



Implementation of Science Learning Alternative School *Sanggar Anak Alam (SALAM)* Nitiprayan Bantul Yogyakarta

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Abstract

This case study aims to analyze the material, process and evaluation of Science learning in *SALAM* Yogyakarta. This research is a qualitative research. The data was collected by participatory observation, in-depth interviews and documentation. Testing the validity of the data using the degree of confidence criteria with triangulation techniques. The results showed that the implementation of Science learning in *SALAM* Yogyakarta did not have special subjects teaching Science material. Science material does not stand up as a formal school subject manifested in Natural Science. The method used in the learning process is research and learning cycles. Learning resources are adapted to the research theme taken by each child. Evaluations are conducted periodically and at any time based on the processes and attitudes that appear during conducting research.

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INTRODUCTION

The freedom of alternative schools to choose subject matter and curriculum independently without the intervention of content standards and processes from the government is worrying because the government emphasizes assessment standards. Competency of alternative school graduates is recognized by the government and is equivalent to formal schools by following a package program that is implemented by the government. One of the subjects that the government evaluates in the national exam is the Natural Science. So far, it has not been widely revealed a description of learning Science in alternative schools. Science as one of the subjects evaluated in the national exam needs to get serious attention from alternative school administrators.

Sanggar Anak Alam Yogyakarta, that is abbreviated as *SALAM* Yogyakarta, is an example of an alternative school that is unique. *SALAM* Yogyakarta students are not required to compete because each child is born original, authentic and cannot be uniformed. *SALAM* Yogyakarta makes its own standards, not following the standards set by the government. The official curriculum issued by the government only serves as a comparison for curricula created by *SALAM* Yogyakarta (Raharjo, 2014).

The Center for Data and Statistics of Cultural Education (*PDSP-K*) of the Ministry of Education and Culture in 2015 said there were 43,008 non-formal education units (alternative schools) in Indonesia. This number consists of 19,139 course institutions, 11,500 Community Learning Centers (*PKBM*) and equality

education package A 457, package B 5,015, package C 6,897. (Ministry of Education and Culture, 2016).

Alternative education exists as an initiative that develops among parents, students and even professionals in their fields. Awareness that diversity and new approaches in the field of education will be better in meeting the educational needs of students. The term alternative education is used as a differentiator with regular classes and refers to different learning processes (Foley & Pang, 2006).

The implementation of rigid learning in formal schools and the limitations of students in certain fields are the reasons they choose alternative education and leave formal schooling (Fitriana, 2016). According to McGregor & Mills (2011: 843-862), in Australia an alternative school was built and designed for students who were marginalized from public schools. Students leave public schools and go to alternative schools due to students' personal circumstances or conflicts that arise with the school. Alternative schools become a solution for them in getting a conducive atmosphere in the learning environment.

Education in alternative schools includes character education. The learning process with examples and habituation will instill character, especially responsibility and independence (Ilyas, 2016). *SALAM* Yogyakarta has carried out the process of learning and managing every element of education well. Seen there is a planning process of the learning program that will be carried out until the learning evaluation stage (Kurniawan, 2016).

An independent, character, personality, productive, creative, skilled, disciplined, intelligent, professional and responsible human resource are the results obtained through quality education. In realizing this goal, education is needed that is tailored to the needs of the community (Azzuhri, 2009). Character education has a close relationship with moral, religious and psychological aspects. In the process of learning the context of vision, materials and processes must be built in their entirety to achieve character education (Maemonah, 2012).

Non-formal education guidance is needed to help the poor in getting opportunities to get education (Dalimunthe, 2017). One of the government's support in the existence and learning process of alternative schools is seen in PKBM Eka Bahupdate East Kotawaringin. The local government provides funding and budget so that PKBM now has its own building (Darlan, 2017).

Giving excessive curriculum leads students to learn by relying solely on memorization. Student interest tends to decrease due to the unrelated curriculum to real life (Cimer, 2012). Excessive curriculum is the cause of the majority of students in Greece experiencing difficulties in understanding Biology (Mavrikaki, 2012). The lecture method that uses textbooks and teachers as a center for information resources is also still used by most teachers. The atmosphere of learning with teaching methods like this is another factor decreasing student motivation and learning outcomes (Yasmin et al., 2015).

