The Project Case: A West African Digital University

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Abstract. This paper is a project case report of a proposed West African Digital University that started based on the outcome of several research findings that focused on three West African countries mainly on export e-education through e-learning environments, which has been discussed as a way to improve African students' learning culture, designs and usability of web-based learning. The main aim and objective of this digital higher education institution are to contribute to the possible solutions to problems of higher education in developing countries, in particular the sub-Saharan West African countries by providing export e-education to West Africa citizens. The West African Digital University, put in practice, would develop students' minds and raise awareness for peace and tolerance as a way of integrating the West African region.

Keywords. West Africa (W/A) · digital university · higher education institution (HE) · export e-education · e-learning environment / web-based learning environment.

1 Introduction

The Economic Community of West African States (ECOWAS) in its education sector has increased the importance of export education through e-learning for higher education across the boundaries of ECOWAS in order to diversify member states' education systems and attract more international students [1].

To achieve this aim of ECOWAS, West African countries are facing challenges in the attempt to adopt export e-education due to the issues of educational policies in West African States' infrastructure, acceptance, accessibility and willingness of member states' governments, students and teachers or/and the perceived acceptability of e-learning methods [2], [3].

This project case for the West African Digital University report will focus on the processes and practice of achieving this ECOWAS aim through e-learning environments has been discussed as a way to improve African students' learning culture, designs and usability of web-based learning environments. Web-based environments/e-learning through a digital higher education institution have also been

discussed to contribute to the possible solutions to problems of higher education in developing countries, in particular the sub-Saharan West African countries by providing export e-education to West Africa citizens. This is in order to develop students' minds and raise awareness for peace and tolerance as a way of integrating the West African region [1], which is the main aim and objective of the West African Digital University.

This project case report will be based mainly on three parts in respect to the context of a case for the West African Digital University (an on-going project) as a medium of regional integration in West Africa. These parts are:

1) The description of the electronic site of the Digital University and its infrastructures.
2) The description of the traditional or physical site of the Digital University and its operational structures.
3) The study contents and contexts, such as, university affiliations or partnerships, degree certifications, and the three educational actors' win-lose situations in West Africa focusing on education and export e-education as a way of promoting a culture of peace and tolerance.

Essentially, the practical and operational results of the West African Digital University would provide meaningful students' acceptance, accessibility and willingness of adopting export e-education (in higher education) through a smart digital higher education institution in West African developing countries. It would in practice and process showcase the solutions to questions that reflect on these areas of students' acceptance, accessibility and willingness of adopting export e-education (in higher education) through a smart digital higher education institution in West African developing countries.

2 Literature Review and Theoretical Background to the Region of West African States

The idea and motivation for the project for a West African Digital University reflects on the findings and outcomes of several research studies in respect to the followings:

- The benefits of e-learning, web-based learning and virtual learning that has been anticipated for more than a decade since governments and university educators and researchers have been discussing the change from the traditional teaching and learning methods based on the revolutionary adoption of technology and technology-supported approaches through use of computers [4].
- ECOWAS education sector's commentaries on the digital divide in education institutions among member states ready for e-learning and wed-based learning environments use show that less than 35% of higher education institutions in Gambia, Ghana and Nigeria had the infrastructures and equipments to effectively implement e-learning in their teaching and learning

processes [5], [4], [6]. Despite these infrastructure and implementation problems, the West African governments through ECOWAS's education wing have been very active to develop educational technology policies to promote the use of technology in HE institutions in the region [1].

- Additional problems that seem to hinder development and adoption of online learning seem to include lack of motivation to adopt e-learning, lack of financial support, and lack of a clear-cut education development policy from the governments of these West African states in respect to their higher education systems [7].
- African learners' collective learning values as one of the key requirements to e-learning environment designs and usability in an African context, while learning through online, VLE, MOOCs and etcetera is learner centered. In this perspective, the study on cultural influences in the designs and usability of web-based learning environments from Africa and Europe points out that pedagogical designs for African learners should be based on learners' motivation and self-regulation among students as well as the higher reliance on group learning because the learning culture of the West African is influenced by strong values of collectivism and respect for authority [8].

