

# ASISTENSI MENGAJAR (AM) PROGRAM IN MERDEKA BELAJAR KAMPUS MERDEKA (MBKM) AS A PEDAGOGICAL MASTERY ACCELERATOR FOR VOCATIONAL HIGH SCHOOL TEACHER CANDIDATES

Muhammad Idris Effendi<sup>a,1,\*</sup>, Yoto<sup>b,2</sup>, Widiyanti<sup>b,3</sup>

<sup>a</sup> Study Program of Vocational Education, Graduate School of Universitas Negeri Malang, Jl. Semarang 5, Malang, 65145, Indonesia

<sup>b</sup> Department of Mechanical Engineering, Faculty of Engineering, Universitas Negeri Malang, Jl. Semarang 5, Malang, 65145, Indonesia

<sup>1</sup> [muhhammad.idris.2305518@students.um.ac.id](mailto:muhhammad.idris.2305518@students.um.ac.id); <sup>2</sup> [yoto.ft@um.ac.id](mailto:yoto.ft@um.ac.id); <sup>3</sup> [widiyanti.ft@um.ac.id](mailto:widiyanti.ft@um.ac.id)

\*Corresponding author

DOI: 10.17977/jps.v12i22024p057

## ARTICLE INFO

### Article History:

Received 11/02/2024  
Revised 15/03/2024  
Approved 20/04/2024  
Published 03/06/2024

### Keywords:

Asistensi Mengajar  
Merdeka Belajar Kampus Merdeka  
Pedagogical mastery  
Vocational high school  
Teacher candidates

## ABSTRACT

This research delves into the issue of inadequate pedagogical proficiency among vocational high school (SMK) teacher candidates, primarily stemming from the constrained timeframe of educational internships, typically spanning a mere two months. As an option, this study suggests the implementation of an Asistensi Mengajar (AM) initiative within the framework of the Merdeka Belajar Kampus Merdeka Program (MBKM), extending over a semester's duration. Employing a literature review methodology, the research highlights that the brevity of conventional two-month internships poses a significant impediment to the development of pedagogical acumen among SMK teacher candidates. The proposed option entails an AM program under MBKM, engaging students in bolstering literacy, numeracy, technological adaptability, and school administration skills. The emphasis is laid on the pivotal role of pedagogical competence in ensuring efficacious and dynamic learning processes. A comprehensive grasp of the constituents of pedagogical competence, encompassing sub-competencies and corresponding indicators, is deemed indispensable. Prior studies have evidenced a positive correlation between heightened pedagogical competence and learning efficacy. It is recommended that AM-MBKM programs be extended to students, affording them opportunities to partake in collaborative learning endeavors under the tutelage of teachers and mentoring lecturers within formal educational settings.

**How to Cite:** Effendi, M. I., Yoto, Y., & Widiyanti, W. (2024). Asistensi Mengajar (AM) program in Merdeka Belajar Kampus Merdeka (MBKM) as a pedagogical mastery accelerator for vocational high school teacher candidates. *Jurnal Pendidikan Sains*, 12(2), 57–62. <https://doi.org/10.17977/jps.v12i22024p057>

## INTRODUCTION

The evolution of education in Indonesia persists in response to the evolving societal, economic, and technological landscapes, striving to equip prospective teachers with a profound comprehension of effective pedagogy tailored to recent needs. This transformative process encompasses revisions in curriculum frameworks, instructional methodologies, and the assessment of learning outcomes, all aimed at fostering a more efficacious and pertinent educational milieu. The pivotal role played by aspiring teachers in the realization of these educational advancements necessitates comprehensive preparation in pedagogical understanding, delineating the teaching approach, which encompasses both theoretical underpinnings and practical application within classroom settings. This comprehension extends beyond subject-specific knowledge to encompass facets such as classroom management, student motivation, and adept utilization of educational technologies. Teachers are urged to acknowledge and accommodate individual differences among students, employing tailored approaches conducive to optimizing their learning potential (Octavianingrum, 2020).

