

ABSTRACT

Oloan Pandapotan Pangaribuan, The Effect of Learning Approach and The Ability of Logical Thinking on The students' Achievement in Biology at SMA Negeri I Binjai. Thesis: Post Graduate Program of State University of Medan. 2007.

The aims of this research were to determine the effect of: (1) the achievement of biology between the student that taught by learning of guided skill processing instructional approach and conventional approach, (2) the achievement of biology between student who had ability of high logical thinking and low logical thinking, (3) interaction between learning approach and the ability of logical thinking on the students' achievement in biology.

The population of this research were the eleven grade students of SMA Negeri I Binjai that consisted of 4 classes with 160 students, the sample of the research were chosen from XI IA-2 and XI IA-4 class. For XI IA-2 class taught by learning of guided skill processing instructional approach and for XI IA-4 done by learning of conventional approach. The samples taken by cluster random sampling technique. The research instrument that used to measure the achievement was test of multiple choice with 5 option. To get the data of ability of logic thought used Longeot test, that amount 30 questions. The research method used quasi-experiment with faktorial design 2×2 . Technic of analyzing data used Anava of two directions at $\alpha = 0,05$.

The findings of the research showed that: (1) the students' achievement in biology that taught by guided skill processing instructional approach ($\bar{x} = 28,88$) is higher than the students' achievement that taught by conventional approach ($\bar{x} = 26,95$), with $F_{count} = 4,97 > F_{table} = 3,968$ (2) the students' achievement in biology by the ability of high logical thinking ($\bar{x} = 30,62$) is higher than the ability of low logical thinking ($\bar{x} = 25,91$), with $F_{count} = 29,02 > F_{table} = 3,968$ (3) the is interaction between learning approach and the ability of logical thinking on the students' achievement in biology analyzed by statistic found $11,17 > F_{table} = 3,968$. The latter analyzed by using Scheffe tested also showed that: (1) the students' achievement in biology that taught by using guided skill processing instructional approach who had ability of high logical thinking ($\bar{x} = 33,44$) is higher than the ability of low logical thinking ($\bar{x} = 25,83$), (2) the students' achievement in biology that taught by conventional approach who had ability of high logical thinking ($\bar{x} = 28,11$) is higher than the ability of low logical thinking ($\bar{x} = 26,00$).

ABSTRAK

Oloan Pandapotan Pangaribuan, Pengaruh Pendekatan Pembelajaran Dan Kemampuan Berfikir Logis Terhadap Hasil Belajar Biologi Siswa SMA Negeri I Binjai. Tesis: Program Pasca Sarjana Universitas Negeri Medan. 2007.

Penelitian ini bertujuan untuk mengetahui: (1) hasil belajar biologi antara siswa yang dibelajarkan dengan pendekatan keterampilan proses terbimbing dan pendekatan konvensional, (2) hasil belajar Biologi antara siswa dengan kemampuan berfikir logis tinggi dan kemampuan berfikir logis rendah dan (3) interaksi antara pendekatan pembelajaran dan kemampuan berfikir logis terhadap hasil belajar biologi.

Populasi penelitian adalah siswa kelas XI IA SMA Negeri I Binjai yang berjumlah 4 kelas dengan jumlah siswa 160, sampel penelitian ditetapkan untuk kelas XI IA-2 dilaksanakan pendekatan keterampilan proses terbimbing dan kelas XI IA-4 dilaksanakan pendekatan konvensional. Teknik penarikan sampel dilakukan dengan cluster random sampling. Instrument penelitian untuk mengukur hasil belajar digunakan tes berbentuk pilihan ganda dengan 5 pilihan jawaban. Untuk menjarang data kemampuan berfikir logis digunakan tes Longeot yang berjumlah 30 pertanyaan. Metode penelitian menggunakan metode quasi eksperimen dengan desain penelitian faktorial 2×2 . Teknik analisis data menggunakan anava dua jalur pada taraf signifikansi $\alpha = 0,05$.

Temuan penelitian menunjukkan bahwa: (1) hasil belajar biologi siswa yang dibelajarkan dengan pendekatan keterampilan proses terbimbing ($\bar{x} = 28,88$) lebih tinggi dari pada hasil belajar siswa yang dibelajarkan dengan pendekatan konvensional ($\bar{x} = 26,95$), dengan $F_{hitung} = 4,97 > F_{tabel} = 3,968$, (2) hasil belajar biologi siswa dengan kemampuan berfikir logis tinggi ($\bar{x} = 30,62$) lebih tinggi dari pada hasil belajar siswa dengan kemampuan berfikir logis rendah ($\bar{x} = 25,91$), dengan $F_{hitung} = 29,02 > F_{tabel} = 3,968$, (3) terdapat interaksi antara pendekatan pembelajaran dan kemampuan berfikir logis terhadap hasil belajar biologi melalui perhitungan statistik diketahui $F_{hitung} = 11,17 > F_{tabel} = 3,968$. Perhitungan uji lanjut dengan uji Scheffe juga menunjukkan bahwa: (1) hasil belajar biologi siswa yang dibelajarkan dengan pendekatan keterampilan proses terbimbing yang memiliki kemampuan berfikir logis tinggi ($\bar{x} = 33,44$) lebih tinggi dari pada siswa yang memiliki kemampuan berfikir logis rendah ($\bar{x} = 25,83$), (2) hasil belajar biologi siswa yang dibelajarkan dengan pendekatan konvensional yang memiliki kemampuan berfikir logis tinggi ($\bar{x} = 28,11$) lebih tinggi dari pada siswa yang memiliki kemampuan berfikir logis rendah ($\bar{x} = 26,00$).