INTRODUCTION

Learning is a process to facilitate the activities of teacher interaction with students in creating a conducive learning environment, which can improve the quality of student learning academically. It is in line with the statement Winataputra (2007: 18) states of learning is systematic and systemic efforts to improve the competence and student learning outcomes.

Learning of Natural Science (IPA) in the elementary school is one of the containers for the students acquire competence in knowing the symptoms or natural phenomena that occur in the environment around(Usman Samatowa, 2010: 19). The learning process students acquire the Natural Sciences in the classroom can not be separated from the supporting factors such as educators, resource materials, instructional media(Rusman, Kurniawan, Riyana, 2012: 41). Educators is one important indicator in a reciprocal relationship between teachers and students (Pennings et al., 2017), Seoruang role of teacher as facilitator should be able to design the ideal learning for students, such as providing learning media in accordance with the material characteristics of materials science and characteristics of elementary school students, so that students can obtain an optimal learning competencies.

Students are able to gain competence IPA said if their mutual interaction between students and teachers, the students were able to master the concepts of learning, and students are able to apply the knowledge gained in their daily lives. Some indicators of acquiring the competencies to be met so that students were able to show maximum learning results. If students are not able to do these things means that the student has not obtained a fully IPA competence.

Research studies by observation and interviews in fourth grade N 1 Sembungan found a variety of problems such as teachers still use the lecture, not using instructional media accordingly, and not associate knowledge of children with material, this results in a lack of enthusiastic students in participating in learning science. One effective way to overcome these problems is using concrete media, engaging and contextual-based teaching and learning.

MEDIA can be interpreted as a mediator or liaison between the two parties, ie between educators with students to obtain information (Anita, 2010: 1). Learning media in the form of physical equipment petrified students understand and interpret learning from things that are conceptual become an actual thing and be accepted by the schemata of students, so that through the media information that is expected to be delivered to students. This is consistent with the
thinking of Edgar Dale that learning to use the media, the students involved in the discussion and present the results of the discussion will be impacted more than 70% of learning achievement. This fact is also in accordance with the opinion Jean Piaget that the children at the basic stages over the things that are concrete and it is in accordance with the schemata of children, agrees with the child's intellectual development stage Brunner stated that primary school students aged 7-12 years are still in the concrete operational phase.

Elementary school students including an early age, require concrete instructional media, engaging and increase enthusiasm to learn science. Therefore we need a new breakthrough solution-based on the use of concrete media in the learning process. The use of instructional media pop-up book based on contextual teaching and learning will be the right way as the connecting material conveyed to the student teacher. Media pop-up book is derived from the two words “pop-up” and the word “book”, two words came from English. The first word means pop-up appears, and the word book means the book. The second word if synthesized means books that may arise, in the sense of a book when it opened its pages to move and bring something (Dzuanda, 2011: 1) in Jatu Pramesti (2015).

Given the concept of materials science should be able to associate the student’s knowledge of the environment of daily learning on aspects must also emphasizes the contextuality. Mulyasa (2009: 217-218) states contextual teaching and learning is a concept which emphasizes the links between the world of learning materials to learners in real life, so that learners are able to connect and apply the competencies to learn science in everyday life. The principle contained in the media pop-up book based on contextual teaching and learning easier for students to understand subjects instructional and develop creative ideas (Hasani, 2016), Through the concept, in harpakan students in the learning process to obtain optimal results and lessons learned, more meaningful for students (Angela, 2014).

RESEARCH METHOD

The method used in this penelitian is descriptive Qualitative. Methods This study aimed to describe the teacher’s perception of the media-based pop-up book Contextual Teaching and learning in science teaching fourth grade 1 Sembungan Nogosari District of Boyolali.

Data collection techniques for the study will be taken from the observation, interviews, documentation (Sukmadinata, 2012: 216). Observation is used to get an overview of IPA learning process that starts from the activities of teachers and students in a lesson. Observation in a planned and controlled, unbiased observation data taken from data on the condition of the school, media, science learning outcomes, conditions of teachers and school facilities.

Interviews were conducted either structured. The data collected is taken from interviews of teachers and students about the learning process. This process is carried out as the basis for cross-checking the data on the materials and media used in delivering learning activities undertaken subsequently matched by science teachers who have obtained student after participating in the learning activities.

The analysis is done by analyzing the documentation, study, and examine the documents literature related books and materials science instructional media. The purpose of documentation is to know the material is a matter of using the media in the process of learning activities. Researchers are planners, implementers, collecting data, analysis, interpretation of data, and eventually became a reporting research results.

