

Book 3



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PREFACE

We are pleased to present this collection of papers submitted to the 4th International Conference of ACERN, November 30, 2016 in Inna Muara Hotel, Padang – West Sumatra. This is the first ACERN conference held in West Sumatra. The conference was an open gate for us to start the information, experiences, researches as well collaboration between various academics and non-academics institutions worldwide. This expands our mutual knowledge and experiences. Kopertis Wilayah X (Sumatera Barat, Riau, Jambi dan Kepri)

The total of 300 papers from Indonesian, Malaysian and Brunei participants contributed to this proceeding and we also attached the abstract and biography from the keynote speakers within the proceeding. The proceeding also presents a wide variety of research on education from various subjects. The papers use various approaches and strategies for research in education. It will give us different perspectives and knowledge for the development of educational research.

A great team effort also became a big support to the successful of the conference and proceeding. We are grateful to have a hard working organizing committee as well as committed editors and board of experts who gave us the important inputs and reviews of this proceeding. We would like to express our great gratitude to all institution and universities that are Fakultas Pendidikan UKM, Universitas Negeri Padang, and STKIP PGRI Sumbar who organized this event and the proceeding publications. Finally, we also express our appreciation to Bank Syariah Mandiri, Bank Nagari, and Bank Tabungan Negara who supported this event. Thank you for all your contributions. We do hope that you experience a stimulating seminar and informative proceeding with many opportunities of future contacts, collaborative research and application.

Dra. Skunda Diliarosta, MPd
Head of Organizing Committee

Kopertis Wilayah X (Sumatera Barat, Riau, Jambi dan Kepri)

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THE DEVELOPMENT OF SCIENCE LEARNING MODULE BASED ON 7E LEARNING CYCLE TO IMPROVE STUDENT'S COMPETENCIES

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Abstract

Science was one of the subjects in Junior High School (SMPN) 12 Padang discuss living beings and inanimate. In science, there are many concepts that students need to learn. The results of the preliminary survey indicate that many students who do not complete in science lessons. This happens because there is no teaching material in accordance with the demands of the curriculum. To help the students in mastering the lessons, teaching materials must fit the demands of the curriculum, attractive, and easy to learn students. To solve this problem developed science learning modules based on 7E Learning Cycle model. The research aims to develop a learning module that is valid science, practical, and effective. This Research used the 4D model of Thiagarajan. The research instrument is the interview guides, observation sheets, sheet validation, the questionnaire for teachers and students, the skills assessment sheet, and achievement test. The results showed that the learning modules have been categorized as valid, practical, and effective to improve students' learning outcomes. It is suggested to the science teacher to use the learning module based on 7E Learning Cycle.

Keywords: 7E Learning cycle, student's competencies.

1. Introduction

Education is one determining factor to increase the human resources quality in order to produce values system and culture to be better. Increasing the education quality is important to get smart and skillful human so that they can compete in globalization era. Due to this, education leads to improvement and completeness to substantive aspects supporting curriculum and learning actor (Ostlund, 1998). The aim of education in statutes of national education system no 20 year 2003 is to develop students' ability and to form character and dignified nation civilization in order to enliven nation life and to develop students' competence. To help students in understanding the learning material, module is one of tools. Module is an individual learning system to increase the effectiveness and effectivity of learning. Using module can help students to study toward finished achievement since students cannot go on to the next module without achieving the previous module. Prastowo (2013) states that module must be enriched with research result so the students do not only understand the material but also get the information related to material and its function to daily life.

Learning science is learning about facts, concepts, principles, and procedures. Lufri (2015) states that learning science (especially biology) is generally provided in long sentences many terms so that the students tend to memorize without understanding. Actually, science is not a memorial material, it needs deep understanding. Students' understanding must be constructed independently so that the material can be settled longer in students' memory. This can be done through direct understanding and connect the material with concepts mastered by the students. Furthermore, based on observation and students interview, there are not many books provided by school and, the books lack of color and uninteresting picture. Teacher also does not motivate students in understanding material. Every school is suggested to design learning process well. This learning process must be related to learning material used. One of learning material is a module.

