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JTET

http://penerbit.uthm.edu.my/ojs/index.php/jtet ISSN 2229-8932 e-ISSN 2600-7932 Journal of Technical Education and Training

Planning and Designing Online Vocational Skill Showcasing Platform: From an Educational Perspective

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DOI: https://doi.org/10.30880/jtet.2021.13.01.003 Received 23rd December 2020; Accepted 15th January 2021; Available online 31st March 2021

Abstract: This paper identified emerging development in utilizing information technology towards the forceful dispersal of information relating to vocational skills. It focused on a significant challenge of generating funds from vocational skills. The paper justified the need for a system that provides relevant information relating to vocational skills to the learned and unlearned and generating income for those who possess the skills in a case study. The paper encapsulates a vis-a-vis oral interview and a focus group method addressing students of Obafemi Awolowo University (OAU), Ile-Ife, with dexterous vocational skills, as well as vocational workers at the vocational centers within the OAU community in order to know their views on showcasing their skills on a web platform. Overall data were collected from 176 respondents, with 40 students who have vocational skills responding, and the remaining 136 responses from the vocational workers who are not students. The analysis attests to the fact that it is crucial to have a platform that allows people to showcase their potentials, vocational skills, dexterity, and talents.

Keywords: Educational planning, vocational skills, ICT, education, design specification

1. Introduction

Today, educational planning has become a global activity that both capitalist and socialist nations devote their efforts and resources considerably (Lynch and Tason, 1984). The overarching goal is to foster quality education through learning and human capacity development for skill acquisition (through vocational education), gainful employment, and solving problems. Additionally, it improves functional and analytical ability that proffers opportunities for individuals and groups to achieve greater access to labor markets and livelihoods (Bala and Singhal, 2019; Caleb et al., 2019). However, planning for quality education that facilitates capacity development for skill acquisition and management requires the effective use of technology in the twenty-first (21st) century. Suppose people's acquired and vocational skills are anything to promote in society. In that case, an appropriate platform to showcase these skills is inevitable with the effective use of technology. Rather than leaving people with vocational skills to be limited to showcasing their skills through one-on-one contact and familiarization of persons, educational planners can embrace the use of information and communication technology (ICT) to plan further and design a platform that showcases vocational skills for patronage.

Therefore, as a tool, ICT has engendered better services by making systems, businesses, and operations more pervasive and productive in today's society (Gambo et al., 2018). This can be leveraged to ensure a qualitative showcase platform within the ambit of vocational skill. The emergence of ICT, coupled with the current need to develop a

knowledge-based society, has moved people to master ICT skills for their daily activities and services (Kong, 2007; 2008). Several individuals with vocational skills in the 21st century can demonstrate the capability to use ICT to communicate their patronage skills and work collaboratively. ICT, in this context, is an essential tool that promotes learning, availability, accessibility, and transparency while projecting people with vocational skills into a global knowledge and service delivery society that requires a high level of ICT skill for success in everyday pursuits (Kong, 2009). Moreover, ICT acts as a bridge to establish excellent engagement, thereby leading to achievement and satisfaction (Gibson, 2002; Gülbahar, 2007; Nance, 2003).

With ICT and organizational intervention, acquiring, sharing, and creating Skills have become an inevitable part of organizational development (Pahl, 2003; Wakefield, 2005; Lin et al., 2005). A Skill is the ability to be mastered in a particular field, which is also the learned power of doing something competently. It is developed through training and experience. Not only is a skill useful, but it can also be used as a job. A vocational skill refers to an occupation that a person gets involved in within a given period. In this case, the individual gains some recognition as an expert through experience (Nwosu and Micah, 2017). A vocational skill showcases are competency-based tests carried out in a work situation or part of a work process designed, implemented, and accessed by representatives from a work environment (Kostoglou et al., 2014). Showcasing one's skills can be challenging if not given the attention and platform to do so.

