



## E-Libwork Web Portal Design as A Digital Learning Resources

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ABSTRACT	ARTICLE INFO
<p>The purpose of this research is to design e-LibWork as a digital instructional resources that can improve student's information management skills. The application and development of Information and Communication Technology (ICT) -based learning is one of the most strategic steps in facing a better future for Indonesian education. Future learning is not just following global trends but is a strategic step in an effort to improve access and quality of education services to the public. The Library and Information Science Study Program develops its students to prepare graduate students to develop their abilities and competencies to find, manage, and evaluate information and knowledge, therefore in this effort it must improve access and quality of educational services, one of which is developing digital instructional resources as one of them. one source of learning. The method in this research is a method that uses Design and Development (DnD). The subjects of this study consisted of several experts and participants. Experts in web design development consist of 1 web practitioner, and 1 content expert about learning resources. The implementation phase involved 32 participants for the pilot process.</p> <p>© 2021 Edulib</p>	<p><b>Article History:</b> <i>Submitted/Received 19 Jan 2021</i> <i>First Revised 28 Apr 2021</i> <i>Accepted 28 May 2021</i> <i>First Available online 28 May 2021</i> <i>Publication Date 31 May 2021</i></p> <hr/> <p><b>Keyword:</b> <i>Digital Learning,</i> <i>E-Libwork Development,</i> <i>Information Management,</i> <i>Learning Resources</i></p>

## 1. INTRODUCTION

The education aspect is greatly determines the progress of the nation, the competitiveness of the nation and the life of the nation and state. Education must be continuously improved in terms of the quality of education, however the educational gap factor is still one of the factors in advancing education. One of the gaps in the quality of education is the result of uneven and adequate facilities and infrastructure at various levels of education. The education system in Indonesia will always undergo very dynamic changes. The change in the education system is aimed at realizing a much higher quality Indonesian education system. This quality education system will have an impact on producing higher quality graduates. The ability of quality graduates at a level of education that must be fulfilled, namely all aspects of life, namely cognitive, affective and psychomotor.

The national education system has a function, namely to develop abilities and shape the character and life of the nation with dignity in the framework of educating the nation's life. The national education system in general aims to develop the abilities and potentials of students to become human beings who believe and have devotion to God Almighty, have noble character, are healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. Education is an academic process that aims to increase the social, moral, cultural and religious values of students. The academic process also broadly aims at preparing students to face challenges to live the life of the nation and state. The role of the teaching staff towards their students becomes a generation capable of improving the quality and capacity of students in developing their abilities and competencies to find, manage, and evaluate information and knowledge to solve problems in the real world and participate actively in community activities in their environment. Education is an organized and sustainable communication designed to foster learning activities in students.

The application and development of Information and Communication Technology (ICT) - based learning is a very strategic step towards a better future for Indonesian education. Future learning is not just following global trends but is a strategic step in an effort to improve access and quality of education services to the public. Learning resources are one of the keys to success in achieving learning goals. Various kinds of learning resources that can be developed, for example, web-based digital portals (Purmadi & Lukitasari, 2017). A practical application of educational technology, learning resources play a crucial role in overcoming learning problems. Advances in technology have given birth to new learning sources. Digitalization is the distinguishing character of these sources. Digital refers to the combination of hardware (processing, memory, input and communication) and software (operating system and application programs) elements to perform various tasks (Dopo & Ismaniati, 2016).

Future ICT learning must be developed to lead to the realization of an integrated education system that can build an independent, dynamic and advanced nation. This ICT-based learning must be prepared by all components of human resources in terms of thinking, behavior orientation, attitudes, and value systems that support the development of information and communication technology-based learning for the advancement of mankind. ICT or ICT products that can be used as learning resources are products produced by the development of information technology and technology. However, to describe these products, you should first understand the trends that occur in the development of the use of information and communication technology in education (Haryati & Erwin, 2019). The Library and Information Science Program Study develops students to prepare graduate students to develop their abilities and competencies to find, manage, and evaluate information and knowledge,

therefore in this effort it must improve access and quality of educational services, one of which is developing digital instructional resources as one source of learning. In the era of information and communication technology (ICT) every institution, including libraries, is competing to integrate technology to build and empower ICT-based applications in the form of libraries that contain learning resources in digital form (Situmorang & Kustandi, 2013).

