

Development of Existential Intelligence Biological Learning Devices on Creative Thinking Skills of Class Xi Students of Samarinda 6 State School

Ratna Sari

Biology Education Study Program,
Master of Biology Teaching,
Teaching Training and Education
Faculty, Mulawarman University
Samarinda, Indonesia
ratnasari.shaleh@gmail.com

Elsje Theodora Massawet

Biology Education Study Program,
Master of Biology Teaching,
Teaching Training and Education
Faculty, Mulawarman University
Samarinda, Indonesia
elsjethedora@yahoo.com

Muh. Amir Masruhim

Biology Education Study Program,
Master of Biology Teaching,
Teaching Training and Education
Faculty, Mulawarman University
Samarinda, Indonesia
nurergaamir@yahoo.com

Abstract— *Learning device is a teacher's teaching aids that each part of the device has a related relationship. In its application, teachers must develop tools that are tailored to the needs of students. One way that can be used to overcome these problems is to use existential oriented learning intelligence devices. The purpose of this study was to compile a design design of multiple intelligence learning devices oriented to existential intelligence., to know the validity, practicality and effectiveness of learning device products that have been developed in the Biology Science material of class XI SMA. Development procedure that used based on Borg and Gall development design modified by Sugiono consisting of nine step: identify problem and potention, collecting data and designing product, design validity by experts, design revisions, product tests, products revisions, utility testing, second products revision, and the final result of multiple intelligence learning devices oriented to existential intelligence to improve students' creative thinking skills that have been developed. Validity and practicality of the product analyzed using descriptive percentage design. Efectiveness analyzed using percentage increase from student's pretest-posttest result. Validity of the products is very good with 97,48% validity percentage which is categorized as very valid. Practicality of the products is also very practical indicated by 88,01% percentage points of students as respondent's assessment. Multiple intelligence learning devices oriented to existential intelligence to improve students' creative thinking skills are able to streamline learning, this can be seen through an increase in learning between pretest and posttest by 74%.*

Keywords— *learning device, existential intelligence, the creative thinking skills.*

I. INTRODUCTION

Education is one of the main factors to realize a quality society. Therefore, the Indonesian government always strives to improve the quality of education in accordance with one of the opening of the fourth century of the 1945 Constitution which reads the intellectual life of the nation, although the results achieved have not met expectation. According to Law No. 20 of 2003, education

is a conscious and planned effort to realize a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, society, nation and country. One reflection of the quality of education in schools is the level of professionalism of a teacher in the school.

A professional teacher certainly evaluates every teaching result. Likewise, with learning devices. The teacher can evaluate himself to what extent the designed learning tools are applied in the classroom.

The evaluation is important to continuously improve the professionalism of a teacher. Evaluation activities can be started by comparing the various activities in the classroom, strategies, methods or even learning steps with the data in the learning device [5].

A teacher's professionalism can be improved by learning tools. In other words, that the learning device is not only as a complete administration, but also as a medium for increasing professionalism. A teacher must use and develop learning tools as much as possible. Fix everything related to the learning process through the device. If this is not the case, then the teacher's ability will not develop and may even decrease. Daily teaching and learning activities are inseparable from the relevant learning device components, namely syllabus, RPP, teaching materials, teaching media, student worksheets, and evaluations [9].

The six components of learning devices are interrelated between one another. Of the six components of learning devices, teachers usually only have a few components so that the results of teaching and learning activities are not optimal [5]. In addition, learning tools make it easier for a teacher to assist in the process of facilitating learning. With the learning tool, a teacher easily conveys material only by looking at the device without having to think and remember a lot. Learning device is a guide or direction for a teacher. This is important because the learning process is systematic and patterned. Today there are still many teachers who are lost or confused in the midst of the learning process just because they do not have a learning tool. Therefore, the learning tool provides guidance on what a teacher should

do in the classroom. In addition, the learning tool provides guidance in developing teaching techniques and provides guidance for designing better devices [12]. Teachers are required to be able to use learning tools that are in accordance with the needs and even optimization of the learning device itself is expected to be able to spur student learning outcomes and can help teachers in improving the quality of themselves to get used to using good and right learning tools.

