

CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1 Conclusion

The analysis of two-tier test and Certainty of Response Index (CRI) has provided valuable information related to students' misconception on global warming topic. Therefore the information was concluded as follow:

1. The seventh grade students have not built a well-constructed understanding about global warming yet. From four students' understanding categories, the category of misconception has the highest average with 41.7% from total student while students who understand the concept well only get average at 31%. Further for the categories of lack of confidence and lack of knowledge, it has lower average than the two others. In summary, the data show if misconception on global warming topic highly occurs in seventh grade.
2. As the misconception highly occurs on global warming, there are some common misconceptions have been detected. There are seven common misconceptions held by students which are (1) global warming is the increase in atmospheric temperature because of ozone depletion, (2) the function of ozone layer is to maintain the Earth's temperature to livable for living things, (3) the increasing of Carbon dioxide (CO₂) concentration causes the ozone layer depletion, (4) global warming causes skin cancer, (5) global warming causes acid rain more frequently occurred, (6) global warming caused by a lot greenhouses, and (7) deforestation does not cause the global warming.
3. Based on students' logical thinking, seventh grade students are dominated by concrete thinking students (63%) and followed by transition thinking (31%) and formal thinking (6%). However both of concrete and transition thinking students had a few different misconceptions which are (1) concrete thinking students had misconception if global warming causes acid rain more frequently occurred while transition thinking students thought if global warming causes the skin cancer, and (2) concrete thinking students also thought if the cause of global warming is because of a lot of greenhouses in literal meaning.

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THE ANALYSIS OF STUDENTS' MISCONCEPTION ON GLOBAL WARMING TOPIC USING TWO-TIER TEST AND CERTAINTY OF RESPONSE INDEX (CRI) IN SECONDARY SCHOOL

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5.2 Implication

As the research conducted in analyzing the students' misconceptions in global warming topic, there are some implications in teaching and learning global warming. First, when students learn about global warming, they might bring their different prior knowledge to the class related to global warming. Therefore it is necessary to identify students' prior knowledge before conducting the learning process. It can help teachers to identify the students' misconceptions earlier.

Secondly, based on this research, the detected misconception also related to students formal and abstract thinking. Thus, teachers can be more selective to choose the appropriate teaching method and media regarding to the concrete thinking students are dominant in seventh grade. Furthermore, teachers or researches can develop the appropriate teaching media or teaching model that can gives better learning experience for students in learning the global warming. Then it also can help to minimize the possibility of students' misconception.

5.3 Recommendation

Based on the research findings, there are several recommendation that could be considered for a better and more qualified research as follow:

1. The number of questions in the two-tier test could be better if the questions are more than 15 questions. And the concept is not limited just global warming, it's better to explore more concept of the other climate change concept, included the ozone layer depletion or acid rain.
2. The researcher should consider the number of participants. It could be better if not only one class per each school but also more than that and the higher secondary school also included in the research.
3. According to the research finding, the future researchers can more consider to choose the effective learning method in delivering this topic.