IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Mapping Electronic Module MBKM in Indonesia: A Bibliometric Analysis

Ade Holisoh[1], John Pahamzah[2], Sholeh Hidayat[3]
[1,2,3]Universitas Sultan Ageng Tirtaysa, Serang, Indonesia

Check for updates OPEN ACCESS

DOI : https://doi.org/10.46245/ijorer.v7i1.1169

Sections Info

Article history:
Submitted: October 18, 2025
Final Revised: Dec. 24, 2025
Accepted: January 12, 2026
Published: January 30, 2026

Keywords:
E-module; MBKM; Digital Learning

ABSTRACT

This study aims to map and analyze research trends related to the MBKM (Merdeka Belajar Kampus Merdeka) E-Module in higher education by identifying publication growth, dominant themes, and research clusters during the 2020–2025 period. This research employs a qualitative descriptive approach using bibliometric analysis. Bibliographic data were collected from Google Scholar through the Publish or Perish (PoP) software using the keywords E-module, MBKM, and university. A total of 236 document metadata records published between 2020 and 2025 were obtained and stored in RIS format. The data were then analyzed using VOSviewer to generate network, overlay, and density visualizations to identify research patterns, keyword relationships, and publication trends. The findings indicate a fluctuating yet increasing trend in MBKM E-Module research, with a significant rise in publications between 2022 and 2024. The most frequently discussed topics include digital learning media, independent curriculum development, project-based learning, digital teaching materials, and student competency development. Network visualization reveals 13 distinct research clusters, demonstrating diverse research themes with strong interconnections among curriculum innovation, digital learning, and experiential learning approaches. Overlay and density visualizations show that recent studies focus increasingly on applied learning models and competency-based education. This study presents a comprehensive and longitudinal bibliometric mapping of MBKM E-Module research by systematically integrating e-module studies with the Merdeka Belajar–Kampus Merdeka (MBKM) policy in higher education. By analyzing publications from 2020 to 2025, this research reveals the intellectual structure, dominant themes, thematic evolution, and emerging research gaps within policy-driven digital learning. The findings offer novel insights into the development of MBKM-based digital learning scholarship and provide a robust reference for future empirical research, curriculum innovation, and evidence-based policy formulation in higher education.

INTRODUCTION

The development of science and technology has encouraged various reform efforts in the use of various technological results in the learning process. It is possible that with the development and demands of the times, teachers are also required to be able to utilize the tools that can be provided by educational institutions. The advancement of science and technology, plays an important role in improving higher education by encouraging innovation, research, and development that can help create quality and professional human resources to meet the demands of the industrial world in the future.

The learning process in an independent campus is one of the manifestations of very essential student-centered learning . According to Alexandrova et al. (2020) student-centered learning , it is an educational approach that focuses on the individual needs and potential of students who aim to improve educational outcomes by providing space for students to choose their own learning paths, creating more personalized learning and tailored to their respective interests and abilities.

Learning in an independent campus provides challenges and opportunities for the development of innovation, creativity, capacity, personality, and student needs, as well

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

as developing independence in seeking and finding knowledge through realities and field dynamics such as ability requirements, real problems, social interaction, collaboration, self-management, performance demands, targets and achievements. Through a well-designed and implemented independent learning program, Hard and soft skills Students will be strongly formed (Tinggi, 2020).

Merdeka means being free to choose a policy alternative between continuing the curriculum design of existing study programs or offering a new curriculum design that provides new innovations and experiences (New Experience) for students. The implementation of Independent Learning Independent Campus (MBKM) itself is based on the demands of the development of science, competencies and skills in the 21st century, to the importance of changes in lecture activities.

The learning process in the Independent Campus is one of the manifestations of student-centered learning (Student Centered Learning) which is very essential. Learning in the Independent Campus provides challenges and opportunities for the development of innovation, creativity, capacity, personality, and student needs, as well as developing independence in seeking and finding knowledge through realities and field dynamics such as ability requirements, real problems, social interaction, collaboration, self-management, performance demands, targets and achievements. Through a well-designed and implemented independent learning program, Hard and soft skills Students will be strongly formed.

In modern times, information and communication technology has developed very rapidly, which itself has a positive impact on the world of education which was once conventional and is now starting to shift to technology-based education. The development of information system technology is the main supporter of the development of efficient and effective learning to support the implementation of the Merdeka curriculum.

The use of media in the learning process can attract students' attention and increase their interest in the material being taught, so that it can support learning motivation. With greater attention, students tend to be more involved in learning activities, both inside and outside the classroom. With the development of technology, print modules can now be reformatted into electronic modules (Herpratiwi & Tohir, 2022).