Module is a learning material designed systematically for teacher and students in learning process at school. Prastowo (2013) states that a module is a collection of learning materials designed systematically so environment and situation is created to make the students learn well. On the contrary, if the module is not suitable with the criteria, there will be a problem during learning. One of considered aspects to develop a module is a learning material due to curriculum intention toward students' need and model in learning.

Learning cycle is a learning model used formally in science program at primary school, Science Curriculum Improvement Study (SCIS, 1974). This learning cycle model was suggested by Robert Karplus in 1960s as a guide discovery: exploration, invention, and discovery (Bybee, 1990). Learning cycle 3 E was developed to be 4 E, then 5 E, and last 7 E (Einsenkraft, 2003) with terms: elicit (raise students' previous knowledge), engage (idea, plan, and experience), explore, explain, elaborate, evaluate, and extend. The formulation problem of this research is how to develop learning science module using learning cycle 7 E for students at class VII practical, valid, and effectively.

2. Research Method

This research used research and development method. The research was done to get information about user's need (needs assessment), while development was done to produce learning module based on 7E learning cycle. Development used the 4D model of Thiagarajan. Thiagarajan (Trianto, 2010) states that the phases of model 4 D are define, design, develop, and disseminate. The subject of this research is the students in class VII and science teacher at SMPN 12 Padang. The instruments observation sheet, validity sheet of learning

module, questionnaire responses students and teacher, and test to evaluate the outcomes of learning.

Based on data collected, they are analyzed qualitatively and quantitatively. Data of validity module , observation, questionnaires, and test are analyzed descriptively and compared to the criteria of validity, practicality, and effectivity of learning module. Learning progress data were analyzed qualitatively by revising readability, activities steps in module. Revision were done based on researcher's note and observation of learning and module used, and opinion of expert judgments.

3. Results and Discussion

3.1. Learning Module based on 7E Learning Cycle

This research has produced a learning science module based on Learning Cycle 7 E. Learning Cycle 7 E is a learning model which apply the studying cycle with phases elicit, engage, explore, explain, elaborate, evaluate, and extend. Learning Cycle 7 E has system: identity, basic competence, indicator, learning goal, studying activities, practice, evaluation, and references. Activities in learning science with 7E Learning Cycle models is referred to Bybee (1989) as seen in table 1.

Table 1. Learning phases with Learning Cycle 7 E

| Phases | Teacher's and Students' Activities |
|------------|--|
| Elicit | <p>Teacher:</p> <ol style="list-style-type: none"> 1. Teacher shows an objects/events / asks some questions to motivate students 2. Teacher correlates previous knowledge with the materials learned by the students 3. Teacher inspires the curiosity of students by asking some questions <p>Students:</p> <ol style="list-style-type: none"> 1. Students understand and answer the teacher's questions 2. Students concentrate on teacher in correlating the previous knowledge with the materials learned 3. Students answer the questions |
| Engagement | <p>Teacher:</p> <ol style="list-style-type: none"> 1. Teacher asks student to tell what they think 2. Teacher supports students to interact each other 3. Teacher asks some questions to guide the students <p>Students:</p> |

| | |
|-------------|---|
| | <ol style="list-style-type: none"> 1. Students explore the objects and phenomenon they think 2. Students interact with media and other students in discussion 3. Students answer teacher's questions |
| Explore | <p>Teacher:</p> <ol style="list-style-type: none"> 1. Teacher facilitates the students to do any experiments 2. Teacher supports the students to apply learning experience in doing the experiments 3. Teacher gives chance to cooperate in their group to predict the observation 4. Teacher observes the group doing the experiment <p>Students:</p> <ol style="list-style-type: none"> 1. Students prepare things for experiment 2. Students apply their learning experience in doing experiment 3. Students do the experiment 4. Students take a note |
| Explanation | <p>Teacher:</p> <ol style="list-style-type: none"> 1. Teacher asks student to explain their understanding about new concepts 2. Teacher introduces new concepts and clarify the misconception 3. Teacher asks students to show the fact or data in explanation <p>Students:</p> <ol style="list-style-type: none"> 1. Student explains their understanding about concepts they learned 2. Students listen to teacher's explanation 3. Students apply their learning experience in explanation |
| Elaboration | <p>Teacher:</p> <ol style="list-style-type: none"> 1. Teacher introduces new concepts 2. Teacher develop students' |