Learning methods by linking subject matter to daily life can improve students'

perceptions and motivations (Prमितasari et al., 2011). Students can also be included in decision making and action on problems around them in their development

METHOD

This research is a qualitative research with a case study approach. The design used in the study is as follows:

- Research focus on material analysis, learning process and evaluation of Science learning at *SALAM* Yogyakarta
- Subjects studied were 7th grade students, 7th grade learning facilitators and the Chairman of *SALAM* Yogyakarta PKBM.
- The instrument was the researcher himself using observation guidelines and interview guidelines.
- The data was collected by participatory observation, in-depth interviews and documentation.
- Validity testing of the data using the degree of confidence criteria with triangulation techniques

RESULTS AND DISCUSSION

Learning materials

Science material is not directly found during teaching and learning activities. Remembering *SALAM* Yogyakarta places more emphasis on learning activities in the field process. Even so, it can be identified scientific topics that emerged during the research process in the field. There are several research activities carried out by children that bring up Science material. Examples of scientific material are in the research of 7th grade students named Nane.

The identified scientific topics are explained in the following table:

Table 1. Example of Science Material in *SALAM* Yogyakarta

No	Science Scope	Main discussion/ activities	Method
1.	Biodiversity	(1) Knowing many medicinal plants and their functions. (2) Identify the plants around the house and school. (3) Knowing the effort food crop preservation, especially local plants that can be growth in surrounding area.	Research, presentation, and discussion
2.	Virus and its role in life	(1) Diseases due to viruses (the spreading, spread area, infection mechanism, etc)	Research, presentation, and discussion
3.	Body's defense system	(1) Discuss the body's health as effect of the staying up late, using handphone and computer. (2) Tips to keep healthy.	Research, presentation, and discussion

In table 1 Science topics appeared in the presentation made by Nane. Topics that emerged include the main ingredients in the form of lemongrass, lime and red betel leaves which explain the scope of biodiversity. Causes

of cough that explain the scope of the virus and its role in life and the body's defense system.

The observation of researchers in the process of learning activities does not appear the existence of textbooks. In the researcher's interview with Widiastutik as the 7th grade facilitator at *SALAM* Yogyakarta explained as follows.

"... There is no specific subject matter given here. These materials will appear along with the process that takes place every day. So there is no limit to children having to learn certain material. "

From observations and interviews it can be identified that *SALAM* Yogyakarta and learning facilitators do not make specific references in studying Science material and there is no manual. Science materials will emerge and be identified when the learning process takes place. Science material is described and identified as emerging through integrated learning courses.

SALAM Yogyakarta is different from formal schools because the principle developed is learning not teaching. In the learning process, material is found and obtained from creating events. The resulting events make children gain knowledge and skills. By creating events, the material provided is not the goal but what competency is the goal.

Learning process

In table 1, it is explained that Science material emerged from the research process carried out by children. The observation of researchers in the process of learning activities does not appear to be the division of subjects as in formal schools. In the researcher's interview with Widiastutik as the 7th grade facilitator at *SALAM* Yogyakarta explained as follows.

"... From the beginning we did plan together with our children and parents because at the beginning we decided what we wanted to research about (the research theme)? There are meetings with parents as well, but before the meeting with parents we have conveyed to your friends what research you want to try to write down first, give reasons why you chose this research, then about what you want to achieve later? At least after having the picture they are asked to discuss with parents about what the research is about how parents respond. Is it possible to propose something different or have your research been good and supported by parents."

Based on observations and interviews, the *SALAM* Yogyakarta learning process does not use a national curriculum but is based on a learning activity plan that has been made and agreed upon by the learning community. In contrast to formal schools that have scheduled subjects, *SALAM* Yogyakarta does not have a specific and specific schedule for the division of subjects including Science (IPA) subjects. Learning materials in each subject will be integrated in the learning process that has been adapted to the interests and needs of the learning community.

