

DAFTAR PUSTAKA

- Arikunto, S. (2013). *Prosedur penelitian suatu pendekatan praktik*. Jakarta: Rineka Cipta.
- Arsanti, M. (2018). Pengembangan bahan ajar mata kuliah penulisan kreatif bermuatan nilai-nilai pendidikan karakter religius bagi mahasiswa prodi PBSI, FKIP, UNISSULA. *KREDO: Jurnal Ilmiah Bahasa dan Sastra*, 1(2), 69-88.
- Daryanto. (2013). Menyusun Modul: *Bahan Ajar Untuk Persiapan guru Dalam Mengajar*. Yogyakarta: Gava Media.
- Fashiri, F., & Susanti, N. (2020). Pengembangan Bahan Ajar Interaktif Berbasis Website Pada Topik Larutan Elektrolit dan Non Elektrolit. *Jurnal Inovasi Pembelajaran Kimia (Journal Of Innovation in Chemistry Education)*, 2(2), 104-109.
- Fatihah, S. H., Mulyaningsih, N. N., & Astuti, I. A. D. (2020). Inovasi bahan ajar dinamika gerak dengan modul pembelajaran berbasis discovery learning. *Jurnal Pendidikan Fisika dan Teknologi*, 6(2), 175-182.
- Handoyo, A. G., Elmubarok, Z., & Sari, T. K. (2018). Analisis Kesesuaian Modul Bahasa Mandarin Rumah Bahasa Universal Dengan Kelayakan BSNP. *Longda Xiaokan: Journal of Mandarin Learning and Teaching*, 1(1).
- Jalinus, N., Nabawi, R. A., & Mardin, A. (2017). The seven steps of project based learning model to enhance productive competences of vocational students. *Advances in Social Science, Education and Humanities Research*, 102, 251-256.
- Juliandini, G., Situmorang, M., & Muchtar, Z. (2020). An Innovative Chemistry Learning Material With Project and Multimedia to Developed Students Thinking Skill on the Teaching of Anion Analysis. In *The 5th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2020)* (pp. 97-103). Atlantis Press.
- Kosasih, E. (2021). *Pengembangan bahan ajar*. Bumi Aksara.
- Martalina, D. S., Situmorang, M., & Sudrajat, A. (2018, December). The development of innovative learning material with integration of project and multimedia for the teaching of gravimetry. In *3rd Annual International Seminar on*

- Transformative Education and Educational Leadership (AISTEEL 2018) (pp. 735-740). Atlantis Press.
- Munawwarah, M., & Anwar, S. Kelayakan E-Book Interaktif sebagai Bahan Ajar E-Learning pada Materi Elektrokimia yang Dikembangkan Melalui 4S TMD. *Chemica: Jurnal Ilmiah Kimia dan Pendidikan Kimia*, 21(2), 228-235.
- Nainggolan, B., Hutabarat, W., Situmorang, M., & Sitorus, M. (2020). Developing Innovative Chemistry Laboratory Workbook Integrated with Project-Based Learning and Character-Based Chemistry. *International Journal of Instruction*, 13(3), 895-908.
- Nasution, A. H., & Kartajaya, H. (2018). *Inovasi*. Penerbit Andi.
- Pakpahan, D. N., Situmorang, M., Sitorus, M., & Silaban, S. (2021). The development of project-based innovative learning resources for teaching organic analytical chemistry. *Advances in Social Science, Education and Humanities Research*, 59, 782-788.
- Purba, J., Situmorang, M., & Silaban, R. (2019). The development and implementation of innovative learning resource with guided projects for the teaching of carboxylic acid topic. *Indian J of Pharmaceutical Education and Research*, 53(4), 603-612.
- Rahmadani, H., Roza, Y., & Murni, A. (2018). Analisis Kebutuhan Bahan Ajar Matematika Berbasis Teknologi Informasi di SMA IT Albayyinah Pekanbaru. *JURING (Journal for Research in Mathematics Learning)*, 1(1), 91-98.
- Rizalina, H., Cahyono, E., Mursiti, S., Nurcahyo, B., & Supartono, S. (2018). Optimasi Penentuan Kadar Metanol dalam Darah Menggunakan Gas Chromatography. *Indonesian Journal of Chemical Science*, 7(3), 254-261.
- Rizki, R., Hernando, H., Situmorang, M., & Tarigan, S. (2020). The Development Of Innovative Learning Material With Project And Multimedia For Redox Titration. *PervasiveHealth: Pervasive Computing Technologies for Healthcare*, 1, 385-393.
- Samosir, R. A., Bukit, J., Situmorang, M., & Simorangkir, M. (2020). Implementation Of Innovative Learning Material With Project To Improve Students Performance

