

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

Rismawati

International Program on Science Education (IPSE)
Universitas Pendidikan Indonesia, Indonesia
Rismawati628@gmail.upi.edu

ABSTRACT

Global warming is one of the biggest environmental issue nowadays. In Indonesian curriculum, global warming has included in science curriculum of secondary school. The study of analyzing students' misconception on global warming topic using two-tier test and Certainty of Response Index (CRI) in secondary school was conducted to identify students' misconceptions about global warming. A descriptive research was applied in this study and a number of seventh grade lower secondary school students (n = 90) was participated in this research. Cluster sampling was implemented as the sampling technique for this study. Data was gathered from two-tier test with Certainty of Response Index (CRI), and Test of Logical Thinking (TOLT). The study finding showed that majority of students were in concrete thinking level (f = 57). Students dominantly held misconceptions in global warming topic. Based on the analysis, students mostly held misconception in cause of the global warming concept. Further the common misconception has been detected as students thought if global warming was caused by ozone depletion. Besides, students who were in concrete thinking level had specific misconception which was they had high certainty if global warming was caused by a lot of greenhouses in literal meaning.

Keywords: *Students' misconception, global warming, two-tier test, CRI, TOLT*

Rismawati, 2018

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

Universitas Pendidikan Indonesia | repository.upi.edu | perpustakaan.upi.edu

ANALISIS MISKONSEPSI SISWA PADA TOPIK PEMANASAN GLOBAL MENGUNAKAN *TWO-TIER TEST* DAN *CERTAINTY OF RESPONSE INDEX (CRI)* DI SEKOLAH MENENGAH

Rismawati

International Program on Science Education (IPSE)
Universitas Pendidikan Indonesia, Indonesia
Rismawati628@gmail.upi.edu

ABSTRAK

Pemanasan global merupakan salah satu isu lingkungan terbesar saat ini. Dalam kurikulum Indonesia, pemanasan global termasuk dalam kurikulum IPA sekolah menengah. Studi tentang menganalisis miskonsepsi siswa pada topik pemanasan global menggunakan *two-tier test* dan *Certainty of Response Index (CRI)* di kelas tujuh sekolah menengah pertama dilakukan untuk mengidentifikasi miskonsepsi siswa tentang pemanasan global. Sebuah penelitian deskriptif diterapkan dalam penelitian ini dan sejumlah siswa sekolah menengah pertama kelas tujuh ($N = 90$) berpartisipasi dalam penelitian ini. Cluster sampling diimplementasikan sebagai teknik sampling untuk penelitian ini. Data dikumpulkan dari *two-tier test* yang dimodifikasi *Certainty of Response Index (CRI)*, dan *Test of Logical Thinking (TOLT)*. Temuan penelitian menunjukkan bahwa mayoritas siswa berada dalam tahap penalaran konkrit ($f = 57$). Selain itu, siswa pun dominan memiliki miskonsepsi pada topik pemanasan global. Berdasarkan analisis, siswa sebagian besar memiliki miskonsepsi dalam konsep penyebab pemanasan global. Lebih lanjut miskonsepsi yang umum telah terdeteksi bahwa siswa berpikir jika pemanasan global disebabkan oleh penipisan ozon. Selain itu, siswa yang berada dalam tahap penalaran konkrit memiliki kesalahpahaman tertentu yang mereka memiliki kepastian tinggi jika pemanasan global disebabkan oleh banyak rumah kaca dalam arti harfiah.

Kata kunci: *Miskonsepsi siswa, pemanasan global, two-tier test, CRI, TOL*

Rismawati, 2018

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

Universitas Pendidikan Indonesia | repository.upi.edu | perpustakaan.upi.edu