Developing Web Textbooks for Teacher Education in Pakistan:
An Innovative Approach for Effective E-Learning

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The world is moving towards e-learning and Pakistan is a part of the globe and has to face the challenges of globalization. The purpose of this study was to design and develop web textbooks for information and communication technology (ICT)-integrated teacher education in Pakistan. The vision was to see Pakistan as a leader in e-learning and online teacher education in the world. The mission was to promote e-learning in Pakistan. The objective of the study was to design and develop course materials and e-content in educational psychology and teacher education disciplines, according to the curricula and syllabi of the universities in Pakistan as approved by the Higher Education Commission of Pakistan. Thus, develope web textbooks for the teacher education in Pakistan, in order to make it blended learning and online e-learning system in future. The writer of the script in hypertext preprocessor (PHP), a programming language, for textbooks is a student of software engineering who designed a website for these books. The course materials were divided into units and units were further subdivided into topics. It has also included e-assessment on multiple choice questions (MCQs) at the end of the unit and the whole course for feedback to the students and authors. The study is significant, because it will help Pakistan in innovation for effective e-learning in virtual learning environment framework and extend to the global world community.

Keywords: web textbook, e-learning, online learning, teacher education, e-content, educational technology, educational psychology

Introduction

The world is moving towards e-governance in all fields of life, including education. Pakistan, as a member of the world community, cannot keep itself away to become seclusive in the progress of the globe to be open and without borders through information and communication technology (ICT).

The new trends in educations and pedagogy demand the use of educational technology, especially, the ICT. But the use of ICT, in turn, requires and demands the courses and contents to be converted into a shape and form that is structurally feasible, usable, and useful, which has attraction and good impact on the learners, i.e., user friendly (Khan, 2013; 2014; 2015).

The competency to convert the course contents and textbooks from traditional make-up to the technology-based web textbooks demands the authors to be both technologist and educationist at the same time.

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The technology is modern and the experts in education of Pakistan are mostly having experience in the traditional textbooks and course contents preparations, presentation, evaluation, and development.

The writer of the web textbook has taken the help of a software engineering student to have technical support in the preparation of website and fill the gap of technical expertise. Therefore, this project is a father-son contribution in the field of education in Pakistan (Khan, 2014).

This document has been designed to provide help to the learners for using online e-learning through web textbooks website. Various sections of the e-learning through web textbooks website are explained in detail, so that the learner become acquainted and familiar with the website and use it for online e-learning and having a drill in reading (Khan, 2014) with refrence to http://www.alqalam.pk.

Website Address

We can access the website by the type of Uniform Resource Locator (URL) "http://www.alqalam.pk" as shown in the following image.

Home Page

The home page contains introduction, vision, mission, goal, aim, and objectives statements of the web textbook.

Figure 1. Home page.

Registration Page

Enter student name, password, student address, and email address to register for accessing the course.

Figure 2. Registration page.

Login Page

Enter email address and password to login to the main page.

Figure 3. Login page.

Reset Password Page

If someone forgets his/her password, then, he/she has the opportunity to reset password in password page, where he/she enter student name, email address, and password.
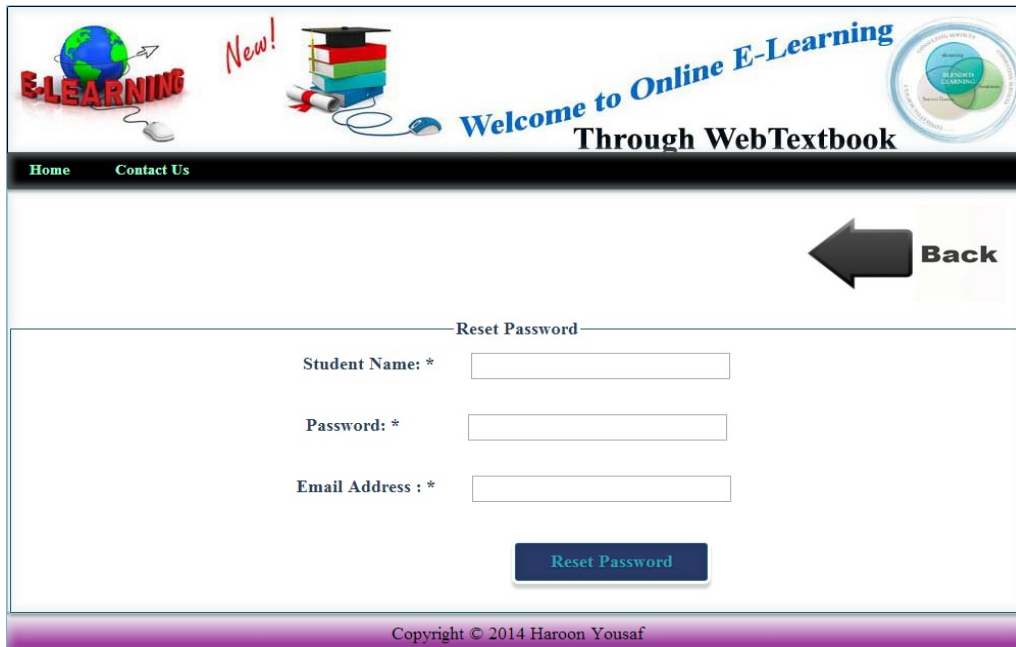

Figure 4. Reset password page.

