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Development and Assessment of Static Website for Digital Media Production

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Abstract. Internet education has a long history, and it has been used to learn everything. Since the advent of computers, digital learning has increased in popularity. Interest in online learning for education has also increased, with both teachers and students looking for online activities to supplement existing education. The *"Development and Assessment of Static Website for Digital Media Production"* is designed for faster, easier and paperless process of teaching students. This study is to promote an exciting approach to SP-ICT students, that ICT Subjects can be fun and interesting, by using an exciting approach that they are all familiar with, *"the Internet",* by creating a website containing downloadable digital modules and assessment that are still related to the subjects *learning competencies.* This study used developmental research and descriptive research as the study conducted gathering of data in order to design and develop system or application and be evaluated by the respondents. Utilization of the developed website for digital media production is found Functional, Reliable, Usable, Efficient, Maintainable and Portable to the IT Professional respondents. In this time of pandemic, majority of the students prefer using cellphones for distance learning. Utilizing the website will be beneficial to them since it is found Portable, which means the website is accessible anywhere where an internet source is available using different gadgets with browser installed. Schools with SP-ICT in other Congressional District of DepED Nueva Ecija may utilize the website by making the admin multi-user with the permission of the researcher. Also, it was found that the application is Effective, Efficient, Satisfactory, Free from Risk and has sufficient Context Coverage.

Keywords: Digital Media Production; ICT; Static Website

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1. Introduction

The students of today are surrounded by technology, where access to a vast collection of information is only a fingertip away. Many in the field of pedagogy state that technology integration is helpful, meaningful, and necessary for a school to function successfully. However, many teachers are reluctant to make the change, and many students are not motivated to try. Internet has a long history in the field of education, for learning skills ranging from shop keeping to warfare. Since the advent of computers, digital learning has increased in popularity. Interest in online learning for education has also increased, with both teachers and students looking for online activities to supplement existing education. Learning advantages have consistently been found whenever well-designed instruction is delivered through a computer (Wisher & Olson, 2003). "Development and Assessment of Static Website for Digital Media Production" will be designed for faster, easier and paperless process of teaching students. Online learning has become popular because of its perceived potential to provide more flexible access to content and instruction by increasing the availability of learning experiences for those who cannot or choose not to attend traditional schools, assembling and disseminating instructional content more efficiently, and increasing student-instructor ratios while achieving learning outcomes equal to those of traditional classroom instruction (Bakia, 2004). The purpose of this study is to promote an exciting approach to SP-ICT students, that ICT Subjects can be fun and interesting, by using an exciting approach that they are all familiar with, *"the Internet",* by creating a website containing downloadable digital modules and assessment that are still related to the subjects *learning competencies.* With this study the learners who eagerly want to learn will be given an equal opportunity of learning. By applying the proposed website- the traditional ways of teaching students such as "reaction paper" "draw something" or "get your phone do whatever you want" shifts to "Log on to the website, Review the lesson, enjoy the discussion through exercises, then assess gained knowledge through assessment." This study will be beneficial to the students as the application was assessed "very effective" and "efficient" in the learnings of the ICT students in the selected secondary schools in the 1st Congressional District of Nueva Ecija.

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2. Methodology

2.1 Conceptual Framework

The development of the website is based on the seven phases of Software Development Life Cycle (SDLC) namely, Planning, Analysis, Design, Coding, Testing, Implementation, and Maintenance. The quality of service of the website was assessed based on ISO 9126 standards; Functionality, Reliability, Usability, Efficiency, Maintainability, and Portability were assessed by IT Professionals while the instructional use of the website was assessed by the teachers/ICT Chairpersons and students. The proponents used this software quality standard as this is acknowledged as the evaluation standard in assessing the software quality, used and being applied internationally to test the quality of the software products.

Figure 1. Research Paradigm

The development of the proposed website went through the seven phases of Software Development Life Cycle (SDLC) shown in figure 1.

3. Results and Discussion

3.1 Planning phase In this phase, the recommended objectives and resources needed for the website were determined. First, the content of the website should be related to the subjects learning competencies. Second, website should have an eye-catching home page, and lastly, the site must be easy to navigate, have all credible information, includes contact information, have user control, and fun

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to explore. Interviews were also conducted with individuals involved in the operation of the school website like ICT Teachers and Education Program Supervisor. They were asked for their opinions about the proposed website and most of them suggested that the website must be useful to both learners and teachers, must have relevant contents, must be accessible and user friendly. Then the researcher gathered data needed to create or formulate concepts for the website.