Moreover, as posited by Hakim (2015), the alignment of pedagogy with present exigencies necessitates a paradigm shift in teaching methodologies. Teacher ingenuity in crafting and delivering instructional materials, leveraging educational technology, fostering collaboration, and cultivating 21st-century competencies assumes paramount importance in preparing students for a fluid and dynamic future. This assertion underscores the earnest endeavors of governmental bodies and educational institutions to augment the quality



of education, prioritizing adaptable and competitive educational reform. It is underscored that educational metamorphosis in Indonesia transcends mere curriculum modifications, extending to the comprehensive preparation of prospective educators. Functioning as primary conduits of education dissemination, prospective teachers must be equipped to function as adept instructional leaders, effectuating positive change in this era of rapid evolution.

The issue of pedagogical adeptness among prospective educators currently presents a multifaceted challenge warranting concerted attention and intervention. Extant literature underscores the imperative of nurturing pedagogical prowess among aspiring teachers. Notably, a dearth of confidence in pedagogical acumen can significantly impede the instructional practices of prospective mathematics teachers (Sumartini, 2020), underscoring the necessity of addressing self-efficacy in pedagogy within teacher training programs. Furthermore, the optimization of pedagogical proficiency through micro-teaching has been explored within the realm of Catholic religious education, indicating a specialized focus on enhancing pedagogical competencies within specific educational domains (Tarihoran & Kurniantono, 2022).

Moreover, the cultivation of Technological Pedagogical Content Knowledge (TPACK) among elementary school teacher candidates has been a focal point of scrutiny and examination, underscoring the imperative to amalgamate technological proficiency with pedagogical insight and subject matter expertise for efficacious teaching (Nurfidah, 2021). Additionally, the preparation of teachers for students with special needs (disability) has emerged as a crucial area of inquiry, accentuating the necessity to scrutinize existing conditions in teacher training and the obstacles encountered in attaining the requisite competencies for special education teachers (Pujaningsih, 2019). Furthermore, scholarly discourse accentuates the significance of reflective teaching methodologies and the pivotal role of practical field experiences in fostering Pedagogical Content Knowledge (PCK) among prospective physics teachers (Budiman, 2017; Safriana & Marina, 2019). This underscores the intrinsic value of hands-on teaching encounters and introspective practices in honing the pedagogical acumen of aspiring instructors. Additionally, the efficacy of platforms such as Lesson Study in augmenting pedagogical content knowledge has been underscored, delineating the potential of collaborative, research-oriented approaches in teacher training endeavors (Yuliati, 2017).

Investigations into the perceptions of professional roles and literacy among future elementary school teachers have been conducted, underscoring the significance of endowing graduates with conceptual frameworks for effective teaching and professionalism amidst globalization (Setyaningtyas, 2016). Additionally, the role of self-efficacy in shaping the preparedness of teacher candidates has been underscored, revealing the impact of their personal beliefs on their capacity to assume effective instructional roles (Setiani et al., 2017).

Within the context of Vocational High Schools (Sekolah Menengah Kejuruan – SMK), teacher candidates are mandated to possess sufficient pedagogical prowess to adeptly cultivate skills in students that align with contemporary industry demands. Pedagogical expertise encompasses a comprehensive grasp of efficacious instructional methodologies tailored to the unique characteristics of SMK students. Teacher candidates must be equipped with diverse pedagogical approaches capable of accommodating the learning preferences of SMK students, who typically prioritize hands-on, practical learning experiences. This mastery extends to the adept design and management of learning encounters geared towards fostering the practical skills requisite for success in the industrial realm.

The role of teachers in SMK transcends mere dissemination of information. Teachers serve as facilitators of learning, tasked with nurturing students' creative and innovative potential. Teacher candidates must adeptly cultivate a learning milieu conducive to the holistic development of both technical and non-technical skills among SMK students. This encompasses fostering collaborative learning environments, spearheading practical projects, and orchestrating simulations mirroring real-world work scenarios to fortify practical competencies germane to the industrial realm (Mayasari et al., 2016; Parwati & Pramarta, 2021).