ICT through the Internet network can integrate all existing knowledge on earth for easy access, students can access materials/ references and obtain sample case studies to study. Various knowledge can be accessed widely, quickly and easily through IT without knowing the boundaries of time and space. Students can use IT to find references needed in learning through various computer and internet technologies. Search for the best materials from other countries and obtain case study examples via the internet. In terms of utilizing IT as a learning resource, IT applications can be used by students as a medium to overcome the limitations of the senses in absorbing, processing, organizing, concluding, and implementing various knowledge which becomes the object of learning. Learning media can be used as an intermediary for information or knowledge from sources to recipients, to facilitate the learning process. By using an animation downloaded via the internet, students can find out the process of the earth's surface, through a computer application can conduct experiments. The development of digital technology today not only makes it easy to communicate but also makes it easier to find the information needed. Through the internet, we can access digital learning resources which are currently very fast. This is evidenced by the existence of various kinds of digital learning resources such as e-books, e-journals, e-learning, digital libraries, learning videos, YouTube, learning games, and some even based on applications such as Ruangguru, Quipper, Zenius, and others (Yani & Siwi, 2020).

The use of media in the learning process enables students to control their learning activities. The ability of the media to display information needed by students can help in exploring knowledge and learning activities. With this, the media can help students to learn quickly effectively and increase knowledge. It is necessary to have an appropriate learning plan so that lectures using digital media can run smoothly and students can understand the material that has been studied (Subekti, 2016).

The importance of providing learning resources that can support the mastery of library management skills by students is the basis for this research. Library management skills are one of the basic assets for students of library and information science study programs. Based on this, this research is intended to build student information management skills through the development of digital e-libwork learning resources that contain a variety of video-format information management learning content.

The implementation of learning using technology serves to facilitate learning and teaching activities. Such technology-assisted teaching and learning activities must be created to enable students to learn individually. Teaching and learning activities must be supported by appropriate learning resources. According to Warsita (2008: 209), learning resources are a system consisting of a set of materials or situations that are created on purpose and made to allow students to learn individually. Learning resources have been created to represent digital units of exchangeable materials that teachers and learners can pull from in order to support the learning processes. They resources themselves. Leveraging the web, one can often find these resources (Libbrecht, 2015).

Students in achieving their learning goals and achieving certain competencies must be supported by learning resources in the form of data, or certain forms that can be used by students in learning. Sudjana and Rivai (2007:76), learning resources are none other than resources that can be used for the benefit of the teaching and learning process, either directly

or indirectly, partially or as a whole. This is reinforced regarding learning resources according to Sanjaya (2010: 174), which are anything that can be used by students to study materials and learning experiences in accordance with the objectives to be achieved. Use of digital learning resources is crucial to implement this kind of teaching in a satisfactory way. (Nilsen et al., 2020).

Learning resources is everything that is in the form of a bunch of ingredients and can be utilized in the interests of the learning process to obtain information and experience, so that it can facilitate learning activities. Learning resources can come from the environment around where students live or are deliberately made as learning resources. Those originating from the immediate environment, for example, humans, mountains, sea, temples, forests and so on, while those that are intentionally made as learning sources are books, videos, dioramas, museums, laboratories.

Use of learning resources to broaden students' horizons in providing accurate and up-to-date information. Learning resources (learning resources) will provide great benefits for the students to facilitate the understanding of matter per kuliah delivered by faculty. Learning resources are useful as: (i) Opening paths and developing insights into the teaching and learning process being undertaken; (ii) Technical instructions and operational steps to trace more thoroughly towards complete mastery of a science; (iii) Provide various kinds of illustrations and examples relating to the scientific aspects studied; (iv) Provide new descriptions and instructions that have been obtained by other people relating to certain scientific fields; (v) Provide an understanding that the various problems that arise are logical consequences in a scientific field that requires the ability to solve (Mulyasa, 2003: 49-50).

Learning resources have a role and benefits that are very closely related to learning. Another opinion regarding the benefits of learning resources is conveyed by Sudjana and Rivai (2007: 77), namely as follows: (i) Learning resources are designed to help the teaching and learning process. (ii) Learning resources that are used can make learning easier for a person. (iii) Provide an overview of objects that are abstract and difficult to understand. (iv) Provide information regarding scientific developments.

