

Inovasi E-Modul Calistung untuk Penguatan Dasar Literasi dan Numerasi Siswa

Oleh:

Mufidah Sufianti
Nurdyansyah

Magister Manajemen Pendidikan Islam
Universitas Muhammadiyah Sidoarjo

Februari, 2023



Pendahuluan

- Data PISA , PIRLS , dan UNESCO kemampuan literasi dan numerasi siswa di Indonesia masih rendah.
- Siswa harus menguasai kemampuan dasar membaca, menulis, dan berhitung (calistung) sebagai dasar literasi dan numerasi



Pertanyaan Penelitian (Rumusan Masalah)

1. Bagaimanakah pengembangan e-modul Calistung untuk penguatan literasi dan numerasi siswa?
2. Bagaimanakah validitas kelayakan,kepraktisan, dan keefektifan e-modul calistung?

Metode

- Metode Penelitian:
 - ✓ Research and Development (RnD)
 - ✓ Model (ADDIE)
- Teknik Pengambilan data:
 - ✓ Angket
 - ✓ Checklist/observasi
 - ✓ Dokumentasi
- Teknik Analisis Data :
 - ✓ Regresi linier



www.umsida.ac.id



[umsida1912](https://www.instagram.com/umsida1912/)



[umsida1912](https://twitter.com/umsida1912)



universitas
muhammadiyah
sidoarjo



[umsida1912](https://www.youtube.com/umsida1912)



Hasil

- Hasil Uji Validasi Tim Ahli:
 - ✓ Media dan desain: 3,6 (90%) artinya **sangat valid**
 - ✓ Materi : 3,75 (93,7%) artinya **sangat valid**
 - ✓ Bahasa : 3,75 (93,7%) artinya **sangat valid**
- Hasil uji kelompok kecil: 3,89 (97,25%) artinya **sangat valid**
- Hasil uji-t: Hasil p-value atau sig.(2-tailed) adalah 0,005 (<0,05) artinya **terjadi peningkatan signifikan**

Pembahasan

- Berdasarkan hasil uji coba validasi E-Modul Calistung oleh ahli media dan desain, ahli materi, dan ahli bahasa diperoleh hasil dengan kualifikasi sangat baik sehingga layak digunakan dalam proses pembelajaran.
- Berdasarkan hal tersebut berarti E-Modul Calistung yang dikembangkan sangat cocok untuk digunakan sebagai media pembelajaran bagi siswa sekolah dasar.
- Tingkat kepraktisan e-Modul Calistung ini dikatakan praktis untuk digunakan, karena dapat dibuktikan dari hasil uji coba produk pada kelompok kecil 5 siswa dalam kategori sangat valid dan praktis untuk digunakan sebagai media pembelajaran. calistung. E-Modul Calistung ini dikembangkan untuk mengaktifkan siswa dalam proses belajar mengajar.



www.umsida.ac.id



[umsida1912](https://www.instagram.com/umsida1912)



[umsida1912](https://twitter.com/umsida1912)



universitas
muhammadiyah
sidoarjo



[umsida1912](https://www.youtube.com/umsida1912)

Pembahasan

- Pengembangan e-Modul Calistung berbasis digital memungkinkan materi dapat diakses atau diunduh melalui internet menggunakan komputer, atau laptop, atau smartphone; sehingga siswa dapat mempelajarinya kapan saja dan di mana saja berulang kali.
- Keterbatasan e-Module Calistung tersebut antara lain:
 - ✓ e-Modul Calistung yang dikembangkan hanya difokuskan pada materi calistung untuk siswa kelas I Sekolah Dasar. Untuk itu e-modul ini perlu dikembangkan lebih lanjut dengan topik yang lebih luas.
 - ✓ uji coba yang dilakukan untuk menguji efektivitas e-modul ini masih sangat terbatas. E-modul hanya diterapkan pada 30 siswa.