It is imperative to discern both current and prospective industry requirements. SMK teachers must possess an in-depth comprehension of industrial advancements and labor market demands. This acumen empowers them to craft curricula that remain responsive to technological progressions and shifts in industry exigencies. The integration of skills aligned with contemporary industry standards constitutes a pivotal facet of SMK education, ensuring that graduates seamlessly transition into the workforce. Indeed, technological proficiency stands as a vital facet of preparation for teacher candidates in SMK. Teachers must adeptly comprehend and integrate educational technology into the pedagogical landscape to equip students with competencies relevant to an increasingly digitized industrial milieu. Incorporating software and technological tools commonly utilized in industries becomes intrinsic to SMK education.

Collectively, these findings underscore the paramount importance of furnishing SMK teacher candidates with robust pedagogical acumen, enabling them to effectively cultivate students endowed with skills aligning with industry requisites. Confronted with the swift pace of technological advancements and the fluidity of the industrial sphere, SMK teachers assume a strategic role in sculpting graduates poised to seamlessly integrate into the workforce, equipped with aptitudes requisite for both current and forthcoming industries. It is noteworthy that despite its significance, pedagogical mastery attained through Student Teaching Practice (STP) in teacher education remains somewhat deficient, owing to its constrained duration of merely two months. STP, constituting a pivotal component of teacher education, furnishes students with opportunities to translate theoretical knowledge into everyday teaching practices. Hence, pedagogical mastery entails students' capacity to adeptly devise, implement, and assess students' learning experiences (Rugaiyah, 2011).

Undoubtedly, the mere two-month duration allocated for practice poses a significant impediment to attaining adequate pedagogical mastery. Within this brief timeframe, students as teacher candidates, must swiftly acclimate to the school milieu, comprehend class dynamics, and conceive and execute learning activities. Such brevity may curtail opportunities for students to encounter diverse teaching scenarios and receive ample feedback for self-improvement.

Moreover, it is imperative to scrutinize whether the teaching methodologies employed during STP align with the objectives of fostering pedagogical expertise. Students ought to be afforded opportunities for active teaching engagement, material development, and autonomous classroom management. It is crucial that STP be meticulously structured to encompass pedagogical dimensions germane to the roles and responsibilities of a teacher.

Initiatives aimed at enhancing the quality of STP warrant consideration. This may entail fostering closer collaboration between higher education institutions and partner schools, providing intensive mentoring from field supervisors, and devising specialized training regimens for STP participants. Active involvement of students in the majority of projects and activities within schools can furnish richer and more comprehensive experiences conducive to cultivating pedagogical mastery. Proposed solutions to this challenge may involve either prolonging the duration of STP or integrating STP with ongoing teaching initiatives throughout students' academic terms. By doing so, students could benefit from more continuous and comprehensive development in pedagogical proficiency. Furthermore, leveraging blended learning methodologies or technology-enhanced instruction could enrich students' learning experiences, even within constrained timeframes.

The *Asistensi Mengajar (AM)* program in Merdeka Belajar Kampus Merdeka (MBKM), which encompasses technology-based classroom learning, non-academic activities, and school administration, holds promise for significantly augmenting students' pedagogical competence. Through active engagement in this initiative, students stand to gain invaluable practical exposure to designing and delivering instructional materials utilizing technology, along with honing administrative competencies within the school environment. Consequently, this program not only amplifies students' pedagogical knowledge and skills but also primes them to emerge as adept educators attuned to the exigencies of present and future education.

## METHOD

The methodology employed for composing this article predominantly involved a comprehensive literature review. The research corpus was sourced from Google Scholar over the past decade (2013–2023), encompassing research papers available in both Indonesian and English languages. This investigation initially yielded 7,890 papers upon querying the keywords “student teacher internship” and “pedagogical competence”. Subsequently, these findings underwent meticulous scrutiny, leading to the identification of 41 papers directly pertinent to the intersection of student-teacher internships and pedagogical competence, based on scrutiny of their titles, keywords, and abstracts. Further refinement narrowed the selection to 38 papers explicitly addressing student-teacher internships via *Asistensi Mengajar (AM)* and pedagogical competence throughout their entirety, which formed the foundation of this inquiry. The adoption of a literature review methodology facilitated the comprehensive integration of pertinent insights and information relevant to the research inquiry. Drawing upon the synthesized literature, a detailed analysis ensued, focusing on elucidating the significance of pedagogical competence in the context of prospective teachers engaged in educational internships. Consequently, this analytical approach endeavors to shed light on pertinent issues surrounding the application and imperatives of pedagogical competence for teacher candidates.