The development of electronic modules as instructional media aims to facilitate the learning process and enhance the overall quality of learning by creating more engaging and interactive classroom experiences. Well-designed e-modules enable students to access learning materials more easily and independently, thereby increasing their motivation and active participation. In addition, contextual e-modules support students in linking theoretical concepts with real-world situations, which significantly contributes to better understanding and improved learning outcomes.

Electronic-based learning can develop optimal learning flexibility for students, students can access learning materials at any time and repeatedly. In addition, students can communicate with educators at any time. Electronic-based learning is needed at this time to help the learning process so that the learning goals that have been set can still be achieved. There are many types of electronic-based learning, one of which is e-modules. E-Modules are learning materials that are systematically designed based on a specific curriculum and designed with the necessary software packaged in the form of a specific unit of time, which is displayed using an electronic module reader such as a computer or android.

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

E-module has an important role in the learning process that can help teachers explain the subject matter. Excess E-module compared to other print media, which is interactive. E-module which is packaged in digital form can be read through a laptop or computer. At E-module It is also equipped with facilities such as learning videos, animations, images, and audio (Pramana et al., 2020).

Electronic modules (E-Module) itself is almost the same as E-book. The difference is only in the content of the two. Deep Encyclopedia Britannica Ultimate Reference Suite explains that E-book is a digital file that contains appropriate text and images for electronic distribution and is displayed on a monitor screen similar to a printed book. E-module or Electronic Modules is a module in digital form, consisting of text, images, or both that contain digital electronic material accompanied by simulations that can and should be used in learning (Hayward, 2020)

E-module as a form of presentation of independent learning materials that are systematically arranged into the smallest learning units to achieve certain learning objectives, which is presented in an electronic format where each learning activity in it is connected with links as navigation that makes students more interactive with the program, equipped with the presentation of tutorial videos, animations and audio for Enriching the learning experience.

Research results related to the use of E-Module shows that as a product learning innovation, E-Module developed is included in the category of feasible as a learning medium. Educational institutions are advised to urge educators to have an open mind and attitude to the presence of technology and then integrate it into learning activities (Yuningtyas, 2023).

Another result stated that currently learning that uses electronic media is very attractive to students in the learning process because of students' interest in knowing new things, supported by a learning model that arouses motivation and stimulation of learning activities and even brings a positive influence on students, besides that it can also eliminate boredom in the learning process (Rizali & Partha, 2021).

In Indonesia, modules are one of the most important learning media in the learning process. Student learning outcomes can be increased with modules made by lecturers because lecturers can understand how students learn, so that student learning outcomes increase by using modules combined with the MBKM approach. This is very suitable for learning that is often considered difficult for students to understand, such as in learning economic sociology, because economic sociology is a course that has a character, namely structured, organized, and tiered which means that the material has a close relationship with each other.

Electronic Module

E-Modules are non-printed teaching materials that can be used in learning. E-modules are a digital form of modules and are packaged in a more attractive way. Similar to modules, e-modules are believed to be able to help students learn actively and independently (Haspen et al., 2021).

Electronic modules (E-Module) itself is almost the same as E-book. The difference is only in the content of the two. Deep Encyclopedia Britannica Ultimate Reference Suite explains that E-book is a digital file that contains appropriate text and images for electronic distribution and is displayed on a monitor screen similar to a printed book. E-module or Electronic Modules is a module in digital form, consisting of text, images, or

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

both that contain digital electronic material accompanied by simulations that can and should be used in learning (Hayward, 2020).

The e-module was created from the beginning to support active learning which will make it easier for teachers to deliver material to learners and make learning more interesting by keeping up with current technological developments. In addition, e-modules are designed to be self-instructional, self-contained, stand-alone, adaptive, and user-friendly, so that they can be the main learning resource for students if developed according to the profile of the teaching participants (Delita et al., 2022).

E-modules were developed as an effort to improve student learning outcomes by providing flexibility of access for students. Designed with practicality and accessibility in mind, e-modules allow students to learn anytime and anywhere. Before being used, this e-module has gone through a validation process so that it is worthy of being used as a learning resource. E-modules not only present material in text form, but also come with interactive media such as videos, images, and exercises to support self-paced learning. In terms of format, e-modules can be created in the form of (.exe), (.app), (.fbr), and (.html) via Flip PDF Professional (Misbah et al., 2021).

Research results related to the use of E-Module shows that as a product learning innovation, E-Module developed is included in the category of feasible as a learning medium. Educational institutions are advised to urge educators to have an open mind and attitude to the presence of technology and then integrate it into learning activities (Yuningtyas, 2023).