| | |
|----------|---|
| | <p>understanding and skill</p> <p>3. Teacher focuses students in conceptual</p> <p>4. Teacher supports students to use ideas they learned</p> <p>Students:</p> <p>1. Students listen to teacher's explanation</p> <p>2. Students apply new concepts in different contexts</p> <p>3. Students make relationship between new experience and experience had before</p> <p>4. Students use ideas that they have obtained</p> |
| Evaluate | <p>Teacher:</p> <p>1. Teacher asks some questions to students which direct to the conclusion</p> <p>2. Teacher observes and records the pedagogy</p> <p>3. Teacher evaluates the students</p> <p>Students:</p> <p>1. Students answer and explain</p> <p>2. Students conclude the learning</p> <p>3. Students perform their ability</p> |
| Extend | <p>Teacher:</p> <p>1. Teacher gives chance for the students to tell their opinions</p> <p>2. Teacher interviews the students</p> <p>3. Teacher asks the students to do reflection of learning</p> <p>Students:</p> <p>1. Students compare their ideas</p> <p>2. Students get interviewed</p> <p>3. Students also reflect learning</p> |

3.2. Validity of Learning Module

Learning Module of science based on 7 E Learning Cycle is validated by three expert judgments. Aspects validated are: Content feasibility, Construction feasibility, and Readability. The Validity Result of Learning Module can be seen in Table 2.

Table 2. Validity Result of Learning Module

| Expert Judgm | Content Feasibili | Constructi on | Readibi lity | Avera ge |
|--------------|-------------------|---------------|--------------|----------|
|--------------|-------------------|---------------|--------------|----------|

| ent | ty | Feasibility | | |
|-----|-----|-------------|-----|------|
| FF | 3.8 | 3.4 | 3.9 | 3.7 |
| SF | 3.7 | 3.5 | 3.8 | 3.67 |
| YF | 3.8 | 3.6 | 3.9 | 3.77 |

The validity result of learning science module based on 7 E learning cycle shows that learning module is valid.

3.3. Practicality of Learning Module

Learning Module test is done to get data about practicality of module. This was done for four times. Observer in this test were science teacher in SMPN 12 Padang. Observer observed the learning process and learning module used. The practicality of module was observed from learning responses of students and teacher. The students and teacher responses to learning showed that module can be done by the students. In short, learning science module based on 7E learning cycle is practical.

Table 3. Practicality of Module Learning

| Aspects | Average | Category |
|---------------------|---------|-----------|
| Learning progress | 3.6 | Practical |
| Teacher's responses | 3.56 | Practical |
| Student's responses | 3.54 | Practical |

3.4. Effectivity of Learning Module

Effectivity of using this module was observed from students learning outcomes in knowledge, skill, and attitude. The average of students learning outcomes in knowledge was 87.45 and the percentage of learning achievement was 90.1 %. The average of students learning outcomes in skill was 82.27 and the percentage of learning achievement was 86.3 %. The average of students learning outcomes in attitude was good and very good for all students 81.5. More than 85% of students amount has decided achievement criteria. In short, it can be stated that learning science module based on 7E learning cycle is effective to increase students' learning outcomes.

3.5. Discussion

Learning science module based on 7E learning cycle in this research are valid, practical, and effective to increase students' learning outcomes. This is related to Piaget theory which states that learning is a development of cognitive aspect including content, stucture, and function (Towndrow and Tan, 2008). Intelektual structure is high mental oraganization that students have to answer question and solve problem. Content is students' attitudes to respond the faced problem. While function is a process of intelectual development including adaptation and organization.

In learning science with model 7E learning cycle, students observe the phenomena in their surroundings. Students try to predict and develop the concepts as suitable as their knowledge. Moreover, students come to to school without blank minded, but they have their own conception to study in the class. Students has already own their ideas about science concepts before coming to the class (Citrawathi, 2000).

