



The Development of Sanggul Gala E-Modul at Beauty Study Program of Vocational High School

Kuswidyaningrum N. J[✉], Bambang Haryadi, Dwi Widjanarko

Pascasarjana, Universitas Negeri Semarang, Indonesia

Article Info

Article History :
Received December 2020
Accepted March 2021
Published July 2021

Keywords:
e-modul, sanggul gala,
beauty, learning

Abstract

The implementation of the Sanggul Gala learning is identical to the exploration of understanding, creativity, and imagination in order to produce a bun according to the desired theme. The limited references to books and modules, as well as the lack of Sanggul Gala learning media cause students' low understanding of the learning material. This is contrary to the factual condition, that vocational high school students in beauty study program are required to think critically and imaginatively in the Sanggul Gala learning process. The research questions of the present study are: 1) How is the development of Sanggul Gala e-Modul? and 2) how effective is the Sanggul Gala e-Modul in increasing the creativity of students in beauty study program?. The aims of this research are: 1) developing Sanggul Gala e-Modul; and 2) testing its effectiveness in increasing the creativity of beauty study program students. The research uses the R&D (Research and Development) method referring to the ADDIE development model (Analysis, Design, Development, Implementation, Evaluation). The research sample was students Beauty Study Program of SMK Negeri 1 Tegal. Based on the results of the validation of learning media experts, it was found that the results of the development of the Sanggul Gala e-Module learning media had met the following criteria: 1) validity level: 81.67% (valid); 2) the level of feasibility: 3.56 (feasible), (3) the level of reliability; 0.364 (reliable). At the trial stage of the Sanggul Gala e-Modul and the video for students of beauty study program, it was found that the average score of students increased by 29.7% in all aspects (cognitive, affective and psychomotor). This shows that the Sanggul Gala e-Modul learning media is significant in improving the cognitive, affective and psychomotor aspects of students in beauty study program.

✉ Correspondence :
Pascasarjana, Universitas Negeri Semarang,
Jalan Kelud Utara III, Semarang, Jawa Tengah, Indonesia 50237
E-mail: kuswidyaningrum.nj@gmail.com

INTRODUCTION

Characteristics of Vocational High Schools (SMK) are different from senior high schools, in terms of the criteria for the education system, the substance of the lessons and the graduates. The creative ability of students from formal schools is in tight competition with the abilities of students from non-formal school graduates. It becomes the reference for formal schools, especially vocational schools, on how to produce students who are creative and can compete in job market. Fun learning can make students active and not bored in receiving material from the teacher, so students can understand and develop the subject matter well.

Learning in vocational education, especially Vocational High Schools (SMK) in the Industrial Revolution 4.0 era, is required to be able to fully and independently master competencies, based on access to information as a learning resource in accordance with their field of expertise. The application of 21st century learning patterns, must continue to be pursued, as an effort to provide an ideal experience for SMK students and is expected to be able to improve the competence of SMK graduates. Sudira (2017) suggests that 21st century learning leads to Learning and Innovation Skills (LIS-5C) competencies which include Creativity, Critical Thinking, Communication, Collaboration and Celebration. *Sanggul Gala* is one of the subjects that must be mastered by Vocational High School students in the Beauty Study Program.

The *Sanggul Gala* subject is closely related to the vocational education learning process, because this subject focuses on mastering the competencies and skills of students. The *Sanggul Gala* subject is very identical to learning that requires students' high creativity in expressing their ideas and using students' imaginations to form a bun or *sanggul* that fits the theme. *Sanggul Gala* are generally elegant buns that are used for large parties, complex shapes, colorful ornaments according to the theme, and the arrangement of the bun or *sanggul* must match the theme carried by the *sanggul* user, because this *Sanggul Gala* is only used on certain occasions such as: events, fashion shows, television. In this lesson,

students' competence is not only related to the knowledge and technique of the *Sanggul Gala*. Students are required to be able to develop their thinking skills in order to create creativity and skills in arranging and forming *sanggul* that are in accordance with the material being taught.

Lack of learning resources in studying *Sanggul Gala* is an obstacle for students to increase their creativity. These constraints require teachers to be more creative in making and developing teaching materials. The use of technology as an effort to facilitate the learning process has been widely carried out, including: 1) the development of interactive media; 2) flipbook media development; 3) e-Pubs; 4) Android Mobile Learning application and 5) e-Module.

