ANALISIS KOMPARATIF *NATURE OF SCIENCE* BUKU TEKS IPA INDONESIA, MALAYSIA, DAN SINGAPURA TINGKAT SMP PADA MATERI KELISTRIKAN BERDASARKAN *FAMILY RESEMBLANCE APPROACH*

TESIS

Diajukan untuk memenuhi sebagian dari syarat untuk memperoleh gelar
Magister Pendidikan pada Program Studi Pendidikan IPA

Oleh:
Putra Habib Dhitareka
2002651

PROGRAM STUDI PENDIDIKAN ILMU PENGETAHUAN ALAM
FAKULTAS PENDIDIKAN MATEMATIKA DAN
ILMU PENGETAHUAN ALAM
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Analisis Komparatif Nature of Science Buku Teks IPA Indonesia, Malaysia, dan Singapura Tingkat SMP pada Materi Kelistrikan berdasarkan Family Resemblance Approach

Oleh :
Putra Habib Dhitareka

Sebuah Tesis yang diajukan untuk salah satu syarat memperoleh gelar Magister Pendidikan (M.Pd.) pada Program Studi Pendidikan Ilmu Pengetahuan Alam (IPA)

Universitas Pendidikan Indonesia
Agustus 2022

LEMBAR PENGESAHAN TESIS

PUTRA HABIB DHITAREKA

ANALISIS KOMPARATIF NATURE OF SCIENCE BUKU TEKS IPA INDONESIA, MALAYSIA DAN SINGAPURA TINGKAT SMP PADA MATERI KELISTRIKAN BERDASARKAN FAMILY RESEMBLANCE APPROACH

Disetujui dan disahkan oleh pembimbing:

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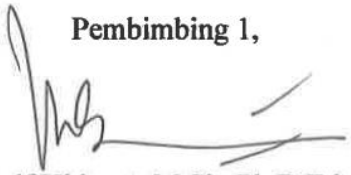

Arif Hidayat, M.Si., Ph.D.Ed.
NIP. 198007162008011008

Pembimbing 2,

Dr. Parsaoran Siahaan, M.Pd.
NIP. 195803011980021002

Mengetahui,

Ketua Program Studi Pendidikan Ilmu Pengetahuan Alam,

Dr. Ida Kaniawati, M.Si.
NIP.196807031992032001

LEMBAR PERNYATAAN ORISINALITAS KARYA

Dengan ini saya menyatakan bahwa tesis dengan judul "**Analisis Komparatif *Nature of Science* Buku Teks IPA Indonesia, Malaysia, dan Singapura Tingkat SMP Pada Materi Kelistrikan berdasarkan *Family Resemblance Approach***" ini beserta seluruh isinya adalah benar-benar karya saya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara-cara yang tidak sesuai dengan etika ilmu yang berlaku dalam masyarakat keilmuan. Atas pernyataan ini, saya siap menanggung risiko/sanksi apabila di kemudian hari ditemukan adanya pelanggaran etika keilmuan atau ada klaim dari pihak lain terhadap keaslian karya saya ini.

Bandung, Agustus 2022

Yang membuat pernyataan

Putra Habib Dhitareka

KATA PENGANTAR

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Namun, kesempurnaan itu hanya milik Allah. Penulis menyadari bahwa karya tulis ilmiah ini masih jauh dari kesempurnaan. Oleh karena itu, kritik dan saran sangat diharapkan untuk meningkatkan kualitas pembelajaran. Semoga hasil yang diperoleh dalam tesis ini dapat bermanfaat bagi siapapun yang membacanya.

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Penulis

Analisis Komparatif Nature of Science Buku Teks IPA Indonesia, Malaysia, dan Singapura Tingkat SMP pada Materi Kelistrikan berdasarkan Family Resemblance Approach

Putra Habib Dhitareka

(2002651)

ABSTRAK

Terlepas dari perdebatan tiada akhir mengenai *Nature of Science* (NOS), semua pihak menyetujui bahwa NOS sangat penting bagi pendidikan sains. Salah satu peran terpenting dari NOS adalah perannya sebagai pilar literasi sains. Buku teks merupakan sumber ajar yang penting dan berkaitan langsung baik pada siswa, guru, dan pemerintah. Dengan mengacu pada hasil asesmen literasi sains, buku teks IPA SMP dari tiga negara dengan tingkat literasi sains yang berbeda diidentifikasi dalam penelitian ini, yaitu Indonesia, Malaysia, dan Singapura. Penelitian ini dilakukan dengan desain penelitian kualitatif dengan metode analisis konten dengan menggunakan 11 kategori FRA sebagai kerangka analitisnya yang dibatasi oleh lingkup materi kelistrikan. Investigasi terhadap kualitas NOS pun dilakukan dengan tiga perbedaan tingkat yaitu tingkat satu (dangkal), dua (detail), dan tiga (sangat baik/percontohan), dan dilakukan kodifikasi penyampaian materi pada kualitas tersebut sehingga dihasilkan tema penyampaian materi NOS. Hasil yang diperoleh adalah terdapat kategori yang tidak dihadirkan pada masing-masing buku teks khususnya etos ilmiah dan sertifikasi sosial. Selain itu, hasil menunjukan proporsi yang sangat tidak merata pada kategori NOS. Kualitas NOS yang teridentifikasi pada buku teks menunjukan buku teks Indonesia merupakan buku dengan proporsi kualitas rendah terbanyak. Sedangkan pada tema penyampaian materi, masing-masing buku teks menunjukan ciri khas masing-masing namun secara umum tema yang ditemukan terkonsentrasi pada beberapa tema saja. Penelitian lebih lanjut sangat terbuka untuk memaksimalkan potensi buku teks untuk mendukung pemahaman NOS siswa.

Kata kunci: hakikat sains, NOS, buku teks IPA SMP, Family Resemblance Approach

Comparative Analysis of Nature of Science in Indonesia, Malaysia, and Singapore Secondary Science Textbooks on Electricity Lesson based on Family Resemblance Approach

Putra Habib Dhitareka
(2002651)

ABSTRACT

Despite the endless debate about the Nature of Science (NOS), all parties agree that NOS is significant for science education. One of the most important roles of NOS is its role as the pillar of scientific literacy. Textbooks are important teaching resources and are directly related to students, teachers, and government. By referring to the results of the scientific literacy assessment, secondary school science textbooks from three countries with different levels of scientific literacy were identified in this study, namely Indonesia, Malaysia, and Singapore. This research was conducted with a qualitative research design with content analysis method using 11 categories of FRA as an analytical framework and limited by the scope of electricity lesson. Investigations on the quality of NOS were also carried out with three different levels, level one (superficial), two (details), and three (exemplary), followed by categorization of the representation delivery on these qualities resulted in themes of NOS representation delivery. The results show that there are NOS categories that are not presented in each textbook, especially scientific ethics and social certification. In addition, the results show uneven proportion in the NOS category. The quality of NOS identified in textbooks shows that Indonesian textbooks are the books with the highest proportion of low quality. While on the theme of delivering material, each textbook shows its own characteristics, but in general the themes found are concentrated on a few themes. Further research is certainly wide open to maximizing the ability of textbooks to support students' understanding of NOS.

Keywords: nature of science, secondary school science textbooks, Family Resemblance Approach

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DAFTAR TABEL

DAFTAR GAMBAR

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