## RESULTS

### Concept and Implementation of *Asistensi Mengajar (AM)* Program in MBKM

Participation in *Asistensi Mengajar (AM)* program under the Merdeka Belajar Kampus Merdeka (MBKM) initiative constitutes a pivotal endeavor for students, aimed at enhancing literacy, numeracy, technological proficiency, and school administrative skills (Andriyani et al., 2023). This collaborative effort involves the engagement of numerous students, whose performance is subsequently assessed through survey methodologies conducted by the university faculty (Rahmawati et al., 2023).

The MBKM epitomizes a multifaceted and autonomous framework for higher education, fostering a dynamic learning community that prioritizes student-centeredness and adaptability (Meke et al., 2022). Integral to its realization is the active involvement of the academic fraternity, including students, in facilitating teaching assistance initiatives (Sintiawati et al., 2022). While extant literature has broached the subject of campus teaching within the ambit of the MBKM program (Anwar, 2021), scholarly discourse remains limited in its specificity on this aspect. Consequently, there exists a pressing need for further investigation to elucidate the intricacies of AM within the context of MBKM comprehensively.

In the execution of the AM program, the primary objective is to enhance proficiency in literacy, numeracy, technology integration, and school administration (Andriyani et al., 2023). Furthermore, this initiative seeks to gauge students' inclination toward pursuing a career in education (Fajaria & Nurhasanah, 2022). However, its implementation is beset by various challenges, including financial constraints, suboptimal academic infrastructure, insufficient staffing, and a dearth of information regarding the MBKM program (Sintiawati et al., 2022). The AM program within the MBKM framework represents a cornerstone of university offerings geared towards fostering students' pedagogical skills. The essence of AM lies in furnishing guidance and instruction to students in pedagogical techniques and classroom management. The practical implementation of AM unfolds through a series of activities encompassing training in pedagogical methodologies, observation and assessment of teaching practicums, and both individual and group mentoring sessions. Moreover, the endeavor receives reinforcement through mentoring provided by supervising lecturers and mentor teachers.

In its implementation, the AM program within the MBKM framework extends beyond honing students' pedagogical skills to encompass the development of their academic and social proficiencies. Through this program, the aspiration is to equip students with the readiness and confidence to navigate future teaching responsibilities adeptly. In summary, the AM program within the MBKM serves as a pivotal endeavor undertaken by students to augment literacy, numeracy, technological adeptness, and school administrative capabilities. The overarching goal of the MBKM initiative is to cultivate an innovative learning milieu that is adaptive and responsive

to the diverse needs of students. Integral to its realization is the active engagement of the academic community, including students, in facilitating teaching assistance activities. Evaluation of AM program initiatives may be conducted utilizing survey methodologies to glean insights and gauge students' perspectives concerning the implementation of MBKM and associated AM endeavors.

### **Pedagogical Competence of Vocational High School (SMK) Teachers**

Teachers must cultivate pedagogical competence to ensure the efficacy and dynamism of the learning process. A thorough grasp of pedagogical theory and its practical applications is imperative to navigate teaching challenges adeptly. Among the myriad responsibilities entrusted to teachers is the meticulous preparation of teaching administration, encompassing tasks such as crafting teaching plans, syllabi, and lesson plans. [Sudjana \(2011\)](#) delineates teacher competence, emphasizing roles spanning educator, mentor, and classroom administrator. [Balqis et al. \(2014\)](#) suggest enriching teachers' pedagogical competence through avenues such as facilitating active student engagement with information and communication technology, fostering effective communication, and fostering a culture of reflective practice to elevate learning quality. [Hakim \(2015\)](#) elucidates teachers' pedagogical competence, which encapsulates proficiency in organizing learning environments, designing instructional frameworks and their execution, assessing learning outcomes, and nurturing students to actualize their potential. Augmenting teachers' pedagogical prowess is pivotal, as it enhances their professional efficacy within the instructional milieu. This empowers teachers to deploy diverse and effective pedagogical techniques when disseminating content to their students ([Rahman, 2014](#)).