SALAM Yogyakarta places children as learning centers (learners centered) and emphasizes the activity of children (active learning) in the learning process. The research method used directs children to search for information directly by applying various methods such as direct observation and interviews with practitioners or practitioners who are experts in their fields. This interaction will also make the child a brave, confident, critical and respectful person.

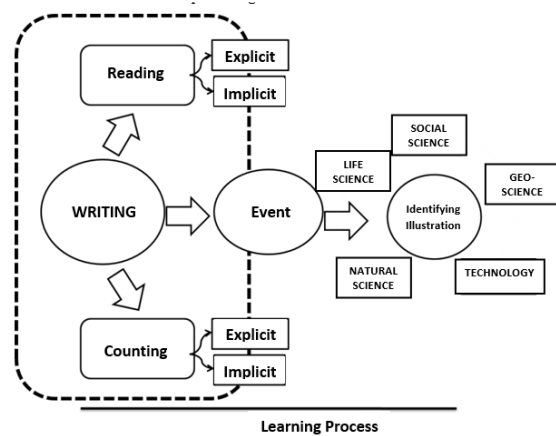


Figure 1. Learning Process Scheme in SALAMYogyakarta

Figure 1 explains the learning process carried out by *SALAM* Yogyakarta. Through the perspective emphasized *SALAM* Yogyakarta which consists of food, environment, health and social culture makes diverse learning resources for children. The scientific concept will appear explicitly and implicitly in the events created. The context of local wisdom contained in the potential and natural resources and social life into a learning laboratory for children. According to Dwianto et al (2017), the application of Science integrated with local wisdom for Science learning materials provides effectiveness in students' scientific process skills and attitudes.

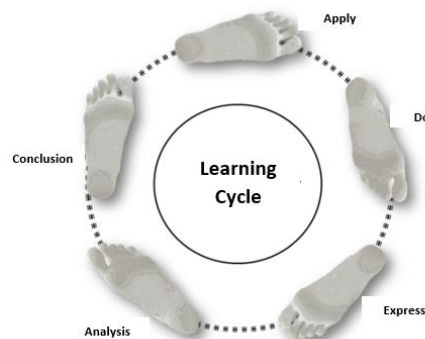


Figure 2. Learning Cycle Scheme in SALAMYogyakarta

Figure 2 is an implementation of the learning process that researchers observe is a learning model they call a "learning cycle". In the learning process, this learning cycle is a guide for learning citizens. Research activities are the beginning of the learning cycle typical of *SALAM* Yogyakarta. Research is chosen so that citizens learn to engage directly in an event to observe and conduct data retrieval in accordance with the needs and learning objectives.

This process shows *SALAM* Yogyakarta applying the scientific approach (scientific approach) in uncovering scientific material. The learning process that reveals Science emphasizes questions and problems as the beginning of the thinking process. Based on the explanation, *SALAM* Yogyakarta applied problem based learning, project based learning and discovery learning.

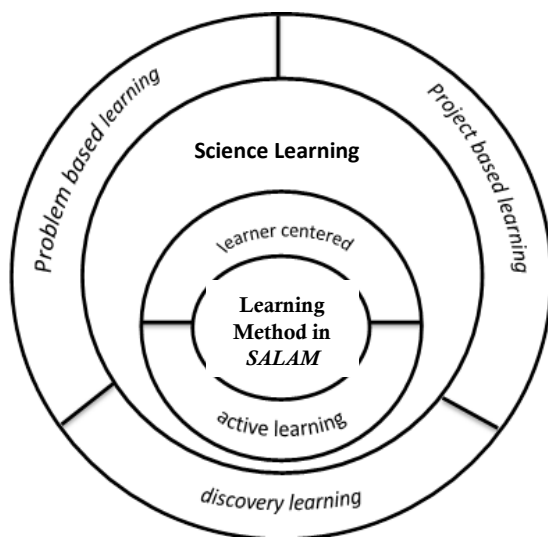


Figure 3. Learning Method in *SALAM* Yogyakarta

Learning Evaluation

To identify the evaluation of learning conducted by *SALAM* Yogyakarta, the researchers conducted interviews with Widiastutik as the 7th grade facilitator.