Having observed many ICT platforms that allow academics to show off their exceptional abilities, vocational workers must focus on elevating entrepreneurial skills in society and avert the unemployment rate. As Nigeria looks forward to becoming a nation with a robust and diversified economy, the development and awareness for vocational skills are widely spread across various fields. On the one hand, knowledge, which is a crucial factor in global economic growth, is a significant catalyst for sustainable economic development. On the other hand, skills– being the ability to produce, select, adapt, commercialize, and use knowledge– are also critical for sustained economic growth and improved living standards.

Just as the accelerated development of ICT has made knowledge globally available, there is the need for a system that would showcase the use and application of knowledge through the skills acquired. This justifies the requirement for an online platform to showcase these skills. Thus, making highly-qualified individuals who developed a broad array of knowledge over time, skills, competencies, and values will be more significant in the global labor market (Udoh and Akpan, 2014). Going to the report of the World Employment and Social Outlook: Trends 2018, the total number of unemployed persons exceeds one hundred and ninety-two (192) million, and the majority of them are young people (Kuhn et al., 2018, Osalar, 2013). In Africa alone, the unemployment rate is on the high side despite the many talented people dexterous in several skills. This challenge keeps rising as most people with vocational skills continue to rely on white-collar jobs. Some of these people are graduates, while others have basic education. It is even true that some of them have potential skills that can earn them good money.

Unfortunately, due to unemployment and frustration, some of them resought to illegal activities in society, such as: robbery, community thugs, and other criminal activities that affect the economy negatively. Notably, the situation in Africa contradicts the evidence observed by Jean (2003), that better qualifications and skills protect individuals from unemployment. Even though the statement sounds true in theory, it is not the case in reality. From a macro-economic viewpoint, people with higher skills attract better overall performances and positively impact social capital.

Therefore, this paper aims to provide a working solution that reduces the unemployment rate by employing and exploring people's potential and vocational skills. The goal is to justify the need for a system that showcases vocational skills using ICT in resemblance to the existing academic platforms that allow academics to publish their research work after a breakthrough in their field of interest. The specific objective is to plan and design a system that would enable people with vocational skills, majorly youths, to showcase their provess in the respective areas of specialization, and then connect them with people interested in the skills and are willing to exchange money for them.

The rest of this paper is presented summarily with a background on related work. After that, we presented the methodological design approaches and design specifications. Next is the description of the system implementation, system testing procedures, results, and discussions. Finally, we concluded the paper and also provided some future works and implications of the system developed.

2. Background

Planning educational programs (Premi, 1968; Sava, 2012) is not limited to the classroom's confines, teaching, and research alone (Amado, 2019; Silwal and Bhatta, 2017; Agrawal, 2013; Lamsal, 2012). It can also be extended to acquiring skills, vocational training, and flexibility to leverage ICT applications. Vocational training aims at promoting knowledge, skills and attitudes, professional and technical know-how, and the social readiness required for working (Estonian example, 2020). From the literature, educational courses, workshops, and seminars are great ways to develop skills quickly. Having skills in one way or the other reduces poverty and equips young people to find decent jobs (Maigida et al., 2013; Uddin, 2013; Ekong and Ekong, 2016; Anih et al., 2019; Andriušaitienė, 2020). It is one way to be gainfully employed and establish self-esteem and confidence in society. However, platforms or systems that allow people to showcase their vocational skills, potentials, and talents are missing.

Furthermore, research focusing on career development over the years exists in the literature. An example includes Izzo and Lamb (2003), Oziegbe-Asikhia (2008), Turner et al. (2010), Ellerton et al. (2014), Rhee et al. (2016), Ojo (2016),

and Vondracek et al., (2019). Despite these research efforts, the ICT tool's choice makes the system(s) suffer scalability problems. Besides, considerations on how to showcase and promote the skills developed were a significant setback.

In Kalva (2013), an automated system that allows a student to upload a resume was developed. The system ranks the student's resume based on skills and experiences gathered concerning a job. However, the system does not give the student room to upload vocational skills, thereby limiting its effectiveness, especially on people who only possess vocational skills. Additionally, Schober et al., (2014) developed a system to connect vocational education with digital media through a web-based learning platform to provide teaching and learning material for people. Nevertheless, the system only provides a platform for learning skills. However, it does not encourage those who already possess the skills to make money from their platform skills.