### **DISCUSSION**

In the context of Merdeka Belajar Kampus Merdeka (MBKM), the Asistensi Mengajar (AM) program offers substantial advantages for teacher candidates. These assistantships enable teacher candidates to acquire practical teaching experience within a school environment. [Restiningtyas et al. \(2022\)](#) demonstrate that participation in the AM-MBKM enhances the quality of education. Teacher candidates benefit from direct teaching experiences, confronting real-world challenges in classroom management, and engaging directly with students. Additionally, the AM program presents opportunities for teacher candidates to refine their pedagogical skills. A study by [Fatonah et al. \(2021\)](#) found that the Kampus Mengajar program under MBKM effectively enhances students' teaching abilities. Through these assistantships, teacher candidates can hone essential teaching skills, including lesson planning, classroom management, and providing constructive feedback to students.

The AM program under the MBKM framework initiative is a groundbreaking effort designed to enhance students' pedagogical abilities. This program offers students the opportunity to engage in direct teaching activities at elementary and secondary schools for one semester ([Faizah et al., 2022](#)). Participants gain hands-on teaching experience, interact with students, and support classroom teachers. They are mentored by experienced educators, gaining valuable insights into the educational environment and developing crucial social skills necessary for the teaching profession. Moreover, students are encouraged to reflect on their teaching experiences, identify areas for improvement, and foster their personal and professional growth ([Santoso et al., 2022](#)).

The primary goal of the AM-MBKM program is to elevate education quality by producing competent and dedicated future teachers who can contribute to the enhancement of Indonesia's education system ([Irawan, 2022](#)). Through this program, students not only acquire practical teaching skills but also learn the importance of teamwork, effective communication, and adaptability in various situations. Consequently, the program aims to develop professional educators with integrity, capable of adapting to the evolving demands of a complex educational landscape ([Sachana et al., 2021](#)).

### **CONCLUSION**

To enhance the pedagogical mastery of vocational high school (SMK) teacher candidates, the two-month duration of educational internships has been identified as a major limitation. To address this issue, the concept and implementation of Asistensi Mengajar (AM) within the context of the Merdeka Belajar Kampus Merdeka (MBKM) program is proposed. The AM program under the MBKM framework constitute a significant activity, involving student participation in enhancing literacy, numeracy, technology adaptation, and school administration. Evaluating these activities through literature review methods can provide valuable data and insights regarding student perceptions of MBKM and AM activities. The pedagogical competence of SMK teacher candidates is a critical focus in this discussion. Developing this competence is essential for ensuring effective and dynamic learning processes. It involves a deep understanding of various elements, including sub-competencies and indicators such as understanding learners, instructional design, teaching implementation, learning evaluation, and learner development. The importance of pedagogical competence for SMK teachers is underscored by research showing a positive relationship between increased pedagogical competence and learning effectiveness. Internship programs adhering to competency standards can serve as exemplary models for enhancing student competence. Based on the discussion, several suggestions are proposed. First, extend the duration of internships. Consideration should be given to lengthening the duration of educational internships for SMK teacher candidates, providing them with more time to develop and refine their pedagogical competence. Second, strengthen and evaluate the MBKM program. The MBKM program, particularly the AM program, should be reinforced and regularly assessed. Increased participation and the improvement of assistantship activities can positively impact student pedagogical mastery. Third, enhance collaboration with schools. Strengthening collaboration with schools as internship sites can offer students richer and more profound experiences in facing real-world teaching challenges.