The term learning resources in education is not a new term. Based on the explanation above, the sources are all facilities and infrastructure that support teaching and learning activities that can present an auditive message or can be seen visually, for example, means books, magazines, bulletin, newspapers, television to simplify and assist the teaching and learning process and make it easier for someone. in study.

According to Warsita (2008: 209-210), there are many kinds of learning sources. The learning resources include: First, messages, which are learning information to be conveyed in the form of ideas, facts, teachings, values and data. Messages are learning information that will be conveyed in the form of ideas, facts, teachings, values and data. Second, people, are humans who act as seekers, storages, processors, and presenters of messages. For example teachers, lecturers, tutors, librarians, laboratory assistants, instructors, lecturers, sports coaches, experts, producers, researchers and many more, including the students themselves. Third, materials are software that contain learning messages which are usually presented through certain equipment. For example, text books, modules, transparencies (OHT), audio program cassettes, video program cassettes, sound slide programs, programmed instructions, CAI (computer- based learning), films and others. Fourth, a tool is hardware that is used to present messages stored in materials. For example, OHPs, slide projectors, tape recorders, video/ CD players, computers, film projectors and others. Fifth, Techniques are certain procedures or steps prepared in using materials, tools, the environment and people to convey

messages. For example demonstrations, discussions, practicums, independent learning, open / distance education systems, face-to-face tutorials and so on. Sixth, the background / environment is a situation around the learning process where students receive learning messages. The environment is divided into two types, namely the physical environment and the non-physical environment. Physical environment for example, school buildings, libraries, laboratories, halls, workshops and others. While non-physical environments, for example, study room layout, air ventilation, weather, atmosphere, learning environment and others.

This opinion is reinforced by [Nana Sudjana and Ahmad R. \(2007: 80\)](#), other classifications that are usually carried out on learning resources are as follows: (i) Printed learning resources: books, magazines, brochures, newspapers, posters, floor plans, encyclopedias, dictionaries, booklets, and others; (ii) Non-print learning resources: film, slides, videos, models, audiocassette, transparency, realia, objects and others. (iii) Learning resources in the form of facilities: library, study room, carrel, studio, sports field and others; (iv) Learning resources in the form of activities: interviews, group work, observation, simulations, games and others. (v) Learning resources in the form of the environment in the community: parks, terminals, markets, shops, factories, museums and others.

The term use comes from the word for use or use and gets the affix of word. According to [Warsita \(2008: 37\)](#) utilization is the act of using instructional methods and models, materials and media equipment to enhance the learning atmosphere. The same thing was conveyed by [Barbara and Richey \(1994: 50\)](#) that utilization is an activity using processes and resources for learning. So it can be concluded that the use of learning resources is the process of utilizing or utilizing learning resources to achieve the desired goals. If it is related to IT, it can be understood that utilization as a learning resource is to use IT to assist in learning or serve as an alternative learning resource.

Information technology can be said to be a source of learning because it has easy access to information and knowledge widely, quickly and easily. Everyone can access information from anywhere, anytime, regardless of time and space boundaries. The advances in IT have supported everyone's needs to be more effective and efficient in obtaining the latest information as needed. The World Wide Web is becoming a powerful, global, interactive, and dynamic medium for delivering classroom instruction. Compared to traditional information warehouses, the web is a rich tool which can provide fast and effortless access to a variety of authentic teaching and learning materials. Web-based learning resources (WBRLs) have the potential to support a learning environment in which students explore knowledge and enhance their learning ([Mohammadi & Abrizah, 2015](#)). The basic principles for successfully utilizing the E- learning resources for professional advancement and personal development are as simple as ABC: access; break down your resources, needs and expectations; and choose the right content ([Adar & Murray, 2016](#)).

ICT through the Internet network can integrate all existing knowledge on earth for easy access, students can access materials/ references and obtain case study examples to study. In addition, ICT can also overcome the limitations of the senses in absorbing, processing, conveying, concluding and implementing. In this case, the role of ICT is as a medium used by students to more easily understand and illustrate materials that are difficult to learn. ICT is also a tool for tailor- made references and teaching materials. ICT provides a choice of flexible and adaptive learning methods, such as the action learning method. Supplementary Learning Materials are substantial tools for delivering lessons of teachers to the learners. Teachers are the best developers of these supplementary learning materials. They have the best capacity to develop a set of well-fit instructional materials for the learners to attain the mastery of learning competencies ([Jimenez, 2020](#)).