Gambo et al. (2018) developed a system that provides relevant information and guidance on vocational career choice that is favorable in the market and has significant economic value. The system provides information on where the vocational choice can be undertaken and suggests vocational choices to users based on John Holland's vocational choices theory. As observed by Nauta (2010), John Holland's theory established that people seek for and enter work situations that allow them to "exercise their skills and abilities, express their attitudes and values, and take on agreeable problems and roles" (Holland (1997; 1959; 1973; 1985). However, with the high ratio of people interested in vocational skills, a system or platform that will help showcase these skills for productivity, employability, income generation, and satisfaction becomes essential. Therefore, there is a need for a system that will enable people (especially youths) to tell the world about the skills they have that they can offer in exchange for money. In this case, people who need them can always hire them; this eventually leads to employment.

3. Methodology

Two (2) qualitative research methods were used to collect information for the online platform's planning and design. These include a face-to-face oral interview and a focus group discussion. The information gathered provided insight into respondents' perception of ICT use in creating awareness and promoting patronage on their various skills and services. The target respondents include twenty-five (25) undergraduates and fifteen (15) postgraduate students with vocational skills, as well as vocational workers (individuals and groups) at the vocational centers within the Obafemi Awolowo University (OAU) community (notably, the OAU Central Market Center), Ile-Ife, Nigeria.

We administered the face-to-face oral interview to selected students of OAU. They have one skill or the other to know their views on showcasing their web platform skills. The students were randomly selected based on the purposive random technique. The focus group discussion approach was used at the OAU Central Market Center. This approach took the form of a face-to-face interview with a small and reasonably homogeneous group to gather real-life data (Parker & Tritter, 2006).

The questions administered at the focus group discussion entail understanding frustration behind the lack of fulfilment and satisfaction despite having a vocational skill. Also, questions on reasons why most people with vocational skills are not patronized were raised. In the three sessions of focus group discussions, each comprised participants with different skills from the different shop centers. The focus group discussion focused on knowing how best vocational skills can be showcased to promote patronage, support advertisement, and increase visibility using ICT.

At this point, the different questions asked during the focus group discussion were meant to encourage the participants to share their views. Thus, the participants shared their views on - (i) how they feel having a vocational skill and yet not being able to make use of it as desired; and (ii) how ICT can be harnessed to provide a suitable platform for showcasing their skills. The participants gave their different viewpoints on how an alternative platform driven by ICT can be of assistance.

Moreover, a total of one hundred and fourteen (114) potential participants were randomly selected across seven (7) selected vocational centers at the OAU Central Market Centre. Out of the one hundred and fourteen (114) participants invited, seventy-six (76) participated, as described in Table 1.

| Categories of Focus group | No. of Focus Groups | No. of Potential Participants Invited from Each Center (a) | No. of Responded participants from Each Center (b) | Response Rate (b/a) |
|--|---------------------------|---|--|------------------------|
| Hair Styling and Beauty Services | 1 | 40 | 28 | 70% |
| Tailoring and Fashion Designing Skills | 1 | 55 | 44 | 80% |
| Photography Skills | 1 | 13 | 10 | 77% |
| Automobile Servicing skills | 1 | 11 | 10 | 91% |
| Computer and IT skills | 1 | 12 | 12 | 100% |
| Carpentry Skills | 1 | 10 | 10 | 100% |
| Catering Skills | 1 | 25 | 22 | 88% |
| Total | 7 | 166 | 136 | 82% |

 Table 1 - Description of Participation during the Focus Group Discussions

Overall, data were collected from one hundred and seventy-six (176) respondents with forty (40) students who possess vocational skills. The remaining one hundred and thirty-six (136) responses were from the vocational workers who are not students.

3.1 Design Specification

The online vocational skill showcasing platform (OVSSP) began with articulating a conceptual framework, as shown in Figure 1. As Figure 1 reflects, educational planning focused on quality education to achieve the Millennium Development Goal (MDG). Quality education can be made possible through teaching, learning, capacity building, and research and development. As Figure 1 shows, our emphasis is on capacity building, which can be achieved through vocational training, skill acquisition, and sustainability mentoring. We identified some examples of vocational skills and the primary goals of learning or having these skills. Also, we identified the possibility of ICT innovation to promote other vocational skills.

