Needs of integrated science textbook for junior high school based on learning style (descriptive research)

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Abstract. One of the factors that determine the achievement of learning objectives is the teaching materials used in the learning. Teaching Materials are all materials (information, tools, and text) that are arranged systematically, which display the whole competencies to be mastered by students [1]. One of the teaching materials that are often used is teaching materials in the form of textbook. Textbooks are typically the main source of learning material for students and the source of information on a specific subject or field [2]. This research is a Descriptive Research that aims to see the urgency of teaching materials in the form of textbooks in integrated science lesson junior high school related to visual learning style. This research was conducted at Junior High School 29 of Bandung. The data collection instrument used in this research is in the form of teacher and students questionnaire. The answers of teachers and students questionnaire wasanalyzed descriptively for each item. The results of the questionnaire showed that both teacher and Students prefer textbooks that use more attractive colours, more detailed explanations and more examples related to daily life. The finding of the research suggest that textbook is urgently needed to support learning process mostly for visual learning style.

1. Introduction
In learning process interaction between students, teachers and learning resources are three things that build the learning process. Learning resources is teaching materials used by teachers in teaching and learning materials that students use for independent learning. Learning the transformation of science (teaching material) from the Teacher to the learner (student) [3]. Teaching materials is one of the important factor in the learning process. Teaching materials that are often used in the learning process is textbooks[4]. One of the subjects at the middle school is a science subject taught by teachers who have spesific science educational backgrounds. Physics, Chemistry or Biology. And they are required to be able to integrated science. Science is a unity of disciplines of physics, chemistry and biology so often called integrated Science. Since the number of learning resources the use of teaching materials plays an important role in the learning of integrated science. If the teaching materials can be understood then the students can do independent learning. Because of the various learning styles of students in the classroom, textbooks can be a teaching material solution for students who have a visual learning style.
2. Method

2.1 Types of Research
The method used in this research is descriptive method. Descriptive method is a method that does not provide treatment, manipulation, or changes in the independent variable, but describes the condition as it is [5]. Descriptive research aims to describe the characteristics of a systematic and accurate population or about a particular field [6]. This research was conducted only to obtain information on the use of integrated science teaching materials in the form of textbooks.

2.2 Object and Subject of Research
The Object of this research is teaching materials used in Integrated Science lessons. The subjects of this research were 3 science teacher and 25 Students 7th grade junior high school 29 of Bandung. The students aged around 12-14 years old.

2.3 Procedures
The study was conducted at Junior High School 29 of Bandung. Election Junior High School 29 of Bandung because this school is included in the middle level of all junior high schools in Bandung. Data collection in secondary school is expected to get an overview of existing problems in science subjects in junior high school Bandung. The problem is focused on the use of teaching materials on integrated science subjects. Data collection using questionnaires. Questionnaire consists of teacher questionnaire and student questionnaire. The answers from teachers and students will be analyzed qualitatively so that the description of the problem of learning process related to teaching materials used in integrated science subjects. This research will be the basis for the development of teaching materials currently required for Integrated Science lessons in junior high schools.

3. Result and Discussion

3.1 Teacher Questionnaire
We analyzed the teacher's answers descriptively to find out the problems encountered in the integrated science learning process that focused on the teaching materials used. Based on our analysis results it is known that the teaching materials are used in the form of textbooks. Textbooks are still the main teaching material. An example of teacher's answer is shown in Figure 1.

![Figure 1. Figure Teacher's answer about the teaching materials being used](image)

Teaching materials in the form of video or internet-based is still rarely used because of limited school facilities. School only has 4 projector and only 2 pieces can be used. The school also does not have internet facilities. An example of teacher's answer is shown in Figure 2.
In textbooks there are integrated science learning materials that have been intergrated from the materials of Chemistry, Physics and Biology. Textbooks become the main teaching materials because the background of science teachers comes from Chemistry, Physics, Biology and Engineering. But teachers are required to teach integrated science that is a combination of chemistry, physics and biology. So teachers often have difficulty in teaching science material outside their field. According to Alfbach Textbooks are a central part of any educational system they help to define the curriculum and can either significantly help or hinder the teacher [7]. An example of teacher's answer is shown in Figure 3.

Textbook materials used today are meeting the demands of the 2013 curriculum. But still less attractive for students because a little picture, the color is less interesting. An example of teacher's answer is shown in Figure 4.

There needs to be some improvements to the textbook that are used to make it more interesting ie more pictures, full colour, easy-to-understand language and more detailed and complete subject matter. An example of teacher's answer is shown in Figure 5 and Figure 6.
3.2 Student Questionnaire

We analyse the answers of the students qualitatively to find out the teaching materials favoured by the students. Based on our analysis results, students like teaching materials in the form of textbooks and videos. Textbook with full explanation of integrated IPA materials. An example of student answers is shown in figure 7.

From the students' answers we can also know that they want the textbook material used more full colour, there are variations of colors, more detailed explanations, examples related to daily life so it is easier to learn and understand. An example of student answers is shown in Figure 8, 9, 10.
3.3 Textbooks used in schools

Teachers use textbooks more than students. The teacher uses 3 books while the students only use 1 book on the learning process is shown in Figure 11, 12. Textbooks are an important component of education in the learning process [8]. Textbooks can also help students learn independently outside of school hours [9].

3.4 Visual Learning Style

Learning style as distinctive and observable behaviors that provide clues about the mediation abilities of individuals and how their minds relate to the world and, therefore, how they learn [10]. There are 3 types of student learning styles that are visual, auditory and kinesthetic [11]. “Visual” information clearly includes pictures, diagrams, charts, plots, animations, etc [12]. An extensive body of research has established that most people learn most effectively with one of the three modalities and tend to miss or ignore information presented in either of the other two [13]. Visual learners remember best what they see: pictures, diagrams, flow charts, time lines, films, demonstrations. If something is simply said to them they will probably forget it. We know in textbooks there are pictures, graphs, diagrams. Textbooks can be teaching materials for students who have a visual learning style.
4. Conclusions
Based on teacher questionnaire analysis, it is found that teachers still need instructional materials in the form of textbooks because of the limitations of school facilities to support video, computer and internet based learning. Based on the analysis of student questionnaires obtained information that teachers are still using teaching materials in the form of textbooks. Students prefer textbooks that use more attractive colours, more detailed explanations and more examples related to daily life. Based on the analysis of students' answers to the student questionnaire. It can be concluded that students want teaching materials that are related to daily life, full colour, easy to understand sentences, many pictures and many examples. It would be better if in the learning process teachers and students use more textbooks. In textbooks there are pictures, graphs, diagrams. So, Textbooks can be teaching materials for students who have a visual learning style.

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6. References