In Indonesia, modules are one of the most important learning media in the learning process. Student learning outcomes can be increased with modules made by lecturers because lecturers can understand how students learn, so that student learning outcomes increase by using modules combined with the MBKM approach. This is very suitable for learning that is often considered difficult for students to understand, such as in learning economic sociology, because economic sociology is a course that has a character, namely structured, organized, and tiered which means that the material has a close relationship with each other.

Independent Learning–Independent Campus (MBKM)

The Independent Learning Independent Campus (MBKM) Policy is an initiative of the Indonesian government to reform higher education by giving more freedom to students in designing their learning experiences. Students are given the opportunity to learn outside of campus through activities such as internships in industry and community service, aimed at developing skills relevant to the needs of the job market. This policy also encourages collaboration between universities and industry in curriculum development and gives more autonomy to educational institutions to adapt academic programs to local needs. In addition, MBKM is aimed at improving the global competence of students while instilling Pancasila values (Voak et al., 2023).

The MBKM program is a new policyfrom the Ministry of Education and Tothe Development that you have implemented by high inflation. From the above explanation, it can be concluded that the developmentof communication communication, knowledge, and technology that is the development of individuals, students, and students can improve their skills and self-esteem in order to be able to belrcompeting in thelnia kelrja which is becomingmore and more competitive. Governance and high level of education in the development of the economy and the development of the economy.

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

RESEARCH METHOD

This research focuses on publication maps in the field of module electronics. To provide a comprehensive overview of the research findings, this study uses a qualitative descriptive methodology. By adopting a qualitative descriptive method, this research was conducted through three stages: (1) journals indexed with the help of Google Scholar PoP (Publish or Perish) software; (2) journals are stored as RIS (Research Information System) files; (3) perform bibliometric analysis using VOSviewer

Bibliographic data were collected from the Google Scholar database using the Publish or Perish (PoP) software. Google Scholar was selected due to its broad coverage of national and international publications relevant to education research, particularly in the Indonesian context. The search was conducted in February 2025 and limited to publications from 2020 to 2025, corresponding to the implementation period of the Merdeka Belajar–Kampus Merdeka (MBKM) policy.

The search for bibliographic data is limited to four aspects, namely: (1) Search by: Title, Abstract, Content (search anywhere in the article/document). (2) Search keywords: E module, MBKM, Universities. (3) Search keyword description: search on Title, Abstract, Content (search anywhere in the article/document) on Google Scholar that contains the words: E-module, MBKM, and university. (4) this search is limited to 236 document metadata, processed with VOSviewer totaling 236 document metadata results between 2020-2025.

The data entered into the Publish or Perish application is then stored as a RIS (Research Information System) file. These files are then imported into the VOSViewer software to visually represent network patterns or connections among bibliometric data, which are categorized into three main types: network visualization, overlay visualization, and density visualization. The analysis is performed using the VOSviewer program after the data has been collected correctly. This study utilizes VOSviewer to produce visualizations. As a result, the purpose of this study is to focus on the search and identify important themes in the literature on the E module of MBKM (Independent Learning Independent Campus). Using this technique, the researcher can create a more comprehensive framework to understand the progress and trends in the research E module of the MBKM (Independent Learning Independent Campus) module during the research, while emphasizing important areas that require more attention.

This study employed a bibliometric research design with a qualitative descriptive approach to systematically map the development of research on MBKM-oriented e-modules in higher education. Bibliometric analysis was chosen to identify publication trends, intellectual structures, thematic clusters, and emerging research gaps within the literature. The analysis was conducted through several structured stages, as described below.

The search strategy applied the Title, Abstract, and Keywords fields, as well as full-text indexing (search anywhere in the document), using the following keywords: “e-module,” “electronic module,” “MBKM,” “Merdeka Belajar–Kampus Merdeka,” and “higher education/university.” These keywords were selected based on their frequent usage in national policy documents, prior empirical studies, and preliminary database searches to ensure comprehensive coverage of relevant literature.

To ensure data relevance and quality, explicit inclusion and exclusion criteria were applied. The inclusion criteria consisted of: (1) peer-reviewed journal articles and conference proceedings related to e-modules and MBKM in higher education; (2)

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

publications within the 2020–2025 timeframe; (3) documents with complete metadata, including title, abstract, keywords, and year of publication; and (4) publications written in Indonesian or English.

The exclusion criteria included: (1) duplicate records identified in the PoP output; (2) documents without abstracts or keywords; (3) publications not substantively related to MBKM or e-module implementation in higher education; and (4) non-academic documents such as editorials, opinion pieces, news articles, and reports. Following this screening process, a total of 236 document metadata records were retained for analysis.