3.2 Design phase. The website consists of five tabs, namely: Home page, which serves as the identity of the website; About page, contains the brief information about the content and objectives of the website; Learning Material page contains the most essential content of the website like Curriculum guides, Learning Activity Sheets (LAS), Basic Exercises and Handouts, Presentations and Learners' Modules; Video lesson page, contains video lessons about digital media production; and Contact page contains the contact information of the school and the website developer. All files uploaded on the website were saved as PDF files. Learning materials from the Department of Education (DepEd) like Curriculum guides and Learning Modules contain watermarks to minimize the potential risk of plagiarism. Files in Learning Materials page contains two buttons, the Download and View Buttons. Users with limited internet connectivity may download the files easily while users with stable internet connections may use the view button. The website is accessible anywhere where an internet source is available using different gadgets with browser installed. These features make the website beneficial to the user. Figure 2 shows the website map that illustrates the site in the form of graphics.

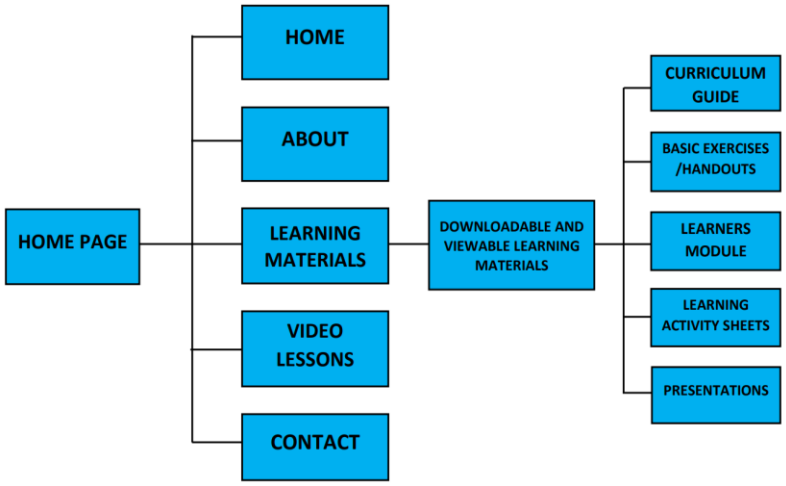

Figure 2. Site Map of the Developed Website for Digital Media Production

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Figure 3. Data Flow Diagram of the Developed website for Digital Media Production (User)

Figures 3 and 4 show the flow of the developed website for user and web developer. The diagrams show the processes and activities inside the Static website for Digital Media Production.

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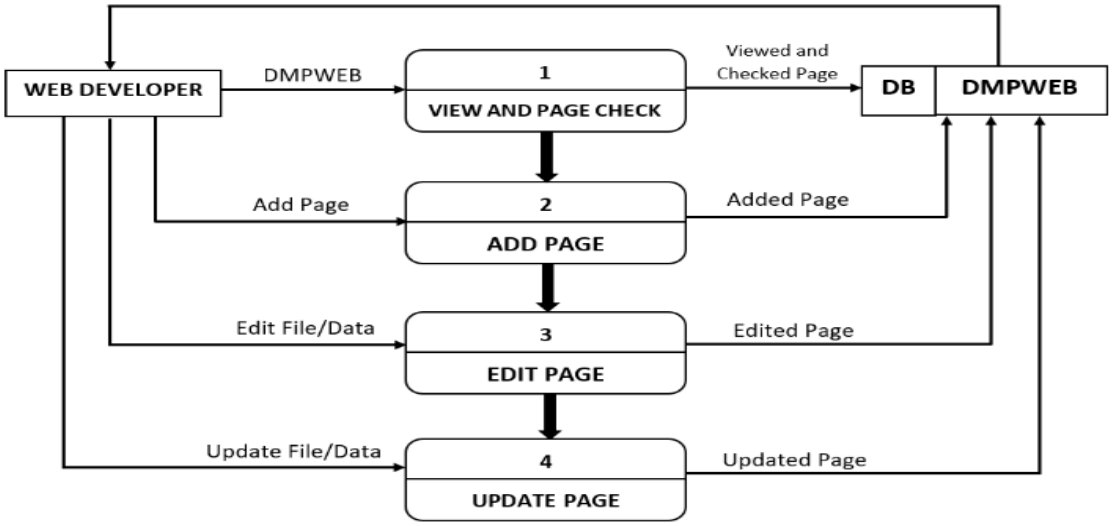

Figure 4.Data Flow Diagram of the Developed website for Digital Media Production (Web Developer)

Figure 5 .Website for User Interface

Figures 5 shows the user interface 'homepage of the developed static website for digital media production.