RESULT AND DISCUSSION

Result

The data obtained from observation data, interviews and documentation. Below is a table about teachers’ perceptions of contextual teaching and learning based media.

<table>
<thead>
<tr>
<th>Table 1. Results Teacher Perceptions on Media Pop-up book-based contextual teaching and learning in Science Lesson Class IV SD N 1 Sembungan.</th>
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<tbody>
<tr>
<td>Competence Learning IPA</td>
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<tr>
<td>• The interaction of teachers and students</td>
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<tr>
<td>• Students are able to Understand the concept of learning</td>
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<tr>
<td>• Students are able to apply academic competence with everyday life</td>
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Obstacle factor

- The manufacturing time is relatively long
- Not all materials can be incorporated into CTL-based pop-up media books

Supporting factors

- Students enthusiastically interesting media
- Students have a desire to learn the material through the media
- School environment as a laboratory science
Discussion


Learning media have an important role in the learning process, because it can affect the success of student learning, the media can stimulate attention, interests, thoughts and feelings of students achieve the learning objectives and learning activities (Moon, 2012), Media is something the tools to deliver messages between its message to the receiver (Anita, 2010: 1). Instructional media tailored to the learning objectives to be taught, according to the characteristics in accordance with less material and student characteristics. The learning process will take place optimally when learning media can effectively deliver the material, because the media can visualize the material that would be submitted teacher. This is consistent with the opinion Arsyad (2015) cited Dyna Setyorini “use media to help the effectiveness of the learning process and the delivery of the message content. In addition, instructional media can improve motivation, interest and help students to understand the learning object.

Results of interviews to the fourth grade teachers in implementing the learning beginning just use media LKS books, textbooks, pictures / posters are available in classes such as a picture of ecosystems, natural features, the solar system, the metamorphosis of the animal. The most important learning science teaches students can understand the material and working on the problems, this is in line with the opinions Daryanto (2013: 5) that uses the media to clarify the matter and students are able to understand the information provided.

Good medium for learning science is in accordance with the characteristics of the material and according to the characteristics of students, which aims to help students understand the material. The use of the media need to teach science because teachers are not necessarily lectures, but also require the media liaison teacher materials will be accepted so that students more enthusiasm and interest in student learning in class.

Media pop-up book based on contextual teaching and learning an appropriate medium according to the needs of students. Media pop-up book is derived from the two words “pop-up” and the word “book”, two words came from English. The first word means pop-up appears, and the word book means the book. The second word if synthesized means books that may arise, in the sense of a book when it opened its pages to move and bring terterntutu object. Li Ju, Gu, and Hu (2011) states media pop-up book can visualize the material in the 3D element, when the page will bring material objects and closes when the page of the book is closed.

while understanding Contextual Teaching and Learning is associate the concept of the nature of academic learning materials with the knowledge of the students dikehidupan daily (Mulyasa 2009: 217-2018), in line with the opinion of Johnson (2002)Suryawati (2010) stating contextual teaching and learning helps teachers connect the learning materials to the real conditions of students, so that students use their knowledge in their daily lives. The principle contained in the media based on contextual teaching and learning easier for students to understand subjects instructional and develop creative ideas (Hasani, 2016).

According to the interview to Mr. Sudarto, S.Pd.SD, before use of media when learning science, students are less enthusiastic in participating in the lesson, students are easily bored, many students who play alone with a partner, students do not understand the material being taught. This is certainly the student can not apply the knowledge that has been delivered in the real life of children in the neighborhood.

After the father Sudarto using media pop-up book-based contextual teaching and learning strategies scientific approach showed the students more enthusiastic in learning science. Step-by-step scientific approach are: (1) Students observe the media who have prepared teachers; (2) The student asked the media contents of a pop-up book for teachers, (3) students gather information through observation and questions to the media which has been shown. (4) students and groups to formulate questions that have been collected in the form of a report. (5) a group of students presented the report of the working group in front of the class.

Media use pop-up book shows some benefits for students include: (1) assist students in understanding learning science, agrees with research conducted Fajriah & Churiyah (2016) media use petrified students to learn faster, more efficient; (2) help students remember the material that was submitted (Dyk, 2011); (3) fostering student learning interest (Nanik Yuliati, 2017); (4) increasing student motivation (Sri Adelia Sari, 2007); (5) improve student learning outcomes, in line with Sophisticated research Djijar Devi (2015) that the effectiveness of the use of pop-up book media can improvstudent achievement that have been implemented in the experimental class increased by 13.7% and 10.7% increase control class.