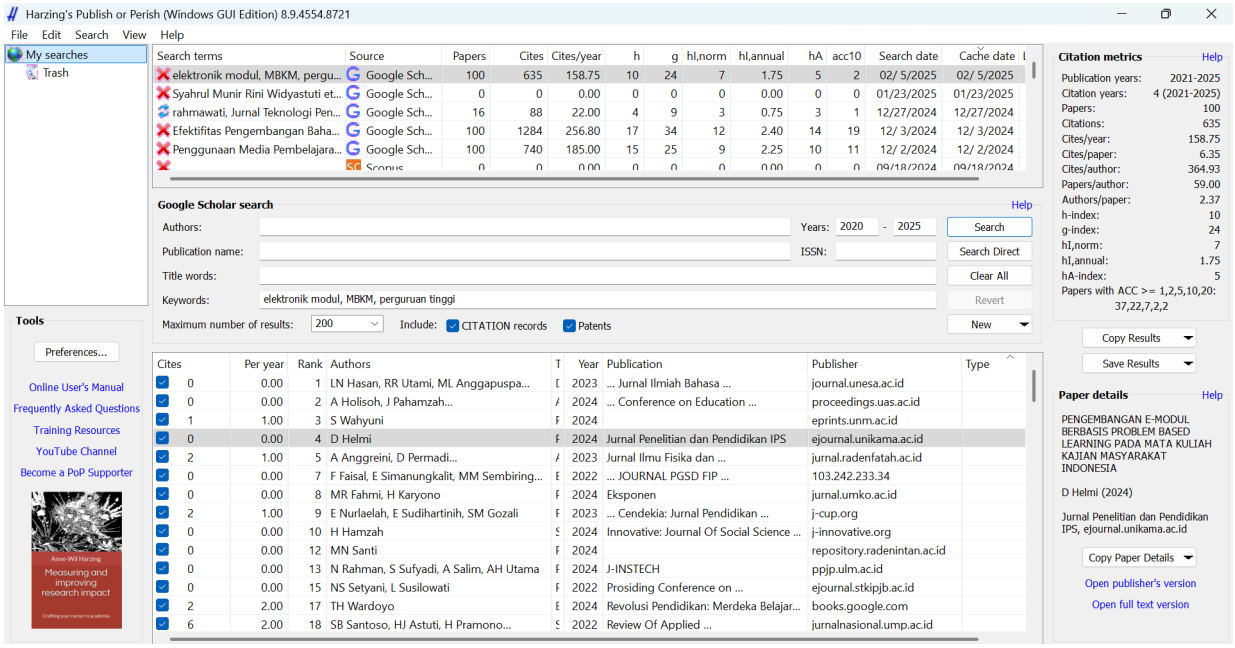


Figure 1. Search method via Publish or Perish (2025)

Prior to bibliometric analysis, a data cleaning process was conducted to improve data accuracy and consistency. This process involved removing duplicate entries, standardizing author names and keywords (e.g., unifying variations such as e-module, e module, and electronic module), and manually screening titles and abstracts to ensure topical relevance. Metadata consistency, including publication year and source, was also verified. The cleaned dataset was then exported in RIS (Research Information System) format for further analysis.

The cleaned RIS files were imported into VOSviewer software for bibliometric visualization and analysis. Three types of visualizations were generated: network visualization to examine keyword co-occurrence patterns, overlay visualization to identify temporal trends in research topics, and density visualization to highlight the intensity and concentration of research themes. Keyword thresholds and visualization parameters followed standard bibliometric procedures to ensure consistency and interpretability.

The validity of the bibliometric data was ensured through careful keyword selection, manual screening of publications, and the use of well-established bibliometric tools (Publish or Perish and VOSviewer). Content validity was strengthened by aligning search terms with official MBKM policy terminology and prior research.

The reliability of the analysis was maintained by applying consistent search parameters, standardized data cleaning procedures, and uniform visualization settings

IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

in VOSviewer. These steps allow the research process to be replicated by future researchers using the same data sources and methodological framework, thereby enhancing the transparency and reproducibility of the study.

RESULTS AND DISCUSSION

Results

Based on data obtained from searches using the Publish or Perish software, 236 document metadata results were found. The Google Scholar database shows that the development of research E modules of MBKM (Independent Learning Independent Campus) during 2020-2025 has experienced fluctuating conditions. The development of research E of the MBKM module (Independent Learning Independent Campus) will increase in the 2022-2024 period, as shown in Table 1. After that, there was an increase in the number of scientific publications about the E research of the MBKM module (Independent Learning Independent Campus).