Learning outcomes and mutual interaction between students and teachers can be used as a reflection of the level of students' understanding of the material that has been taught [4]. To obtain reciprocal interaction between students and teachers and optimal student learning outcomes teachers are required to provide innovation in the learning process and tools. The process of learning in the classroom is related to the learning model used by the teacher to provoke students' curiosity and provide interaction between students and teachers [11]. Search by Eisner from Stanford University states that the concept of multiple intelligences is in accordance with current education policies that tend to focus on learning processes that meet the needs of students.

Development of multiple intelligences can be inserted in learning through the use of varied learning approaches [3]. But the results of observations in 9 public / private high schools in Samarinda showed that teachers still did not provide much room for the development of potential students. Learning tends to develop the potential of logical-mathematical and language intelligence. Other facts obtained from observations of nine Samarinda high school students are that students who are less than optimal get the opportunity to improve their creative thinking skills because the teachers in schools have difficulty in developing learning tools that can improve students' creative thinking skills. In addition, the teacher explained the lack of response of students in understanding the material because the teacher still felt difficulties in carrying out cooperative learning models in the classroom.

The teacher also still has not made adjustments to the learning device with the condition of the students in the school even though in the interview process the teacher stated that he had or had developed a learning tool he owned. This can be seen from the learning tools found only in the form of RPP and syllabus. Besides that the teacher also confirmed that the creative thinking skills of students were still very lacking, this was seen in the learning activities where students were still not responding to every material explained by the teacher because students felt less confident and less listening to the learning material in the classroom.

The teacher will not find it difficult to do the learning process in class if the components of the learning device have been prepared in advance [13]. In addition, the teacher should evaluate the learning tools that are owned so that they are in accordance with the needs of students in the school. The teacher must also be able to evaluate the activities of students in teaching and learning activities so

that they can see the urgency of student needs in this context is the creative thinking skills of students [10]. The effort that can be done is by conducting development research on the learning tools owned by the teacher so that it can be used as a reference for teachers to develop other devices they have. In addition to improving creative thinking skills students can use multiple intelligence learning tools that are oriented to existential intelligence.

One of the Biology learning materials in high school is cell material. The object studied in cell material cannot be seen directly, because the size is very small. To achieve the basic competencies that have been established, students need to have a thorough understanding of the structure and function of cells, understanding the organelles contained in a cell and their respective functions, can compare the differences between plant cells and animal cells. This is in line, with one of the multiple intelligence-oriented learning namely existential intelligence which asks the nature of the existence of an object. Therefore, a strategy is needed that can make students involved physically and psychologically with material to make learning more meaningful and not just memorized. In addition, cell material allows for the application of varied learning strategies in which there are elements of multiple intelligence development, so that students can not only master the material but also honed their multiple intelligences.

The development of this learning tool is directed at the preparation of learning tools using a variety of learning approaches and various assignments, such as making observations, making observation reports, solving problems or case studies, group discussions, drawing and making concept maps, and creating reflection journals so that make students play a direct role in learning and encourage students to define, describe, describe, and register rather than analyze, draw conclusions, connect, synthesize, criticize, create, evaluate, think and think again. As a result students do not think superficially, and are able to think deeply.

Based on this background, the researcher tried to develop a learning tool that was oriented to existential intelligence towards students' creative thinking skills through learning Biology at Samarinda State Senior High School 6

II. METHOD

This research method uses Research and Development (R & D) method. This method is used to adjust to the purpose of the study, namely to develop learning tools that are oriented towards the development of existential intelligence on the creative thinking skills of class XI students in SMAN 6 Samarinda. As stated by Sugiyono that "Research and Development Research is a type of research used to produce certain products and test the effectiveness of these products" [8]. Likewise, what was said by Borg and Gall that "Research and Development (Research and Development) is a type of research used to develop or validate products used in education and

learning" [8]. So based on the opinion of experts, the use of this type of R & D research is in line with the objectives of this study. This development research procedure uses Borg and Gall's research which has been modified from Sugiyono. As for the order of design and development of learning devices that have been adopted based on Borg and Gall design modified by Sugiyono, can be described and explained in Figure 1.

