

НЕПЕРЕРВНА ПРОФЕСІЙНА ОСВІТА: ЗАРУБІЖНИЙ ДОСВІД

CONTINUING PROFESSIONAL EDUCATION: FOREIGN EXPERIENCE

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THE DEVELOPMENT OF LEARNING MODULE WITH A SOCIO-CULTURAL CONTENT FOR CRITICAL THINKING

This research has aims: develop learning module generates critical thinking to the charge sociocultural holy, and determine the effectiveness of the learning modules think critically charged sociocultural holy developed in The Class III Elementary school. This research use method research and development (RnD) by Gall, Gall, & Borg (2003). Research participant total 61 students elementary school, male= 28 & female 33, in 10-12 years old (M=11). The data analysis technique used to assess the success of the learning module is to use a questionnaire. The results of the analysis of data from the development of a slightly critical Learning Module with sacred sociocultural content in class III elementary school are appropriate to use. The results of this research and development were declared feasible by experts with an average value of 3.6 for the results of the validation of the material experts and 3.2 for the results of the validation of the media experts, from the data obtained good data. Learning Module developed demonstrates the effectiveness of the data.

Key words: critical thinking; development; elementary school; learning module; socio-cultural content.

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Introduction. The development of the 21st-century world is marked by rapidly developing science and technology (Castells, 2014) with the use of science and technology in addition to being able to provide benefits in human life.

There are also complex problems that become separate challenges. These problems require the ability to think good to complete. The ability to think determines whether someone is successful or not in life (Lockwood, 2006). Solving the problem – a problem that is faced in life is also one of the uses of the ability to think critically.

Critical thinking skills are always important and have

become a vital necessity to society in the 21st century (Kay & Greenhill, 2011). Each generation needs more education than before because the world is increasingly technical and complex (Sternberg, Roediger III, & Halpern, 2007). The ability to think critically is the ability to think at a higher level. This ability affects the decision-making process taken by someone who later becomes the output of his actions (Lloyd & Bahr 2010). Therefore, it is need to hone critical thinking skills that enable students to learn problems or challenges in an organized way.

This research has aims: develop learning module generates critical thinking to the charge sociocultural holy, and determine the effectiveness of the learning

modules think critically charged sociocultural holy developed in The Class III Elementary school.

The objects of the research are elementary school 1 Jati, SD 2 Getas Pejaten and SD 2 Jati. The three schools have similar or even similar problems, namely the lack of critical thinking and the school also expects knowledge about material that has socio-cultural content. The sociocultural theory associated with constructivism meaningful approach to learning that emphasizes that individuals will learn best when they actively construct knowledge and understanding (Yussen, Santrock, & Cracknell, 1978). As the aim of developing the module is to develop sacred sociocultural material aimed at optimizing the process of internal development (Kozulin, Ageyev, Gindis, & Miller, 2003). Holy socio-culture raised in the module material development from the opinion of Zamhuri & Harun (2012) which states that in general, the main character of the holy community is jigsaw society (the Koran and trading), because Muslim traditions and industry-trade economic traditions, greet a certain level emerges economic independence based on tradition and supports the potential for economic growth and development of the community.

Retrieval of initial data to obtain information needs at school using interview techniques. The results of interviews that support the observations related to critical thinking skills obtained data that students have not been able to understand the problem, such as understanding what is trying to do, what information is needed, information available and information that is not available that is useful to solve the problem. Another thing experienced by students in working on story problems is the confusion of how to identify problems and then understand from the language of questions that can ultimately make decisions or change story problems into symbols or formulas.

The observational data was supported by interview data conducted with grade III teachers related to honest character namely the absence of an honesty canteen which could be used as an indicator that the school had not implemented the whole honest character. Although the procurement of honesty canteen is not mandatory and it becomes a benchmark of honest character. However, the procurement of honesty canteen will add a stronger character of honesty to students. Honest character is very important in forming the mature personality of students for the future. Therefore, the importance of honest character education needs to be increased as early as possible.

Research Method. This research use method research and development (RnD). The research and development procedure in this study uses the model of Gall, Gall, & Borg (2003) which consists of ten stages of development, namely; (1) research and information gathering, (2) product planning, (3) development of the product draft, (4) initial trials, (5) revision of initial trial results, (6) field trials, (7) improvement of product results field trials, (8) Field Testing, (9) Final Product Revision, (10) dissemination or Implementation.