Main Page

Main page appears on successful login. This contains "Test," "Result," "Change Password," "Feedback," and "Search" buttons for accessing the individual page.

Figure 5. Main page.
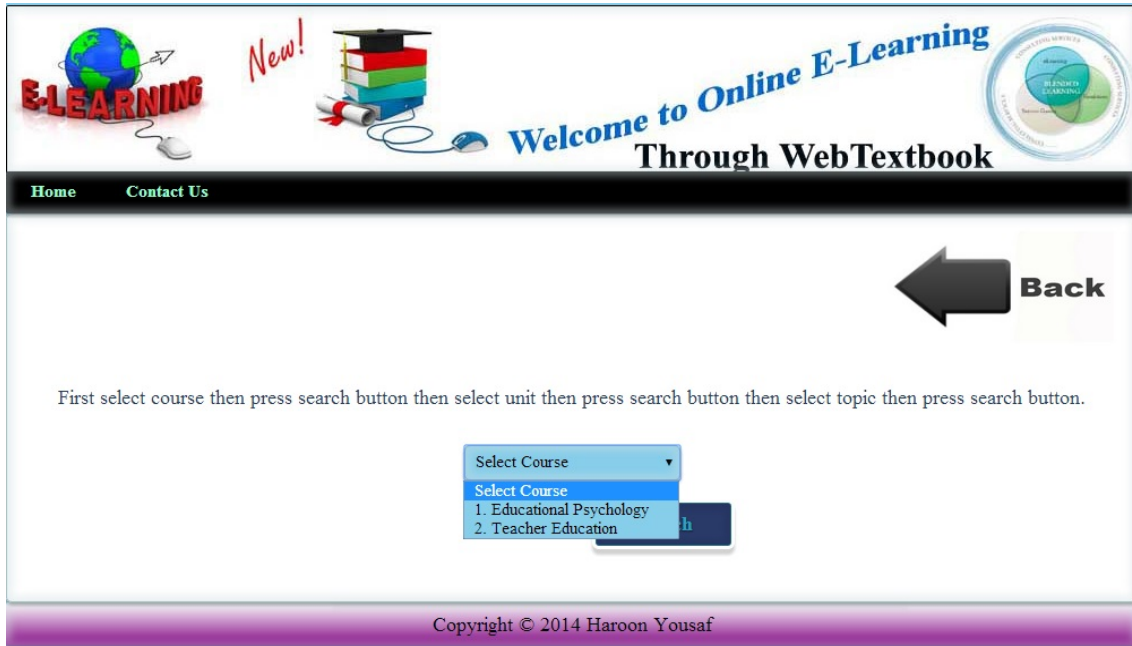
Accessing a Course

Figure 6. Accessing a course.

Click on Search button to go to course searching page, where a drop down button that contains different courses will appear. Select one course from them, and then, click on Search button below the drop down button.

Accessing Unit

After selecting course, a drop down button will appear that contains different units of the courses. Then, select one unit from them and click on Search button below the drop down button.

Figure 7. Selecting unit.

