



# The Use of WIX as a Learning Media to Support Self-regulated Learning and Learning Activity

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**Abstract.** The increase in the use of technology has an impact on the education sector and also changes the learning outcomes of students. 21st century learning that prioritizes the application of technology requires students to be independent and have superior competencies. Educators as a source of learning must be able to apply technology in learning. Websites can be used in learning by providing material and practice questions to improve student learning outcomes. The Wix-based learning website is designed to be an alternative solution to students' learning problems. The low independence and understanding of students towards certain concepts is further exacerbated by decreased learning activities. Learning media that is minimal and less varied also affects the achievement of student competencies in the era of 21st century learning. The development of a Wix-based learning website aims to produce digitalized learning media that can accommodate increased independence and student learning activities. This improvement is supported by a valid and appropriate learning website to be applied in the learning process using research and development methods.. The development of a Wix-based website is considered to be able to overcome learning problems.

**Keywords:** WIX · Website · Learning Media · *Self-Regulated Learning* · *Learning Activity*

## 1 Introduction

Technological changes in the current era of the industrial revolution are happening very quickly. The technology used and currently being developed has provided many benefits and facilitated daily activities [1]. The digitalization era forces everyone to adapt to changing technology. Technology covers all activities that people do every day, whether it is helping to do work, mobility, or others. Everyone must be able to have the resources and good understanding so as not to be left behind by rapid technological changes. Technological advances in the modern era as it is today continue to increase. Everyone can get information just by accessing the internet freely. Moreover, the development of the internet is growing rapidly to the increase in the quality and quantity of human resources [2]. In addition, humans also began to create and develop applications to support and complete work.

In the field of education, technology is widely used as a medium of learning. Usually used as a tool to help explain concepts or procedures so that they are easy to understand

and apply [3]. This is meant to provide more real understanding and increase students' comprehension in learning or understanding certain concepts. This development is one sign of the progress of changes in information and communication technology. The era of digitalization demands that education be able to adapt technological developments to improve student learning outcomes, especially analytical skills and appropriately solve a problem. The era of digitalization has also changed the achievement of student's skills to be more creative and innovative in participating in learning [4].

This is in accordance with 21st-century learning which requires students to be able to understand the material through the application of a concept in a real environment. Therefore, it needs to be balanced with the appropriate, sustainable, and affordable use of technology by students [5]. 21st-century education is closely related to the rapid development of technology in various fields. This change is marked by changes in learning paradigms such as curriculum, learning media, and the technology used [6]. In the implementation of digitalization-based learning, educators must be able to integrate technology with the material being taught [7]. This requires a good understanding of the use of technology in education. Students and educators must be able to understand the changes and improvement of skills that must be possessed in every learning achievement.

Learning activities arranged by educators must be able to provide an overview of the problems that students will face in the real world. In this case, educators must also accompany and provide stimulus to students in order to find solutions to any problems experienced. To achieve this, educators need appropriate learning strategies and media for students with varying levels of understanding [8]. Educators must be able to make systematic learning media and explain abstract concepts to be easy to understand. Not only the skills to create and apply learning media, but educators must also facilitate students in the learning process to understand concepts. This is done by (1) supporting and encouraging students to think creatively and innovatively, (2) involving students to find ideas and solutions to solve problems, (3) supporting students' understanding and providing reinforcement, and (4) facilitating real concept understanding. in the surrounding environment [9].

Systematic learning technology can be used to support the implementation of 21st-century learning, namely the wix.com website. The Wix platform is an easy-to-use and user-friendly website platform for beginners [2]. The conveniences offered by Wix are very diverse. Educators can access over 500 Wix templates as needed and are compatible with teaching materials via desktop and mobile devices [10]. With various models and variations of templates, educators can create a systematic and accessible learning website. In addition, Wix can also create blog-based updated information pages, media galleries, video information, certain menus, and support business operations. Website users can easily access the available menus [11]. Educators can also not only enter writing, but also video and audio groups in one particular menu.

Various facilities provided by Wix can increase activities and make it easier for students to access learning materials. Moreover, the ability to think critically, creatively, communicate, and collaborate can also be increased through the use of the Wix website in learning [12]. The development of the Wix learning media aims to increase the learning activities and independence of students of the office administration education at the State University of Malang. Based on interviews and preliminary studies conducted with

students, it was found that during the COVID-19 pandemic, learning activities began to decline [13]. Although learning has changed a lot based on digital, the media provided as an alternative to learning has not been much. Based on this, researchers use and develop Wix as a learning medium to increase student activity and learner independence in learning.