Simpulan

- E-Modul Calistung yang dikembangkan efektif untuk meningkatkan kemampuan literasi dan numerasi siswa sekolah dasar.
- Siswa yang diajar menggunakan e-Modul Calistung mendapatkan hasil belajar yang lebih baik daripada yang diajarkan menggunakan buku teks biasa.
- Disarankan bagi guru sekolah dasar untuk menggunakan e-Modul Calistung yang telah dikembangkan dalam pembelajaran khususnya untuk kelas I siswa sekolah dasar.
- Karena ada beberapa keterbatasan penelitian ini, juga direkomendasikan pada peneliti lain untuk mengembangkan e-modul dengan berbagai topik dan jenjang pendidikan yang berbeda.



www.umsida.ac.id



[umsida1912](https://www.instagram.com/umsida1912)



[umsida1912](https://twitter.com/umsida1912)



universitas
muhammadiyah
sidoarjo



[umsida1912](https://www.youtube.com/umsida1912)

Referensi

1. Afwan, B., Suryani, N., & Ardianto, D. T. (2020). The Development of Digital Flipbook Media Based on the 5 Hours Battle of Kalianda upon High School History Materials. Budapest International Research and Critics Institute (BIRCI-Journal): Humanities and Social Sciences, 3(2), 1003–1012. <https://doi.org/10.33258/birci.v3i2.930>
2. Aguiar, A. L., Aguiar, C., Cadima, J., Correia, N., & Fialho, M. (2019). Classroom quality and children's social skills and problem behaviors: Dosage and disability status as moderators. Early Childhood Research Quarterly, 49, 81–92. <https://doi.org/10.1016/j.ecresq.2019.05.005>
3. Alegre De La Rosa, O. M., & Villar Angulo, L. M. (2019). Factorial analysis of the attitudes of children from 6 to 16 years old with hearing devices towards inclusive education . Aula Abierta, 48(2), 129–137. <https://doi.org/10.17811/rifie.48.2.2019.129-138>
4. Ali, S. R. B., Sarudin, A. B., & Muhamad, Z. F. B. (2021). Developing a thinking strategy on understanding numeracy among students of school in hospital (sdh). Turkish Journal of Computer and Mathematics Education, 12(5), 101–112. <https://doi.org/10.17762/turcomat.v12i5.802>
5. Alves, I., Campos Pinto, P., & Pinto, T. J. (2020). Developing inclusive education in Portugal: Evidence and challenges. Prospects, 49(3–4), 281–296. <https://doi.org/10.1007/s11125-020-09504-y>



Referensi

6. Amanullah, M. A. (2020). Pengembangan Media Pembelajaran Flipbook Digital Guna Menunjang Proses Pembelajaran Di Era Revolusi Industri 4.0. *Jurnal Dimensi Pendidikan Dan Pembelajaran*, 8(1), 37. <https://doi.org/10.24269/dpp.v0i0.2300>
7. Anderson, J., & Boyle, C. (2019). Looking in the mirror: reflecting on 25 years of inclusive education in Australia. *International Journal of Inclusive Education*, 23(7–8), 796–810. <https://doi.org/10.1080/13603116.2019.1622802>
8. Anggraeni, S. W., & Alpian, Y. (2019). Penerapan metode Teams Games Tournament (TGT) untuk meningkatkan kemampuan membaca permulaan siswa kelas I sekolah dasar. *Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran*, 9(2), 181. <https://doi.org/10.25273/pe.v9i2.5086>
9. Asshiddiqi, M. R., Vitasari, M., & Biru, L. T. (2021). Validity of Disaster E-Book To Improve Disaster Literacy Skills At Junior High School. *Jurnal Pena Sains*, 8(2), 79–87. <https://doi.org/10.21107/jps.v8i2.12204>
10. Ayuningtyas, A., Honggowibowo, A. S., Pujiastuti, A., Retnowati, N. D., & Indrianingsih, Y. (2018). Pendampingan Pembuatan Bahan Ajar Bagi Guru Sekolah Dasar Islam Terpadu (SDIT) Salsabila Al Muthi'in Berbasis Multimedia dengan Menggunakan Microsoft Power Point. *KACANEGERA Jurnal Pengabdian Pada Masyarakat*, 1(1), 1. <https://doi.org/10.28989/kacanegara.v1i1.265>