- In The Teaching Of Complexometric Titration. *PervasiveHealth: Pervasive Computing Technologies for Healthcare*, 1, 375-384.
- Sary, S. P., Tarigan, S., & Situmorang, M. (2018). Development of innovative learning material with multimedia to increase student achievement and motivation in teaching acid base titration. *Advances in Social Science. Education and Humanities Research*, 200, 422-425.
- Simaremare, S., Situmorang, M., & Tarigan, S. (2018). Innovative learning material with project to improve students achievement on the teaching of acid-base equilibrium. *Advances in Social Science. Education and Humanities Research*, 200, 431-436.
- Sinaga, M. (2019). Implementation of innovative learning material to improve students competence on chemistry. *Indian Journal of Pharmaceutical Education and Research (IJPER)*, 53(1), 28-41.
- Situmorang, H. N., Purba, S., & Situmorang, M. (2020). Learning Innovations During the Pandemic COVID-19 for Teaching of Automotive Industrial Management. *Advances in Social Science, Education and Humanities Research*, 488, 261-267.
- Situmorang, H. N., Purba, S., & Situmorang, M. (2021). The Development of Innovative Learning Resources with Multimedia to Support Online Learning in Teaching Industrial Management. In *6th Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2021)* (pp. 918-925). Atlantis Press.
- Situmorang, M., Purba, J., & Silaban, R. (2020). Implementation of an Innovative Learning Resource with Project to Facilitate Active Learning to Improve Students' Performance on Chemistry. *Indian Journal of Pharmaceutical Education and Research*, 54(4), 905-914.
- Situmorang, M., Sinaga, M., Purba, J., Daulay, S. I., Simorangkir, M., Sitorus, M., & Sudrajat, A. (2018). Implementation of innovative chemistry learning material with guided tasks to improve students' competence. *Journal of Baltic Science Education*, 17(4), 535.

- Situmorang, M., Sinaga, M., Sitorus, M., & Sudrajat, A. (2022). Implementation of Project-based Learning Innovation to Develop Students' Critical Thinking Skills as a Strategy to Achieve Analytical Chemistry Competencies. *chemistry*, 15, 16.
- Situmorang, M., Sitorus, M., Hutabarat, W., & Situmorang, Z. (2015). The Development of Innovative Chemistry Learning Material for Bilingual Senior High School Students in Indonesia. *International Education Studies*, 8(10), 72-85.
- Siwa, I. B., & Muderawan, I. W. (2013). Pengaruh pembelajaran Berbasis Proyek dalam Pembelajaran Kimia terhadap Keterampilan Proses Sains ditinjau dari gaya kognitif siswa. *Jurnal Pendidikan Dan Pembelajaran IPA Indonesia*, 3(2).
- Soesilo, A., & Munthe, A. P. (2020). Pengembangan Buku Teks Matematika Kelas 8 Dengan Model ADDIE. *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 10(3), 231-243.
- Suarsana, I. M. (2013). Pengembangan e-modul berorientasi pemecahan masalah untuk meningkatkan keterampilan berpikir kritis mahasiswa. *JPI (Jurnal Pendidikan Indonesia)*, 2(2).
- Suhartatik (2016). *Teknologi Farmasi*. Yogyakarta:GapuraPublishing.
- Sukestiyarno, Y. L., & Agoestanto, A. (2017). Batasan prasyarat uji normalitas dan uji homogenitas pada model regresi linear. *Unnes Journal of Mathematics*, 6(2), 168-177.
- Sutiani, A. (2021). Implementation of an inquiry learning model with science literacy to improve student critical thinking skills. *International Journal of Instruction*, 14(2), 117-138
- Sutiani, A., Silalahi, A., & Situmorang, M. (2017). The development of innovative learning material with problem based approach to improve students competence in the teaching of Physical chemistry. In *2nd Annual International Seminar on Transformative Education and Educational Leadership (AISTEEL 2017)* (pp. 379-383). Atlantis Press.
- Tegeh, I. M., & Sukmana, A. I. W. I. Y. (2018). Pengembangan Media Strip Comic Dengan Model Addie Pada Mata Pelajaran IPA Untuk Meningkatkan

- Motivasi Belajar Siswa Kelas V Di SD Negeri 1 Sari Mekar. *Jurnal Edutech Undiksha*, 6(2), 245-255.
- Titu, M. A. (2015). Penerapan model pembelajaran project based learning (PjBL) untuk meningkatkan kreativitas siswa pada materi konsep masalah ekonomi. In *Prosiding Seminar Nasional* (Vol. 9).
- Wardani, D. S., Fauzi, M. R., Zafira, R., & Kurniawati, D. (2020). Creating Props: Improving Writing Skills of Teaching Materials of Elementary Teacher Education Students through Project-Based Learning Model. In *Elementary School Forum (Mimbar Sekolah Dasar)*, 7(2), 216-234.
- Windyariani, S., & Juhanda, A. (2020). Analisis Kemampuan Pengembangan Penulisan Modul Materi SMA Terintegrasi Self Assessment pada Calon Guru Biologi di Kota Sukabumi. *Prosiding SNPBS (Seminar Nasional Pendidikan Biologi dan Saintek) Ke-5*.
- Wiyarsi, A., & Partana, C. F. (2009). Penerapan pembelajaran berbasis projek pada perkuliahan workshop pendidikan kimia untuk meningkatkan kemandirian dan prestasi belajar mahasiswa. *Paedagogia*, 12(1).
- Wonorahardjo, S. (2010). *Metode-Metode Kimia Pemisahan*. Jakarta: PT.Indeks.
- Yulianto, E., & E. Rohaeti. (2013). Pengembangan Majalah Kimia Untuk Meningkatkan Motivasi Belajar Dan Kreativitas Peserta Didik Kelas X SMA N 1 Melati. *Jurnal Pendidikan Sains*, 1(1), 1-15.

