ABSTRAK

DINI PRANSISKA. Perbedaan Keterampilan Proses Sains Anak Usia 4-5 Tahun Pada Kegiatan Batik Jumput (TIEDYE) Dengan Pewarna Alami Di TK ABA 06. Skripsi. Medan: Fakultas Ilmu Pendidikan. Universitas Negeri Medan. 2026.

Penelitian ini bertujuan untuk mengetahui perbedaan keterampilan proses sains anak usia 4–5 tahun sebelum dan sesudah mengikuti kegiatan batik jumput (*tie dye*) menggunakan **media saputangan dengan pewarna alami** di TK ABA 06 Medan. Penelitian ini dilatarbelakangi oleh masih rendahnya keterampilan proses sains anak, khususnya pada kemampuan mengamati, memprediksi, bereksperimen, dan mengomunikasikan hasil. Kegiatan batik jumput (*tie dye*) menggunakan media saputangan dengan pewarna alami dipilih sebagai kegiatan pembelajaran yang memberikan pengalaman belajar secara langsung melalui kegiatan eksplorasi, percobaan sederhana, dan pengamatan terhadap perubahan yang terjadi selama proses pembelajaran sehingga mampu menstimulasi keterampilan proses sains anak. Penelitian ini menggunakan pendekatan kuantitatif dengan metode **Pre-Experimental Design** dan rancangan ***One Group Pretest–Posttest Design***. Subjek penelitian terdiri atas 12 anak usia 4–5 tahun di TK ABA 06 Medan. Teknik pengumpulan data menggunakan lembar observasi keterampilan proses sains yang disusun berdasarkan empat indikator, yaitu mengamati, memprediksi, bereksperimen, dan mengomunikasikan hasil. Analisis data dilakukan menggunakan statistik deskriptif dan ***Uji Wilcoxon Signed Rank Test***. Hasil penelitian menunjukkan bahwa rata-rata nilai *pre-test* keterampilan proses sains anak sebesar 31 dengan kategori cukup, sedangkan rata-rata nilai *post-test* meningkat menjadi 42,33 dengan kategori sangat baik, sehingga terjadi peningkatan sebesar 11,33 poin. Peningkatan tersebut terlihat pada seluruh indikator keterampilan proses sains yang diamati. Berdasarkan hasil *Uji Wilcoxon Signed Rank Test*, diperoleh nilai Asymp. Sig. (2-tailed) sebesar 0,002 (< 0,05), sehingga H_0 ditolak dan H_1 diterima. Dengan demikian, dapat disimpulkan bahwa terdapat perbedaan yang signifikan pada keterampilan proses sains anak usia 4–5 tahun sebelum dan sesudah mengikuti kegiatan batik jumput (*tie dye*) menggunakan media saputangan dengan pewarna alami di TK ABA 06 Medan.

Kata Kunci : Keterampilan Proses Sains, Batik Jumput (*Tie Dye*), Pewarna Alami, Anak Usia Dini.

ABSTRACT

DINI PRANSISKA. Differences in Science Process Skills Among Children Aged 4–5 Years During Tie-Dye Activities Using Natural Dyes at TK ABA 06. Skripsi. Medan: Faculty of Education. State University of Medan. 2026.

This study aimed to determine the differences in the science process skills of children aged 4–5 years before and after participating in **tie-dye batik activities using a handkerchief as the learning medium and natural dyes** at TK ABA 06 Medan. This study was motivated by the low level of children's science process skills, particularly in observing, predicting, experimenting, and communicating results. Tie-dye batik activities using a handkerchief and natural dyes were selected because they provide meaningful hands-on learning experiences through exploration, simple experimentation, and observation of changes occurring during the learning process, thereby fostering children's science process skills. This study employed a quantitative approach using a **Pre-Experimental Design** with a **One Group Pretest–Posttest Design**. The participants consisted of 12 children aged 4–5 years at TK ABA 06 Medan. Data were collected using an observation sheet developed based on four indicators of science process skills, namely observing, predicting, experimenting, and communicating results. The data were analyzed using descriptive statistics and the **Wilcoxon Signed Rank Test**. The results showed that the mean pre-test score of children's science process skills was 31, which was categorized as fair, while the mean post-test score increased to 42.33, which was categorized as very good, indicating an average improvement of 11.33 points. Improvements were observed across all measured indicators of science process skills. Furthermore, the Wilcoxon Signed Rank Test produced an Asymp. Sig. (2-tailed) value of 0.002 (< 0.05), indicating that the null hypothesis (H_0) was rejected and the alternative hypothesis (H_1) was accepted. Therefore, it can be concluded that there was a significant difference in the science process skills of children aged 4–5 years before and after participating in tie-dye batik activities using a handkerchief as the learning medium and natural dyes at TK ABA 06 Medan.

Keywords : Science Process Skills, Tie-Dye Batik, Natural Dyes, Early Childhood.