Dina (2015) states that using e-Modules as a learning medium can increase students' creativity in their work, and increase positive power and critical thinking for students. In another study, Abriyanti et al. (2013) stated that the e-Modul learning media in the *Sanggul Gala* material can improve student learning outcomes, student activities, and the ability of teachers to manage their teaching and learning. As described above, the *Sanggul Gala* subject for Vocational School students in the beauty study program can foster students' creativity in culture and art, to be actualized into a theme so that the spirit of independence, entrepreneurship and willingness to preserve the potential and value of local wisdom grows.

Based on the description of the background above, the research questions are: 1) how is the development of *Sanggul Gala* the e-Modul for students of Vocational High School in the beauty study program? and 2) how is the effectiveness of the *Sanggul Gala* e-Modul in increasing the creativity of SMK students in the beauty study program? Furthermore, the objectives of the research carried out are: 1) developing the *Sanggul Gala* e-Module for vocational students in the beauty study program; and 2) testing the effectiveness of the *Sanggul Gala* e-Modul in increasing the creativity of vocational high school students in beauty study program..

METHOD

The present study uses the R&D (Research and Development) method, while the e-Modul learning media development procedure refers to the ADDIE (Analysis, Design, Development, Implementation, Evaluation) method as shown in Figure 1 and the e-Module development framework as shown in Figure 2. The sampling technique used is purposive sampling. According to Sugiyono (2016: 85), purposive sampling is a sampling technique for data sources with certain considerations. The purposive sampling technique is used because not all samples have criteria that are in accordance with the phenomenon under study.

In this study, the respondents who became the sample were students of the Beauty Study Program at SMK N 1 Kota Tegal. It consisted of 40 students of class XI. Data collection techniques used were: 1) observation; 2) interview; 3) distribution of questionnaire sheets; 4) tests and 5)

documentation. The instruments used in the present study were interview guidelines, questionnaires or questionnaires, and test sheets.

Expert judgment is used to assess the validity and feasibility of the resulting *Sanggul Gala* e-Modul learning media. In order to test the effectiveness of the developed media, the instrument used is a test sheet. Analysis of the prepared test sheets used the Content Validity Ratio (CVR) method. According to Lawshe (1975), CVR is a content validity approach to determine the suitability of items with the domain which is measured based on the judgment of experts. The validation involved experts from the field of vocational education and SMK teachers of the Beauty study program. In order to measure the Content Validity Ratio (CVR), a number of experts (panels) were asked to examine each component of the measurement instrument. This expert input is then used to calculate the Content Validity Ratio (CVR) for each component.