## ACKNOWLEDGMENTS

First and foremost, I would like to express my deepest gratitude to Mr. Yoto and Mrs. Widiyati, my first and second supervisors. Your guidance, advice, and support throughout this research have been invaluable and will always be remembered. Without your supervision, this study would not have been possible. I would also like to extend my thanks to the University of Malang for providing internet facilities and journal access, which were essential for conducting this literature study. A heartfelt thank you to my forever partner, Lailatul Nurjanah, for her assistance with proofreading. Lastly, I am grateful to all parties involved in this research. Your contributions and support have been greatly appreciated.

## FUNDING AGENCIES

The authors no received financial support for the research, authorship, and/or publication of this article.

## AUTHOR CONTRIBUTIONS

MIE was responsible for the conceptualization of the study, including formulating the research questions and design. MIE also undertook the data collection, ensuring that the methodology was rigorously applied and all relevant data were accurately gathered. Furthermore, MIE led the data analysis, interpreting the results and drawing initial conclusions. YT contributed significantly to the data analysis, providing additional insights and ensuring the robustness of the findings. YT was also heavily involved in writing the manuscript, crafting the narrative, and integrating the findings into a coherent and compelling document. WD played a crucial role in the writing process, focusing on refining the manuscript, ensuring clarity, coherence, and adherence to academic standards. Additionally, WD managed the submission process to the journal, handling all correspondence, revisions, and ensuring that the manuscript met all necessary requirements for publication. Each author has approved the final version of the manuscript and agrees to be accountable for all aspects of the work, including any questions related to the accuracy or integrity of any part of the research.

## CONFLICT OF INTEREST STATEMENT

The authors declare that there are no financial conflicts of interest related to the material discussed in this manuscript. None of the authors have received funding, grants, or any other form of compensation that could influence the study's outcomes or interpretation. In terms of personal relationships, the authors confirm that there are no personal or professional relationships that could bias the work reported in this study. Each author's contribution was based solely on their academic and professional expertise without any external influence. Additionally, the authors have no affiliations with any organizations or entities that could be perceived as influencing the research. All affiliations mentioned in the manuscript are purely academic and professional with no hidden interests. To further ensure transparency and integrity, any potential conflicts that might arise will be managed by recusal from certain decision-making processes and establishing oversight mechanisms. These proactive steps are taken to maintain the objectivity and ethical standards of the research. The authors confirm that they have provided a full and honest disclosure of any potential conflicts of interest and have taken all necessary measures to mitigate any bias in their research.

## REFERENCES

- Andriyani, H., Zubair, M., Alqadri, B., & Mustari, M. (2023). Implementasi program kampus mengajar angkatan 4 dan dampaknya terhadap budaya literasi siswa di SDN 43 Cakranegara. *Jurnal Ilmiah Profesi Pendidikan*, 8(1), 452–459. <https://doi.org/10.29303/jipp.v8i1.1200>
- Anwar, R. N. (2021). Pelaksanaan kampus mengajar angkatan 1 program merdeka belajar kampus merdeka di sekolah dasar. *Jurnal Pendidikan dan Kewirausahaan*, 9(1), 210–219. <https://doi.org/10.47668/pkwu.v9i1.221>
- Balqis, P., Ibrahim, N. U., & Ibrahim, S. (2014). Kompetensi pedagogik guru dalam meningkatkan motivasi belajar siswa pada SMPN 3 Ingin Jaya Kabupaten Aceh Besar. *Jurnal Administrasi Pendidikan: Program Pascasarjana Unsyiah*, 2(1), 25–38. <https://jurnal.usk.ac.id/JAP/article/view/2497>
- Budiman, H. (2017). Pengajaran reflektif mahasiswa calon guru pendidikan matematika. *Jurnal PRISMA*, 6(2), 132-143. <https://doi.org/10.35194/jp.v6i2.63>
- Faizah, I. N., Aprilyani, N., Amalia, R. T., Sulikah, S., & Wulandari, D. J. (2022, July). Peran mahasiswa asistensi mengajar dalam mengatasi permasalahan pembelajaran komputer akuntansi di SMK 1 Malang. In *Prosiding National Seminar on Accounting, Finance, and Economics (NSAFE)* (Vol. 2, No. 3, pp. 152–161). <http://conference.um.ac.id/index.php/nsafe/article/view/2539/1697>
- Fajaria, N. H., & Nurhasanah, I. (2022). Exploring students' interest in becoming a teacher through “kampus mengajar” program. *Akademika: Jurnal Teknologi Pendidikan*, 11(02), 329–340. <https://doi.org/10.34005/akademika.v11i02.2259>
- Fatonah, K., Alfian, A., & Lestari, S. (2021). Implementasi program kampus mengajar di sekolah dasar swasta Nurani Jakarta. *JS (Jurnal Sekolah)*, 5(4), 194–205. <https://doi.org/10.24114/js.v5i4.31326>
- Hakim, A. (2015). Contribution of competence teacher (pedagogical, personality, professional competence and social) on the performance of learning. *The International Journal of Engineering and Science*, 4(2), 1–12. <https://theijes.com/papers/v4-i2/Version-3/A42301012.pdf>
- Irawan, D. (2022). Evaluasi program asistensi mengajar di satuan pendidikan program studi pendidikan teknik otomotif berbasis model kirkpatrick. *Jurnal Teknik Otomotif: Kajian Keilmuan dan Pengajaran*, 6(1), 1–8. <http://doi.org/10.17977/um074v6i12022p1-8>