Self-regulated learning is not only about how students can learn to determine their learning needs. Self-regulated learning greatly affects students in determining their willingness to learn and control learning [14]. The learning needs and the different characteristics of students certainly distinguish the way in which teaching materials are delivered. Self-regulated learning is important so that students can choose, apply, and control the material obtained in class. Self-regulated learning makes students the main role in learning [15]. Students will plan and determine their own learning needs. Students will control and manage their learning in accordance with the planning that has been done.

If students can build self-regulated learning, then students can have skills and academic achievements. Students who are able to have self-regulated learning can determine and set learning goals, and then manage the learning system according to plans that are supported by a good learning environment [16]. If self-regulated learning can be applied in the learning process to every student, then students are ready to respond to the development of 21st-century learning skills [17]. Students can be directed to the main learning objectives and direction of learning behaviour. Students will go through a self-regulated learning phase such as planning, self-performance control, and self-reflection at the end of the lesson.

## 2 Literature Review

The use of technology as a learning medium expands student opportunities to improve learning. Utilization of technology and information in learning with visual media tools improves analytical skills, communicates effectively, and provides flexibility in learning activities. Learning that will be given to students must be designed in a structured manner that pays attention to pedagogical aspects. The role of learning media also influences the success of learning implementation. Learning media designed by educators can consist of text, audio, video, animation, images, graphics, tables, simulations, and case studies, especially in today's disruptive era of learning in dire need of interactive learning media that is easily accessible to all students. The disruptive era with high learning achievement demands also forces educators to provide complex and systematic learning media.

One of the complex, systematic, and multimedia learning media is the website. The use of websites by integrating multimedia in the learning process has several advantages, namely learning materials can be accessed freely without being limited by time and learning materials can be added at any time. Students can also access other appropriate learning resources by organizing hyperlinks. The developed website can also contain documents that are not contained in books, such as graphics, videos, certain readings or articles. The presentation of website-based learning can be an alternative solution and facilitate learning according to the needs of different students. Learning materials uploaded on the website not only turn reading books into web pages but also require skills in designing structural and systematic learning designs.

A cloud-based platform that can be used to create websites, namely Wix. Users of this website do not need high coding skills, because there are various website templates available that can be used immediately. Wix also has user-friendly tools and websites that are easy for beginners to use. Users only need to drag and drop to modify the website template as desired. The various facilities provided by Wix make this website usable for the learning process by educators. Several studies have also used Wix as a learning medium proven to improve learning outcomes and students' critical thinking skills and increase learning activities.

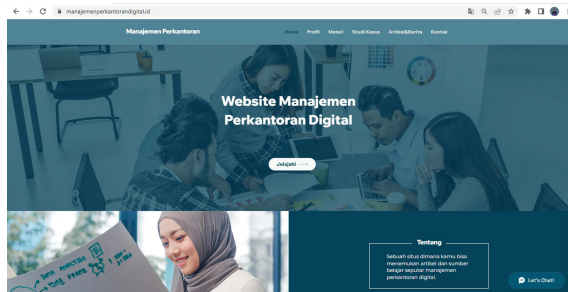
### **3 Method**

This research utilizes Wix, which is a cloud-based platform using the Borg and Gall adaptation development model. The Borg and Gall development model is considered very suitable for the development carried out on the website as a learning medium. The Borg and Gall development model can be applied in research by designing products that must be piloted to users [18]. In addition, it is also tested for its effectiveness and refined so that it becomes an effective product to use. The steps taken are the first step to identify the problems that occur and alternative solutions. The second step is to create and design a Wix-based website product design. At this stage, a careful design is needed based on the problem analysis that has been carried out in the previous first stage. The third step is to validate the appearance and application of the website in learning. The fourth step is to test the learning website. In the fifth step, the researchers conducted a trial using the learning website. The last step is to make improvements to the learning website product.