Table 1. Development of quality management research publications

Publication Year	Total
2020	2
2021	14
2022	48
2023	75
2024	86
2025	11

Source: Publish or Perish (2025)

In Table 1, in the last three years, namely 2022-2024, research E module MBKM (Merdeka Learning Independent Campus) has increased the number of documents, namely from 48 articles in 2022, increasing to 75 articles in 2023, and again increasing to 86 articles in 2024. Until the beginning of the year (February 2025), there have been 11 articles published. Despite the decline in recent years, there are still many people interested in doing research in this area.

Table 2. Article E of the MBKM (Independent Learning Independent Campus) module is the most cited.

Cities	Authors	Title	Year	Source
29	I Ayudia, C Promise	Analysis of Digital Media Needs in Science Learning in Elementary Schools	2023	Journal of Elementary School Teaching
28	M Frananda, MD Kurnia, J Jaja...	Independent Curriculum for Independent Learning Campus to Meet the Learning Needs of the 21st Century	2023	… Education...
24	A Purwanto, E Risdianto	Analysis of the Need for the Development of Digital Teaching Materials for Geophysics Courses Based on the Moodle LMS Platform to Support the Implementation of the Mbkm Curriculum	2022	Journal of Physics Coils
20	MR Nasucha, K Khozin	Synergizing islamic religious education and scientific learning in the 21st century: A systematic review of literature	2023	… Islamic Religious Education (Journal of ...

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Cities	Authors	Title	Year	Source
20	MI Sholeh, H Rohman, EA Suwandi...	Transformation of islamic education: A study of changes in the transformation of the education curriculum	2023	Educational journals ...
19	S. S. S. and Katherine	Meta-Analysis: PBL Learning Model on Students' Mathematical Critical Thinking Skills	2022	... : Journal of Education ...
18	E Mulyana, J Juariah, A Suherman...	Implementation of Project Based Learning Model in order to improve creative thinking skills	2022	... : Journal of Education ...
17	PWK Philip	Integration of Spiritual Attitudes and Social Attitudes in Indonesian Language Learning Based on the Independent Learning Curriculum in Grade VIII Students of Citra Bakti Junior High School	2022	Stylistics: Journal of Language and Art Education
16	L Suryati, N Jalinus, R Abdullah, S Rahmadhani	The Impact of the Implementation of the Independent Curriculum in the Perspective of Constructivist Philosophy on Vocational Education	2023	… and educational development
11	MD Cahyani, TA Gusman	Design and Validity Test of Problem-Based Learning Physics Chemistry Lecture Module	2023	Orbital: Journal of Chemistry Education

Source: Publish or Perish (2025)

Based on Table 2, it can be seen that the topics that are widely cited are within the scope of E of the MBKM module (Independent Learning Independent Campus) are: The need for digital media (Ayudia & Prasetya, 2023), Independent curriculum of the 21st century (Frananda et al., 2023), The Need for Digital Teaching Material Development (Purwanto & Risdianto, 2022), Islamic Religious Education and Scientific Learning in the 21st Century(Nasucha & Khozin, 2023), Transformation of Islamic Education (Sholeh et al., 2023), Meta Analysis: PBL Learning Model (Widodo & Katminingsih, 2022), Implementation of Project Based Learning Model (Mulyana et al., 2022), Integration of Spiritual Attitudes and Social Attitudes Based on the Independent Learning Curriculum (Philip, 2022), The Impact of the Implementation of the Independent Curriculum (Suryati et al., 2023) and e-Module Design and Validity Test (Cahyani & Gusman, 2023).

Table 3. 10 Latest Articles

Authors	Title	Year
T Tamaji, E Dhaniswara...	Innovation Of Embedded-Iot Modules As Stem Learning Media In Vocational Schools: A Case Study At Smk Siang And Smk Kawung 1 Surabaya	2025
I Prabawati, BS Widodo...	Strengthening National Values Based on Digital Literacy in Indonesian Students in Manila, Philippines	2025
Women's High School, SSB Gultom, N Alvionita...	Socialization of Making Worksheets for Students Using Canva for Teachers of State Junior High School 13 Bengkulu City	2025
R Kurniawan, S Trisnawati, YP Sari...	Assistance in the Use of Learning Management System (LMS) for Teachers and Students at SMKN 1 Negeri katon	2025
I Darmastuti, and Mardiati	Development of E-Modules Based on Project Based Learning on Virus Material to Improve Students' Creative Thinking	2025

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Authors	Title	Year
GP Adilah, S Utaya, and Suharto	The Influence of Microsite-Assisted Resource Based Learning Model on Learning Outcomes Reviewed from Students' Learning Motivation	2025
S Tenor	Brand Love and Service Excellent and Its Impact on Business Performance	2025
G Waye	The Challenges of Technology Adoption in Retail Market	2025
C Simon	Controlling Repurchase by Increasing Service Excellent in Education Sectors	2025
M Haus	Persistent Career and Dynamics Service in Automotive Industries	2025

The Independent Learning Independent Campus E-Module (MBKM) is designed to support the implementation of education policies that are more flexible and adaptive to the needs of students, universities, and the world of work. Through this approach, students can develop competencies, skills, and experiences through various programs that are integrated with the industrial world, humanitarian projects, research, and entrepreneurship.

