

ABSTRAK

HEROSTOMIHI KAPEANI MARBUN. Perbedaan Kemampuan Berpikir Logis Anak Usia 5-6 Tahun Melalui Kegiatan Eksperimen Sains Sederhana Di Paud Adelia Gonting Mahe. Skripsi. Medan: Fakultas Ilmu Pendidikan. Universitas Negeri Medan. 2026.

Penelitian ini bertujuan untuk mengetahui perbedaan dan pengaruh kegiatan eksperimen sains sederhana terhadap kemampuan berpikir logis anak usia 5–6 tahun di PAUD Adelia Gonting Mahe. Latar belakang penelitian ini didasarkan pada rendahnya kemampuan berpikir logis anak yang terlihat dari kesulitan dalam mengklasifikasikan benda, memahami hubungan sebab-akibat, serta mengurutkan ukuran secara tepat. Pembelajaran yang masih didominasi metode konvensional seperti bercerita, tanya jawab, dan lembar kerja anak dinilai kurang memberikan pengalaman konkret bagi anak. Penelitian ini menggunakan metode kuantitatif dengan desain eksperimen semu (one-group pretest-posttest design). Sampel penelitian berjumlah 18 anak yang diambil menggunakan teknik sampel jenuh. Teknik pengumpulan data dilakukan melalui observasi menggunakan lembar penilaian kemampuan berpikir logis. Perlakuan yang diberikan berupa kegiatan eksperimen sains sederhana, yaitu eksperimen jus pelangi dan roti pelangi. Hasil penelitian menunjukkan bahwa terdapat peningkatan kemampuan berpikir logis anak setelah diberikan perlakuan. Nilai rata-rata pretest sebesar 23,9 (kategori mulai berkembang) meningkat menjadi 33,9 pada posttest (kategori berkembang sesuai harapan). Hasil uji hipotesis menggunakan Paired Sample T-test menunjukkan nilai signifikansi $0,000 < 0,05$ dan nilai t hitung $(38,7) > t$ tabel $(2,11)$, sehingga hipotesis alternatif (H_a) diterima. Dengan demikian, dapat disimpulkan bahwa kegiatan eksperimen sains sederhana berpengaruh signifikan terhadap peningkatan kemampuan berpikir logis anak usia 5–6 tahun. Penelitian ini diharapkan dapat menjadi referensi bagi guru dalam mengembangkan pembelajaran yang lebih aktif, eksploratif, dan berbasis pengalaman langsung pada pendidikan anak usia dini.

Kata Kunci: Eksperimen Sains Sederhana, Jus Pelangi, Roti Pelangi, Kemampuan Berpikir Logis Anak.

ABSTRACT

HEROSTOMIHI KAPEANI MARBUN. Differences in Logical Thinking Skills of 5-6 Year Old Children Through Simple Science Experiments at Adelia Gonting Mahe Preschool. Skripsi. Medan: Faculty of Education. State University of Medan. 2026.

This study aims to determine the differences and effects of simple science experiments on the logical thinking skills of 5–6-year-old children at Adelia Gonting Mahe Preschool. The background of this study is based on the low logical thinking skills of children as seen from difficulties in classifying objects, understanding cause-and-effect relationships, and ordering sizes correctly. Learning that is still dominated by conventional methods such as storytelling, question and answer, and children's worksheets is considered to provide less concrete experiences for children. This study used a quantitative method with a quasi-experimental design (one-group pretest-posttest design). The research sample consisted of 18 children taken using a saturated sampling technique. The data collection technique was carried out through observation using a logical thinking ability assessment sheet. The treatment given was a simple science experiment activity, namely the rainbow juice and rainbow bread experiments. The results showed that there was an increase in children's logical thinking skills after being given the treatment. The average pretest score of 23.9 (starting to develop category) increased to 33.9 in the posttest (developing category as expected). The results of the hypothesis test using the Paired Sample T-test showed a significance value of $0.000 < 0.05$ and a calculated t-value ($38.7 > t$ -table (2.11)), thus the alternative hypothesis (H_a) was accepted. Therefore, it can be concluded that simple science experiments significantly influence the improvement of logical thinking skills in children aged 5–6 years. This research is expected to serve as a reference for teachers in developing more active, exploratory, and experiential learning in early childhood education.

Keywords : Simple Science Experiments, Rainbow Juice, Rainbow Bread, Children's Logical Thinking Skills.