Referensi

11. Bacete, F. J. G., Tinoco, V. M., Perrin, G. M., & Remírez, J. F. R. (2021). Stability of peer acceptance and rejection and their effect on academic performance in primary education: A longitudinal research. *Sustainability* (Switzerland), 13(5), 1–29.
<https://doi.org/10.3390/su13052650>
12. Batubara, H. H., & Ariani, D. N. (2018). Implementasi Program Gerakan Literasi Sekolah Di Sekolah Dasar Negeri Gugus Sungai Miai Banjarmasin. *Jurnal Pendidikan Sekolah Dasar*, 4(1), 15. <https://doi.org/10.30870/jpsd.v4i1.2965>
13. Bessarabova, I. S., & Kurysheva, E. S. (2020). Multicultural orientation of inclusive education in the modern school of the USA . *Perspektivy Nauki i Obrazovania*, 43(1), 180–193.
<https://doi.org/10.32744/pse.2020.1.13>
14. Cai, L. L., Dearden, J., & Jin, X. (2019). Pedagogy, curriculum and special education: a case study in China. *British Journal of Special Education*, 46(2), 201–225.
<https://doi.org/10.1111/1467-8578.12257>
15. Ellis, S., & Rowe, A. (2020). Literacy, social justice and inclusion: a large-scale design experiment to narrow the attainment gap linked to poverty. *Support for Learning*, 35(4), 418–439. <https://doi.org/10.1111/1467-9604.12324>



Referensi

16. Fahyuni, E. F., & Fauji, I. (2017). Pengembangan Komik Akidah Akhlak Untuk Meningkatkan Minat Baca dan Prestasi Belajar Siswa di Sekolah Dasar. *Halaqa: Islamic Education Journal*, 1(1), 17–26. <https://doi.org/10.21070/halaqa.v1i1.817>
17. Festiyed, Djamas, D., & Ramli, R. (2019). Learning model based on discovery learning equipped with interactive multimedia teaching materials assisted by games to improve critical thinking skills of high school students. *Journal of Physics: Conference Series*, 1185(1). <https://doi.org/10.1088/1742-6596/1185/1/012054>
18. Haerani, R., Masunah, J., Narawati, T., Rochyadi, E., & Mujiarto. (2020). Models of arts teacher's professional development. *International Journal of Higher Education*, 9(6), 77–86. <https://doi.org/10.5430/ijhe.v9n6p77>
19. Handley, H. K., Hillman, J., Finch, M., Ubide, T., Kachovich, S., McLaren, S., ... Tiddy, C. (2020). In Australasia, gender is still on the agenda in geosciences. *Advances in Geosciences*, 53, 205–226. <https://doi.org/10.5194/adgeo-53-205-2020>
20. Herry Setyawan, W., Budiman, A., Septa Wihara, D., Setyarini, T., Nurdyansyah, Rahim, R., & Barid Nizarudin Wajdi, M. (2019). The effect of an android-based application on T-Mobile learning model to improve students' listening competence. *1st International Conference on Advance and Scientific Innovation, ICASI 2018*, 1175(1). <https://doi.org/10.1088/1742-6596/1175/1/012217>



Referensi

21. Jablan, B., Stanimirović, D., Vučinić, V., & Pešić, D. (2019). How special education and rehabilitation students perceive self-efficacy for working in inclusive schools . Specijalna Edukacija i Rehabilitacija, 18(1), 63–84. <https://doi.org/10.5937/SPECEDREH18-19832>
22. Khikmiyah, F. (2021). Implementasi Web Live Worksheet Berbasis Problem Based Learning Dalam Pembelajaran Matematika. Pedagogy: Jurnal Pendidikan Matematika, 6(1), 1–12. <https://doi.org/10.30605/pedagogy.v6i1.1193>
23. Kintoko, Wardono, Zaenuri, & Saefudin, A. A. (2021). Developing the teaching materials of algebra matrix based on M-APOS model to develop students' autonomous learning on math. 7th International Conference on Mathematics, Science, and Education 2020, ICMSE 2020, 1918(4). <https://doi.org/10.1088/1742-6596/1918/4/042104>
24. Laili, I., Ganefri, & Usmeldi. (2019). Efektivitas Pengembangan E-Modul Project Based Learning Pada Mata Pelajaran Instalasi. Jurnal Ilmiah Pendidikan Dan Pembelajaran, 3(3), 306–315.
25. Lisauskienė, D. (2018). Inclusive education from pre-school education to higher education: The need for continuity . Pedagogika, 132(4), 241–253. <https://doi.org/10.15823/p.2018.132.15>