The table of 10 views of the latest MBKM e-module articles below provides a brief overview of various main topics related to the implementation of the MBKM program, including curriculum development, independent learning strategies, and soft skills development. Each article provides guidelines, concepts, and practical examples that are relevant to the implementation of MBKM in the university environment. These articles are expected to be an important reference for students and lecturers in maximizing the benefits of the MBKM program, as well as assisting universities in compiling, managing, and evaluating the implementation of the program.

This table also includes various aspects that support project-based learning and real experience carried out by MBKM, which aims to create graduates who are ready to compete in the world of work and are able to contribute to society.

Top thirteen keywords

In VOSviewer Network Visualization, a term or keyword is depicted with labels and circles. The size of these labels and circles depends on how important or how often the keyword is used. The larger the size of the circle or label, the more frequent or important the keyword is in the context of the research.

Sometimes, labels for multiple keywords aren't displayed to avoid overlapping each other, which can make visualizations difficult to read. The color of this keyword indicates which group (cluster) the keyword belongs to.

The lines connecting the keywords represent the links or relationships between those keywords. By default, VOSviewer displays the 1000 strongest lines, which shows the strongest relationships between keywords.

The distance between two keywords also shows how closely related they are; The closer the distance, the stronger the relationship. If two keywords often appear together in the same article, then the connecting lines between them will be thicker, signaling a stronger relationship.

Overall, this visualization helps us see the relationships between keywords or journals within a particular area of research, as well as patterns that indicate trends or areas that are more researched.

IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

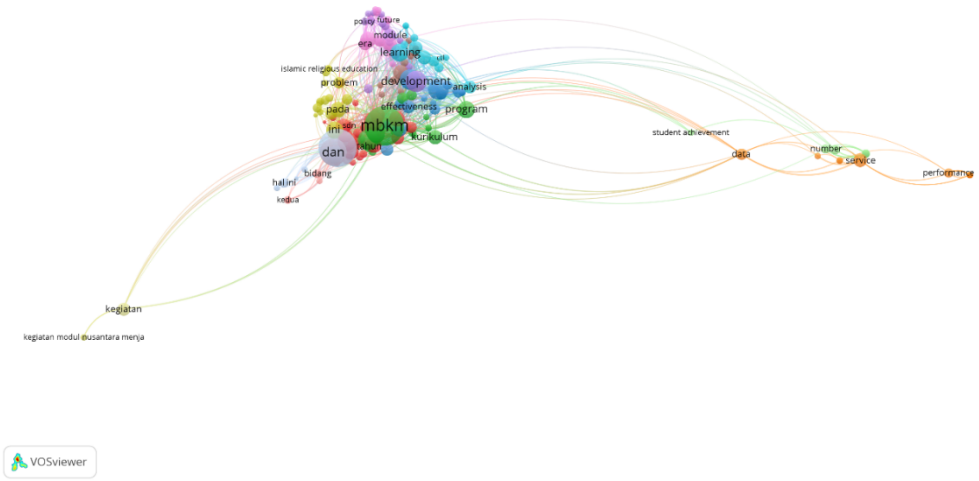
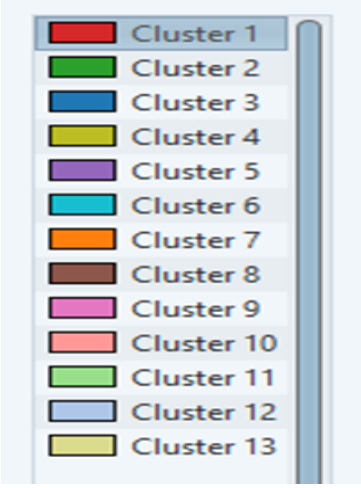


Figure 2. Network visualization VOSviewer

Number of Clusters : 13
Each color on the VOSviewer Network Visualization graph represents 1 cluster



The terms/keywords for each sequential cluster from clusters 1 to 13 can be summarized as follows: (1) cluster 1 has 27 keywords, (2) cluster 2 has 18 keywords, (3) cluster 3 has 17 keywords, (4) cluster 4 has 16 keywords, (5) cluster 5 has 15 keywords, (6) cluster 6 has 12 keywords, (7) Cluster 7 has 11 keywords, (8) Cluster 8 has 11 keywords, (9) Cluster 9 has 10 keywords, (10) Cluster 10 has 9 keywords, (11) Cluster 11 has 8 keywords, (12) Cluster 12 has 6 keywords, and (13) Cluster 13 has 5 keywords.