3.2 User Acceptance Testing. One of the important phases of system development is the testing stage where the developed website could be tested by various personnel like students, faculty and IT professionals so that possible errors could be corrected and to facilitate the User Acceptance Testing the

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developed static website for digital media production were tested and assessed by different respondents (IT professionals, teachers and students) as shown in Tables 1 and 2.

Table 1. IT professionals

Company Name	No. of IT Professional Respondents
PLDT	1
AlphaRed Management System Inc.	1
Connec Plus IT Solution	1
TORO Cloud	1
Converge	1
TOTAL	**5**

Table 2. Teacher and Students

School	No. of Teachers/ICT Chairperson	No. of Students (Grade 8-ICT)
Aliaga NHS	1	14
Bartolome R. Sangalang NHS	1	13
Carmen NHS	1	14
Exequiel R. Lina NHS	1	15
Eduardo L. Joson Memorial NHS	1	12
Galvan NHS	1	13
Julia Ortiz Luis NHS	1	19
Magpapalayok NHS	1	19
Nampicuan NHS	1	12
Pacac NHS	1	14
Restituto B. Peria NHS	1	14
Salagusog NHS	1	13
Sta. Maria NHS	1	15
Sto. Rosario NHS	1	9
Talavera NHS	1	17
Vicente R. Bumanlag NHS	1	17
Zaragoza NHS	1	12
TOTAL	**17**	**241**

The study was conducted in seventeen Secondary Schools offering SP-ICT in Congressional District I of Nueva Ecija. The main sources of data were the three sets of respondents, identified as follow:

Five (5) IT Professionals; seventeen (17) ICT Chairpersons/Teachers; and two hundred forty-one (241) Grade 8 SP-ICT Students

The data that the proponent collected from the field was analyzed. Statistically weighted mean was used in answering the research questions. The response options in the instrument was weighted as shown below:

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Table 3. Scoring Scale

Response	Scale	Verbal Description
4	3.25-4.00	Very Functional, Very Reliable, Very Usable, Very Efficient, Very Maintainable, Very Protable, Very Effective
3	2.50-3.24	Functional, Reliable, Usable, Efficient, Maintainable, Protable, Effective
2	1.75-2.49	Needs Improvement(NI)
1	1.0-2.74	Not Functional, Not Reliable, Not Usable, Not Efficient, Not Maintainable, Not Protable, Not Effective

Table 4. Summary of assessment of the Website's technical Characteristics by the IT Professional respondents based on ISO 9126 standards.

Overall		
Value	**Weighted Mean**	**Verbal Description**
Functionality	3.60	Very Functional
Reliability	3.47	Very Reliable
Usability	3.90	Very Usable
Efficiency	3.20	Efficient
Maintainability	3.60	Very Maintainable
Portability	3.80	Very Portable

Table 4. shows that the Development and Assessment of Static Website for Digital Media Production successfully meet the User Acceptance Testing and Quality Assurance of all criteria in ISO/IEC international standards except maintainability.It implies that using international standards for quality of the software, the Development and Assessment of Static Website for Digital Media Production was successfully passed the User Testing Acceptance. It means that the system was successfully met the objective and criteria of the study. It was deployed and ready for accepting request from client.

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4. Conclusions

The development of the website underwent the stages of planning, analyzing, designing, coding, testing, implementation and maintenance and is found Functional, Reliable, Usable, Efficient, Maintainable and Portable to the IT Professional, teachers and students respondents. Utilizing the website will be beneficial to them since it is found Portable, which means the website is accessible anywhere where an internet source is available using different gadgets with browser installed. Future researchers may use the findings of this study as their guide in conducting new research related in the field of Information Technology.

5. Recommendations:

Based on the conclusions and findings, the following suggestions are made:

5.1. All secondary schools in District I of DepED Nueva Ecija offering Special Program in ICT may utilize the website for digital media production, since it is found effective and efficient by the intended users.

5.2. Schools with SP-ICT in other Congressional Districts of DepED Nueva Ecija may utilize the website by making the admin multi-user with the permission of the researcher.

5.3 The website developer may file a patent to the Intellectual Property Office to prevent unauthorized parties from copying and using his work without permission.

5.4 The website developer may set the de-activation of the website during the break period of the students to minimize the exposure of data uploaded on the website.

5.5 Future researchers may use the findings of this study as their guide in conducting new research related in the field of Information Technology.

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