Referensi

26. Mahendra, Y., Apriza, B., & Kotabumi, U. M. (2022). Learning Loss Pembelajaran Calistung Siswa Sekolah Dasar. 6(6), 9294–9303.
27. Matenda, S., Naidoo, G. M., & Rugbeer, H. (2020). A study of young people's use of social media for social capital in mthatha, eastern cape. Communitas, 25, 1–15.
<https://doi.org/10.18820/24150525/Comm.v25.10>
28. Mishra Sr., K., Siddharth, V., Bhardwaj, P., Elhence, A., & Jalan, D. (2018). Perception of school teachers towards inclusive education system in Jodhpur City, Rajasthan, India. Journal of Clinical and Diagnostic Research, 12(4), JC19–JC23. <https://doi.org/10.7860/JCDR/2018/31714.11433>
29. Motsa, N. D., & Morojele, P. J. (2019). Vulnerable masculinities: Implications of gender socialisation in three rural swazi primary schools. South African Journal of Childhood Education, 9(1).
<https://doi.org/10.4102/sajce.v9i1.580>
30. Mustikawati, R. (2015). Upaya Peningkatan Keterampilan Membaca Permulaan Dengan Metode Suku Kata (Syllabic Method) Pada Siswa Kelas I Sd Negeri Nayu Barat Iii Banjarsari Surakarta Tahun 2014-2015. Jurnal Ilmiah Mitra Swara Ganesha, 2(1), 41–56.

Referensi

31. MZ, A. B., & Syafi'i, I. (2021). The Development of Learning Media of Islamic Education Based on Flipbook in Covid-19 Pandemic at Elementary School. *Halaqa: Islamic Education Journal*, 5(1), 43–62. <https://doi.org/10.21070/halaqa.v5i1.1209>
32. Nakamura, K. W., Watanabe, R., Fujiwara, A., Saito, K., Kobayashi, H. H., & Sezaki, K. (2018). Plant phenology observation by students using time-lapse images: Creation of the environment and examination of its adequacy. *Environments - MDPI*, 5(1), 1–10. <https://doi.org/10.3390/environments5010007>
33. Nurdyansyah, Abdullah, A. H., Daud, N., Mohamad, M. Z., Mohamad, M. Z., & Mohamad, M. Z. (2019). Teaching Media Design Innovation Using Computer Application with Scientific Approach. *International Journal of Academic Research in Business and Social Sciences*, 9(3), 373–382. <https://doi.org/10.6007/ijarbss/v9-i3/5689>
34. OECD. (2019). *Indonesia Education at a Glance*. OECD: Country Note, 1–5.
35. Padmadewi, N. N., & Artini, L. P. (2017). Teaching english to a student with autism spectrum disorder in regular classroom in Indonesia. *International Journal of Instruction*, 10(3), 159–176. <https://doi.org/10.12973/iji.2017.10311a>



Referensi

36. Pakistyaningsih, A., Nurdyansyah, By Arifin, M. B. U., Rudyanto, H. E., & Rais, P. (2019). School library utilization technology model to improve reading interest and reading ability in elementary education. *Universal Journal of Educational Research*, 7(9), 1945–1955.
<https://doi.org/10.13189/ujer.2019.070914>
37. Panos, G. A., Kromydas, T., Osborne, M., Wright, R. E., & Wright, R. E. (2020). PAPER.
38. Pendidikan, K., Kebudayaan, D. A. N., Jenderal, D., & Dikmen, D. A. N. (2021). Panduan pengukuran.
39. Penelitian, J. H., Kepustakaan, K., & Pendidikan, B. (2022a). *Jurnal Kependidikan*: 8(4), 806–816.
40. Penelitian, J. H., Kepustakaan, K., & Pendidikan, B. (2022b). *Jurnal Kependidikan*: 8(1), 179–189.
41. Pombo, L., Carlos, V., & Loureiro, M. J. (2017). Edulabs AGIRE project—evaluation of ICT integration in teaching strategies. *Educational Media International*, 54(3), 215–230.
<https://doi.org/10.1080/09523987.2017.1384158>