The purpose of media use pop-up book based on contextual teaching and learning in science teaching is easy for students to understand learning science teaching and students are able to apply them
in everyday life, making learning more meaningful for students.

Meaningful in the sense of students to learn, not just get the concept of matter cognitively only, but students can connect the concepts of the lessons with activities in the application in the environment of their lives, stimulate students discover new knowledge and generate new understanding intact for students, so that concepts learned will be stored either in memory of students and not easily forgotten.

b. Supporting factors and obstacles faced by teachers in science teaching

Learning science in the fourth grade have supporting factors and inhibiting factors. These factors come from teachers and students. Other factors such as infrastructure and the school environment. Factors supporting and inhibiting factors should be known to the school and teachers in the learning process. Researchers through interviews, observation, and observations during the study identified several factors.

1) Student

Students through interviews mention some difficulty in following the science learning. The difficulty comes from the students themselves and from outside the student. Factors of the students themselves among other things: (1) the difficulty in understanding the concept of science teaching; (2) students can not work on the problems that he considered difficult; (3) students are not interested in studying science because teachers only use the lecture method. While external factors, students, among others (1) condition that disrupts the classroom bustling The concentration of students; (2) lack of instructional media in accordance with the material science; (3) lack of teachers engage students in learning science.

2) Teacher

Fourth grade teacher N 1 Sembungan certainly have related media science learning tailored to the competence standard, basic competence and matter. Teachers have a bottleneck in making instructional media in accordance with the material characteristics and student characteristics. Media pop-up book based on contextual teaching and learning is the preferred media because the media students visualize the material into a page that has a 3D element when page opened, the media is attractive and increase the enthusiasm, interest and motivation of students to learn the material science, research dengaan line Desi Puspita Sari (2016), the use of media pop-up book outdoor study method effectively increases the interest and motivation of students in science learning. Barriers to making the media pop-up book based on contextual teaching and learning is the time of manufacture requires quite a long time, and the amount of material to be made into a media.

Lack of textbooks IPA also affect learning. Class IV have students 14 students, but the book is available only 10 books, thus affecting the learning process. Lack of textbooks IPA must be addressed by the school because the book is an important medium in the study of science which material is vast.

The availability of science teaching kits in grade IV is incomplete and less well maintained, because the learning kit is a relief from the government that he was already a long time, until now there has been no new aid kit and additional props from the government. The school itself has not been able to buy a kit props that are quite expensive.

3) Environment

Location SD N 1 Sembungan located in the village Sembungan, District Nogosari, Boyolali. This school is the first school in the village stood Sembungan, the school building is located just off the highway and close to the sports field. The school has a large yard and a variety of plants that can be used students to play and learn the type of plant, the type of leaves, and a different type of tree trunks. The school environment and the environment around the village can be a science lab for teachers and students.

The facilities and infrastructure of schools are supported by the library that provides many books related to science learning. Students were allowed to read and borrow books in the library with applicable regulations.

**CONCLUSION AND SUGGESTION**

**Conclusion**

Teacher grade IV SD N 1 Sembungan named Mr. Sudarto, S. Pd.SD in science teaching using media in accordance with the characteristics of the material and characteristics of students. Concrete media, interesting and close to the life of students is a medium that suits the needs of teachers and students. Media Type pop-up book based on contextual teaching and learning is right for the media to solve the problems of students. Media pop-up book is a
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book when the page is opened media will bring up an appropriate object paper folds IPA material and close again when the page is closed. Students looked excited when trying to use this learning media, they asked each other any objects contained on the media. The influence of media-based pop-up book CTL against students, among others: (1) students more easily understand the concept of matter, (2) The child’s enthusiasm and motivation to learn increases; (3) stimulate the children to ask questions; (4) the results of the fourth grade students learn science increased.

Factors penginhibitory learning science when using media-based pop-up book CTL key is making the media requires a relatively long time, not all the learning material was made into contextual-based media. While the main contributing factor in the use of media in learning science is the school environment and the community can be a place to get natural science students. Students liked the concrete media, attractive and close to the students’ everyday life. Learning science using media media pop-up book based on contextual teaching and learning the ultimate goal is to make learning more meaningful for students.

Suggestion
Primary school teachers in teaching should use the media to help students understand the material, teachers must be creative collaborate on methods, strategies and techniques of teaching so that students are not easily bored in studying science. The use of media is very helpful to condition the characteristics of elementary school age children are still the things that are real and interesting.

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