

Title : **Identifying and Remediating Pupils' Misconception on Electricity**

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## 1. Content of the Paper

- 1.1 Most teachers do not realise that students make sense of the world through their own personal construction about the world.
- 1.2 Teachers should consider pupils' idea in their teaching.
- 1.3 Predict-Observe-Explanation (POE) is one of the effective teaching technique to probe pupils' understanding and to detect pupils' misconception of science concepts.
- 1.4 Three tasks are involved in carrying out the POE technique, which is predicting, observing and explaining.
- 1.5 Examples of POE activities concerning electricity are:
  - making a bulb light
  - to find out whether battery produces a constant source of current.
- 1.6 Mechanical analogies can be used to help students understand electrical concepts.

## 2. Discussion

- 2.1 *Madam Chin from Batu Lintang Teacher Training College, Kuching, Sarawak* suggested that explanation be given for science concepts instead of just giving a textbook answer to them. For example, students should be told that a complete pathway from the battery, round the circuit and back to the battery is needed to light up a bulb.
- 2.2 *Madam Salbiah Mat Som from Curriculum Development Center, Ministry of Education Malaysia* asked whether POE is the best technique to identify misconceptions or the best way to teach electricity?

### *Answer*

It is important for the teachers to know students' prior knowledge before a science concept is taught. Many studies showed that students come to the classroom with some prior knowledge. Other studies showed that students' concept on electricity is incomplete or not in line with scientific explanation. If not eradicated students' misconceptions on science will remain in their cognitive structure. POE is one of the techniques recommended to identify misconception as well as to teach electricity.

- 2.3 Prof. Dr. Khadijah Mohd. Salleh from National University of Malaysia asked how excitement in science among students can be developed.

*Answer*

The presenters believe that students will get excited through POE activities.