

# Enhancing The Competence Of Ict Educators In Developing Media And Learning Material Based On Local Wisdom Through Learning Cycle (3e) For Teacher In Sd Kkg Gugus 05 Kemuninglor Jember

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**Abstract**— An educator, is expected to have five (5) competence to be prepared in the era 4.0, namely (1) the competence of internet-based learning as a basic skill, (2) the competence to bring the students have an entrepreneurial attitude with the technology on the work of innovation of students, (3) hybrid competence, (4) the competence memprediksi future strategy, and (5) competence in psychological problems. The purpose of this activity to provide training on developing the media and interesting learning device using Macromedia Flash and Microsoft Publisher to educators KKG SD 05 village groups Kemuninglor Jember. This mentoring is done by modifying the model Learning Cycle (3E), which consists of three stages, namely Exploration, Explanation and Elaboration. This activity is expected educators with KKG SD 05 Kemuninglor Jember group was able to develop local knowledge-based learning media using Macromedia Flash and develop local knowledge-based learning tools using Microsoft Publisher.

**Index Terms**— ICT Competency of Teachers, Local Wisdom, Learning Cycle (3E).

## 1. INTRODUCTION

The era of the Industrial Revolution 4.0 is not easy a developing country. Indonesia as a developing country, should prepare themselves in facing the challenges of the industrial revolution 4.0. Likewise the field of education, have to deal with all aspects including curriculum, educators, learners, educators, media and learning devices. An educator, is expected to have five (5) competence to be prepared in the era 4.0, namely (1) the competence of internet-based learning as a basic skill, (2) the competence to bring the students have an entrepreneurial attitude with the technology on the work of innovation of students, (3) hybrid competence, (4) the competence memprediksi future strategy, and (5) competence in psychological problems. Even though, educator role will not be replaced by artificial intelligence. So that educators must continue to provide assistance and learning on the learner to go to an independent.

One of the competencies of an educator to be prepared is competence-based learning as a basic internet skills. In a much-needed instructional media and learning devices. Media and internet-based learning device can be interpreted as a learning facility utilizing the Internet every lesson. Learning media is one tool in learning to transfer material to the learners.

Media learning media can be text, audio, visual, and media manipulation. The use of media in the learning process can provide benefits include: (1) to clarify the presentation of messages and information so as to improve the process and learning outcomes of students, (2) can cause learners' learning motivation for learning interesting, and (3) engage learners in the learning process. Making the learning media interest is one educator competencies in the 4.0 era as a creative educator. Macromedia Flash is a multimedia program that allows users to present the appearance in animated form. Media making learning interesting one is using an animated display. Making the learning media by using Macromedia Flash will provide an attractive appearance so that learners are more focused and more motivated to follow lessons. Macromedia Flash is a multimedia program that allows users to present the appearance in animated form. Media making learning interesting one is using an animated display. Making the learning media by using Macromedia Flash will provide an attractive appearance so that learners are more focused and more motivated to follow lessons. Macromedia Flash is a multimedia program that allows users to present the appearance in animated form. Media making learning interesting one is using an animated display. Making the learning media by using Macromedia Flash will provide an attractive appearance so that learners are more focused and more motivated to follow lessons.

Based on Permendikbud No.22 of 2016 which deals with the preparation of the learning device. Educators are expected to draw up a learning tool that can be a syllabus, lesson plan (RPP), Books Educators, Students Book, Worksheet Students, and Evaluation Sheet. The preparation

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of the learning device can use Microsoft Publisher application, in addition to a more attractive appearance to use it more easily. In Microsoft Publisher to put images and make drawings more flexible. With LKPD or books that look interesting Students then learners in completing or learn the material therein will be more pleased.

KKG primary school in the village 05 Kemuninglor Force District of Jember Arjasa is one of KKG (Teachers Working Group) located in the remote highlands of Jember. KKG Kemuninglor Village Cluster 05 consists of four elementary schools, namely Kemuninglor SDN 01, SDN Kemuninglor 02, Kemuninglor SDN 03 and SDN Kemuninglor 04, with the number of educators around 50 educators. Fourth elementary school is located on a plateau area in Jember. With areas away from the city, educators only use textbooks in the learning process. Media used only sober without any local knowledge or innovation of the plantation environment. Use of the media is very less, so the learners to follow learning are saturated. Conditions such as these can be completed accurately and quickly,

*Learning cycle*(3E) is one model of learning which consists of Exploration (exploration), Explanation (explain) and Elaboration (expand). The learning model is used as a stage in the service where the students in the learning model is replaced educators and educators on teaching model was replaced by the team of devotion. At this stage of exploration, educators are given the opportunity to observe local wisdom in each school environment and observe the behavior of students in each class. Explanation stage is the stage of explanation, the stage is expected the process of understanding new concepts with the concept that has been owned by educators. Educators get an explanation from the team devotion. Elaboration stage is the stage of implementation of the new concepts that have been obtained in the previous stage.