The research subjects were 152 students of SMA Negeri 06 Samarinda which were divided into 3 classes in which two classes were used and one class was used. In the first-class product trials will be used as a control class with the teacher's treatment and the teacher's learning tools will be used in the class, in addition 1 other class will be used by the researcher and the device developed by the researcher is used in this class.

The results of the use trial were pretest, posttest students. Data analysis techniques in the form of validity obtained from a team of experts / experts on the devices made, practicality obtained from the student response questionnaire and the effectiveness in the form of a percentage increase in pretest and posttest students

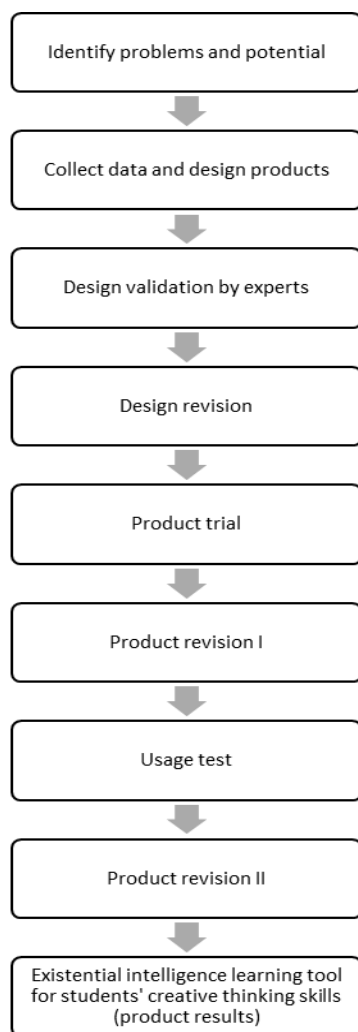


Figure 1. Schematic of Borg and Gall Modification Development Procedures for Sugiyono

III. FINDING AND DISCUSSION

Finding

1. Problem and Potential Identification

Problem identification and potential are carried out in SMAN 6, Samarinda. Based on observation questionnaire regarding the conditions and problems faced in SMAN 6 Samarinda, namely:

- The teacher knows various cooperative learning models but still uses conventional methods when teaching in the classroom
- The learning tools owned by the teacher are incomplete.
- The teacher has several learning tools that are not tailored to the needs of students in the classroom.
- Teachers lack knowledge about how to develop a device.
- Students tend to be reluctant to think creatively in various opportunities that have been given by the teacher
- Students are less motivated in learning because the teacher only applies the teacher center system

2. Collect Data and Design Products

The data collection stage is done to find out the learning tools that the teacher has. The results obtained at this stage are in the form of syllabi and RPP. Product design is carried out on cell material for class XI. The expected results in this development are learning implementation plans, teaching materials, student worksheets, evaluations and assessment instruments

3. Validation of Design by Experts

Learning device-based learning tools that are oriented to existential intelligence on students' creative thinking skills that have been made are then validated by experts. The validator team consists of developing learning tools assessed by Dr. Didimus Tanah Boleng, M.Kes, the material validator was assessed by Prof. Dr. Daniel, M.Si and the language validator were assessed by Dr. H. Yusak Hudiyono M.Pd. The results obtained from this validation are 97.48 converted to very valid.

4. Revision of Design

Although the device has been declared very valid, it needs some improvements to the device related to writing systematics. This is done to get a quality device. Design revisions were made on several learning devices, the results of the subsequent revisions were reviewed

5. Product Trial

The product testing phase was conducted at one school to see how much success the learning device was. Students who will be observed in this product test are 72 students, divided into two classes, namely XI Mia 2 and XI Mia 3. In class XI Mia 2 the teacher will teach cell material using conventional models or direct learning (teacher center) and class XI Mia 3 will be taught by

researchers by using existential oriented learning tools and devices that have been developed previously on cell material.