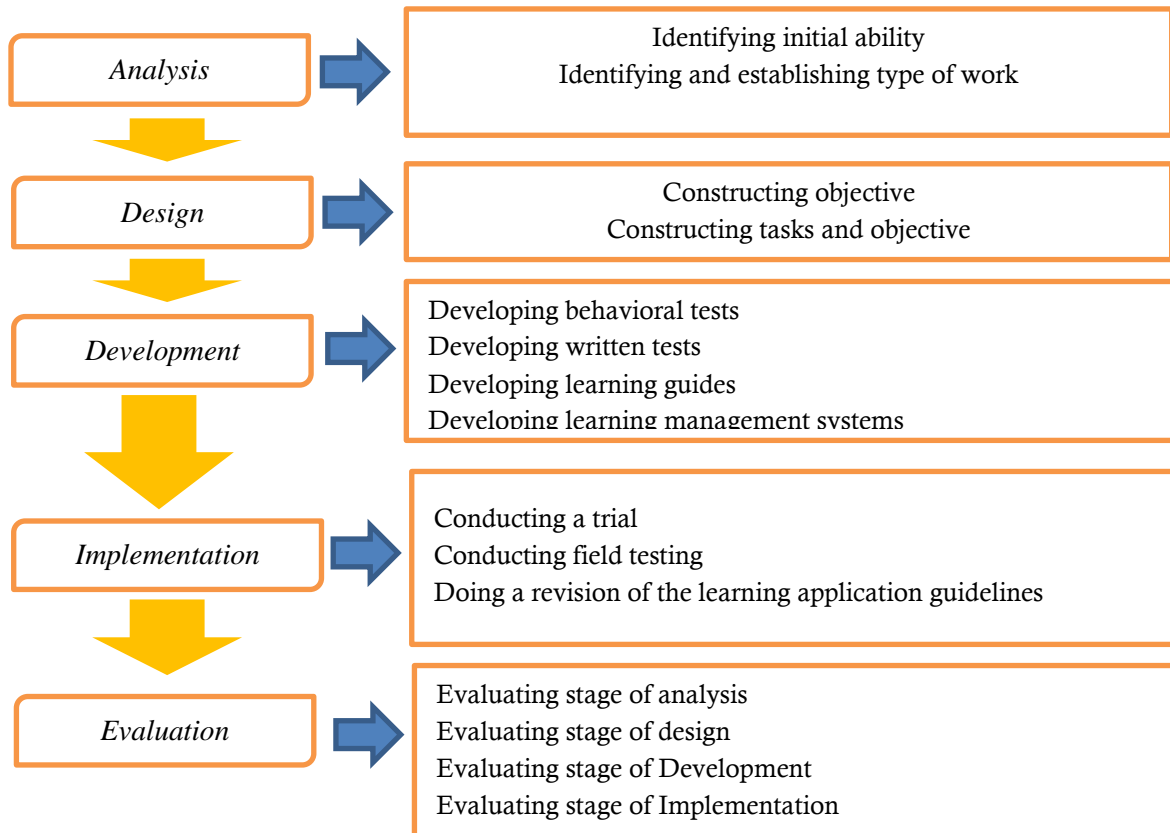


Figure 1. Procedure of ADDIE (source: Sugiyono, 2015)

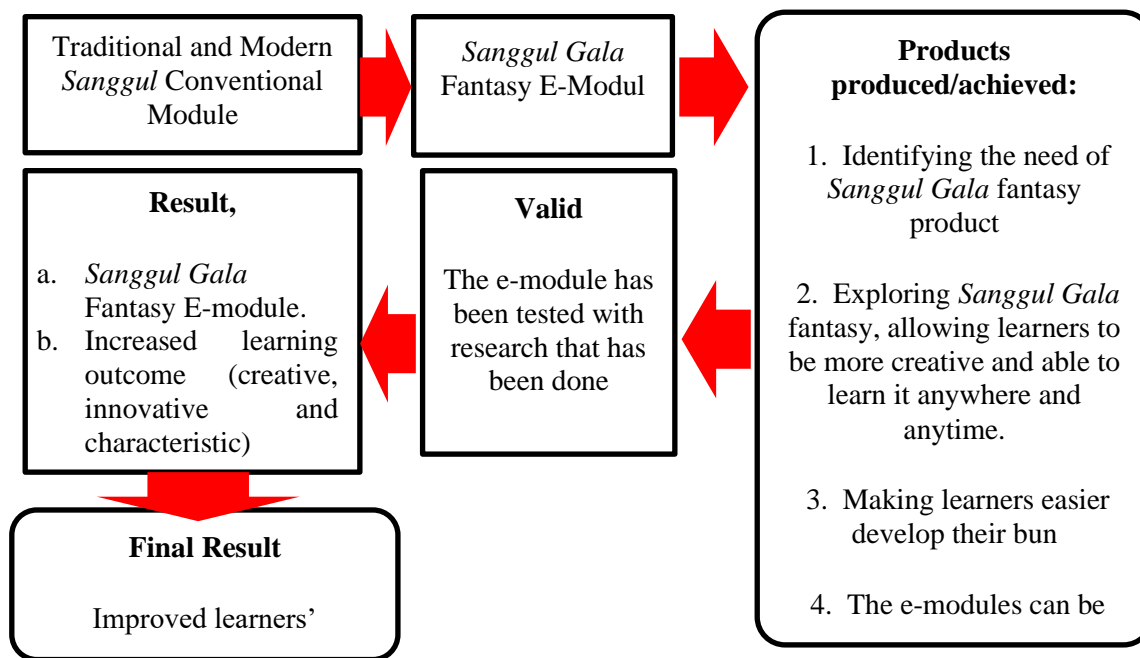


Figure 2. The *Sanggul Gala* e-Module development Diagram

The effectiveness test of the developed e-Modul was carried out with one group pretest-posttest design, in order to obtain differences in learning outcomes before and after using the developed e-Modul. This test is done in order to see how much the increase (gain) in the cognitive, affective and psychomotor aspects of the students.

RESULT AND DISCUSSION

1. Development of *Sanggul Gala* e-Modul

The implementation of the development of learning media for *Sanggul Gala* e-Modul uses the ADDIE approach (Lee and Owens, 2004: 3) through the following stages:

a) Analysis Stage

In the analysis there are 2 stages, namely Needs Assessment and Front-end Analysis. Needs Assessment is an analysis of field conditions and participants as well as collection of reference materials that will be the subject of discussion in the development of e-Modules. Field analysis activities were carried out by collecting information about the

learning conditions at SMK Negeri 1 Tegal, class XI. The results of information about the learning process, student characteristics and the development of e-Module learning media contained in the learning process activities.