It is based on these foregoing that the West African Digital University will implement and put into practice and process as a medium of promoting culture of peace and tolerance as a way of integrating the West African region through export e-education.

According to the United Nations [9], Western Africa includes the following sixteen countries: Cape Verde, Senegal, Gambia, Guinea, Guinea-Bissau, Sierra Leone, Liberia, Mali, Burkina Faso, Mauritania, Niger, Cote d'Ivoire, Ghana, Togo, Benin and Nigeria. These Western Africa countries formed the Economic Commission of West African States (ECOWAS) in 1975. Its mission is to promote economic integration in "all fields of economic activity, particularly industry, transport, telecommunications, energy, agriculture, natural resources, commerce, monetary and financial questions, social and cultural matters" [1]. Figure 1 shows the geographical locations of the sixteen member states of ECOWAS. These sixteen West African countries consist of former British, French and Portuguese colonies, and the West African Digital University will be focusing on these sixteen countries of ECOWAS, which will be referred to as West Africa in this project case report. Although the initial startup project of the West African Digital University will focus on the Anglo-phone West African countries of ECOWAS and later as it succeeds moves to the Franco-phone West African countries.

The practice and processes of the West African Digital University are going to be based on e-learning design and evaluating courses, designing e-modules, technical usability support, and project management for learning HE institutions in West Africa. It will enable less privileged ambitious West African youths to learn in different areas of academic excellences in different prominent universities within West African countries and especially, in Western European countries where about 75% of African students are presently studying either directly or indirectly [4]. This West African Digital University, as earlier stated, will serve as a way of integrating the West African region through the power of (higher) education in a flexible learning digital world.

Fig. 1. Geographical locations of the sixteen member states of ECOWAS[1]

3   The Project Case Report of the West African Digital University

The idea of the project case is to implement preceding research of this project case as possible solutions to these problems of higher education in West Africa. These previous research works are [4], [7], [10].

   This section of the project report focuses mainly on three parts in respect to the context of a case for the West African Digital University (an on-going project) as a medium of regional integration in West Africa. These parts, processes and practice, are:

- The description of the electronic site of the West African Digital University and its infrastructures.
- The description of the traditional or physical site of the West African Digital University and its operational structures.

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[1] Source: http://www.mfwa.org/wp-content/uploads/2015/11/ecowas_map.jpg

3.1 The Electronic Site and Its Infrastructures

The West African Digital University though is going to be a blended learning higher education institution with in-house real-time course programme activities. The blended approach will mainly be based on the idea of core technology and complementary technology [11]. The e-site features will mainly be based on core technology of WWW-based systems including information, communication, dissemination, collaboration and learning resources. This will be supported with a complementary approach of prints and real-time session learning activities, that is, complementary technology.

The West African Digital University will have its own specially developed tools, such as, 'tablet-computers', 'cloud-computing' internet server and tuition export e-education from the parenting HE institutions. The West African Digital University's web-based learning environment (e-site) will be linked with password to the partnerships/parents' module (VLE) sites for an effective e-learning system.

Project tools and manpower assistance and academic partnerships are anticipated from Nokia, Microsoft and Huawei for prototype tablet-computers and HE institutions from Finland, Netherlands and other prominent European and West African countries' universities.

The West African Digital University will be a 'wall-less' (education without border) HE institution with absolute contact via the World Wide Web (WWW). It will consist among others, of the followings:

1) E-learning platform (i.e. e-books, e-classrooms, work activities, assessments and submissions, group discussion and feedbacks).
2) Partnerships (i.e. collaborating foreign universities in W/A and Western European countries).
3) E-learning degrees and courses that mainly based on HE such as Bachelor, Master, Doctorate and Doctoral degrees/courses in sciences (minor non-practical based sciences like mathematics and statistics), social sciences and education.
4) The partnerships' e-learning modules (VLEs links).

Figure 2 below shows the proposed World Wide Web (WWW) layout of the anticipated West African Digital University's WBLE.