Student classifiers based on the category of students' creative thinking level from the results of the pretest were conducted to facilitate the writer and reader in classifying students before the treatment with existential oriented intelligence learning tools.

Table 1. Percentage of Early Student Creative Thinking Levels

Classifying the Level of Creative Thinking	Class experiment		Class Control	
	N	%	N	%
Very low	1	4,16	0	0
Low	1	4,16	0	0
Is being	22	91,6	24	100
High	0	0	0	0
Very High	0	0	0	0

Source: Research Results (2018)

Based on table 1. Classification of creative thinking levels of students in various experimental and control classes. From the 24 students in the experimental class, it was found that 4.16% was in the very low category, 4.16% in the low category, and 91.6% in the moderate category. Whereas from 24 students in the control class obtained results that 100% included in the medium category used on the results of the posttest, also carried out classifications of students based on the category of students' level of creative thinking

Based on table 2 Classification of Creative Thinking Levels of students in various treatment and control classes. Of the 24 students in the treatment class, it was found that none of them belonged to the category of very low, low category, as well as the medium category. 29.16% in the high category and 70.83% in the very high category. Whereas of the 24 students in the control class, the results showed that none included in the category of very low, low category, and medium category, 50% in the high category and 50% in the very high category.

Table 2. Percentage of Student End Creative Thinking Rate

Classifying the Level of Creative Thinking	Class experiment		Class Control	
	N	%	N	%
Very low	0	0	0	0
Low	0	0	0	0
Is being	0	0	0	0
High	7	29,16	12	50
Very High	17	70,83	12	50

Source: Research Results (2018)

The sample used in class was 48 students, divided into 24 students in class XI Mia 2 and 24 other students in class XI Mia 3. In the initial stage is to determine the homogeneity of the sample, the results obtained are both homogeneous classes. This can be seen from the results of Fcount in class XI Mia 2 of 1.13 and Fcount in class XI Mia 3 of 1.08 while Ftable is 2.01. Furthermore, a combined T test is carried out and uses a two-tailed hypothesis test. The result of the t test shows the location of tcount to ttable is $2.013 > -5.07 < 2.013$ so that H_0 is rejected and means that the class taught by the teacher using the school equipment (XI Mia 2) is not the same as the class taught by the researcher using the developed learning tools (XI Mia 3). The average value of the pre-test and post-test in the graphical form above can be seen that student learning outcomes are more improved after being given a learning device oriented to existential intelligence in cell matter when compared to teacher centered learning.

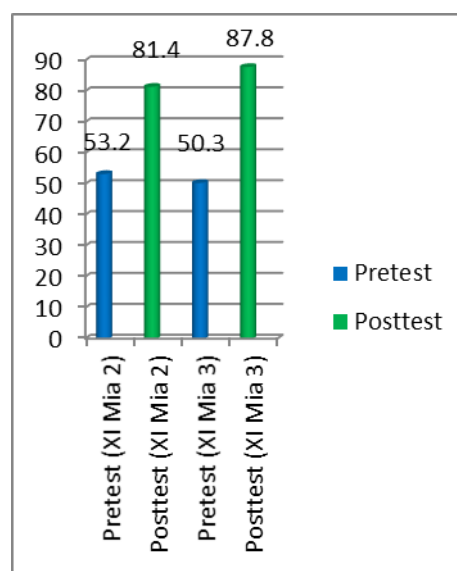


Figure 2. Graph of Results of Mean Pretest and Posttest Results for Class XI Mia 2 and XI Mia 3 (Product Trial)

6. Product Revision I

The result of this product I revision is the need for additional examples of teaching materials so that students more easily understand the material as a whole.