Accessing to Topic

After selecting unit, a drop down button will appear that contains different topics of that unit. Then, select one topic from them and click on Search button below the drop down button to display the topic.
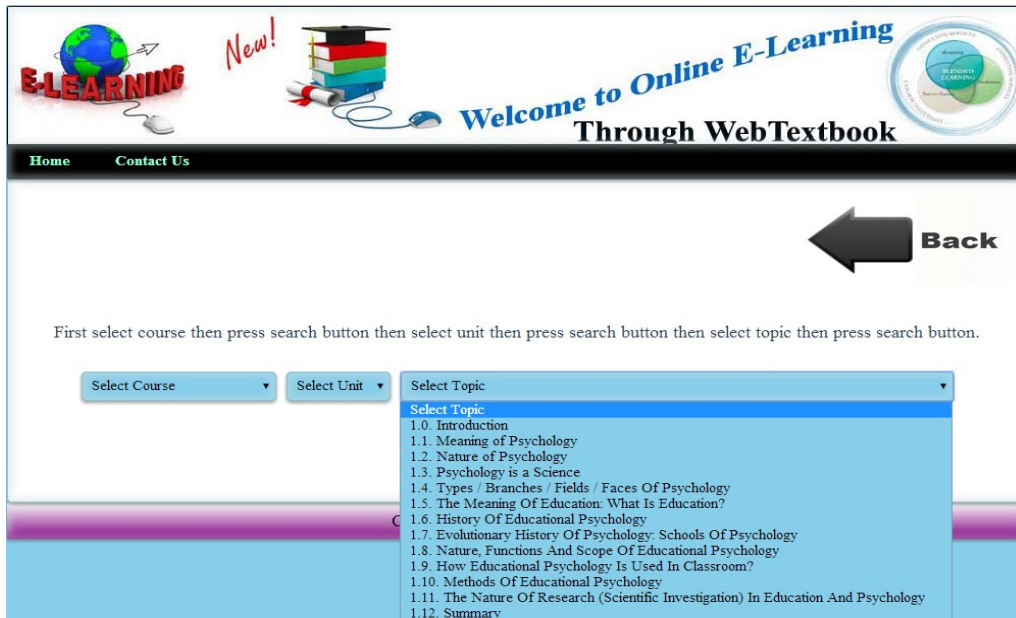

Figure 8. Selecting topic.

Displaying the Topic

After selecting topic and clicking the dropdown button, that topic will be displayed on the screen and it will contain subtopics and detail for the reader.
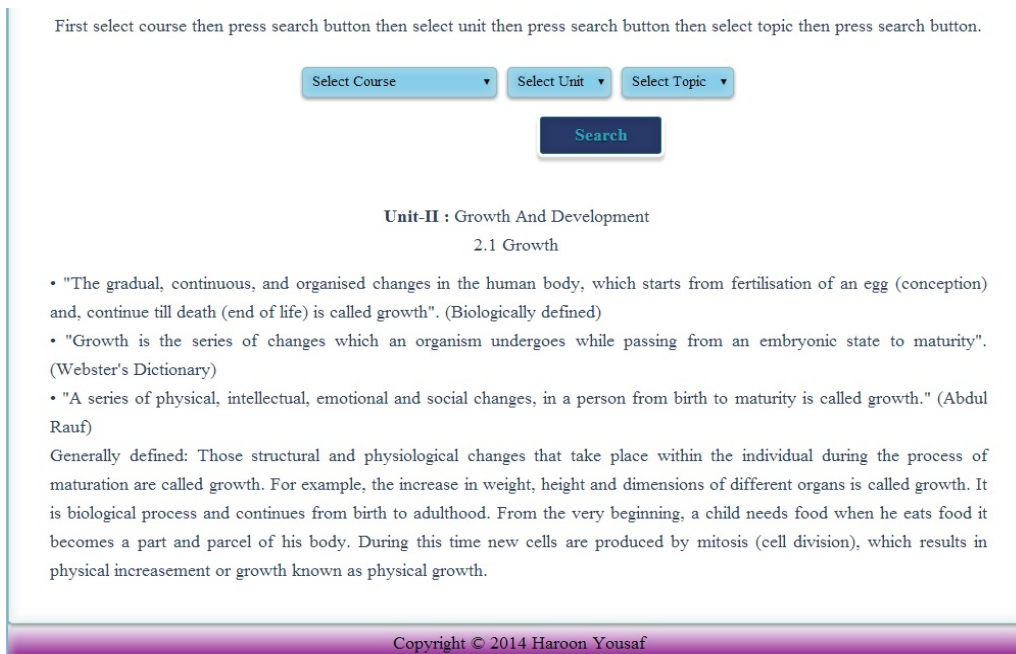

Figure 9. Subtopics and details.