(A) The e-site
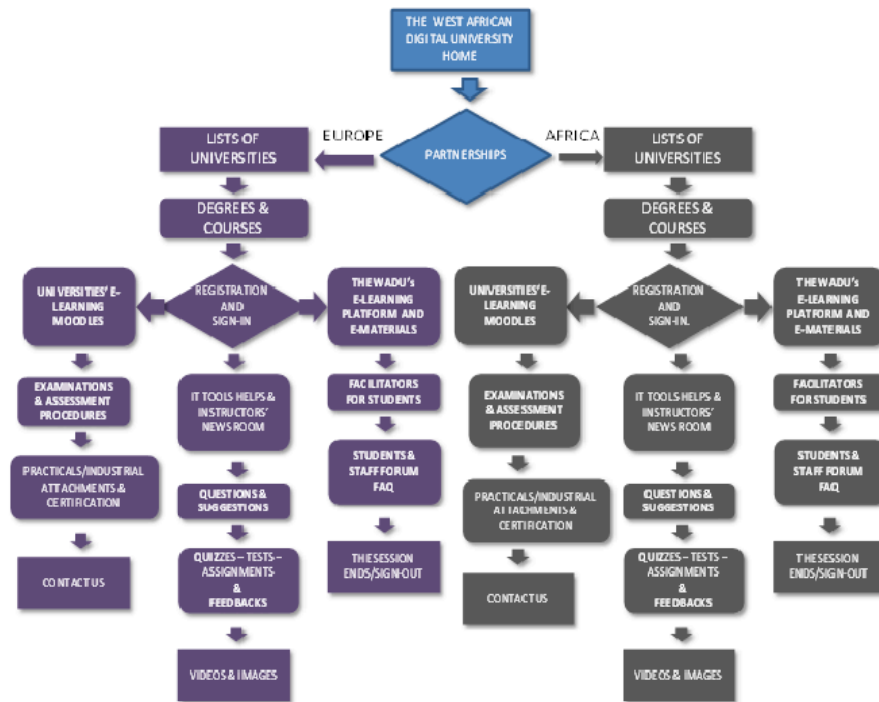
The proposed online layout of the West African Digital University's WBLE

Fig. 2: The E-site of the West African Digital University.

The study contents and contexts, such as, university affiliations or/and partnerships, degree certifications, and the three educational actors' win-lose situations focusing on education and export e-education as way of promoting a culture of peace and tolerance in W/A countries would be practically experienced in the project.

3.2 The traditional/physical site and its operational structures

The West African Digital University will have locations (traditional site) in three West African countries with a total of eight highly IT competent academic staff who will serve as facilitators supporting the students online via the e-site and from these different locations in the West African region.

The physical site structure will be the same in these three African countries and serves as a complementary approach to the core approach of learning activities of the West African Digital University. It is connected and run along with the e-site where students or/and visiting lecturers and researchers stay over, especially when different time zones are involved while learning with the parents' universities. And students and lecturers can also use the work or study rooms for real-time teaching and learning

activities while on site. The physical site will also consist of studio or computer display rooms that will be used for live tele conferencing, live learning streams, on-site real time examinations, and other live real time teaching and learning activities. The physical site is shown in figures 3 and 4 below as floor layout drawing and building layout drawing respectively.
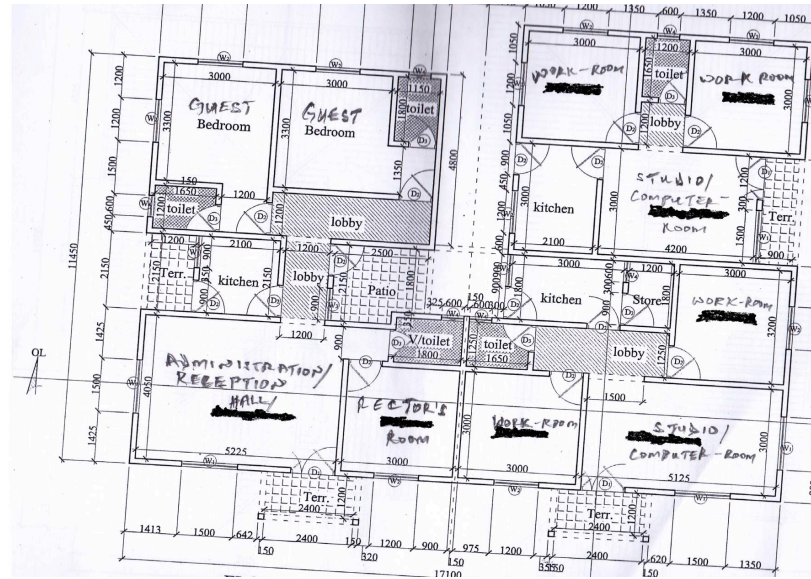