7. Test Usage

The trial of this use is limited to students of class XI of SMAN 6 Samarinda, research data includes the results of the Pretest and Posttest scores. Presentation of the results of the average pretest and posttest results can be seen in Figure 3. The results of the assessment were analyzed using a percentage increase to find out whether there was an increase in learning between two samples, namely the pretest and posttest of students.

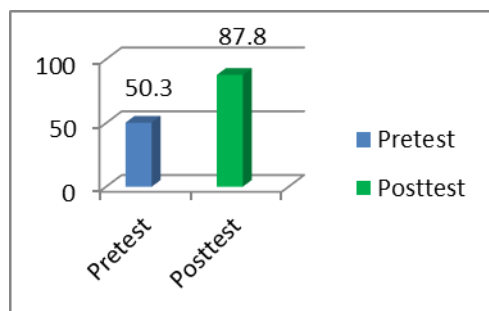


Figure 3. Graph of Mean Pretest and Posttest Results of Class XI Mia 1 (Usage Test)

The percentage increase formula is as follows:

$$\frac{(\text{Posttest} - \text{Pretest})}{(\text{Pretest})} \times 100\%$$

The percentage increase between pretest and posttest was 74% where this result was the value of the research effectiveness test. Next is to analyze student responses as the value of practicality tests. This analysis was carried out on 105 students who were divided into 3 classes XI SMAN 6 Samarinda. The results obtained at this stage are the results of the practicality test of the research product, the percentage of results is 88.01% which is then converted into very practical criteria.

The teacher assesses that this device is in accordance with the need to solve problems in school, both on device development factors that can be used as examples as well as students because students tend to be more active in learning activities. The teacher gives input and suggestions to add material, especially examples on growth and adaptation growth by adding images to each sub-subject discussed. Student classifiers based on the category of students' creative thinking level from the results of the pretest was done to facilitate the writer and reader in classifying students before the treatment in the test class of use with an existential oriented learning device.

Table 3. Percentage of Early Student Creative Thinking Levels

Classifying the Level of Creative Thinking	Class Trial	
	N	%
Very low	0	0
Low	0	0
Is being	24	100
High	0	0
Very High	0	0

Source: Research Results (2018)

Based on table 3. Classification of students' creative thinking level. In the use trial class, the results obtained from 24 students 100% included in the medium category.

Based on the results of the posttest, also carried out classifications of students based on the category of students' level of creative thinking

Based on table 4 students' creative thinking level classification in the user trial class where the teacher uses the developed learning tools has the results obtained that none belong to the category of very low, low category, as well as the medium category. 29.16% in the high category and 70.83% in the very high category.

Table 4. Percentage of Students' Final Thinking Rate

Classifying the Level of Creative Thinking	Class Trial	
	N	%
Very low	0	0
Low	0	0
Is being	0	0
High	7	29,16
Very High	17	70,83

Source: Research Results (2018)

8. Product Revision II

Based on the teacher's input and suggestions in the teacher response questionnaire, the researcher made several improvements by considering the capacity of the image content to be proportional to the systematic learning devices (teaching materials and worksheets) without reducing the points on the learning objectives. In addition, product revision II was conducted on the lesson implementation plan (RPP) by adjusting the time in group discussions and added classes, as well as reducing the time on the teacher's brief material at the beginning of the learning

9. Existential Intelligence Learning Devices Against Students' Creative Thinking Skills (Product Results

Learning tools that have undergone product trials, revisions, expert validation and usage trials resulted in existential intelligence learning tools for students' creative thinking skills in Class XI Biology subjects in the form of learning implementation plans (RPP), teaching materials, student worksheets (LKS), evaluation and learning assessment instruments

Discussion

The need to develop learning tools oriented to existential intelligence is based on several considerations. The consideration in question is in terms of the characteristics of students' intelligence and in terms of learning devices. Characteristics of students who made the population in the study were the students of class XI Mia, amounting to 3 classes. The selection of the study

population that uses grade XI is because the level of understanding and thinking of students has reached the formal stage where students have been able to think more abstractly and understand things that are higher and have been able to use their intelligence more maximally. Each student has a dominant intelligence on him so that in class XI each student has a variety of intelligence. This is in line with the statement of Griggs et al (2009) that knowing the diversity of previous students' intelligence will make learning planning more relevant because the teacher can plan learning that is appropriate to students' abilities, and of course can actively involve students in learning. But the teacher still directs learning in the sphere of mathematical logic and linguistic intelligence.