Observations made in the context of Needs Assessment in the *Sanggul Gala* learning process in class XI at SMK Negeri 1 Tegal, resulted the following conditions:

1. The delivery of the material by the teacher tends to be monotonous and boring, so learning becomes less interesting and students cannot fully understand the *Sanggul Gala* material;
2. The use of media and learning methods that are less varied makes students easily bored;
3. Students need learning media that can be used flexibly, so that the learning process can be done anytime and anywhere;
4. There has been no development of the e-module learning media on *Sanggul Gala* in SMK N 1 Tegal.

Based on the results of the observations described above, the development of e-Module learning media in the *Sanggul Gala* subject was carried out, as a means of learning for class XI students at SMK Negeri 1 Tegal.

The second activity in the analysis phase is Front-end Analysis. Front-end analysis is carried out by collecting references in the form of curriculum, syllabus for *Sanggul Gala* subjects and textbooks related to the material. This activity is needed because it is directly related to the need for developing learning media for *Sanggul Gala* e-Module.

b) Design Stage

At this stage, the concept of learning media that will be developed needs to be adjusted to the objectives of the learning material. An important step at the stage of developing learning media for *Sanggul Gala* e-Modul is to determine the knowledge and attitudes that will be acquired by students after using learning media. Determining the knowledge (theory) and student attitudes that will be obtained after using the *Sanggul Gala* e-Module learning media, is outlined in the formulation of the objectives of using the *Sanggul Gala* e-Module learning media that was developed. The goal formulation technique uses ABCD (Audience, Behavior, Condition, Degree), as shown in Figure 3.

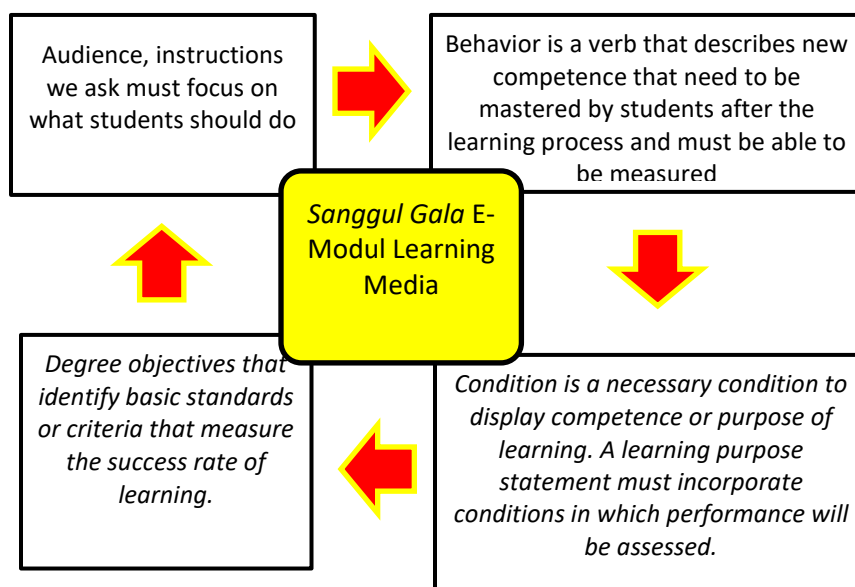


Figure 3. ABCD goal formulation technique

The results of the formulation of the objectives of developing learning media for *Sanggul Gala* e-Modul are:

1. The learning material can be well understood by the 11th grade students of SMK N 1 Tegal, if the developed flipbook type of e-Module media is used.
2. By learning using the flipbook e-Module, it is hoped that the 11th grade students of SMK Negeri 1 Tegal can be more active in the learning process of the *Sanggul Gala* subject;

3. The 11th grade of SMK N 1 Tegal can learn the *Sanggul Gala* material anywhere and anytime, using the developed flipbook type e-Module media.