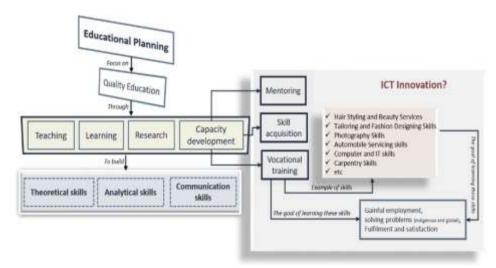


Fig. 1 - Conceptual framework showing the key focus of educational planning and the need for ICT innovations for vocational skills

The participants for the development of the OVSSP involved two purposive selected academics (one from the Department of Educational Management and the other from the Department of Computer Science and Engineering, OAU). Also, one postgraduate student from the Department of Educational Management, two students from the Department of Computer Science and Engineering, OAU, participated in the design and implementation of the OVSSP. Precisely, the development process followed the change-driven software development technique (Breu, 2010; Bergmann et al., 2012). The technique involves the eliciting and analysis of users' requirements. Nevertheless, the participants' information during the face-to-face oral interview and focus group discussion was used to represent the system's functional requirements.

Additionally, the functional requirements were transformed into graphics design to serve as a blueprint and vehicle for communicating with the participants. Table 2 shows the functional requirements for developing OVSSP. However, it includes a user authentication system before full access is granted.

| S/N | Specification |
|-----|--|
| 1. | Username and password are used as a means of authentication. |
| 2. | The system should have an administrative and user interface accessible via secure authentication to monitor all the system's operations. |
| 3. | Users can register as either employers or skilled owners, after which they are given access to update their profile. |
| 4. | Registered users are authenticated into the system and given access based on what they register as. |

- 5. Users registered as employers can decide to search and hire any skill based on their choice.
- 6. The system also includes a rating functionality such that skill owners can be rated to improve service delivery and promote patronage.
- 7. The system administrator can add, update, and delete a vocational skill or registered users manually.
- 8. The system should have excellent data indexing to enhance the search operation.

At the design stage, the co-authors from the Department of Computer Science and Engineering (author 3 and 4) performed the system analysis and design activities for implementing the system. The first and second authors provided the domain knowledge expertise during the design stage to ensure conformance to what obtains in practice from an educational planning perspective. The Umbrello and Star Unified Modelling Language (StarUML) design tools were used to describe the relationship between the users and the system operations.

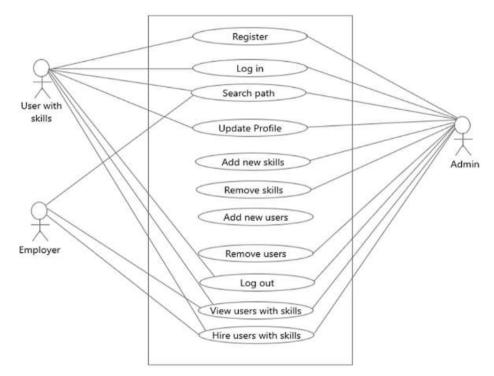


Fig. 2 - Use case diagram of the vocational skill showcase system

On the one hand, Figure 2 shows the use case diagram, which was used to design the system's functional requirements and corrected as they are reviewed. The use case diagrams are usually referred to as behavior diagrams used to describe a set of actions (use cases) that some systems (subject) should or can perform with one or more external users of the system (actors). Also, the use case is meant to provide observable and valuable results to the system's actors or other stakeholders. In specifying the design, a three-tier architecture was used, as shown in Figure 3. It depicts the structure of the system. Figure 3 comprises a standard Graphical User Interface (GUI) previewed on a web browser application to access the functionality of the system applications. The browser transmits the user's request to the web server, sending the requests using the HTTP protocol. The database used in the development of OVSSP is the Mongo DB, accessed through Node is, used for the server-side coding. Next, the webserver with the possible returns from the database server generated the HTML pages that are returned to the user.

