fig 13 is an alert generated by PHP. It shows that the answers have been submitted successfully and it directs the user to click the last link on the list of previous results of tests taken.

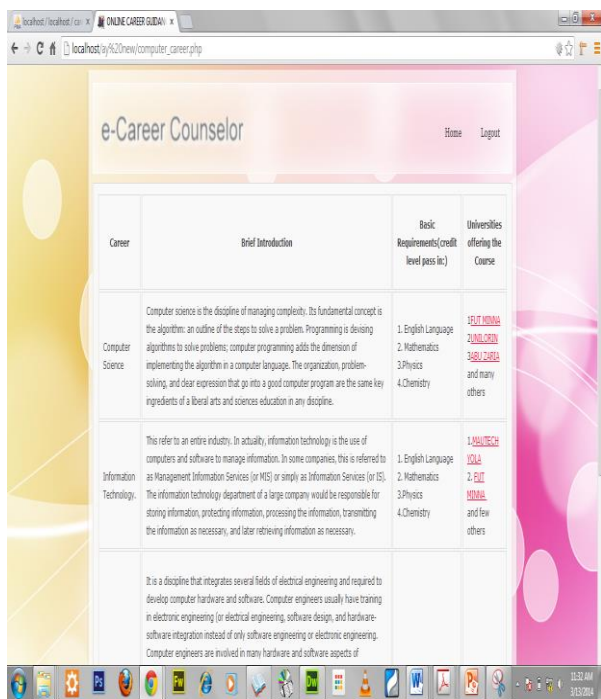


Figure 14. A summary of the careers under the Computer

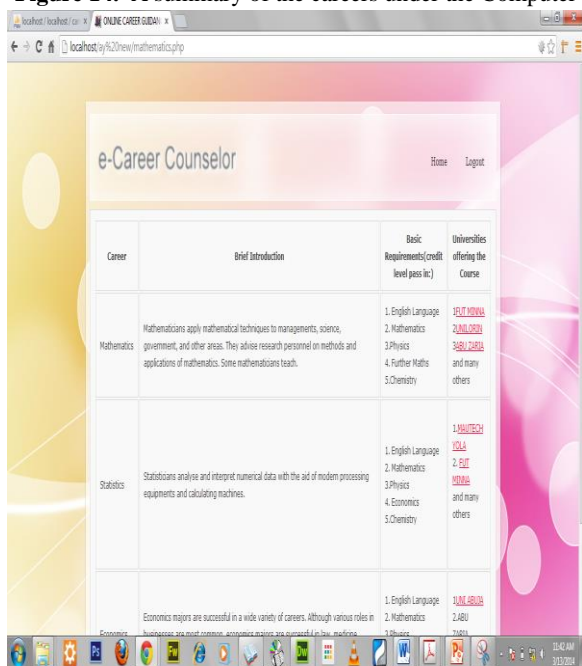


Figure 15. Mathematics career technology categories

The fig 14 above shows the summary for mathematics career path. The summary comprises of 4 rows, row 1 show the careers, row 2 shows a brief introduction of what the career is all about, this helps students understand what indeed the career is about, the 3<sup>rd</sup> row shows Basic requirement that a student will need

to gain admission into the universities offering the course. The 4<sup>th</sup> row shows some universities offering the course presently in Nigeria.

The fig 15 above shows the summary for mathematics career path. The summary comprises of 4 rows, row 1 show the careers, row 2 shows a brief introduction of what the career is all about, this helps students understand what indeed the career is about, the 3<sup>rd</sup> row shows Basic requirement that a student will need to gain admission into the universities offering the course. The 4<sup>th</sup> row shows some universities offering the course presently in Nigeria.