## 2. METHODS

The research method used is descriptive qualitative with a SWOT analysis approach. The data source used was primary data by conducting interviews with Islamic Boarding Schools in Pasuruan Regency. The criteria for Islamic boarding schools that are the research sample are (i) human resources who have knowledge related to entrepreneurship, (ii) have developed business units, and (iii) have production factors as capital in the implementation of creative economy development. In this study, three research samples were obtained, namely (i) Sidogiri Islamic Boarding School, (ii) Al-Yasini Islamic Boarding School, and (iii) Al-Inayah Islamic Boarding School. After conducting interviews with the three research samples, we can find the map of strengths, weaknesses, opportunities, and challenges to the SWOT quadrant as a reference in formulating strategies to accelerate creative economy development through the contribution of Islamic Boarding Schools in Pasuruan Regency. The SWOT analysis results are then combined with the results of literature studies to find the concept of sustainable creative economy development. The following is an overview of research methods, from mapping problems to formulating the eco-creative hub model as a solution.



**Figure 1.** The Research Stages

## 3. RESULTS AND DISCUSSION

The results of the research in the form of e- LibWork Development to Improve Student Information Management Skills have been carried out, where the researcher has produced a product in the form of a website . The stages carried out in this study in answering the formulation of the problem are related to how to design e-LibWork Development to Improve Student Information Management Skills

### 3. 1. Problem Identification

Study Program Library and Information Science to develop learners to prepare graduate students can develop the skills and competencies discover, manage, and evaluate information and knowledge, and therefore in these efforts should improve access to and quality of education services, one of which is elaborated digital instructional resources sebagai i one of the learning resources. ICT through the Internet network can integrate all existing knowledge on earth for easy access, students can access materials / references and obtain case study examples to study.

### 3.2. Goal Setting

The main objectives of this research are as follows: (i) Knowing the data related to the students' initial conditions regarding their information management skills; (ii) Designing e-LibWork as digital instructional resources that can improve student information management skills; (iii) Obtain a description of the usefulness of e-LibWork in each information

management course; (iv) Obtaining data on the results of student information management skills after attending lectures using e-LibWork media.

### 3.3. Design Development

System planning that determines the design of the database and the design of the navigation structure which is intended as a step to implement the system to be made . This section describes the structure of the system design that will be made using a flowchart. Flowchart is an flowchart that determines the process of an activity and its implementation in an organization or system to be created. Interface design can be seen in the image below:



Figure 2. Web Interface Design

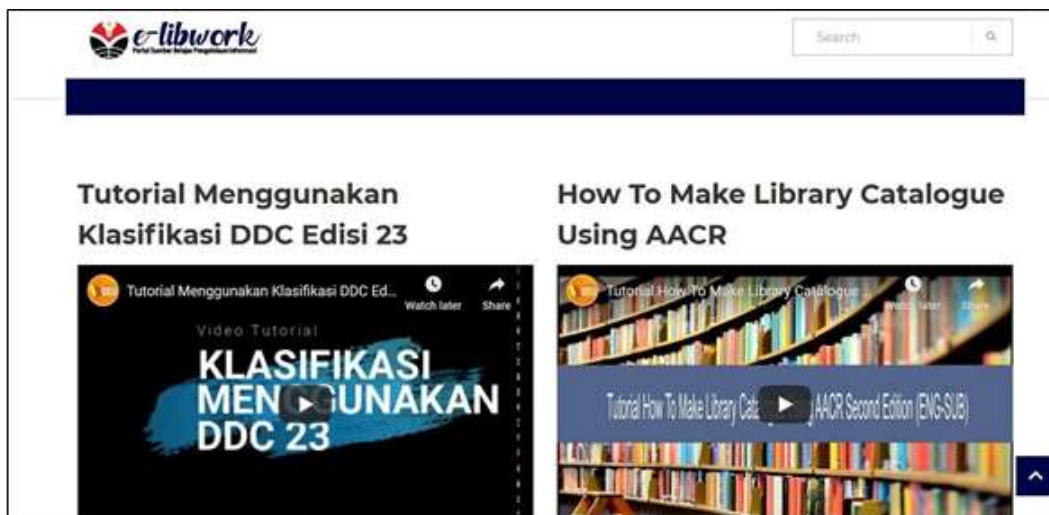


Figure 3. Instructional Design Resources

### 3.4. Limited Trial

#### Web Design Product Validation Assessment

On the product validation assessment regarding the e-LibWork Development website to Improve Student Information Management Skills . Assessment aspects of good web criteria are (i) Attitude toward the site, (ii) Cultural adaptation, (iii) Ease of navigation, (iv) Online Trust, (v) Presentation of information, (vi) Purchase intention, (vii) Satisfaction, (viii) Website

design, (ix) Web page viewing patterns, (x) Website quality , (xi) Willingness to travel . In this section, the assessor gives a score of 101 , this score if converted into a percentage, which is 93 % , which means the appearance of a website which means it is very good to be a web - based blog . Based on the assessment, the following is a note from the expert regarding the geulis website compiled from several components of the review.

**Table 1.** Website Assessment Criteria

No	Aspect	Score Obtained	Maximun Score
1.	Attitude toward the site	11	12
2.	Cultural Adaption	7	8
3.	Ease of Navigation	12	12
4.	Online Trust	8	8
5.	Presentation of Information	7	8
6.	Purchase intention	7	8
7.	Satisfaction	15	16
8.	Website design	8	8
9.	Web page viewing patterns	8	8
10.	Website quality	11	12
11.	Willingness to travel	7	8
<b>Total Score</b>			<b>101</b>
<b>Maximum Score Amount</b>			<b>108</b>
<b>Percentage</b>			<b>93%</b>

#### **Attitude toward the site**

The attitude towards the website or website that the subject has a significantly more positive attitude towards information management websites.

#### **Cultural adaptation**

Cultural adaptation refers to the extent to which individuals can identify diversity of learning resources on edulibwork websites.

#### **Ease of navigation**

Ease of navigation on this edulibwork web has familiar and consistent navigation. Edulibwork web navigation that language plays a role in terms of website navigation layout preferences.

#### **Online Trust**

The online trust level on this edulibwork website marker gives an impression of greater trust by showing several aspects of the website, namely color appeal, and safety signs for the site identified as key factors affecting online trust.

#### **Presentation of information**

Edulibwork information presentation presents information with good information management.

#### **Purchase Intension**

The intention to use the edulibwork website was also expressed as being strongly influenced by the presentation of information and the ease of use of the site

#### **Satisfaction**

User freedom to choose and free from discomfort, has a positive attitude towards productuse.

#### **Website design**



Edulibwork has a good design in presenting information management. Edulibwork is compatible with the diversity of existing content.

#### **Web page viewing patterns**

The main menu display of the edulibwork page accommodates the development needs of information management.

#### **Website quality**

The content in edulibwork has met the expectations of users. Edulibwork, which is long-term oriented in developing content, meets user expectations.

#### **Willingness to travel**

Edulibwork content triggers users to look for more information about managing that information more.

### **4. CONCLUSION**

E-LibWork web portal base web for digital learning has several major steps that the design itself, the development of the design and testing of products. First. At this stage, to achieve a good design, several steps are taken, including problem identification, goal formulation. Researchers conducted a pilot study a questionnaire to meet those steps, so that the data generated later n can be contained in the next stage of design development. At the design development stage, the researcher chose a software engineering model, namely the waterfall model. These steps include software requirements analysis, system design such as interface database design, implementation using XAMPP, which is an application that contains the management of a system using the html, php, css programming language using the notepad ++ application as well as a mysql database with phpMyadmin, after the next implementation process. black box testing phase which is intended for checking the functional software that has been made , and product maintenance. In this study, the website was validated by expert judgment, the results obtained were in accordance with the assessment criteria so that product trials could be carried out. The results of product trials, at the product trial stage, obtained results related to the usability testing assessment according to 32 respondents. Where respondents rated the website both in terms of usability testing from various aspects. The results of the product trials show that there are several recommendations from the respondents.

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