Improve Students' Critical Thinking and Skills Through Canva-Based E-Modules

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Abstract. Technological changes have also changed the students achievement in the disruptive era. 21st-century learning demands skilled students to think creatively, critically, communicate, and collaborate. Vocational teachers as educational facilitators must be able to overcome the difficulties and learning conditions of students to support the achievement of 21st-century learning skills. The importance of using technology in the learning process is needed in facing the increasingly widespread digitalization of education. This is complicated by the condition of students with learning activities and low levels of learning achievement. Teachers do not have sufficient tools and knowledge to develop complex digital learning media. The purpose of developing a Canva-based e-module is not only to assess the effectiveness of learning media but also to accommodate the improvement of students' skills in the disruptive era. The results of this development prove that e-modules are proven to be effective in increasing the learning activities, skills, and knowledge of students. Thus, this development is considered capable of overcoming problems and learning difficulties in changing the learning process.

Keywords: Canva · Critical Thinking · Creative · Learning Activities · Learning Difficulties · Learning Media

1 Introduction

Various challenges in the era of globalization continue to increase along with changes and more modern times. This era of globalization requires everyone to adapt to the rapidly changing digital world. Changes globally force everyone to do work quickly and precisely [1]. In addition, globalization is also characterized by technology that is growing rapidly. This technology facilitates daily work, mobility and reaches all aspects of life. Therefore, human resources are needed with high quality and skills. The whole world must be able to work together, think level, be creative, and be able to communicate and collaborate in various areas of life [2]. All humans are expected to have a high level of productivity that can solve problems, find solutions, make decisions, and master the digital world. Today's world community has merged as digital citizenship due to technological changes that target all areas of life [3].

Technological developments bring about rapid changes in all fields, including education and learning strategies. The education sector continues to develop strategies and

a learning environment that supports quality improvement. This quality improvement includes educators, students, curriculum, infrastructure and learning media [4]. The role of educators greatly determines the creation of quality education and encourages the competence of students. Therefore, educators must be able to create learning media or teaching materials that are interactive and based on applied technology. This is done so that initially teacher-centred learning can be transformed into student-centred learning [5].

The achievement of independent and student-centred learning certainly requires interactive and creative learning media. Learning media is a form of communication between teachers and students in the learning process. Learning media is made by combining teaching tools and materials to facilitate students' understanding [6]. 21st-century learning can be supported by teacher competence and the teacher's role in helping students think creatively, critically, and responsively about a problem [7]. Teachers can also use learning facilities in schools to help students solve real problems. Teachers can demonstrate and describe the understanding of students in detail. Collaboration between students is also needed so that learning can be carried out based on problem solving and real learning [8].

The success of the learning process is not only determined by the competence of the teacher, but also by the learning media used in the learning process. Limited learning media also hampers the delivery of material from teachers to students. The incorporation of technology in learning media aims to grow students' learning skills [9]. One of the learning media that can be used is the e-module [10]. A good module must be made based on an appropriate discussion and supplemented with pictures, animations, videos and practice questions or case studies to support the learning process [11] The making of e-modules as learning media is arranged systematically which is displayed in electronic format.

The creation of e-modules is done through the Canva application which can be used as a graphic design platform with various tools to create graphic designs such as presentations, posters, pamphlets, graphics, banners, invitation cards, photo editing, logos, and Facebook covers [12]. Canva can make it easier for students to master the material because it can display text, video, animation, audio, images, graphics and others according to the desired appearance [6]. The use of Canva-based learning media can make it easier for teachers to design learning media and explain learning materials [11] Canva can support the creation of graphic designs that are equipped with templates, good image quality and design sizes, support design collaboration.

As one of the integrated vocational schools in the Malang district that uses technology and learning media in every learning and practicum, it is SMK Al Ishlahiyah Singosari. However, there are several obstacles faced by Al Ishlahiyah Singosari Vocational School in learning such as readjustment of study hours, curriculum adjustments, and the lack of infrastructure to do a practicum or provide understanding to students both online and offline learning [13]. Constraints faced by SMK Al Ishlahiyah Singosari coupled with the boredom of students when participating in classroom learning. As a form of anticipation and efforts to maintain the quality of education, educators are required to innovate learning but the use of learning media is still limited [14].