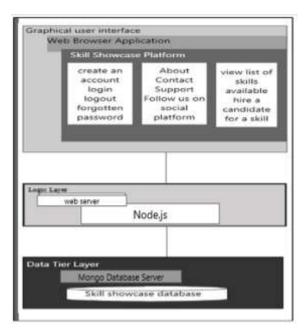


Fig. 3 - System architecture for implementing OVSSP

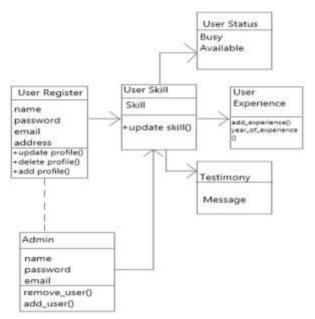


Fig. 4 - Class diagram of OVSSP

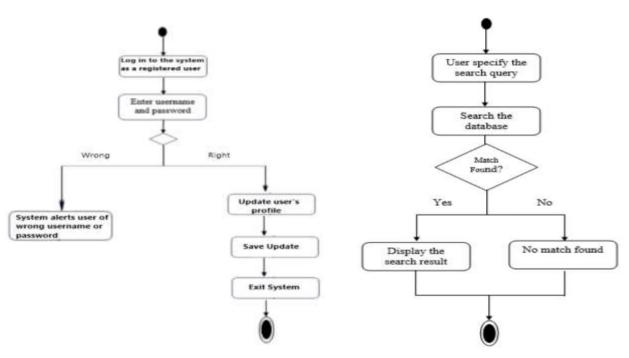


Fig. 5 - Activity diagram for the OVSSP

Fig. 6 - Activity diagram for Search in the system

On the other hand, Figure 4 depicts the class diagram, which explains the various classes of activities and relationships for the OVSSP. It stated the class names, the methods, and attributes of the classes used for the system and the relationship among these classes. In Figure 5, the activity diagram was used to show the flow of activity performed on the system. At the initial stage, the registered user logs into the system with the correct details; incorrect details would trigger an alert and prompt the user to re-enter the correct details. If the user is registered as an employer, then he/she can hire a skilled owner or search for a service based on his/her preference. However, suppose the user is registered as a skilled owner. In that case, he can update his profile, showcase new products of his skills, and get employed and paid for his skills after delivering.

Figure 6 depicts the activity diagram that indicates how the user specifies the search query of the skills he/she wants to search. The system searches the database and checks if there is a match in the keyword used and the database's content. If a match is found, then the result is returned to the user.

4. System Implementation

After the design specification, the programming phase commenced. At this point, the co-authors from the Department of Computer Science and Engineering (author 3 and 4) implemented the system using the following web technologies, Hypertext Markup Language (HTML), Cascaded style sheet (CSS), Javascript, BootStrap, Node.js for the client-side and MongoDB for the database. Alpha and Beta testing techniques were used to test the system involving some of the participants discussed in section 3. The implementation was carried out on a 64-bit Windows 10 Pro Operating System (OS) with an Intel(R) Core™ i7-2670QM CPU @ 2.20 GHz processor and 12GB RAM. The system was divided into two segments: the Front end and the Back end. While the Frontend consists of the User Interface (UI) and Responsiveness, the Backend consists of Server-side programming and database. Each segment was developed using the necessary web technologies which enable smooth interaction with the system. The User Interface (UI) was designed with Hypertext Markup Language (HTML), Cascading Style Sheet (CSS) was used for the description of the written document in a markup language, Bootstrap for the Responsiveness and Javascript, which is a client-side programming language was used to make the web page more dynamic and interactive.

The system can be accessed via the standard Internet browser such as Internet Explorer, Google Chrome, Opera Mini, Mozilla, and to mention but a few, for the system's actual interactions. Server-side programming is used to describe the codes or scripts that are executed by the system web server. Node.js is used for the implementation of the server end of the system. The sharing of information with users on the internet is made possible by the webserver. It acts as an intermediary between the client and the database. We ensured a user-friendly interface, as shown in Figures 7, 8, 9, and 10, respectively, that can be used to navigate through the OVSSP. The navigation begins from the Home Page in Figure 7. It is the first page that the user sees when the system is accessed. The page gives a brief description of the system. It also consists of the about, contact, and services link. The sign-in and sign-up links are also included on the home page.