## 2. METHODS

The method used in the implementation of these activities is a model of Learning Cycle (3E), which consists of Exploration, Explanation and Elaboration. The stages of the implementation of activities is as follows:

### 1. Exploration phase

At this stage, to all partner school educators:

- (1) Explains the general purpose of the activities provided
- (2) Explaining about the local wisdom
- (3) Provide examples of local wisdom of the town of Jember in general
- (4) Ask educators to observe the phenomenon of local wisdom contained in each school around
- (5) Ask educators to observe the situation and habits of students in each class

- (6) Providing educators to choose the theme or material that can be applied to local wisdom.
- (7) Request educators describe the selected learning topic
- (8) Providing educators to explore the learning situation that happened in her class.
- (9) Educators divide into several groups according to the grade

### 2. phase explanation

At this stage, the provision of material to educators partners:

- (1) Giving examples of media that is created using Macromedia Flash so that educators feel interested and motivated to learn to develop their own learning media
- (2) Providing material about Macromedia Flash and its use in the manufacture of instructional media
- (3) Giving examples of the learning device in the form of lesson plans, LKPD, and teaching materials are created using Microsoft Publisher
- (4) Providing material about Microsoft publisher and its use in the preparation of the learning device

### 3. Elaboration phase

At this stage, do coaching manufacture instructional media attention to local knowledge and preparation of learning tools attention to local wisdom:

- (1) Educators ask partners to install Macromedia Flash;
- (2) Educators ask partners to prepare the material that has been selected in the previous stage;
- (3) Educators ask partners to form groups according to the class being taught, each group was accompanied by one of the team activities.
- (4) Educators ask partners to join the group and work together in making media with the guidance of team activities.
- (5) Request educator partners continue the preparation of learning tools and rejoined the group and work together in making learning tools with the guidance of team activities.

Circuit method used is presented in the figure below.

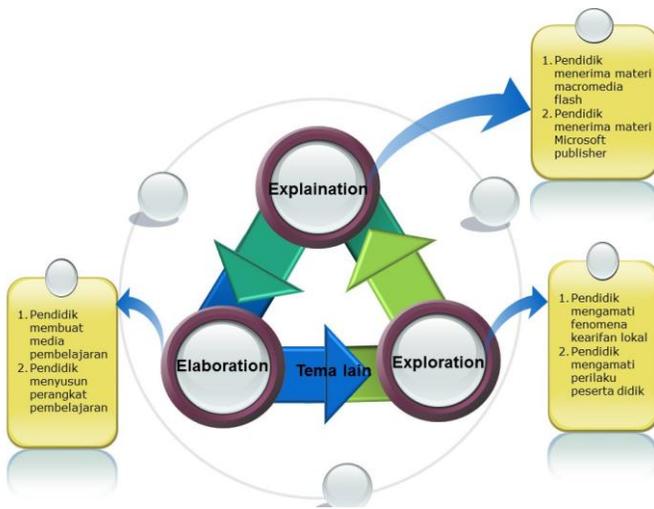


Figure 2.1. Utilization Learning Cycle (3E) in assisting educators

### 3. RESULTS AND DISCUSSION

In accordance with the stages in the Learning Cycle (3E), which consists of (1) Exploration phase, (2) Explanation stage, and (3) Elaboration phase, in detail the results of the activities are presented as follows:

#### 1. Preparation for the implementation of devotion

In the event coordination team. Coordination is carried out site surveys, preparation of macromedia flash modules and module publisher. The results of the activity of this preparation is two modules, namely (1) the modules macromedia flash that contains the basics of Macromedia Flash, how to create a simple media with Macromedia Flash and (2) module of Microsoft Publisher that contains the basics publisher, how to make LKPD by using the publisher.

#### 2. Exploration phase

At this stage:

- (1) Explains the general purpose of devotion given  
The overall aim of this activity is to provide training and assistance to teachers Kemuninglor KKG Force 05 members in developing learning media using Macromedia Flash and develop learning tools using which all publishers by taking into account local knowledge kemuninglor village.
- (2) Explaining about the local wisdom  
Local knowledge is a part of culture that is usually inherited from one generation to the next. The realization of local knowledge can be folk games, folk customs, folklore, proverbs or songs.
- (3) Ask educators to observe the phenomenon of local wisdom contained in each school around.  
Some teachers give an answer, among others: (a) every time the coffee harvest, the students are always many who do not get in, asked the parents to help the process

of harvesting coffee, (b) customs before harvest cane be done tasyakuran first to bring rice and gathered in one a place for prayer together, (c) not all the students want to wear shoes at the time of school for after school directly into the garden.