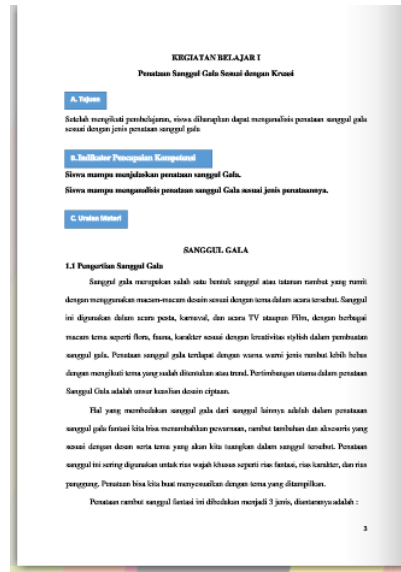
c) Development Stage

The *Sanggul Gala* e-Modul learning media that was developed is a flipbook type e-Modul. The developed E-Module can be used flexibly in order to develop and improve creativity and student learning outcomes of the beauty study program at

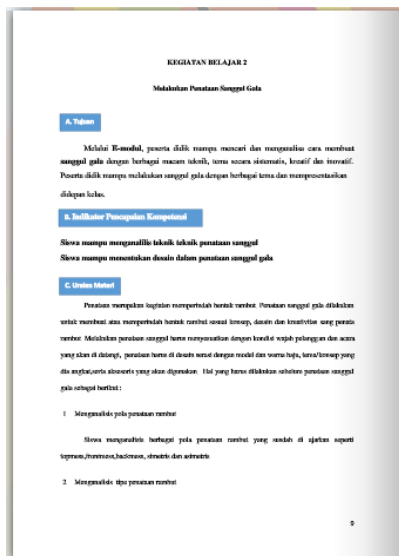
SMK Negeri 1 Tegal. In the development stage, the parts of the *Sanggul Gala* e-Module that were developed can be seen in the image below.