Referensi

42. Průžek, M., Cihová, I., Novak, D., Wang, X., Vašíčková, J., Tománek, L., & Antala, B. (2020). Inclusion in physical education on the basis of opinions of high school female students from Slovakia, Czech Republic and Croatia. *Journal of Physical Education and Sport*, 20(3), 1538–1542. <https://doi.org/10.7752/jpes.2020.03211>
43. Rhosyida, N., Muanifah, M. T., Trisniawati, T., & Hidayat, R. A. (2021). Mengoptimalkan Penilaian Dengan Liveworksheet Pada Flipped Classroom Di Sd. *Taman Cendekia: Jurnal Pendidikan Ke-SD-An*, 5(1), 568–578. <https://doi.org/10.30738/tc.v5i1.9749>
44. Ricu Sidiq, & Najuah. (2020). Pengembangan E-Modul Interaktif Berbasis Android pada Mata Kuliah Strategi Belajar Mengajar. *Jurnal Pendidikan Sejarah*, 9(1), 1–14. <https://doi.org/10.21009/jps.091.01>
45. Ritter, R., Wehner, A., Lohaus, G., & Krämer, P. (2019). Pre-service Teachers' Beliefs About Inclusive Education Before and After Multi-Compared to Mono-professional Co-teaching: An Exploratory Study. *Frontiers in Education*, 4. <https://doi.org/10.3389/feduc.2019.00101>
46. Saleh, H., Nurdyansyah, Hasanah, F. N., Rudyanto, H. E., & Mu'alimin. (2019). Application of Classroom Response Systems (CRS): Study to measure student learning outcome. *International Journal of Emerging Technologies in Learning*, 14(14), 132–142. <https://doi.org/10.3991/ijet.v14i14.10506>



Referensi

47. Sari, M., Murti, S. R., Habibi, M., Laswadi, L., & Rusliah, N. (2021). Pengembangan Bahan Ajar E-Book Interaktif Berbantuan 3D Pageflip Profesional Pada Materi Aritmetika Sosial. *Jurnal Cendekia : Jurnal Pendidikan Matematika*, 5(1), 789–802.
<https://doi.org/10.31004/cendekia.v5i1.490>
48. Setiawan, T. Y., & Fikri, A. (2022). the Development of E-Lkpd Using Book Creator on Fraction Operations Material in Elementary School. *MaPan*, 10(1), 116–126.
<https://doi.org/10.24252/mapan.2022v10n1a8>
49. Spatioti, A. G., Kazanidis, I., & Pange, J. (2022). A Comparative Study of the ADDIE Instructional Design Model in Distance Education. *Information (Switzerland)*, 13(9), 1–20.
<https://doi.org/10.3390/info13090402>
50. Stehle, S. M., & Peters-Burton, E. E. (2019). Developing student 21st Century skills in selected exemplary inclusive STEM high schools. *International Journal of STEM Education*, 6(1).
<https://doi.org/10.1186/s40594-019-0192-1>

Referensi

51. Sugiarto, R., Nurdyansyah, N., & Rais, P. (2018). Pengembangan Buku Ajar Berbasis Majalah Anak Materi Wudlu Untuk Meningkatkan Pemahaman Siswa. *Halaqa: Islamic Education Journal*, 2(2), 201–212. <https://doi.org/10.21070/halaqa.v2i2.1772>
52. Sultoni, S., Gunawan, I., & Pratiwi, F. D. (2018). Perbedaan Motivasi Belajar Mahasiswa antara Sebelum dan Sesudah Mengikuti Pelatihan Motivasional. *Ilmu Pendidikan: Jurnal Kajian Teori Dan Praktik Kependidikan*, 3(1), 115–119. <https://doi.org/10.17977/um027v3i12018p115>
53. Susantini, E., Puspitawati, R. P., Raharjo, & Suaidah, H. L. (2021). E-book of metacognitive learning strategies: design and implementation to activate student's self-regulation. *Research and Practice in Technology Enhanced Learning*, 16(1). <https://doi.org/10.1186/s41039-021-00161-z>
54. Tryanasari, D., Aprilia, S., & Cahya, W. A. (2017). Pembelajaran Literasi di SDN Rejosari 1 Kecamatan Kawedanan Kabupaten Magetan. *Premiere Educandum : Jurnal Pendidikan Dasar Dan Pembelajaran*, 7(02), 173. <https://doi.org/10.25273/pe.v7i2.1641>
55. Whale, K., Cramer, H., & Joinson, C. (2018). Left behind and left out: The impact of the school environment on young people with continence problems. *British Journal of Health Psychology*, 23(2), 253–277. <https://doi.org/10.1111/bjhp.12284>
56. Zashchirinskaia, O. V. (2020). Features of Non-Verbal Communication of Children with Intellectual Disabilities and Differences from their Normatively Developing Peers. *Journal of Intellectual Disability - Diagnosis and Treatment*, 8(4), 633–641. <https://doi.org/10.6000/2292-2598.2020.08.04.5>





DARI SINI PENCERAHAN BERSEMI