- (4) Ask educators to observe the situation and habits of students in each class
- (5) Providing educators to choose the theme or material that can be applied to local wisdom.

- (6) Request educators describe the selected learning topic

Subjects were selected from the most is math because the grounds are the subjects of mathematics are most difficult to accept learners. Of the 60 teachers KKG member 05 Kemuninglor Force obtained the details based on subjects as follows: 38 teachers choose matpel math, 12 teachers choose matpel IPA, and 10 teachers choose matpel IPS.

- (7) Providing educators to explore learning situations that occur in its class based matpel selection, the participants were divided into four major groups namely group 1 and 2 matpel mathematics, science matpel group 3 and group 4 matpel IPS. With a group like this facilitate shared service team mentoring the next stage of devotion.

- (8) Educators divide into several groups according to the grade of the major groups, subdivided into small groups for mutual sharing among teachers. It is expected that any small group produces instructional media and devices in accordance with the objectives of this devotion. There are 12 small groups were formed based matpel and class.

#### 3. phase explanation

At this stage, the provision of material to educators partner. Providing material taken is training. The training activities carried out include:

- (1) Educators partner given two training modules, namely modules Macromedia Flash and Microsoft Publisher models
- (2) Giving examples of media that is created using Macromedia Flash so that educators feel interested and motivated to learn to develop their own learning media
- (3) Providing material about Macromedia Flash and its use in the manufacture of instructional media
- (4) Giving examples of the learning device in the form of LKPD using Microsoft Publisher
- (5) Providing material about Microsoft publisher and its use in the preparation of the learning device
- (6) Doing install Macromedia Flash software on the laptop some partners teacher

- (7) Giving examples of instructional media using a flash  
 (8) Providing material about flash and utilization in making learning media.

#### 4. Elaboration phase

At this stage, assistance to partner teachers to develop learning tools Microsoft Publisher and media learning using Macromedia Flash.

Facilitation of learning tools done by asking small groups to prepare materials that have been at the time of local wisdom material. The whole small group ie 12 small groups accompanied by a team activity. Adjacent to do is to create a template for learning devices. Learning tools are arranged is LKPD (Worksheet Students). This is because every teacher required to be able to make their own LKPD. Subsequent assistance is to make learning media using Macromedia Flash. At this stage does not meet expectations, teachers are not so interested partners and trouble. In making this learning media should be logic, this makes the teacher and the difficulty partners feel inadequate. Suppose making game media summation of integers, makas a teacher must know, "if any, or if true", "if a student answers it should be how" or "when the student is not able to answer it must be how". Because of this, teachers are not interested partners can make learning media. Teachers partners are more interested in the preparation of LKPD. In the media-making activities, they are more often the discussion and ask questions about the preparation of LKPD.

#### 4. CONCLUSIONS

Based on some of the activities carried out can be summarized as follows:

1. Educators are able to develop media local wisdom-based learning using Macromedia Flash and develop local knowledge-based learning tools using Microsoft Publisher
2. At the stage of elaboration, it takes motivation to teachers to make instructional media partners by making use of Macromedia Flash.
3. At this stage of the material macromedia flash explanation for more partners instensif teacher again and added examples of flash media.

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#### REFERENCES

- [1]. Akhmad, HT, 2018, Minister of Education Prepare 5 Step Strategy to Face the Industrial Revolution 4.0, Available in

<https://news.okezone.com/read/2018/05/02/65/1893561/mendikbud-siapkan-5-langkah-strategi-hadapi-revolusi-industri-4-0>

- [2]. Suhartoko, 2018, Teacher for the Millennial generation in the era of the Industrial Revolution 4.0, Available in <http://girimu.com/2018/03/08/guru-bagi-generasi-milenial-di-era-revolusi-industri-4-0/>
- [3]. Sunardi, Sujadi, I., 2017, the study Source: potential participants PLPG program, Jakarta: Directorate General of Teachers and Education Personnel
- [4]. Abdul, 2017, cyclical or Learning Model Learning Cycle, Available in <http://abdulgopuroke.blogspot.com/2017/01/model-pembelajaran-bersiklus-atau.html>