In 7E learning cyclemodel, engagement phase is aimed to attract the students' interest so that they create relationship with previous knowledge (Carin dan Bass dalam Cartono,

2007).Effect of this phase toward learning activities progress is: centering the students' attention. This happens because teacher do not need to explain learning proses done, students have already been able to know by learning the preface. Learning process with 7E learning cycle model gives opportunity for the students to share ideas with their groupmates during the discussion to solve questions given to test their understanding or concepts. Besides, material adopted in module is complete and understandable so that it can help students to get relevant information to educational level. As Harjanto (2008) states that learning is a process of transferring knowledge done by the students, activeness is for students only, the teacher supply and tell the way of good learning. Phases in module based on 7E learning cycle have given contribution to learning process. This is relevant to Adnyana dan Citrawathi (2008) states that module based on 7E learning cycle has some strenghts. They are: interesting, understandable, challenging tasks, and support students to learn actively; active to think and to do. Students' learning achievement taught by using module based on 7E learning cycle is better than using convensional module (Citrawathi, 2006).

4. Conclusion

This research has produced a module for learning science based on 7E Learning cycle. The module of learning developed is valid, practical, and effective to improve the students' competencies. Students' knowledge and skill are more than 85% achieved. Students' attitude is good and all students are good. It is suggested for science teacher to use leaning module developed. Then, for the next reseachers are able to develop learning module with materials which have not been researched.

References

- Adnyana, Putu Budi dan Desak Made Citrawathi (2008).Pengembangan Modul Biologi Berorientasi Siklus Belajar untuk Meningkatkan Penalaran dan Keteram-pilan Inkuiri Siswa SMA.*Jurnal Penelitian dan Pengembangan Pendidikan Lembaga Penelitian*.Undiksha.No.3.
- Bybee, R.W. (1989). *Science and Technology Education for the Elementary Years:Frame work for Curriculum and Instruction*. Washington, D.C.: The Nationan Center for Improving Instruction.
- Cartono (2007).*Metode dan Pendekatan dalam Pembelajaran Sains*. Bandung: Universitas Pendidikan Indonesia.
- Citrawathi, D.M., Sutajaya, Pt. Budi Adnyana (2000). *Pengembangan Model Pembelajaran Anatomi dan Fisiologi Manusia Menggunakan Suplemen Bahan Ajar dan Siklus Belajar Berbasis Sains-Teknologi-Masyarakat (STM) di Program Studi Biologi STKIP Singaraja.Laporan Penelitian*. Bali: STKIP
- Citrawathi, Desak Made (2006). *Pengembangan Pembelajaran Biologi dengan Menggunakan Modul Berorientasi Siklus Belajar dan Pengaruhnya Terhadap Hasil Belajar Siswa di SMA. Jurnal Pendidikan dan Pengajaran*.IKIP Negeri Singaraja, No. 3 TH. XXXIX.
- Einsenkraft (2003). *Expanding the 5E model: a Proposal 7E model emphasizes 'Transfer of Learning and the importance of Eliciting prior Understanding'*. *Journal the Science Teacher*.Vol 70.p 58-59.
- Hartlay, J, & Davies.I.K. (1978). Prienstructional Strategies, the role of pretest, behavior objectives, overviews. and advance organizers. *Journal of Educational Research*. No 46 (2), p: 239-265.

- Harjanto (2008). *Perencanaan Pengajaran*. Jakarta: Rineka Cipta.
- Kemendikbud (2013). *Permendikbud No 81A Lampiran tentang Pedoman Umum pembelajaran*. Jakarta: Kemendikbud
- Ostlund, Karen (1998). *What the Research says about Science Process skills*. *Electronic Journal of Science Education*, vol. 2(4).
- Polyem, T., Nuangchalern. P. Wongchantra, P. (2001). Learning Achievement, Science Process Skill, and Moral Reasoning of Ninth Grade Students Learned by Learning cycle 7E and Sosioscientific Issue-based Learning. *Australian Journal of Basic Applied Science*. Vol. 1, p: 257-296
- Thiagarajan, S dan Semmel, D.S. (1974). *Instructional Development for training teachers of Exceptional Children: A Sourcebook*. Minneapolis: University of Minnesota.
- Towndrow, P. Alexander and Ling Tan (2008). Promoting Inquiry Through Science Reflective. *Journal Writing. Eurasia Journal of Mathematics, Science & Technology Education*, vol. 4 (3).
- Trianto (2010). *Model Pembelajaran Terpadu*. Jakarta: Bumi Aksara.
- Yenilmez, K. and Ersoy, M. (2008). Opinions of Mathematic Teachers Candidates Towards Applyng 7E Instructional. *Journal of Instruction*. Vol. 1 (1). p.49 – 60