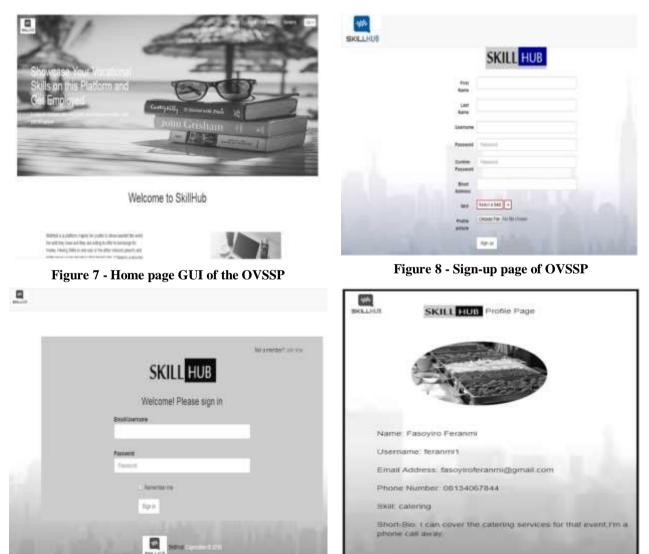


Fig. 9 - Sign-in page of OVSSP

Fig. 10 - Picture of profile page GUI

On the one hand, the user uses the sign-up link to register. It provides the form which collects information about the user and stores it in the database (see Figure 8). On the other hand, the sign-in page is used for authenticating users into the system. Furthermore, only registered users can be successfully validated and granted access to the system. Credentials like username and password used during registration are required at the sign-in page (see Figure 9).

Figure 10 shows the profile page. On this page, the registered user can edit his or her profile. By editing, we mean changing a profile picture, changing the password, changing the mobile number, and other information. Next, Figure 11 shows the page where the skills are displayed for awareness, advertisement, marketing, and contacts. The skill page is a significant contribution to this paper. It contains the vocational skills, talent, and potentials each user has registered alongside a captivating statement.

Moreover, Figure 11 identifies skills like fashion design, bead making, catering and baking, hairstylist and barbing, shoe design, makeup, and gele. On clicking the 'Hire button' on the home page, the user is taken to this page displaying all skill owners with different skills. The skills are also categorized on this page (that is, there is a category for all users with skill A and another category for all users with skill B) to make navigation and search of skills efficient and effective. A search path is also included on this page to enable end-users to easily search for any skill of their choice depending on the skill they are planning to acquire.

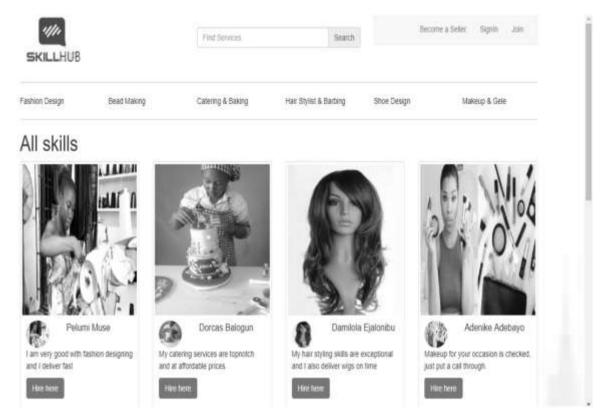


Fig. 11 - Screenshot of the skill page GUI

5. Results and Discussion

To affirm that our implementation meets the expected result and functional requirements, the system was tested using alpha and beta testing. The system's components and services' functionality were evaluated to ensure that the developed system is defect-free. Alpha testing was carried out in every phase of the system development to ensure that all the modules function as expected. Bugs were encountered in some modules, and they were fixed before proceeding to the next module of the system. Beta testing was carried out by allowing users to test and rate the system based on the criteria in Table 3. We gave the system to ten (10) users to use and rate the application based on the criteria. The rating scale of rating is 1-10; 1 is the worst, and 10 is the best. The results obtained from the ten (10) users are shown in Table 4.