This is not in accordance with the diversity of intelligence that appears. On the other hand, students can learn better if they are in accordance with the dominant intelligence possessed [1]. Therefore, it would be better if learning is directed to using intelligence that students have so that learning feels more meaningful to students. The government recommends that learning in the classroom be done interactively, inspiratively, fun, challenging, and motivating students to actively participate, as well as providing sufficient space for initiative, creativity, and independence in accordance with the talents, interests, and physical and psychological development of students [6]. This can mean that the government wants learning not only to make students smart, but also to facilitate students to be able to develop as broadly as possible according to the abilities, talents and interests of each student.

Given that each child has a different background, it is not easy to invite students to develop their abilities in the classroom with an atmosphere that tends to be monotonous. More preparation is needed in order to produce quality learning. Departing from this, there have been many considerations to use the concept of existential intelligence in learning. The concept of existential intelligence oriented is seen in accordance with current education policies that emphasize learning that can meet the needs of students, besides teaching subject matter [2].

Therefore, learning oriented existential intelligence can be an alternative to fulfill the mandate of the ministerial regulation. Learning using the concept of existential intelligence is done in several ways, including through pictures, physical experiences, social experiences, events, and more. Student intelligence that develops well can be associated with related learning activities such as existential intelligence activities (making analysis based on questions given during discussion and observation), assignments given can develop existential intelligence that is the task of a reflection journal, analyzing the function of cell organelles based on form, analyze due to loss of one cell organelle (existential intelligence). Learning resources in learning existential intelligence can be taken from the environment around the school and the environment around students. This is in line with Sugiharti's opinion that interesting learning for students is able to increase the activity, creativity, and enthusiasm of

students' learning which ultimately makes students learn more meaningfully [7]. Then learning using the concept of existential intelligence can facilitate the development of students' potential and intelligence in accordance with the mandate of Ministerial Regulation No. 41 of 2007.

Learning tools used by the teacher so far have not used the nuanced existential intelligence learning tool KD and indicators only include cognitive aspects [5]. RPP made has not followed the learning syntax and learning objectives only include the product and do not include the process. Planned learning activities can not make students active in learning, because they are more dominant using the lecture method. The learning resources used are less varied, namely printed books, presentation slides, and practical equipment. Learning media uses printed books and presentation slides only. As well as the assessment carried out still covers cognitive aspects in the form of tests, and is supplemented by independent assignments.

Biology teacher at Samarinda State Senior High School 6 has never known an existential oriented learning tool. In compiling learning tools, teachers use the 2013 curriculum. When introduced to learning tools oriented to existential intelligence, biology teachers provide positive responses regarding the existence of these learning tools. Teachers are interested in the tools developed because students can be more active in learning. The learning resources used vary, not only from printed books recommended by schools. The teacher is willing to make similar learning tools when the teacher has time, because the school has facilities that can be used to make learning that invites students to use existential intelligence possessed. Therefore, oriented learning tools for existential intelligence need to be developed.

Learning tools oriented to existential intelligence towards students' creative thinking skills that have been completed are in the form of learning implementation plans (RPP), teaching materials, student worksheets (LKS), evaluations and assessment instruments. The learning device is then validated by the validation team from learning tool experts, material experts and language experts to find out the validity of product development. The developed learning tools received several entries from the validator team, the authors continued to improve the development products according to the validator team. Validation results in the form of an average rating with a percentage of 97.48 and stated to be very valid, besides that there are suggestions and entries that become guidelines in improving the product until the product becomes a viable development product. The results of the improvements can be seen on the development product revision sheet that has been made.