The preliminary study was conducted with a literature study, while the field study was carried out by gathering information through interviews and observations in three elementary school s as research subjects. After conducting a preliminary study, initial product development is carried out, starting with the formulation of the material, worksheets, evaluation and product development. The

next stage after the product is finished, a validation test involves media experts and material experts to get input and revision to evaluate the product. The next stage is conducting initial testing involving 4 respondents, here for the direction of module use, from the initial results the data is taken for revision.

After the product has been revised at the initial testing stage after the revision, a field trial involving 8 respondents is conducted. After doing the steps above, an operational test involving 51 respondents arrived. The respondents were divided into two classes, namely the experimental class and the control class. In the experimental class consisted of 36 respondents and the control class consisted of 15 respondents

This research design uses a quasi-experiment with Intact-group comparison design (Gall, Gall, & Borg, 2003). Retrieval of data was using quasi-experiment with racing in two classes, namely the control class and the experimental class. The control class is a class without getting treatment, namely the class that does not use the module products that have been developed, and the experimental class uses modules that have been developed.

$$\frac{X O_1}{O_2}$$

Information:

X = Treatment

O₁ = experimental group post-test results

O₂ = control group post test results

Place and time of research. This research was conducted in May 2019 which took place in three elementary schools, namely SD 1 Jati, SD 2 Jati, and SD 2 Getas Pejaten because the three elementary school s had the same problem.

Research participants. The study was conducted at three elementary school s, namely SD 1 Jati, SD 2 Jati, and SD 2 Getas Pejaten. With third-grade student is 51 participants in 10–12 years old (M= 11). The results of the study are described as follows.

Description of Respondent Characteristics. Based on gender, respondents with male gender totalled 28 students (46%), while respondents were female 33 students (54%). The proportion of male and female students in this study tended to be almost equal, so there was no domination based on gender.

Table 1

Frequency distribution of respiration genes

No	Gender	Frequency	Percentage
1	Man	28	46%
2	Girl	33	54%
	total	51	100

Source: primary data processing, 2019

Data analysis technique. The data analysis technique used to assess the success of the learning module is to use a questionnaire (Patten, 2016) given five assessment options namely, very good «5», good «4», good enough «3» not good «2», and very bad «1».

Results and Discussion. The needs analysis is carried out by conducting a preliminary study, namely

a literature study by compiling indicators of critical thinking and socio-cultural which will be raised by K-13 material. The indicators of critical thinking are; (1) identifying problems, in this aspect, students in solving thematic problem solving focuses on what the problem is, what is the core problem (2) analyzing, in this aspect, students must write the exact reasons of what is already known by linking information which is relevant in solving a problem; (3) conclude, in this aspect, students write conclusions based on the results of the analysis.

Analysis of the holy regency data used includes Peak of the Wind, Peak 29, the summit of Argopiloso, the summit of Argojembangan, and all of which enter the Mount Muria region. Models of houses are in Kudus, Kudus traditional games and Kudus historical area.

Product Feasibility Results. Product viability is carried out by media experts and material experts. Material expert judgment is divided into two components, namely the material component and the Language Component. Material Components include; (1) Material Coverage, (2) Relevance, (3) Material Supporting Activities. While the second component, namely the Language Component, consists of: (1) Use of Indonesian Language, (2) Language Clarity, (3) Communicative and Interactive, (4) Use of Symbols / Symbols.

Table 2

Results of Expert Material validation Tests

	N	Min	Max	The mean
Material Coverage	43	3	4	3.6
Language Coverage	19	3	4	3.2

Source: primary data processing 2019

Aspects of the assessment of Media Experts include several things including: (1) Presentation Components, (2) Graphic Components. Presentation components include; (1) Completeness of the Presentation, (2) Presentation of Learning. While the Graphic Components

include, (1) Physical Module Size (2) Module Skin Layout, (3) Module skin typography, (4) Module content layout, (5) Typography module content.

Table 3

Results of Media Expert Validation Components

	N	Min	Max	The mean
Presentation Component	31	3	4	3.8
Components of the Graphic	44	4	4	4

Source: primary data processing 2019

In conducting their assessments, experts, both media experts, and material experts use a Likert Scale that uses a scale of five with a value range of one to five. Five has the highest value while one has the lowest value. Field trials can be done after getting validation by media experts and material experts. The initial trial was conducted by 4 students and the second trial with 8 students.