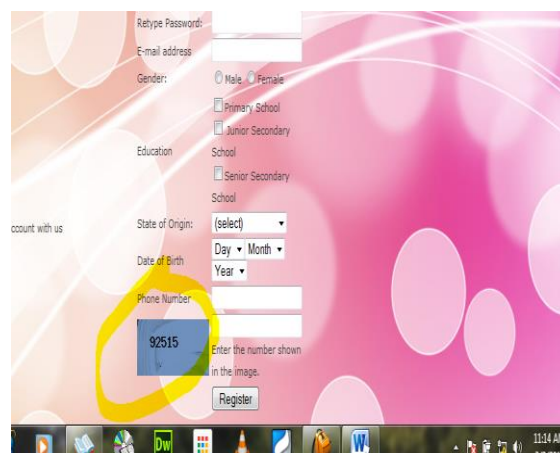


Figure 16. This Shows The “Captcha” Functionality In The Registration Aspect Reloaded

The above fig. 16 shows the “captcha” functionality which helps to ensure that only humans register, there are so many malicious viruses and automated online applications which may want to overload the system by registering themselves sporadically with the intent of causing an overload of the server.

Career	Brief Introduction	Basic Requirements (credit level pass in:)	Universities offering the Course
Accountant	An accountant performs financial functions related to the collection, accurate recording, analysis and presentation of a business, organization or company's financial operations. The accountant usually has a variety of administrative roles within a company's operations. In a smaller business, an accountant's role may consist of primarily financial data collection, entry and report generation. Middle to larger sized companies may utilize an accountant as an adviser and financial interpreter, who may present the company's financial data to people within and outside of the business. Generally, the accountant can also deal with third parties, such as vendors, customers and financial institutions.	1. English Language 2. Mathematics 3. Accounting 4. Commerce	1. UNI ABUJA 2. UNIL OSHO 3. ABU DAQUA and many others
Business Administrator	Business administration is a wide field that incorporates many types of management positions. From major corporations to independent businesses, every operation needs skilled administrators in order to succeed. Motivated, organized personalities will thrive in business, where environments are often high-powered. Knowing how to deal with stress will help you keep your cool—and keep your business in the black.	1. English Language 2. Mathematics 3. Commerce 4. Accounting	1. UNI ABUJA 2. UNI BEN 3. TBSU LAFI and many others
Project Management	A project manager is the person who has the overall responsibility for the successful initiation, planning, design, execution, monitoring, controlling and closure of a project. The job title is used in construction, petrochemical, architectural, information technology and many different industries that produce products and services. The project manager must have a combination of skills including an ability to ask	1. English Language 2. Mathematics 3. Physics	1. FGT NIGER 2. LAUTECH 3. UNIL OSHO

Figure 17. The summary for Business Career Category

The fig 17 above shows the summary for business career path. The summary comprises of 4 rows, row 1 show the careers, row 2 shows a brief introduction of what the career is all about, this helps students understand what indeed the career is about, the 3rd row shows Basic requirement that a student will need to gain admission into the universities offering the course. The 4th row shows some universities offering the course presently in Nigeria.

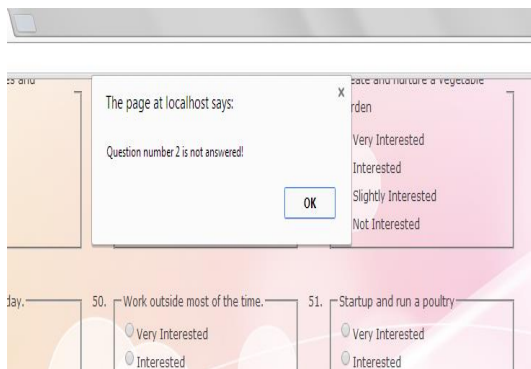


Figure 18 A Javascript alert

The fig 18 above shows a javascript that alerts the user that some questions are yet to be answered. It also shows specifically the question number yet to be answered. This helps the user avoid not answering some questions mistakenly. The system is designed in such a way that all questions must be answered for an accurate result to be gotten.