Online Test Page/Quiz Page

If someone wants to give test or have quiz in the unit that he/she has read, then, click on the Test button and select the unit to give test or quiz. The design of the page is given below.
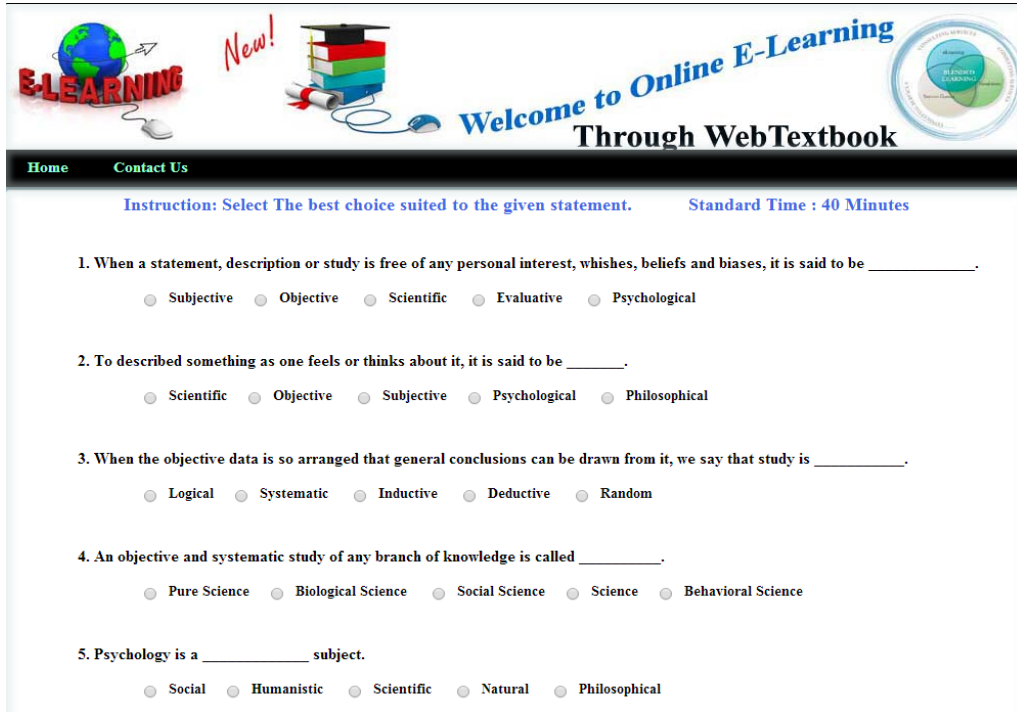

Figure 10. Online test page.

Result Page

The result page will display the result of all units to the student, in which he/she has given a test. The page appears as below.
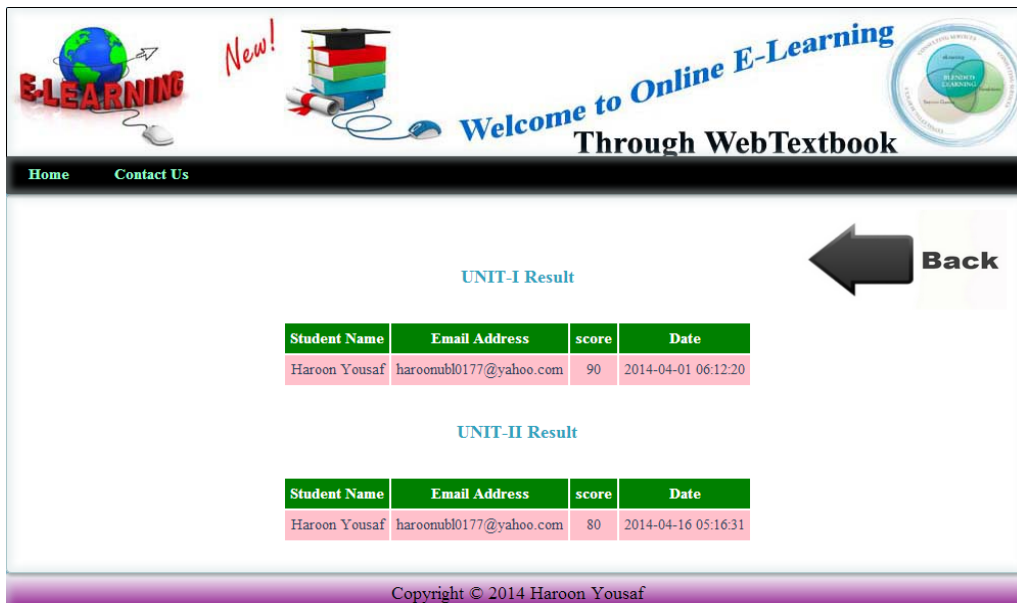
Figure 11. Result page.

Feedback Page

If someone wants to give feedback to the authors, then, he/she will go to feedback page. The page is as under. The feedback will be provided to the student by the author through email or mobile contact on request.

Figure 12. Feedback page.

Change Password Page

If someone wants to change his/her password, then, he/she has to go to the change password page. The design of the page is as under.

Figure 13. Change password page.

Further Help or E-Tutoring

For course related help and e-tutoring, the student may contact the course coordinator. For technical support, the student may contact website administrator at email address: haroonubl0177@hotmail.com or cellphone number: +923339471086.

The contact addresses of the web textbook author is: uswat@hotmail.com (email address) and +923349349366 (cellphone number).

Conclusion

In conclusion, we can say that the design and development of the web textbook in Pakistan will help to convert the traditional textbook to e-learning. It will also make the distance learning online and technology-based in Pakistan become a leader in open and flexible learning thorough e-technologies.

In future, this website can be used as a prototype for web textbooks designs and development. It can also be modified for distance learning in various countries, according to their needs and requirements. It is a gift for Pakistan from the authors.

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