Product Effectiveness Data. Testing the effectiveness conducted through several stages, the first stage is done by testing normality data.

Table 4

Data Normality Test Results

Sample Group	Kolmogov-Smimov Z	ASymp, Sig (2-tailed)	Information
SD 1 Jati	1,097	180	Normal
SD 2 Jati	902	390	Normal
SD 2 Getas Pejaten	433	992	Normal

Source: primary data processing 2019

Normality test on the matter of environmental care attitude without using media, namely SD 2 Jati 902 and using media in SD 1 Jati and SD 2 Getas Pejaten for 1.097 and 433, was carried out. Data in the table shows that the data is Normal.

Table 5

Independent Test Results t Test Value of Student Learning Outcomes Based on Learning Media

Variable	Class	Average	t-count	t-table	Sig.	information
Critical Thinking Ability						
<i>Pre-test</i>	Experiment	53,7391	1,759	2,000	0,084	No difference
	Control	47,8667				
<i>Post-test</i>	Experiment	73,0435	6,140	2,000	0,000	different
	Control	50,7333				

Source: primary data processing 2019

Based on the results of the independent t test, it is known that there are differences in the critical thinking skills of students who follow and do not follow learning with sociocultural-based learning modules. Then in the paired t-test it was found that there was a significant increase in the critical thinking skills of students participating in sociocultural-based learning. This means that sociocultural-based learning modules are effective for enhancing students' critical thinking skills

Learning by using modules as independent teaching materials with direction of learning is designed to achieve educational goals. Modules are not only in the

form of format but can also involve a set of learning or coordinated material kits so that they support one another in the learning process. Modules as additional books for students are interesting and help students understand and add broader insights. Handbooks that are commonly used by teachers are books from the government whose material is less detailed and in-depth. The module is able to encourage students to be active, independent and creative with a variety of interesting animated touches. With the learning module can help students get used to the questions that hone students' critical thinking skills.

Critical thinking is reflective and productive

thinking that is used in mental activities by analyzing and evaluating so as to get the truth from a question. The truth goes through a deeper and clearer thought process that results in them being sure and knowing what they should do. Critical thinking skills can be learned and seen from their behaviour. This ability is very good if learned early on. The results of this study are in line with research conducted by Abduh (2015) which states that based on the results of the main test activities, it can be stated that the sociocultural-based thematic-integrative learning media is effective. Good learning must use clear learning methods. The application of learning methods will be more effective if supported by appropriate learning media. Learning media aims to help students to make it easier to understand the concepts being taught by the teacher. One of the learning media in question is the learning module.

Characteristics of third grade elementary school students are at the stage of concrete operational cognitive development. In this stage the child's way of thinking is no longer dominated by perception, but children begin to be able to use their experiences as a reference. Teachers are required to understand and be able to apply various learning approaches that are appropriate to the specific characteristics and characteristics of students so that teachers can facilitate student activities in learning. In this case to help the cognitive development of children's learning, learning can use sociocultural-based modules.

The sociocultural-based module is a module that is closely related to the socio-cultural conditions of the local area. The development of sociocultural-based modules can help students' critical thinking skills, when the modules developed have problems that are very close to the culture of the student's environment. Problems related to daily life are fully integrated in the learning process, students are required to be able to think critically in solving problems related to everyday life. This is in line with the theory conveyed by Rusman (2013, p. 255) which states that in order to solve a problem, students must choose and rearrange the knowledge and learning experiences they have. The flow of constructivism sees first-hand the experiences of students as key in learning. In this case learning adapted to sociocultural life can enable students to construct their knowledge and be able to apply it.

This well-organized sociocultural-based module can

provide many benefits for students, namely students actively involved in learning activities, attracting students' attention to engage in learning activities, Students can measure their own abilities, there is feedback for exercises that motivate students, communicative so students can learn independently, integrate with local socio-culture, train students' maturity because students can manage their own time, giving students more learning opportunities. The application of sociocultural learning is also very much needed because students in fact still do not know their own culture and there are even some students who are not of good character.