## System Testing and Integration

The method of implementation for this research is Parallel implementation. This means the system is to be used in conjunction with the already existing manual counseling program. The application seeks to complement the existing manual system and can even be used as a tool for counselors. It is intended to be used as a standalone system for students and schools who don't have access to a human career guide or counselor.

Since the system is a web based system it can be accessed by the means of any device that has a valid web browser and a functional internet connection from anywhere in the globe.

The system was tested by 20 pre tertiary institution students, they registered, took the career quiz and they did agree with the result of the system.

The system can be integrated into secondary school website or students are encouraged to visit the web page by their teachers, parents or career counselor in school.

The system does not intend to replace totally the existing manual system, but serve those who do not have access to the manual system and to serve as a complementary tool for the manual system

## Summary

This research work 'design and implementation of a web based career guidance information system' used study career guidance as a tool to helping students choose a proper career path, design a way in which the manual system of guidance can be computerized and to deploy a website that will serve as a virtual career guide and an advisor to students on what career path to take and the relevant courses to offer in order to succeed in the career path.

## Findings and Discussion

During the course of the research, the manual career guidance system was critically studied and some shortcomings were seen, places of improvement were discovered and a space that an online system can fit

into was exposed. We saw that an online career guidance system will prove really helpful in our present day, nearly everything is done online these days, and the age group of those that this research scope covers spends a good number of their time on the web doing less productive things, it is imperative and necessary that they be encouraged to engage in productive activities such as determining the best career possible for them.

### Suggestions for Further Work

It is suggested that the scope of this research be widened if the time and resources permit.

Career guidance is an continuous and never ending exercise. It can prove very useful not only for pre university students but also for first degree graduates, masters' students and even prospective doctorate students as well.

### Recommendation

It is highly recommended that this research be improved upon and implemented as this will be very useful to the society at large. A society filled with citizens who are fulfilled with what they do for a living can go a long way in improving general health and reduce violence rate.

A live and functional chat system can also be included to help students who are not clear with the recommendation given by the system.

## IV. CONCLUSION

In this research work we have been able to explore the problems encountered by the existing manual system, to design a web based career guidance system that will improve upon the existing manual/ human career guide and to implement a web based application that will help young ones get a good understanding of themselves and advise them on the career path that best suits them. And also serve as a complementary tool for career guide and counselors. In this research we have studied career guidance, designed a functional web application and implemented it with some successful test results.