In VOSviewer Network Visualization, visualization of the relationships between keywords helps illustrate the importance and relevance of keywords in the research. The size of the circle and label reflects how often the keyword is used, while the color indicates the cluster of each. The lines connecting the keywords indicate the strength of their relationship, with a closer distance signifying a stronger relationship. Based on the data, there are 13 clusters, each of which consists of a varying number of keywords, ranging from cluster 1 with 27 keywords to cluster 13 with 5 keywords. This suggests that there is a diverse range of themes and trends developing within this area of research, with some keywords being more dominant than others.

IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

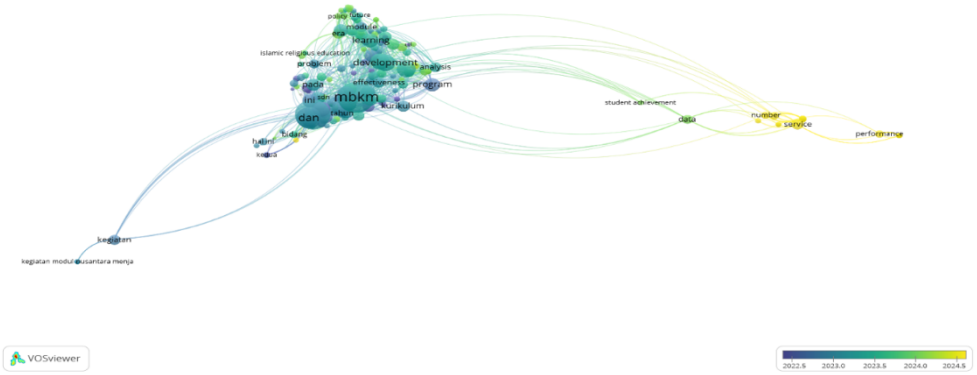


Figure 3. Overlay visualization

The VOSviewer Visualization Overlay in this case depicts the year of publication of the journal. Darker colors indicate a longer year of publication. Whereas lighter colors indicate a more recent year of publication. Thus the light green to yellow color indicates an increasingly recent year of publication. The dark green to blue color indicates the year of publication that is getting longer.

Table 4. Keyword Distribution Based on Cluster, Frequency of Appearance, and Average Publication Year

Nu.	Terms	Cluster	Occurrences	Avg. pub. Year
1	Consumer	7	2	2025
2	Excellent service	7	2	2025
3	Service	7	8	2024.75
4	Business World	11	3	2024.6667
5	Competition	11	3	2024.6667
6	Position	11	3	2024.6667
7	Service Quality	11	3	2024.6667
8	Students Creative Thinking	5	2	2024.5
9	above definition	7	2	2024.5
10	Customer expectation	7	2	2024.5