Learning device development products produced in the form of learning implementation plans (RPP) which contain learning tools oriented to existential intelligence in accordance with learning scenarios, teaching materials containing material that has been selected as development material (cells), student worksheets (LKS) are made in accordance with Existential intelligence oriented learning device syntax

contained in student work procedures and evaluation is made in accordance with learning material in teaching materials and taxonomic domains.

Students in the control class (XI Mia 2) and the treatment class (XI Mia 3) no one achieved the ability to think in the high category. In the data obtained from pretest treatment class (XI Mia 3) many students included in the category of medium creative thinking while for the control class (XI Mia 2), all students included in the category of moderate creative thinking. This shows that students' creative thinking skills are strongly influenced by environmental factors, for example in this case school. According to Munandar (2009), formal education to date mainly trains the convergent thinking process, so that most students are hampered and powerless to face problems that demand creative thinking and problem solving.

The results of the posttest processing data showed that there were significant differences in creative thinking abilities in the application of existential-oriented learning in the treatment class (XI Mia 3), and learning by the lecture method and ordinary discussion in the control class (XI Mia 2). The average value of the posttest treatment class is greater than the control class. In the treatment class, students have achieved the KKM (Minimum Completion Criteria) score of 80 as many as 19 students, while in the control class there are 15 students. This shows the influence of existential intelligence-oriented learning devices on students' creative thinking ability on cell concepts.

This is because students do active learning activities and use various learning resources. The highest level of learning is at the third meeting. At the third meeting, practicum activities were conducted to observe animal cells and plant cells. Students seem enthusiastic and full of curiosity during the learning activities. This causes students to do more learning activities and work with intelligence more. This is in line with Sugihartini's statement that creative learning based on the application of existential intelligence theory increases students' activity and pleasure towards the lesson [7].

Learning-oriented learning tools for the development of existential intelligence have a significant effect on the post test score. This is because in the learning oriented development of existential intelligence there is a variety of learning activities, learning resources, learning media, and assignments that make students always feel interested in learning. This makes students absorb more information about the lessons that ultimately students better understand the subject matter. This is what encourages students to get higher post test scores than students in the control group (XI Mia 2). The statement proves that learning using existential intelligence-based instruction makes students gain greater achievement than traditional learning [14]. This is because during learning students interact more, both with the teacher and between students than in the control class (XI Mia 2).

In terms of tolerance and friendship, students discuss a lot and do work in groups. Interaction between students is very high so students learn to work well with

other students and learn to understand and understand the differences. In the curious aspect, students are given stimuli in the form of media, learning resources, learning activities, various assignment questions so that students do not feel bored, but remain enthusiastic in understanding the material. These things result in increasing student affective attitudes. In oriented learning the development of existential intelligence is practicum activities that hone students' psychomotor skills.

Improvements to the development products tested during the product testing phase, the development product was tested again through the usage test. In this usage trial the teacher acts as a teacher by using an improved learning tool. The trial was conducted in class XI Mia 1 and produced 7 students including the category of high creative thinking and 17 other students including the very high category. Based on the analysis of Biology teachers who observed at the time of learning, the development product was said to be feasible to be used with several notes, namely the formation of discussion groups plus and the need to add supporting images on teaching materials so that students can have a full picture of the material presented.

The results obtained in the percentage analysis increase is that there is an increase after learning by using existential-oriented intelligence learning tools on students' creative thinking skills in cell learning material by 74%. The results of this product trial are also the results for the effectiveness tests conducted by researchers on the development of learning tools and development products can be used throughout the school.