"... Because it's based on what is experienced by the child, done by the child, discovered by the child, that is what will be assessed later."

"... Look forward to the end of the semester there is a presentation, this is the time where they might be evaluating too. Report of responsibility for what process they have been through. "

A similar sentiment was also conveyed by Yudhistira as the Chairperson of *SALAM* Yogyakarta PKBM which is explained as follows.

"... *SALAM* has its own rules of play and the second *SALAM* as PKBM uses government regulations. If we see the output of the learning community *SALAM*, *SALAM* is not burdened with evaluation. What we do is record the development of children's learning processes related to their knowledge, attitudes and skills. The record is done from the beginning of the process to the end can also be done when the child presents, when there is a review process it strengthens the facilitator's notes. "

From the results of the interview it was written that the assessment of the *SALAM* Yogyakarta learning outcomes was not carried out by working on the questions as was done in formal schools in general. Evaluation is done with parameters experienced, carried out and discovered by children. Learning residents who have been processing for one semester were observed by the facilitator about their understanding. At the end of the semester, a review is conducted, which is to repeat what has been obtained.



Figure 4. Learning Evaluation *SALAM*

Yogyakarta

In figure 4 it can be identified at *SALAM* Yogyakarta as an educational institution also carrying out an assessment of learning outcomes. The evaluation process starts from the child's daily diary conducted by each facilitator of the accompanying child. This evaluation looks at children's processes and attitudes everyday. Researchers also observe the manufacture of products based on research also become material for evaluation and assessment.

The facilitator will make a report on the learning outcomes of the learning community in the form of a review in the form of an individual report card. Learning outcomes report contains the achievement of learning citizens for one semester. The learning outcomes report will later be submitted to parents and the facilitator can tell the conditions and progress of the learning community. The assessment of *SALAM* Yogyakarta's learning outcomes is not used as a reference for higher grade levels. *SALAM* Yogyakarta does not recognize the term "class stay" for their learning citizens. Assessment of learning outcomes is a reflection of the learning process that has been carried out for one semester.

Yudhistira as the Chairperson of *SALAM* Yogyakarta PKBM explained as follows.

"... as a PKBM, this is actually also a choice, meaning this is a facultative nature of the family, we want to choose the exam or not,

we give it freedom. Because actually we don't believe in the diploma, but we facilitate it, can we use it or not? "

"... When it becomes a PKBM the rules of the game follow the rules of the government, like it or not, this PKBM can facilitate the UN, packages A, B, C, then later because she is under the auspices of the Ministry of Education and Culture she can also facilitate issuing diplomas."

Based on interviews and observations of *SALAM* Yogyakarta researchers, it is a non-formal institution that does not issue formal diplomas for its learning citizens. For learning citizens who want to continue their level in formal schools, *SALAM* Yogyakarta facilitates by registering on the package equality exam in accordance with the class and level they have taken.

PKBM acts as a learning tool for the community with the main task as an information center, education center and skills training center (Raharjo et al., 2016). Alternative (non-formal) schools have broader concepts and definitions than formal schools run by the government. The term alternative school emerged as a form of initiative of a learning activity for students who had the risk of not being able to follow the pattern of public schools. Alternative schools have different teaching approaches from public schools but still produce a diploma and are recognized by the state (Aziz, 2014).

CONCLUSION

Based on the results of the study, it can be concluded that in *SALAM* Yogyakarta material related to Science subjects will be studied by citizens learning by referring to the needs, interests and desires of citizens to learn. The material is obtained from creating events that are integrated with other subjects in one

scientific aspect or another scientific aspect. *SALAM* Yogyakarta uses a "learning cycle" learning model with research activities to observe and retrieve data in accordance with the needs and learning objectives. Evaluations at *SALAM* Yogyakarta are conducted regularly and at any time. *SALAM* Yogyakarta facilitates package equality exams in accordance with the classes and levels that have been taken.

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