Through this Canva-based e-module, it is hoped that it will be able to overcome material constraints that can be used in the learning process. Not only that but students will also be given interactive and interesting materials in order to overcome learning boredom. Easy access to e-modules both online and offline is the advantage of Canva-based e-modules as an alternative learning medium. Teachers can assist students in increasing creativity and critical thinking in the learning process. Teachers and students can also do more varied learning with the Canva platform which is easily accessible and flexible in use [11] The existence of diverse materials and practical support materials can encourage students to study and explore abstract material. The creation of a more interactive learning process can be implemented to improve critical thinking analysis and learning outcomes.

2   Literature Review

Canva is a design platform that is quite complete and can be used as a medium for learning in the field of education. The development of the Canva platform can be one of the audio-visual-based learning media. Canva has quite complex features and lots of easy-to-use templates to add text, create designs, add numbers, images, videos, audio, and even links. Canva can be accessed through mobile phones and websites for free. In fact, this platform has been integrated with various supporting applications such as LinkedIn, Microsoft Teams, Google Classroom, Gmail, LMS, and even other social media [12]. Canva can also be sent and shared with students as materials supplemented with case study-based assignments.

Easy access to the Canva platform as a learning medium is expected to increase learning motivation, interest, and enthusiasm in learning. The use of the Canva platform during the learning process that is equipped with varied and complete materials or content can encourage activities and the achievement of learning objectives. Learning media or teaching materials that can be poured through the Canva platform are e-modules. E-modules can be accessed anywhere and are more practical because they contain neat and systematic learning materials, have a high level of interactivity, and are equipped with case study-based questions or practice questions, both formative and summative [15]. E-modules are structured so that students experience a high level of independence in understanding the material. This can help realize the pattern of student-centred education (student-centered learning) [16].

Several researchers revealed that e-module is effective to increase students' learning activities. The existence of a Canva-based e-module also makes it easier for teachers to provide varied and interactive learning media for students. The ease and freedom of access to the Canva platform can also provide a new learning experience for students. E-modules created as learning media or teaching materials are equipped with complete learning content such as text, images, audio, video, links, and infographics that can trigger analysis and critical thinking. The completeness of the material and the type of presentation can affect student acceptance of the learning material [17].

3 Method

The development of this Canva-based learning media uses a development model adapted from the development of the borg and gall model. This development model fits perfectly with the Canva-based e-module development that is being developed. The borg and gall development model is used to create and design a product that must be tested, assessed for its effectiveness, and refined until it is effective and of high quality [18]. The first step is to collect some information about the problems and constraints of the learning process. This information collection was carried out to determine the learning obstacles faced by students, the conditions of the learning process, teaching obstacles experienced by teachers, and materials that were not mastered by students. The second step is the process of designing and creating a Canva-based e-module. This stage is carried out based on an in-depth analysis in stage 1 [16]. The content or learning materials and practice questions given can be arranged systematically. The third step is to test the use of the e-module. The fourth step, is the evaluation and improvement of content.

There are several stages of developing this e-module in order to get the success of a product being developed and the usefulness of the product. The e-module given to students will be assessed for its effectiveness, systematics, and usefulness in helping the smooth learning process [19]. That way, students will be able to develop knowledge and understanding. In addition, the e-module is expected to improve critical, creative, and analytical thinking skills. Through the development of this e-module, it can add new learning experiences and provide varied learning solutions for teachers [20].

4 Findings and Discussion

There are several stages of developing this e-module in order to get the success of a product being developed and its usefulness of the product. The e-module given to students will be assessed for its effectiveness, systematics, and usefulness in helping the smooth learning process. That way, students will be able to develop knowledge and understanding. In addition, the e-module is expected to improve critical, creative, and analytical thinking skills [19]. Through the development of this e-module, it can add new learning experiences and provide varied learning solutions for teachers (Fig. 1).