- Mayasari, T., Kadarohman, A., Rusdiana, D., & Kaniawati, I. (2016). Apakah model pembelajaran problem based learning dan project based learning mampu melatih keterampilan abad 21?. *Jurnal Pendidikan Fisika dan Keilmuan (JPFK)*, 2(1), 48–55. <http://doi.org/10.25273/jpfk.v2i1.24>
- Meke, K. D. P., Astro, R. B., & Daud, M. H. (2022). Dampak kebijakan merdeka belajar kampus merdeka (MBKM) pada perguruan tinggi swasta di Indonesia. *Edukatif: Jurnal Ilmu Pendidikan*, 4(1), 675–685. <https://doi.org/10.31004/edukatif.v4i1.1940>
- Nurfidah, N. (2021). Kemampuan teknologi pedagogical and content knowledge (TPACK) mahasiswa calon guru PGSD melalui presentasi di kelas. *JISIP (Jurnal Ilmu Sosial Dan Pendidikan)*, 5(4), 1412–1415. <https://doi.org/10.58258/jisip.v5i4.2572>
- Octavianingrum, D. (2020). Pentingnya kompetensi pedagogik dalam kegiatan magang kependidikan bagi mahasiswa calon guru. *Jurnal Ilmiah Kependidikan*, 7(2), 115–124. <http://doi.org/10.30998/fjik.v7i2.6401>
- Parwati, N. P. Y., & Pramatha, I. N. B. (2021). Strategi guru sejarah dalam menghadapi tantangan pendidikan Indonesia di era society 5.0. *Widyadari*, 22(1), 143–158. <https://ojs.mahadewa.ac.id/index.php/widyadari/article/view/1114>
- Pujaningsih, P. (2019). Penyiapan calon guru untuk anak berkebutuhan khusus di Indonesia: Kondisi saat ini dan tantangan. *JPK (Jurnal Pendidikan Khusus)*, 15(1), 24–33. <https://doi.org/10.21831/jpk.v15i1.24894>
- Rahman, M. H. (2014). Professional competence, pedagogical competence and the performance of junior high school of science teachers. *Journal of Education and Practice*, 5(9), 75–80. <https://iiste.org/Journals/index.php/JEP/article/view/11868>
- Rahmawati, S., Irhamni, I., Nurlaili, N., Suhendrayatna, S., Huzni, S., Marwan, M., ... & Zuhri, S. (2023). Pemanfaatan metode survei sebagai strategi evaluasi kegiatan asistensi mengajar dalam mendukung program merdeka belajar kampus merdeka. *Jurnal Pusat Inovasi Masyarakat (PIM)*, 5(1), 102–115. <https://doi.org/10.29244/jpim.5.1.102-115>
- Restiningtyas, L. N., Sayekti, T., & Maryani, K. (2022). Effectiveness asistensi mengajar in improving quality of learning through the MBKM program. *ThufuLA: Jurnal Inovasi Pendidikan Guru Raudhatul Athfal*, 10(1), 85–116. <https://doi.org/10.21043/thufula.v10i1.13085>
- Rugaiyah, R. (2011). Pengembangan kompetensi mahasiswa melalui magang. *Jurnal Manajemen Pendidikan*, 209–219.