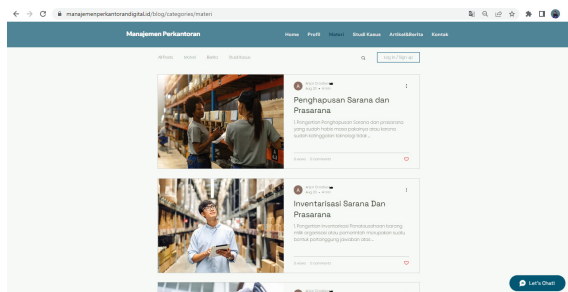
Several stages of this development are carried out to produce the right learning website. In addition, this development is also expected to be an alternative solution to the learning problems that occur. The stages of developing a learning website certainly use a design that is following the learning problems of students [18]. This is sought so that students can improve their learning activities both independently and with the help of educators. This Wix-based learning website is certainly expected to be able to improve the competence of students and their critical thinking skills.

### **4 Findings and Discus**

The development of this learning media produces a cloud-based website using Wix. The use of Wix as a learning media has provided easy access to student learning materials [19]. Learning materials on the website can be accessed freely by connecting to the internet network. Based on the results of a preliminary study that has been carried out on students of the S1 Office Administration Education study program at the State University of Malang, it is stated that there are obstacles to access to materials or teaching materials. In addition, the learning media used, especially after the Covid-19 pandemic, are less diverse. 74.3% of students stated that they could not understand the material given. Meanwhile, 68.6% of students stated that the teaching media applied in class was too boring and seemed to only be based on PowerPoint (ppt). These constraints make it difficult for practical learning and high-level analysis (Fig. 1).



**Fig. 1.** Wix-Based Learning Website Home Display



**Fig. 2.** Learning Material Menu Display

In addition to learning media that are less varied, the level of learning independence of students also decreases. This is exacerbated by the impact of the Covid-19 pandemic, which forces students to learn independently [20]. Students only rely on learning materials provided by the lecturer. Students do not plan and set learning goals, so the lecturer only provides material according to the material that must be mastered by students. Lecturers or educators also do not understand the learning constraints and characteristics of each student [13] (Fig. 2).

With the introduction and application of technology in education, educators must be able to provide a variety of learning alternatives that can be accessed by students (Fig. 3). Moreover, 21st-century learning prioritizes the use of technology in the learning process [9]. Educators have an important role in improving the skills and learning activities of students. Learning that is changing based on digitalization requires educators to be smarter in choosing learning media [7]. Educators must also be able to think innovatively in creating interactive learning media. Not only that, but students must also be independent in learning to create and improve their understanding of certain concepts. Therefore, researchers developed a learning website consisting of material and practice questions that can be accessed by students in the learning process (Fig. 4).

The design of the learning website is based on the analysis of the preliminary studies that have been carried out previously. In addition to easy access to materials, the use of this website also makes it easier for students to get a variety of learning materials. For example, educators can provide material in the form of text, video, audio-visual,

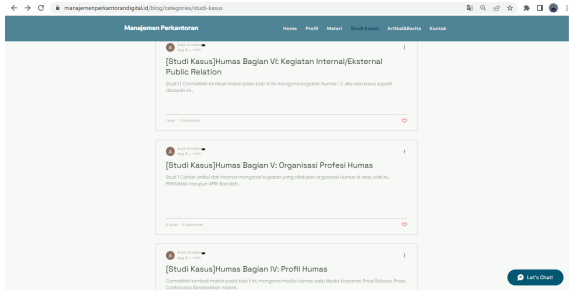


Fig. 3. Menu Display Case Studies and Practice Questions

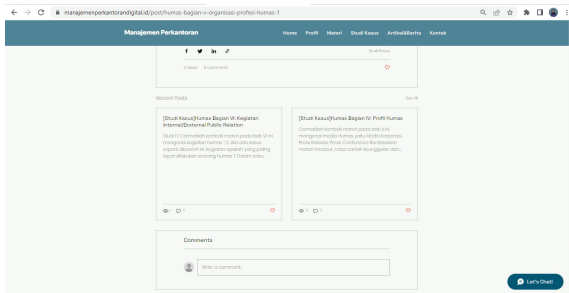


Fig. 4. Comment Column to Respond to Practice Questions, Case Studies, and Project Assignments

diagrams, pictures, and link sources that make it easier to understand the presentation of learning materials. This Wix-based learning website design also provides practice questions, case studies, and project assignments that can be done to improve student learning activities.

The Wix-based learning website design has been designed, then tested its effectiveness and validity through the validation stage. This validation test is carried out by lecturers who understand learning technology, design multimedia learning materials, understand the curriculum, and have good experience and knowledge of websites. This validation test is carried out by measuring the presence of the website appearance and the completeness of the material contained in the learning website. The following table assesses the validity of the learning media developed.