| Name | Description Based on Expectations |
|-----------------|---|
| Clarity | This measures how well the user can interact with the system by communicating meaning and function with ease of use and efficiency. |
| Attractiveness | This measures how pleasing or appealing the user-interface is to the user. |
| Responsiveness | This measures how quickly the system loads to improve the user experience. It also measures feedback from the search page to the user to inform them about what is happening on the system. |
| Content quality | This measures the level of excellence of information provided by the |

| Table 3 - Criteria | a used for rating | OVSSP by users |
|--------------------|-------------------|-----------------------|
|--------------------|-------------------|-----------------------|

| Table 4 - Testing results from 10 users | | | | | | |
|---|----------------|----------------|---------|-----------------|--|--|
| User | Attractiveness | Responsiveness | Clarity | Content Quality | | |
| А | 8 | 9 | 9 | 6 | | |
| В | 8 | 8 | 7 | 8 | | |
| С | 9 | 7 | 8 | 7 | | |
| D | 7 | 8 | 8 | 8 | | |
| E | 6 | 7 | 7 | 8 | | |
| F | 8 | 9 | 9 | 6 | | |
| G | 9 | 8 | 8 | 8 | | |
| Н | 7 | 7 | 8 | 8 | | |
| Ι | 9 | 9 | 7 | 8 | | |
| J | 9 | 9 | 8 | 6 | | |
| Average | 7.8 | 8.1 | 7.9 | 7.3 | | |
| Percent (%) | 78.0% | 81.0% | 79.0% | 73.0% | | |

| Table 4 - | Testing | results | from | 10 | users |
|-----------|---------|---------|------|----|-------|
|-----------|---------|---------|------|----|-------|

system.

However, we demonstrated the use of the application among the different focus groups identified in Table 1. A structured interview guide was given to each participant to source data based on the criteria mentioned in Table 3. Instead of the measurement scale of rating is 1-10, we used the Likert scale survey questions in Table 5 to gather feedback.

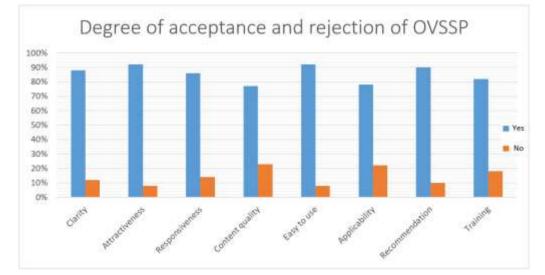
| Table 5 - Structured interview guide with likert scale survey questions | Table 5 - Structured interview | y guide with | likert scale survey | questions |
|---|--------------------------------|--------------|---------------------|-----------|
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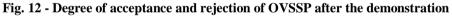
| No. | Identified Questions | SA | PA | PD | SD |
|------|---|----|----|----|----|
| 1. | Clarity (I feel I can interact with the system, and the system | | | | |
| | communicates meaning and function efficiently) | | | | |
| 2. | Attractiveness (The GUI is friendly and appealing to use) | | | | |
| 3. | Responsiveness (The system responds well and provides quick | | | | |
| | feedback) | | | | |
| 4. | Content quality (The quality of content in the application is good) | | | | |
| 5. | Easy to use (The application is straightforward to use) | | | | |
| 6. | Applicability (I am ready to start using the application when deployed | | | | |
| | finally) | | | | |
| 7. | Recommendation (I will recommend the application to others) | | | | |
| 8. | Training (I need to be trained further to use the application) | | | | |
| SA-S | Strongly Agree, PA – Partially Agree, PD – Partially Disagree, SD – Strongly Disagree | | | | |

The responses received are presented in Table 6. Responses were categorized as 'Yes' or 'No'. 'Yes' means the respondent either strongly agrees or partially agrees on a given question about the system's functionality. 'No', however, means the respondent either partially disagrees or strongly Disagrees on the question about the system's functionality. The degree of acceptance and rejection of the identified questions as part of identifiable questions about the system's functionality is shown in Figure 12. The identified questions were selected as they have been widely supported to be among the most common questions in evaluating software product usability and acceptance among end-users.