Based on in-depth interviews with several students, the results showed that the learning process carried out by students at SMK Al-Ishlahiyah still had various kinds of obstacles. The obstacles experienced by students include (1) the unpreparedness of educational institutions in adjusting the learning process, even though the situation and conditions of education are always changing; (2) Internet connection that is not sufficient for all students but teaching devices such as cellphones and laptops owned by students are devices with medium specifications; (3) Difficulty understanding the material, students feel bored and reluctant to see the material if it is not interesting and is only treated to text; (4) Limited material or varied teaching materials. Realities like this need to be addressed with the presence of learning media in the form of Canva-based e-modules. This e-module presents diverse learning content, based on visualization, and critical analysis.

This learning innovation encourages progress of higher order thinking or critical analysis of students towards a problem in the disruptive era. Education in the current

Fig. 1. Learning Process in the Class

disruptive era requires students to understand the technology and keep up with the times in the era of the industrial revolution 4.0 [21]. The educational model that has turned into digitalized education has also changed the components of learning as well as following the rapid growth of technology [22]. The disruptive era will not be far from the digitalization era, because it has several tendencies that must be addressed critically, especially by educational institutions. This tendency is in the form of a tendency for economic integration which results in free competition. In addition, there is a tendency for political fragmentation. The general public will also tend to have a desire to use technology. This tendency depends on the development of information technology and culture [23].

As an effort to introduce new habits in the field of education, namely the involvement of technology and information, it is necessary to introduce and develop Canva-based e-modules [24]. This development is one solution to solving the problem of learning difficulties and a decrease in learning activities at SMK Al-Ishlahiyah Singosari. With this Canva-based e-module, it can create 21st-century student competencies including 4C competencies (critical thinking, creativity, collaboration, and communication). The content of the e-module consists of materials, practice questions, case study-based questions and questions, illustrated images, and other supporting components.

After using the e-module, students provide an assessment and input on the existence of a Canva-based e-module that contains the learning process and level of understanding. The results of the student assessment include.

Based on Table 1 proves that the use of e-modules in learning activities is considered effective. The percentage of student assessments also proves that the learning content presented in the Canva-based e-module has met and overcomes the learning difficulties experienced by students.

Based on Fig. 2, the initial appearance of the creation and design of the e-module is made attractive and does not contain long text. This avoids the boredom of the reader and creates curiosity by presenting attractive images and colours. The completeness of the e-module is also marked by the presence of complete material in easy-to-understand language. This is further clarified by several presentations of practice questions that

students must do with problem-based learning. The types of practice questions are in the form of case studies, descriptions of observations or interviews, and certain projects that are following the material field as contained in Figs. 3 and 4. The e-module designed not only provides one type of material in the form of text, but there are learning videos, infographics, pictures, tables, and graphs that trigger critical thinking and analysis. The following is the teacher's assessment of Canva-based e-modules (Fig. 5).

Based on Table 2, E-Module can be proven that the level of teacher assessment of learning media, namely Canva-based e-modules is quite high at 91%. This means that the design and manufacture of Canva-based e-modules are proven to be effective and meet the criteria as one of the learning media that can help increase student activity in class both online and offline. The completeness of the material, the types of practice questions, and the level of interactivity in learning media prove that Canva can be a learning medium. Teachers can also take advantage of the Canva platform as a medium for student collaboration in completing projects and observing face-to-face or remotely. Teacher assessments can also be aligned with student assessments in Table 1 which shows

Table 1. Student Assessment Results on Canva

No	Assessment Aspect	Number Of Answers	Number Of Questions	Total Value
1	Material or content presented	275	3	300
2	Visual communication	375	4	400
3	Language Used	280	3	300
Total Value		920	10	1000
Value Percentage		**92%**		

Source: Research Data

Fig. 2. E-Module Using Canva

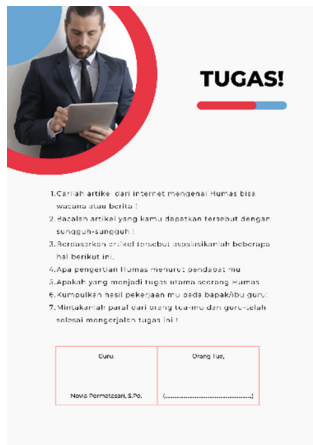**Fig. 3.** Learning Materials On E-Module

Fig. 4. Exercises That Must Be Done By Students

that the higher the benefits and convenience provided in the creation of this Canva-based e-module. That way, the implementation of education in a disruptive era that utilizes technology can be realized [1].