- Saehana, S., Ali, M., Darsikin, D., Nurgan, N., & Ratnaningtyas, D. I. (2021). Pelatihan penggunaan learning management system (LMS) bagi guru sebagai mitra asistensi mengajar program mbkm prodi pendidikan fisika FKIP Universitas Tadulako. *Bubungan Tinggi: Jurnal Pengabdian Masyarakat*, 3(4), 441–446. <https://doi.org/10.20527/btjpm.v3i4.4333>
- Safriana, S., & Marina, M. (2019). Pengembangan perangkat pengajaran mikro berbasis lesson study untuk meningkatkan pedagogical content knowledge mahasiswa calon guru fisika. *Jurnal Pendidikan Sains Indonesia (Indonesian Journal of Science Education)*, 7(2), 79–90. <https://doi.org/10.24815/jpsi.v7i2.14643>
- Santoso, H. D., Sari, D. P., Fadilla, A. D., Utami, F. F., Rahayu, F. P., Sari, D. C., & Sya'bani, N. P. (2022). Asistensi Mengajar, Adaptasi Teknologi, Dan Administrasi Dalam Program Kampus Mengajar. *Jurnal Pengabdian Dharma Laksana*, 4(2), 100–105. <https://doi.org/10.32493/j.pdl.v4i2.18220>
- Setiani, I. B., Taufiq, A., & Suherman, S. (2017). Bimbingan kelompok dengan pengajaran formula ABCDE pendekatan rasional emotif behavior untuk meningkatkan self efficacy mahasiswa calon guru. *Jurnal Kajian Bimbingan dan Konseling*, 2(1), 9–17. <https://doi.org/10.17977/um001v2i12017p009>
- Setyaningtyas, E. W. (2016). Persepsi mahasiswa PPL 1 dan 3 PGSD BIPE UKSW mengenai profesi guru SD yang profesional dan pengajaran literasi. *Scholaria: Jurnal Pendidikan dan Kebudayaan*, 6(2), 139–152. <https://doi.org/10.24246/j.scholaria.2016.v6.i2.p139-152>
- Sintiawati, N., Fajarwati, S. R., Mulyanto, A., Muttaqien, K., & Suherman, M. (2022). Partisipasi civitas akademik dalam implementasi merdeka belajar kampus merdeka (MBKM). *Jurnal Basicedu*, 6(1), 902–915. <https://doi.org/10.31004/basicedu.v6i1.2036>
- Sudjana, N. (2021). *Dasar-dasar proses belajar mengajar*. Bandung, Indonesia: Sinar Baru Algensindo.
- Sumartini, T. S. (2020). Self efficacy calon guru matematika. *Mosharafa: Jurnal Pendidikan Matematika*, 9(3), 419–428. <https://doi.org/10.31980/mosharafa.v9i3.797>
- Tarihoran, E., & Kurniantono, M. K. (2022). Optimalisasi kompetensi pedagogis calon guru agama katolik melalui micro teaching. *Sapa: Jurnal Kateketik dan Pastoral*, 7(2), 166–180. <https://doi.org/10.53544/sapa.v7i2.360>
- Yuliati, L. (2017). Membangun pedagogical content knowledge calon guru fisika melalui praktek pengalaman lapangan berbasis lesson study. *Momentum: Physics Education Journal*, 1(1), 16–30. <https://doi.org/10.21067/mpej.v1i1.1629>