## V. REFERENCES

- [1] Alhassan, J. K. (2013). Course Material On Expert Systems, Unpublished.
- [2] Atch. T., & Bowers. J (2005). The ASCA National Model: A Model For School Counseling Programs.
- [3] Bukoye, R.O. (2006). Career Guidance For Basic And Secondary School Education (2nd ED.).
- [4] Cascading Style Sheets. In Wikipedia (January, 2014) Retrieved From [Http://En.Wikipedia.Org/Wiki/CSS\\_Style\\_Sheets](http://en.wikipedia.org/wiki/CSS_Style_Sheets).
- [5] Dawn, R. M. (2012). "What Is Career Guidance" Retrieved From [Http://Careerplanning.About.Com/Od/Careerchoicechan/F/Career-Guidance.Htm](http://careerplanning.about.com/od/careerchoicechan/F/Career-Guidance.Htm).
- [6] Design. In Wikipedia (January, 2014) Retrieved From [Http://En.Wikipedia.Org/Wiki/Design](http://en.wikipedia.org/wiki/Design).
- [7] Gladding, S.T. (2004). Counseling: A Comprehensive Profession (5th Ed.). Upper Saddle River, NJ: Merrill/Prentice Hall. O 6-7.
- [8] Glen, S. Notebook On Ethics, Legal Issues, And Standards For Counselors.
- [9] Guidance & Counseling: Defining Guidance And Counseling And The Difference Between Them. (2009) Retrieved From [Http://Www.Tvtc.Gov.Sa/English/Trainingunits/Vocationalinstitutes/TVTS/Trainees/Pages/Directionguidance.aspx](http://www.tvtc.gov.sa/english/trainingunits/vocationalinstitutes/TVTS/Trainees/Pages/Directionguidance.aspx).
- [10] Hooley, T. (2012). "How The Internet Changed Career: Framing The Relationship Between Career Development And Online Technologies". Journal Of The National Institute For Career Education And Counseling (NICEC) 29: 3
- [11] Hooley, T., Watts, A. G., Sultana, R. G., & Neary, S. (2013). "The 'Blueprint' Framework For Career Management Skills: A Critical Exploration". British Journal Of Guidance & Counseling 41 (2): 117.
- [12] Hypertext Markup Language (HTML) (2014, March) Retrieved From [Http://Www.Mediahex.Com/Hypertext\\_Markup\\_Language\\_](http://www.mediahex.com/hypertext_markup_language_).
- [13] Information Systems. N.D. In Wikipedia (2014, January) Retrieved From [Http://En.Wikipedia.Org/Wiki/Information\\_Systems\\_\(Discipline\)](http://en.wikipedia.org/wiki/Information_Systems_(Discipline)).
- [14] Information Systems. In Wikipedia (2014, January) Retrieved From [Http://En.Wikipedia.Org/Wiki/Information\\_Systems](http://en.wikipedia.org/wiki/Information_Systems).
- [15] Introduction To System Analysis And Design. (2014, January) Retrieved From [Http://Zolotarev.Fd.Cvut.Cz/Sni/Ct?Act=Show,File,9725](http://zolotarev.fd.cvut.cz/sni/ct?act=show,file,9725).
- [16] Julia, F. (2014, January) The History Of Career Guidance Retrieved On January 23, 2014 From [Http://Www.Ehow.Com/Info\\_8172663\\_History-Career-Guidance.Html](http://www.ehow.com/info_8172663_history-career-guidance.html).
- [17] Margaret, R. (2007) "Implementation" Retrieved From [Http://Searchrm.Techtarget.Com/Definition/Implementation](http://searchrm.techtarget.com/definition/Implementation)
- [18] Mopelola, O. & Benjamin B. (2013) Career Guidance For Nigerian Students: Why Career Choice Is Becoming More Difficult. Retrieved From [Http://Cdnetng.Org/?Q=Node/4006](http://cdnetng.org/?Q=Node/4006).
- [19] OECD/The European Community, (2004) P. 10. Retrieved From [Http://Www.Dol.Govt.Nz/Publications/Research/45plus-Review/45plus-Lit-Review\\_12.Asp](http://www.dol.govt.nz/publications/research/45plus-review/45plus-lit-review_12.asp)
- [20] Ojenge, W & Muchemi, L. (2013) "Career Guidance Using Expert System Approach" Retrieved From [Https://Profiles.Uonbi.Ac.Ke/Lmuchemi/](https://profiles.uonbi.ac.ke/lmuchemi/)
- [21] Rachel, G. (2014) What Is Web Design? Retrieved From [Http://Www.Treefrog.Ca/What-Is-Web-Design/](http://www.treefrog.ca/what-is-web-design/).
- [22] Schillenberg, R. (2008). The New School Counselor: Strategies For Academic Achievement. MD Little Field Education.
- [23] Schimidt, T.J (2003) Counseling In School: Essential Service And Comprehensive Program (4th Ed.): Allyn & Bacon
- [24] Stephen, C. (2014, January) "What Is Javascript?" Retrieved From [Http://Javascript.About.Com/Od/Reference/P/Javascript.Htm](http://javascript.about.com/od/reference/p/javascript.htm).
- [25] Storey, Philip A. "Hypertext Markup Language (HTML)." Microsoft® Student 2009 [DVD]. Redmond, WA: Microsoft Corporation, 2008.
- [26] Ulrich & Eppinger (2000). Product Design & Development. Irwin McGraw-Hill. ISBN 0-07-229647-X.