In the era of 21st-century education, teachers have an important role in helping improve students' skills and thinking levels with various media and multimedia tools. Digital learning makes teachers have to be creative in creating interesting, varied, and interactive learning media so that students do not feel bored during the learning process [25]. Of course, by using relevant and suitable learning methods. Through the Canva platform, students are not only familiar with e-modules as learning materials, but also work in the digital world such as making graphics, infographics, presentations,
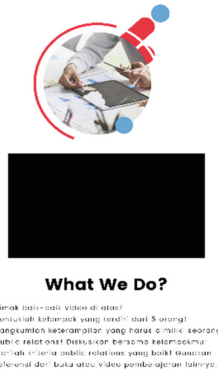
Fig. 5. Group-Based Practice Questions

Table 2. Teacher Assessment Results on Canva

No	Assessment Aspect	Number Of Answers	Number Of Questions	Total Value
1	Material Equipment	123	5	125
2	Variation Or Type Of Material	114	5	125
3	Smooth Operation	44	2	50
4	Colour and Appearance Harmony	110	5	125
5	Illustration and Interactivity	87	4	100
6	Type of Exercise	93	4	100
Total Value		571	23	625
Value Percentage		**91%**		

Source: Reseacrh Data

brochures, resumes, flyers, comics, logos, personal data, announcements, proposals, videos, storyboards. And others [26].

Students are also required to learn independently and develop their knowledge. They are required to participate in solving problems and need critical thinking skills. Not only that, the creativity of students in providing solutions to a problem also requires skills with repeated practice [27]. The E-Module presented in the development of this learning media makes it easier for teachers to provide case studies with the social-entrepreneur model. This model is suitable for the demands of competent SMK graduates in the business world. The problems contained in the case studies can also train students' analytical and high-level thinking skills during the learning process [9].

Rapid changes in technology and information make students have to adapt to changes in the world of education and be able to predict the conditions of the world of work that

will be faced. Therefore, with the existence of this e-module, it is hoped that it will not only be able to introduce the digital world in the field of education but also describe the conditions of the problems that will be faced [28]. 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 multimedia learning to the conditions of the learning environment [29].

Skills, creativity, and analytical skills can be developed and continuously improved to harmonize students' critical thinking in responding to changes in digitalization. Through this e-module, teachers can easily create learning materials creatively. On the other hand, Canva as a digital learning media platform that is used as a platform for making e-modules is easily accessible and reaches all devices [30]. Students can conduct case studies and project-based learning according to their respective subject areas. Moreover, Canva is integrating with Google Classroom, Microsoft Teams, and LMS which can be shared directly in the e-learning [26].

After the implementation of the use of this e-module to several students, information was obtained through in-depth interviews that students felt they had a new experience and atmosphere in learning. As learning materials with new media, students are getting to know Canva's uses other than for the learning process. Students can find out that other features can be used in the learning process and are collaborative [24]. Meanwhile, teachers can present new knowledge as learning multimedia that can be used in the learning process both online and offline. That way, the development of this learning media can prepare human resources as integrated SMK graduates who can compete in digitalization changes.

5   Conclusion

This Canva-based e-module that was developed has complex content in its use. The material contained in this e-module is not only in the form of text, but also visualizations such as images, sound, and video. The existence of practice questions based on case studies and projects has proven to be effective in increasing student learning activities. As an alternative to digital-based learning media, e-modules are considered very good in overcoming learning difficulties and increasing students' learning mastery. This e-module allows access freely, free of charge, and at any time by connecting to the internet network. The ease of access and the ability of Canva-based e-modules that can reach all students' learning devices or tools make this media very easy to use and implement.

Learners can access independently, so teachers can choose Canva-based e-modules as an easy-to-access learning media option with a high level of effectiveness. With the presence of this e-module, it is hoped that teachers can develop learning media and learning models that can address the needs of students. In addition, teachers are expected to further develop the skills and creativity of students in the digital era. Teachers

can present learning media in other forms using Canva or other similar platforms for face-to-face and distance learning.

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