Components in learning devices that are predicted to have a major contribution to learning outcomes are varied learning activities and diverse assignments. Learning activities that are not monotonous make students interested in continuing to pay attention to the teacher's explanation. While the various assignments given make students more active in learning and at the same time challenge their abilities. The ability to understand the existence of cell organelles with their respective interrelated functions (existential intelligence) appears in the discussion activities. The ability to accept, understand and respond to friends' opinions (existential intelligence) arises when the teacher invites students to respond to the opinions of other groups and students' ability to understand the function of the existence of bacteria in life (existential intelligence). Apart from the positive results outlined, this research still has drawbacks. Consideration and planning on the use of learning models and appropriate assignments takes up a lot of time during the making of learning devices

The final activity after giving learning and test evaluation the writer gave a questionnaire of responses to each student, the questionnaire was given aimed to find out the students' responses and assessments of the learning model that had been made by the author. The results of student responses are said to be very practical with an average percentage value of 88.01

Development of existential intelligence-oriented learning tools in Class XI SMA Negeri 6 Samarinda

Learning Year 2018/2019. Based on the results of the trial and assessment analysis, the product development is declared to be very valid, effective and very practical and can be used throughout the school and can improve students' creative thinking skills. This is in line with the advantages of existential intelligence, namely that learning can focus more and show optimal results, provide a new perspective on the development of human potential, give new hope and enthusiasm, especially to students / educators, open up opportunities for students to be critical , creative, and innovative and open-minded, and avoids judgment of humans from the point of view of intelligence. But students still need a teacher in each direct learning because the teacher's role is very important in the learning process.

IV. CONCLUSION

The conclusions from the results of this study are: 1) Design of learning devices oriented to existential intelligence on the creative thinking skills of class XI students in the form of learning implementation plans, teaching materials, worksheets, evaluations and assessment instruments. 2) The validity of the learning device produced is very valid with a percentage of 97.48%. 3) The practicality of the learning device produced is very practical with a percentage of 88.01%. 4) The use of learning tools has proven effective in learning activities, this can be seen from the improvement of students' creative thinking skills by 74%.

Based on the above conclusions, it is suggested: 1) The teacher can use an existential intelligence-oriented learning device to students 'creative thinking skills as an alternative to school learning, especially by looking at students' needs while studying. 2) Researchers who will develop learning tools can make the product of the development of an existential intelligence-oriented learning device as a reference material and implement it more widely.

REFERENCES

- [1] Denig S. Multiple Intelligences and Learning Style. Teachers College Record 106 (1): 96-111, 2004
- [2] Eisner E. Multiple Intelligences: Its Tension and Possibilities. Teachers College Record 106 (1): 31-39, 2004
- [3] Griggs LA, S Barney, JB Sederberg, E Collins, S Keith & L Iannaci. Varying Pedagogy to Address Student Multiple Intelligences. Journal of the Sociology of Self-Knowledge 7 (1): 55-60, 2009
- [4] Ministry of National Education. Large Indonesian Dictionary. Jakarta: Balai Pustaka, 2007
- [5] Muhaimin, Sutiah. Development of Education Unit Level Curriculum Models (KTSP) in Schools and Madrasas. Malang: PT. Rajagrafindo Persada, 2009
- [6] Mulyasa, E. Implementation of the 2004 Curriculum the learning guide of the KBK. Bandung: Rosdakarya, 2006
- [7] Munandar, U. Developing Talent and Creativity in School Children cet. 4th, Jakarta. PT Rineka Cipta, 2009
- [8] Sugiharti P. Application of Multiple Intelligence Theory in Physics Learning. Sowing Education Journal (5): 29-42, 2005
- [9] Sugiyono. Qualitative, Quantitative Research Methods and R & D. Bandung: Alfabeta, 2011
- [10] Suhadi. Instructions for Learning Devices. Surakarta: Sahid University Surakarta, 2007
- [11] Sukardi. Educational Evaluation Principles and Operations. Jakarta. Earth characters, 2008
- [12] Suparlan. Questions and Answers on Curriculum Development and Learning Materials. Depok: Earth Literacy, 2010
- [13] Trianto. Integrated Learning Model. Surabaya: PT. Earth Literacy, 2010
- [14] Yaomi, Muhammad. Learning Design Principles. Jakarta: PT Kencana, 2013
- [15] Özdemir P, S Güneysu & C Tekkaya. Enhancing Learning through Multiple Intelligences. Journal of Biological Education 40 (2): 74-78, 2006