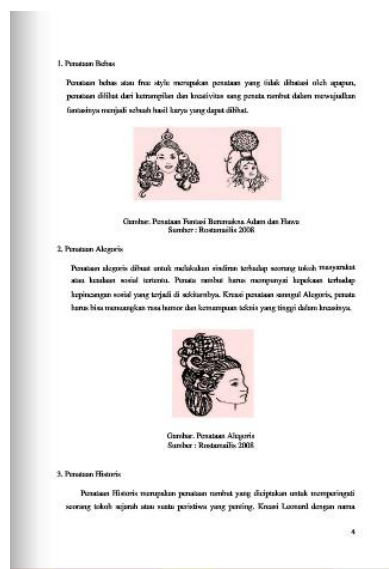
Picture 3. Cover of E-Module



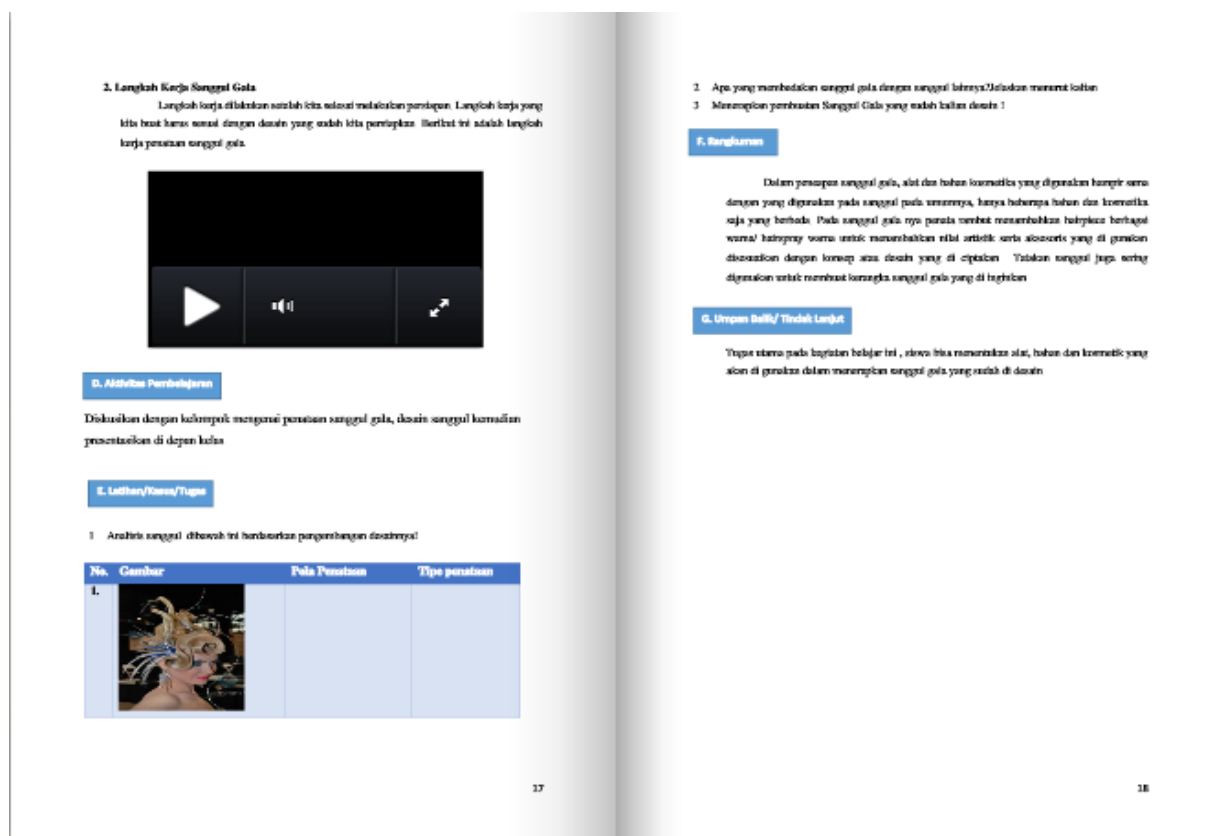
Picture 4. Content of E-Module



Picture 6. Learning Activities of E-Modul



Picture 5. Content of E-Modul



Picture 7. Complementary video on E-Module

d) Implementation Stage

Implementation is limited to schools designated as research sites, namely SMK Negeri 1 Tegal City, Beauty Study Program. Teachers conduct learning activity by using e-Module learning media that has been developed. At this stage, the researcher acts as an observer and records everything on an observation sheet that can be used as an improvement in the learning media developed. At the end of the learning process, students take a test using the questions that have been provided. The questions have been compiled based on indicators of competency achievement to see the level of effectiveness of using the *Sanggul Gala* e-Module learning media that was developed. At this stage, the researcher collected material objects refers to the concept and design of the material on the learning media that has been made. The stages of object collection carried out are:

- Collecting materials, evaluation questions and answers, as well as examples of the steps in making *Sanggul Gala*. The material is arranged according to existing references and made coherently to make it easier for students to learn the material. Evaluation and answers are taken to find out students learning outcomes.
- Collecting interesting reference images and illustrations, so that students are more interested and understand the *Sanggul Gala* material.

At the implementation stage, a feasibility test of the *Sanggul Gala* e-Modul learning media was also carried out. The feasibility test instrument was made in the form of a questionnaire which was presented to media experts, material experts and respondents using the type of answer in the form of check list (√). The results of the feasibility test can be seen in table 1 below.

Tabel 1. Result of Feasibility test on *Sanggul Gala* E-Module

Aspek	No.	Statements	V1	V2	V3	Average	Criteria
MEDIA CONTENT	1	The questionnaire instruments are served systematically	3	4	3	3.3	Valid
	2	The presented content can reflect the description of the objectives that support the achievement of learning objectives	4	3	5	4.0	Valid
	3	The questionnaire instruments are served to exposes faults that support the improvement	3	4	4	4.0	Valid
	4	Each question presented has a clear purpose	4	3	4	3.67	Valid
	5	Instruments can reveal the quality of the e-modules to learning.	3	3	3	3.00	Valid
LANGUAGE	LANGUAGE						
	1	The phrase used represents the content of the message that was meant to be conveyed exactly	4	3	4	3.67	Valid
	2	The sentences are simple and it uses direct sentences	3	4	5	4.0	Valid
	3	The sentences contain a clear meaning	3	3	5	3.67	Valid
	4	The sentences are communicative	3	3	4	3.33	Valid
PRACTICALITY	5	The language use is in accordance with EYD (improved spelling)	2	3	3	2.67	Valid
	1	Instrument instructions can be easily understood by the user	3	4	5	4.0	Valid
	2	The format is clearly presented and thus makes it easier to do the assessment	4	3	5	4.0	Valid
	3	Instruments can be used to assess the feasibility of the e-module	4	2	3	3,0	Valid
	THE AVERAGE OF A WHOLE ASPECT						3.56

e) Evaluation Stage

At this stage, the researcher made the final revision of the *Sanggul Gala* e-Module learning media which was developed based on the input obtained from the response questionnaire or field notes on the observation sheet. It is intended that the developed *Sanggul Gala* e-Module is truly appropriate and can be used by other vocational high school in the subject of the *Sanggul Gala*, as well as in the same study program. Some of the analyzes carried out at the evaluation stage are as follows:

1. Analysis of learning media validation data

Analysis of the learning model validation data obtained from the validation by media experts and material experts to determine the feasibility of e-Module learning media;

2. Analysis of data from respondents in the learning process

Analysis of data from respondents of *Sanggul Gala* e-Modul learning media are obtained from students to determine the feasibility of *Sanggul Gala* e-Module learning media;

3. Final Product

The final product in form of e-Modul learning media which is valid, appropriate and effective can be used in the learning process in order to increase creativity and learning outcomes of Vocational High School students for the *Sanggul Gala* subject in Beauty Study Program.