Conclusion. Based on the results of research and discussion that has been described in this study, there are several conclusions obtained. Sociocultural-based learning modules that are appropriate for enhancing elementary students' critical thinking skills: Assessment of the feasibility of learning modules based on material experts states that assessment in the category of «fit for use without revision»; Based on the media experts stated that the assessment in the category «fit for use without revision»; Based on the responses of teachers the average rate in the category «relevant and feasible to use»; and Student responses, included in the category «relevant and appropriate to use».

The effectiveness of sociocultural-based learning modules to improve elementary students' critical thinking skills. The results of the independent t-test revealed that there were differences in the critical thinking skills of students who took and did not participate in learning with sociocultural-based learning modules. Furthermore, in the paired t test it was found that there was a significant increase in the critical thinking skills of students who took part in sociocultural based learning. This means that the sociocultural-based learning module is effective in improving the critical thinking skills of elementary students.

For the next research, it can improve the limitation of this research, which is to add other materials, so that the results are more varied; this learning module is not only with an offline system but can also be an online system using gadgets; and to get better development product results, products that are developed should be field tested with a broader capacity.

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РОЗРОБЛЕННЯ І АПРОБАЦІЯ НАВЧАЛЬНОГО МОДУЛЯ СОЦІОКУЛЬТУРНОГО ЗМІСТУ ДЛЯ РОЗВИТКУ КРИТИЧНОГО МИСЛЕННЯ УЧНІВ

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Запропоноване дослідження присвячене розробленню навчального модулю соціокультурного змісту, що сприяє розвитку критичного мислення; а також визначенню ефективності навчального модулю для III класів початкової школи. Критичне мислення розуміється як рефлексивне та продуктивне мислення, яке використовується в розумовій діяльності як аналіз та оцінка матеріалу з метою отримання істини. Для проведення дослідження використаний метод RnD (Gall, Gall, & Borg, 2003), відповідно до якого дослідження починалось з критичного аналізу наукової літератури, збору інформації за допомогою інтерв'ю та спостережень у трьох початкових школах, а також включало розроблення проекту, початковий експеримент з обробкою результатів і внесенням коректив до первісного плану експерименту; формувальний експеримент, в якому взяли участь 36 учнів в експериментальному класі і 15 – у контрольному (всього 51 учень). Навчальний модуль був розроблений з використанням сакрального соціокультурного матеріалу, спрямованого на оптимізацію процесу внутрішнього розвитку учнів. Модуль тісно пов'язаний із соціокультурними умовами місцевого простору і навколишнього середовища і вимагає умінь критично мислити при розв'язанні завдань, пов'язаних із повсякденним життям. Розроблений модуль був прорецензований експертами, які засвідчили, що його доцільно впроваджувати в навчальну діяльність у III класах початкової школи. Результати проведеного дослідження та розробки були визнані експертами ефективними для розвитку критичного мислення учнів. Кількісні результати експерименту також засвідчили позитивний вплив розробленого навчального модулю на розвиток критичного мислення учнів. Результати незалежного t-тесту показали, що значно підвищилися навички критичного мислення учнів експериментальних груп, які брали участь у навчанні за допомогою модулю із соціокультурним змістом.

Ключові слова: критичне мислення; навчальний модуль; початкова школа; розвиток; соціокультурний зміст.

РАЗРАБОТКА И АПРОБАЦИЯ УЧЕБНОГО МОДУЛЯ С СОЦИОКУЛЬТУРНЫМ СОДЕРЖАНИЕМ ДЛЯ КРИТИЧЕСКОГО МЫШЛЕНИЯ УЧАЩИХСЯ

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Предложенное исследование посвящено разработке учебного модуля социокультурного содержания, который способствует развитию критического мышления; а также определению эффективности учебного модуля для III классов начальной школы. Критическое мышление понимается как рефлексивное и продуктивное мышление, которое используется в умственной деятельности как анализ и оценка материала с целью получения истины. Учебный модуль был разработан с использованием сакрального социокультурного материала, направленного на оптимизацию процесса внутреннего развития учащихся. Модуль тесно связан с социокультурными условиями местного пространства и окружающей среды и требует умений критически мыслить при решении задач, связанных с повседневной жизнью. Результаты проведенного исследования и разработки были признаны экспертами эффективными для развития критического мышления учащихся. Количественные результаты эксперимента также показали положительное влияние разработанного учебного модуля на развитие критического мышления учащихся.

Ключевые слова: критическое мышление; начальная школа; развитие; соціокультурний зміст; учебный модуль.

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