Table 1 shows the assessment of the Wix-based learning website validation test which is quite high with a score of 93%. It can be concluded that the use of Wix in the learning process is proven to be an alternative learning media. The assessment at the validation stage of the product being developed is proven to be valid and feasible to use. Furthermore, the researchers conducted a trial use to 6 students to measure the usefulness of the developed product, the appearance and menu presentation, ease of access, and the suitability of the material. Based on the trial, 6 students stated that this Wix-based learning website was feasible to use with a percentage of 93.8%.

The usage trial became the benchmark for researchers in developing and implementing a Wix-based learning website. With the value obtained from the trial, the researchers

**Table 1.** Product Validation Test Results Data

No	Measurement Aspect	Number of Questions	$\sum x$	$\sum xi$
1.	Menu Display and Presentation	4	20	20
2.	Material Equipment	8	37	40
Total		12	56	60
<b>Average</b>				<b>93%</b>

**Table 2.** Usage Test Result Data

No.	Assessment Aspect	Number of Questions	$\sum x$	$\sum xi$
1.	Ease of Access	6	198	210
2.	Benefits of Wix	4	126	140
3.	Wix Display	6	202	210
4.	Material Suitability	4	135	140
Total		20	661	700
<b>Average</b>				<b>94,4%</b>

conducted an open-use test for 70 students to measure the level of validity and suitability of the developed learning website. The assessment in the usage test phase is as follows.

Based on the student's assessment of the Wix-based learning website in Table 2, the website developed is proven to be feasible and valid to use. This is following the percentage assessment of the product of 94.4%. This assessment is obtained by presenting learning materials accompanied by practice questions, case studies, and project assignments that can be done by students. Wix-based websites are also easily accessible by simply selecting the available menus on the website's home page.

Increased learning activities and student independence in the learning process are increasing with the use of technology [21]. The skills of students must continue to be improved in order to harmonize thinking and application of technology. Students must always be trained to be able to face changing conditions in the era of globalization. Teachers as educational facilitators must be able to provide and provide learning multimedia in accordance with the conditions of the learning environment [12].

The results of measuring the level of independence of students in conducting learning are measured by giving questionnaires. The questionnaire shows the level of awareness and learning needs in the tertiary environment. The following is a presentation of the measurement of learning independence.

Table 3 proves the level of learning independence is included in the strong or high category with a percentage of 95.3%. This self-regulated learning measurement questionnaire was filled out by 40 students who used the WIX-based learning website. This learning website is implemented through supplies management courses or office facilities

**Table 3.** Data on Self-Regulated Learning Test Result

No.	Assessment Aspects	Number of Questions	$\sum x$	$\sum xi$
1.	Learning Initiative	2	387	400
2.	Learning Needs Diagnostics	3	561	600
3.	Setting Targets and Learning Objectives	3	552	600
4.	Willingness to Seek Other Relevant Sources	2	369	400
5.	Choose A Study Strategy	2	433	400
6.	Self Efficacy	3	557	600
Total		15	2859	3000
<b>Average</b>				<b>95,3%</b>

and infrastructure. In this way, it can be concluded that the use of a website as a WIX-based learning medium can encourage increased self-regulated learning as measured by six indicators.

With the application of a Wix-based learning website to a number of students, information was obtained through interviews and assessment questionnaires that students found it easier to access learning materials, obtain new learning resources, and improve their understanding of abstract concepts [22]. The use of Wix can also be an alternative to distance learning or direct learning in the classroom so that students get new experiences and make learning easier.

## 5 Conclusions

The wix-based learning website developed has a variety of learning content. The material given to students is very complex, not only consisting of text but can be in the form of images, audio, video, link sources, tables and graphics. Practice questions, case studies, and project assignments presented on the website improve analytical skills or higher-order thinking, learn independently, and increase student activity. The wix-based learning website is considered valid and feasible to be developed and used in the learning process. Learning websites can also be used and reach all learning devices so that they are easy to use, easy to access, and implement.

Wix as a cloud-based website can also be a digital-based learning media. In addition, the wix-based website can also be a learning medium for the flipped classroom learning method. With this wix, it is hoped that educators can be creative and innovative in choosing and utilizing quality and digital-based teaching media to support the success of 21st-century learning. Educators can organize and sort out the material that will be given to students and put it on the website. Educators can also see student comments on the material or practice questions given.



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