| No. | Identified Questions | Yes | No |
|-----|---|-----|-----|
| Q1. | Clarity (I feel I can interact with the system, and the system communicates meaning and function efficiently) | 88% | 12% |
| Q2. | Attractiveness (The GUI is friendly and appealing to use) | 92% | 8% |
| Q3. | Responsiveness (The system responds well and provides quick feedback) | 86% | 14% |
| Q4. | Content quality (The quality of content in the application is good) | 77% | 23% |
| Q5. | Easy to use (The application is straightforward to use) | 92% | 8% |
| Q6. | Applicability (I am ready to start using the application when deployed finally) | 78% | 22% |
| Q7. | Recommendation (I will recommend the application to others) | 90% | 10% |
| Q8. | Training (I need to be trained further to use the application) | 82% | 18% |







As presented in Figure 12, ease of use and attractiveness had the highest acceptance of 92%. Next, the feedback on recommending the application to others was 90%. This means that the participants were well pleased with the application. Clarity and Responsiveness got an acceptance rate of 88% and 86%, respectively. 82% agree that adequate training will be needed to make use of the system entirely. On the readiness to start using the application when deployed, 78% agreed. On the quality of the content, 77% agreed. Fortunately, this means there is a need for constant improvement in the content displayed on the platform.

Suffice it to say, this paper attests that it is crucial to have a platform that allows people to showcase their potentials, vocational skills, dexterity, and talents. Simultaneously, they make money from it, just as platforms allow people to showcase their professional provess through their resumes. This finding has expanded the existing knowledge on planning and designing online vocational skills platform as documented in the previous study from Kalva (2013) and Schober et al., (2014).

6. Conclusion and Future Work

The rate at which unemployment is increasing, if not addressed, will increase the poverty rate, which eventually will increase the death rate due to hunger, crimes, and other illegal practices. With the diffusion of ICT in almost every sector of life– including the educational sector– quality education is administered, especially in vocational training and skill acquisition. For instance, ICT plays a vital role in allowing an individual to decide on a vocational career to embark on sustainable growth and economic development (Gambo et al., 2018). This has aided activities by making them faster and more accurate. Thus, vocational skills are essential for reducing the rate of poverty and unemployment in the society.

However, most people with vocational skills lack expression in terms of having the right or relevant avenue to showcase these skills. This paper aims to provide an online platform that gives expression to skills, thereby alleviating poverty and reducing crime rates among the youths. We have implemented a system that allows users to showcase their skills, potentials, and talents for patronage, gainful employment, and service delivery. The platform implemented can also allow established employers to source individuals with the skills needed in their organizations for employment or

consultancy services. The design specification was achieved using UML tools. The implementation was done using web technologies built on the Webstorm IDE.

The system was tested using unit and beta testing, focusing on user experience and flexibility. The beta test carried out with ten (10) users revealed 78% attractiveness, 81% responsiveness, 79% clarity, and 73% content quality. After demonstrating the system to the focused group, the degree of acceptance proved the following: (i) ease of use and attractiveness had the highest acceptance of 92% each; (ii) the feedback on recommending the application to others was 90%. This means that the participants were well pleased with the application; (iii) Clarity and Responsiveness got an acceptance rate of 88% and 86%, respectively; (iv) 82% agreed that adequate training would be needed to make use of the system entirely.

Based on the implementation, users (both those with vocational skills and employers looking for skilled persons) are allowed to showcase their skills, potentials, and talents on a web application platform to reduce and eventually eradicate unemployment and Nigeria's poverty rate. Notably, the platform provides the opportunity to advertise vocational skills to the world and make them meet employers willing to employ or seek consultancy.

Further research on this work should be focused on developing a mobile app version of the web-based application. Secondly, it is vital to create a platform for employers to have their accounts sign in and out of the system. Also, the system should give room for more skills. It is also essential to implement a referral system where every registered user with a vocational skill can be referred to prevent fraud and scams.

Acknowledgement

Authors would like to thanks to those individual and organizations who involved in this research.

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