2. Trial and Error Test of *Sanggul Gala* e-Module

The limited scale model trial was conducted using the Project Based Learning (PBL) model. The PBL model trial was carried out in several stages, the first is the pre-test where students were asked to

work on questions that had been prepared by the researcher according to the cognitive assessment instrument grid. The students also did affective and psychomotor tests with the practice of making a *Sanggul Gala*. Students will be assessed in the specifications and details of each preparation to the final result, including how to behave, communicate, carry out K3 procedures and be responsible. The function of the Pre-test and Post-test is to determine the creativity of students. The results of the cognitive, affective and psychomotor assessment of students at SMK Negeri 1 Tegal can be seen in table 2 below.

Tabel 2. Pre-Test and Post-Test Trial Results

No	Aspect	Score		Item Discrimination	Gain	Criteria
		Pre	Post			
1	Cognitive					
	The definition of <i>Sanggul Gala</i>	3.13	3.5	0.37	0.42	Medium
	The function and objectives of <i>Sanggul Gala</i>	2.9	3.63	0.73	1.50	High
	The types of <i>Sanggul Gala</i>	2.96	3.53	0.57	2.2	High
2	The Steps of <i>Sanggul Gala</i>	2.54	3.86	1.32	1.00	High
	Affective					
	Initiating procedure K3	2.5	3.33	0.83	1.80	High
	Creativity	3.0	3.43	0.43	2.32	High
	Honesty	3.13	3.53	0.40	2.17	High
3	Creative and Innovative	3.03	3.43	0.40	2.40	High
	Responsibility	3.04	3.45	0.32	1.45	High
	Psychomotor					
	Preparation	2.5	3.4	0.9	1.66	High
	Work procedure	3.1	3.5	0.4	2.25	High
4	Pack up	3.13	3.36	0.23	3.7	Very High
	Result	3.03	3.56	0.53	1.83	High
	Creativity					
	Design of <i>Sanggul Gala</i> :	2.73	3.56	0.83	1.53	High
	Standard of line					
	Shape					
	Background					
Idea:	3.0	3.4	0.4	2.50	High	
Unique						
Color						
Object of the product:	3.1	3.4	0.30	3	Very High	
Worthiness						
Attraction						
Selling Value						

Based on the results of the pre-test and post-test above, the eleventh grade of SMK students showed an increase in assessment results before and after learning using the *e-Sanggul Gala* e-Module learning media. In the cognitive aspect, the score with a range of 0-100 is then converted to a 4-scale value, with the aim of facilitating the presentation and analysis of data combined with psychomotor and affective aspects.

The criteria for the assessment results are arranged based on the maximum score which is worth 4 and the minimum score is 1. So, 4 minus 1 equals 3, then 3 divided by the maximum value of 4, it equals 0.75. Competency criteria are arranged as follows: (a) 1.00-1.75 = incompetent; (b) 1.76-2.50 = less competent; (c) 2.51- 3.25 = competent, and (d) 3.26- 4.00 = very competent.

The difference between the results before and after the use of *Sanggul Gala* e-Modul learning media showed significant results. The increase in cognitive aspects made it possible for participants to have good prior knowledge of the *Sanggul Gala* subject. The results of the psychomotor, creativity and affective aspects showed an increase due to the addition of creativity assessment for students.

DISCUSSION

Based on the results of research that has been carried out, with a focus on developing learning media for *Sanggul Gala* e-Module for Vocational High School students of Beauty Study Program, a valid, feasible and effective *Sanggul Gala* e-Module learning media has been produced. This shows that learning that is equipped with appropriate learning media, accompanied by the application of appropriate learning methods, will be able to have a significant impact on student learning outcomes in cognitive, affective, and psychomotor aspects.

This study is relevant to previous research conducted by Dominik, et al (2014) which shows that education is increasingly promoting models through training to prepare their students for professional life to simulate real-life situations that give students the opportunity to apply theoretical

knowledge in practice. It is also relevant to the research by Maghfiroh (2015) and Rusnani (2012) which say that it is necessary to develop a more attractive learning model for students consisting of a syllabus, curriculum, lesson plans and learning materials that have been developed to be more attractive.