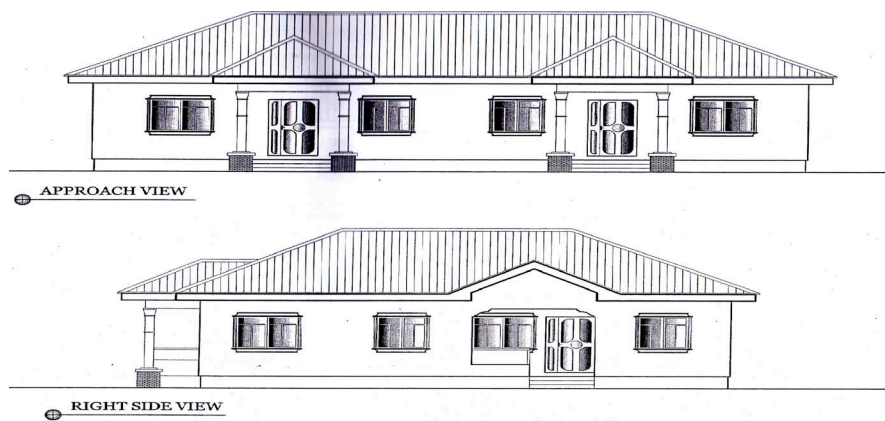**Fig. 3:** The physical site - Floor layout drawing

Fig. 4: The physical site - Building layout drawing

The traditional/physical site will have its private owned electricity power supply, such as, owned electricity transformer and diesel powered generator, to solve the problem of distribution of public electricity supply.

4 Conclusion

The West African Digital University project will aim to contribute to the solutions to problem of HE education in West African countries by providing export e-education to West African citizens in order to develop their minds and raise awareness for peace and tolerance in the West African region. It will help tackle qualitative HE education challenges, such as, lack of universal access to HE education; poor quality of HE education and poor management of the education system; and the increasing irrelevance of the current West African HE education system in the knowledge society. It will help find possible solutions to the socio-economic problems, such as, gender aspect for e-learning (particularly well suited for female learners), armed conflicts resolution, cyber crimes and other socio-political ills facing West African countries. It will serve as a way of integrating the educated youths of West African region towards the development of ECOWAS aims and objectives.

The construction of the West African Digital University is in its development/start-up stage with initial start up in three West African countries (The Gambia, Ghana and Nigeria) and two European countries (Finland and Netherlands), already used as case study in the author's doctoral research study. Tuition, in form of export e-education, would be provided by partnership universities in West Africa and Western Europe notably, those European countries also used as case study in the author's doctoral research study [8].

The project would confirm students' supports, consents and willingness to access export e-education through an electronic higher education institution and applications of information communication technology in teaching and learning processes. It will confirm students' responses, accessibilities and willingness to use and acquire e-education at a higher education institution in West African countries. The West African Digital University will continue to promote the West African students' use of several forms of technologies in their learning process that also has implications for the design and usability of e-learning environments.

Many West African students have extensive experiences using computers connected to network applications and information communication technology use in e-learning, however, they need to be informed in the use of other collaborative learning tools embedded in a digital higher education institution. This major obstacle in this region of Africa would be minimised through the approach of a West African Digital University.

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