

## ABSTRAK

**Rahmat Surya S: Pengaruh Model Discovery Learning Berbantuan Multimedia Terhadap Keterampilan Proses Sains, Berpikir Tingkat Tinggi dan Keterampilan Bertanya pada materi sistem pernapasan di SMA Negeri 5 Langsa.** Tesis Program Pascasarjana UNIMED 2016

Penelitian ini bertujuan untuk mengetahui pengaruh model *discovery learning* berbantuan multi media terhadap: (1) Keterampilan proses sains pada materi sistem pernapasan di SMA Negeri 5 Langsa; (2) berpikir tingkat tinggi pada materi sistem pernapasan di SMA Negeri 5 Langsa; (3) keterampilan bertanya pada materi sistem pernapasan di SMA Negeri 5 Langsa. Penelitian ini merupakan kuasi eksperimen dengan sampel sebanyak tiga kelas dengan menggunakan teknik *cluster random sampling*. Kelas XI MIA 1 menggunakan model *discovery learning*; Kelas XI MIA 2 menggunakan model *discovery learning* berbantuan multimedia dan; kelas XI MIA 3 menggunakan model *direct interaction* (kontrol). Instrumen penelitian berupa soal uraian untuk menguji keterampilan proses sains dan berpikir tingkat tinggi dan lembar observasi untuk melihat keterampilan bertanya siswa. Teknik analisa data menggunakan uji ANACOVA yang dilanjutkan dengan uji *Tukey's* pada taraf signifikansi  $\alpha = 0,05$  dengan SPSS 21,0. Hasil penelitian menunjukkan: (1) terdapat pengaruh signifikan model *discovery learning* berbantuan multimedia ( $92,057 \pm 5,585$ ), *discovery learning* ( $81,458 \pm 11,647$ ), dan *direct interaction* ( $73,417 \pm 13,682$ ) terhadap keterampilan proses sains dengan nilai  $F=24,080$ ,  $p=0,000$ ; (2) terdapat pengaruh signifikan model *discovery learning* berbantuan multimedia ( $87,499 \pm 10,03$ ), *discovery learning* ( $79,703 \pm 10,79$ ), dan *direct interaction* ( $73,897 \pm 13,38$ ) terhadap berpikir tingkat tinggi dengan nilai  $F=11,485$ ,  $p=0,000$ ; (3) Adanya pengaruh model *discovery learning* berbantuan multimedia terhadap keterampilan bertanya peserta didik, pada model *discovery learning* berbantuan multimedia lebih banyak yang bertanya dibandingkan dengan model pembelajaran *discovery learning* dan *direct interaction* pada materi sistem pernapasan di kelas XI SMA Negeri 5 Langsa.

Kata Kunci : Keterampilan Proses Sains, Berpikir Tingkat Tinggi, Keterampilan Bertanya, Model *Discovery Learning*, Berbantuan Multimedia.

## ABSTRACT

**Rahmat Surya S: Effect of discovery learning model assisted multimedia to Science Process Skill, high order thinking and the ability to Asking of students SMA Negeri 5 Langsa at Topic Respiratory system.** Thesis. Postgraduate Program, State University Of Medan (UNIMED). 2016

This research is aimed to study effect of discovery learning model assisted multimedia on: (1) Science Process Skill of students SMA Negeri 5 Langsa at Topic Respiratory system; (2) high order thinking of students SMA Negeri 5 Langsa at Topic Respiratory system; (3) the ability to Asking of students SMA Negeri 5 Langsa at Topic Respiratory system. This quasi experiment with a sample of three classes using cluster random sampling technique. Class XI MIA 1 used a model of discovery learning; Class XI MIA 2 used discovery learning assisted multimedia; class XI MIA 3 used a direct instruction model (control). The research instrument is a matter of description to test the science process skills and high order thinking and observation sheet format for the ability to asking. The technique of data analysis was ANACOVA followed by Tukey's test at the level of significance  $\alpha=0,05$  by using SPSS 21,0. The research result showed: (1) There was significant effect of discovery learning model assisted multimedia ( $92,057\pm 5,585$ ), discovery learning model ( $81,458\pm 11,647$ ), direct interaction ( $73,417\pm 13,682$ ) to Science Process Skill with  $F=24,080$ ,  $p=0,000$ ; (2) There was significant effect of discovery learning model assisted multimedia ( $87,499\pm 10,03$ ), discovery learning model ( $79,703\pm 10,79$ ), direct interaction ( $73,897\pm 13,38$ ) to high order thinking with  $F=11,485$ ,  $p=0,000$ ; (3) There was significant effect asking the learning model, the model of discovery learning model assisted multimedia more participants were asked compared with discovery learning and Direct interaction model.

Keywords: Science Process Skill, high order thinking, ability to Asking, discovery learning model, assisted multimedia