The validity of the *Sanggul Gala* e-Module learning media on the *Sanggul Gala* subject based on the experts can be concluded as valid. The validation of *Sanggul Gala* e-Module learning media includes various aspects, namely: (1) Knowledge of the understanding of the *Sanggul Gala*, (2) The goals and benefits of the *Sanggul Gala* (3) Steps to make the *Sanggul Gala*, (4) evaluation, (5) learning instruments which includes syllabus, teaching materials and assessment instruments, (6) cognitive assessment instruments with pre-test and post-test, psychomotor and affective using observation sheets.

The elements in the model are relevant to research conducted by Nur Hikmah (2015) entitled the development of student worksheets (LKS) of excretory system materials in human. The research conducted is research and development with steps to analyze potential and problems, data collection, product design, design validation, design revision, small-scale trials, product revisions, large-scale trials, product revisions, and final products. The product development trials used an experimental method with a one-shot case study design. The feasibility of the LKS material and media was analyzed by descriptive percentage. The research subjects in the small-scale trial consisted of one teacher and 30 students. The data taken in large-scale trials are student learning outcomes data which are analyzed by quantitative descriptive, and teacher and student responses which are analyzed by percentage descriptive.

The effectiveness of the e-Module learning media is measured by the final results of student assessments. The results of the assessment that are used as benchmarks for this effectiveness are determined on cognitive, psychomotor, and affective assessments. Cognitive assessment uses

pre-test and post-test analysis where students carry out pre-tests before being given treatment and then after being given treatment using e-Module learning media, students carry out post-tests.

Psychomotor assessment is carried out when students carry out practice in making *Sanggul Gala* that are in accordance with the theme including the practice of making *Sanggul Gala* with the creativity and imagination of the students. Psychomotor assessment uses a scoring system using an assessment grid. Affective assessment is carried out when students follow a series of tasks in the craft subject. Affective assessment is carried out using observation sheets based on affective aspects. Evaluation of results to measure the achievement of performance results in the effective category is evidenced by the increasing competence of the *Sanggul Gala*, namely cognitive, affective and psychomotor.

CONCLUSION

1. The development of the Sanggul Gala e-Module learning media for Vocational School students of the Beauty Study Program, referring to the ADDIE procedure has resulted in a learning media for the Sanggul Gala e-Module which is valid and suitable to be used in the learning process.;
2. The developed Sanggul Gala e-Modul learning media has been proven to be able to improve students learning outcomes in the cognitive, affective and psychomotor aspects in a significant category. It proves that the Sanggul Gala e-Module learning media is effective.

REFERENCES

Abdel Salem. Dina. 2015. "The integration of form-focused instruction within communicative language teaching: instructional

options". *Journal of Language Teaching and Research*. Vol. 6. No. 5. September 2015. Hal. 1125-1131

Abriyanti R, Budijastuti W & Asri MT. 2013. Penerapan lembar kegiatan siswa inkuiri pada materi daur ulang limbah kelas X di SMA N 1 Manyar Gresik untuk meningkatkan ketuntasan hasil belajar siswa. **BioEdu** 2(1):94-98

Lawshe, C. H. 1975. *A Quantitative Approach to Content Validity*. Purdue University: Personnel Psychology, Inc. Hlm. 563-575.

Lee, William W & Owens, Diana L. 2004. *Multimedia-Based Instructional Design*. San Fransisco: Pfeiffer.

Maghfiroh, Ulfa. 2015. "Pelaksanaan penilaian pembelajaran mata pelajaran ppkn kelas vii SMP N 1 lasem dan SMP N 1 sedan berdasarkan kurikulum 2013". *Skripsi S-I* Semarang. Fakultas Ilmu Sosial Universitas Negeri Semarang.

Matt Dominik T., Rauch Erwin, Dallasega Patrick. 2014. Mini-factory – a learning factory concept for students and small and medium sized enterprises. *Procedia CIRP*. 17: 178-183

Rusnani. 2012. Pelaksanaan Unit Produksi pada Sekolah Menengah Kejuruan Negeri Kelompok Bisnis dan Manajemen di Banjarmasin. Tesis tidak diterbitkan. Yogyakarta: Program Pascasarjana Universitas Negeri Yogyakarta

Sudira, Putu. 2017. *TVET ABAD XXI Filosofi, Teori, Konsep, Dan Strategi Pembelajaran Vokasional*. Yogyakarta. UNY Press 2017

Sugiyono. 2015) *Metode Penelitian Kombinasi (Mix Methods)*. Bandung: Alfabeta.

Sugiyono. 2016. *Metode Penelitian Kuantitatif, Kualitatif dan R&D*. Bandung: PT Alfabeta