Supriyadi, Prasetyaningsih, Indri Sari Utami, dan Rendi Zulni Ekaputri

Inovasi Kontekstual Pendidikan IPA pada Kebumian, Energi, dan Kebencanaan

DSE
Dharma Samakta Edukhatulistiwa

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Penulis	**:**	Supriyadi, Prasetyaningsih , Indri Sari Utami, dan Rendi Zulni Ekaputri
Editor	**:**	Dr. Ismail, M.Si., M.Pd.
Layout & Desain Cover	**:**	Isnawati, S.Pd, M.Pd.

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Telp/Wa: 085759155966

ISBN
v + 126 halaman, 15,5 x 23 cm
Cetakan Pertama: Mei 2025

PRAKATA

Puji syukur ke hadirat Allah SWT atas terselesaikannya buku *Inovasi Kontekstual Pendidikan IPA pada Kebumian, Energi, dan Kebencanaan*. Buku ini disusun sebagai upaya menghadirkan pembelajaran IPA yang lebih kontekstual, inovatif, dan relevan dengan tantangan abad ke-21, khususnya pada isu atmosfer, kebencanaan, dan energi berkelanjutan.

Indonesia sebagai negara dengan karakteristik geologis dan ekologis yang kompleks menghadapi berbagai tantangan lingkungan, mulai dari perubahan iklim, bencana alam, hingga kebutuhan energi berkelanjutan. Kondisi tersebut menjadikan pendidikan IPA memiliki peran penting dalam membangun literasi sains, kemampuan berpikir kritis, kesadaran ekologis, dan keterampilan pengambilan keputusan berbasis bukti ilmiah.

Buku ini membahas berbagai inovasi pedagogi dalam pendidikan IPA, meliputi penguatan literasi atmosfer melalui *Case-Driven Learning*, pengembangan literasi bencana berbasis *Science Edutainment*, mitigasi bencana melalui *Citizen Science Project*, serta penguatan literasi energi terbarukan melalui integrasi *Project-Based Learning* dan *Nature of Science*. Seluruh pendekatan tersebut memiliki tujuan yang sama, yaitu menghadirkan pembelajaran IPA yang lebih partisipatif, reflektif, dan berorientasi pada keberlanjutan.

Melalui buku ini, penulis berharap pembaca memperoleh gambaran mengenai pengembangan pembelajaran IPA yang tidak hanya berorientasi pada penguasaan konsep, tetapi juga mampu

menghubungkan sains dengan persoalan nyata dalam kehidupan masyarakat. Buku ini diharapkan dapat menjadi sumber inspirasi dan referensi bagi dosen, mahasiswa, guru, peneliti, maupun praktisi pendidikan dalam mengembangkan pembelajaran IPA yang lebih bermakna dan adaptif terhadap perkembangan zaman.

Akhir kata, penulis menyampaikan terima kasih kepada semua pihak yang telah mendukung penyusunan buku ini. Semoga buku ini memberikan manfaat dan kontribusi positif bagi pengembangan pendidikan IPA di Indonesia.

Bandung, Mei 2026

Tim Penulis

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