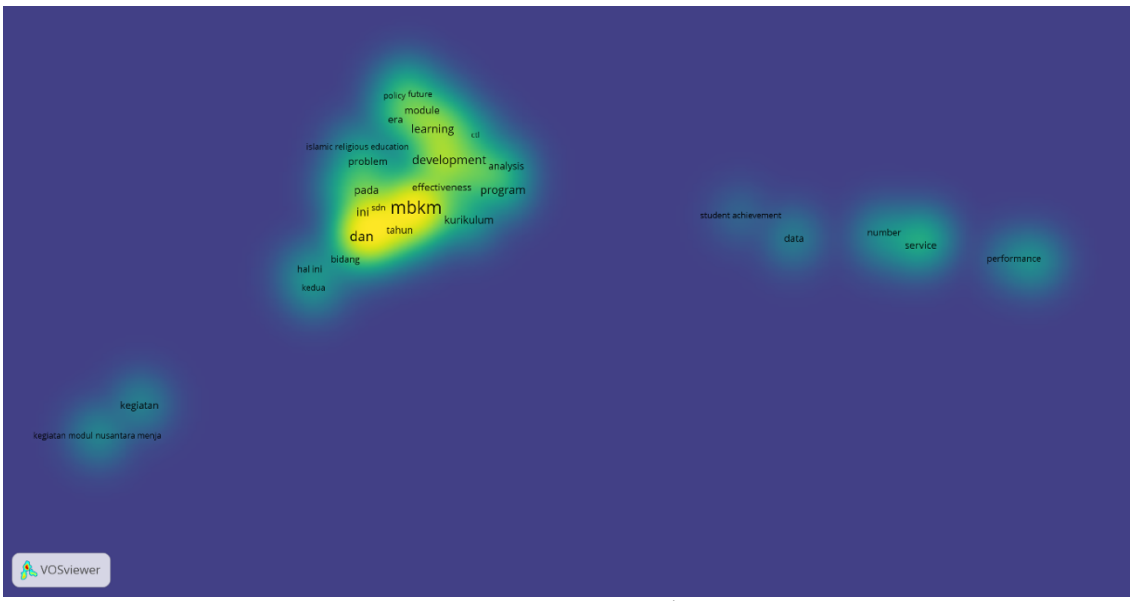


Figure 4. Density visualization

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Density Visualization VOSviewer in this case describes the density of a term/keyword. In term/keyword density visualization, terms/keywords are represented by their labels in a similar way to Network Visualization VOSviewer and Overlay Visualization VOSviewer. Each point in the term/keyword density visualization has a color that indicates the term/keyword density at that point. By default, the color varies from blue to green to yellow. The more the number of terms/keywords around a point and the higher the weight of the neighboring term/keyword, the closer the color of the dot is to yellow. Conversely, the fewer the number of terms/keywords around a point and the lower the weight of the neighboring term/keyword, the closer the color of the dot is to blue.

Discussion

This section is the core and most important part of the content of the manuscript that will be loaded for publication. The discussion section aims to interpret the results of the research according to the theory used and not just explain the author's findings. Discussions should be enriched by referring to the results of previous research published in scientific journals or findings from international research. It is recommended to integrate such findings into an established set of theories or knowledge, the development of new theories, or modifications of existing theories. The conceptual framework needs to be clearly explained to get the discussion appropriate.

This research focuses on mapping a field of science. In its definition, science mapping is a method that allows the visualization of research in a particular field of science through the creation of representations such as maps (Tupan et al., 2018). Based on data obtained from the Publish or Perish software, research related to MBKM e-modules shows a significant increasing trend from 2022 to 2024, despite fluctuations in the number of publications in previous years. This increase reflects the growing attention to the implementation of the Independent Learning Independent Campus (MBKM) program in the context of higher education in Indonesia. This is in line with the need to develop digital learning media that is more relevant and adaptive to technological developments and the industrial world. Research on the MBKM e-module focuses on the 21st century independent curriculum, the development of digital teaching materials, and the impact and implementation of the curriculum that supports the development of student competencies in various fields.

The main topics that are widely cited in the MBKM e-module research, such as the need for digital media (Ayudia & Prasetya, 2023), the transformation of Islamic education (Sholeh et al., 2023), and the development of digital teaching materials (Purwanto & Risdianto, 2022), show that there is great concern for the development and preparation of technology-based curriculum that supports more flexible and independent education. Through the development of e-modules, MBKM aims to answer educational challenges in the era of globalization, where students are required to have broader skills, not only in the academic field but also in social, spiritual, and entrepreneurial aspects. The project-based approach and real experience contained in MBKM are one of the important aspects in developing students' soft skills who are expected to compete in the world of work.

Keyword visualization obtained through VOSviewer shows a close relationship between terms such as independent curriculum, project-based learning model (PBL), and student competency development in various research clusters. This visualization shows that these topics are often interrelated in research related to MBKM e-modules, creating

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

a closer relationship between curriculum concepts, digital learning media, and experiential learning approaches. Along with the development of educational technology, research on MBKM e-modules provides a clear picture of how universities can utilize digital media to support the achievement of educational goals that are more inclusive and adaptive to future needs.

It is important to note that although there has been an increase in the number of research related to MBKM e-modules in recent years, fluctuations in the number of publications in previous years indicate that there are still challenges in terms of consistency and a deep understanding of the implementation of this program. It also shows that despite the high interest in this research, greater efforts are still needed in integrating the research results into educational practices in higher education. Therefore, further research needs to be focused on the evaluation and development of more efficient learning methods, as well as measuring the long-term impact of the implementation of MBKM e-modules in improving the quality of education in Indonesia.

CONCLUSION

Fundamental Finding: This study shows that research on MBKM E-Modules (Independent Learning Independent Campus) during the 2020–2025 period experienced a fluctuating trend, with a significant increase in publications between 2022 and 2024. Bibliometric analysis using VOSviewer identified 13 research clusters, indicating diverse and interconnected themes, with dominant topics including digital learning media, the 21st-century independent curriculum, project-based learning, and the development of student competencies. These findings confirm that MBKM e-modules play an important role in supporting flexible, student-centered, and technology-based learning in higher education. **Implication:** The results imply that MBKM e-modules have strong potential as strategic digital learning resources to support the implementation of the MBKM policy. Universities and lecturers can utilize e-modules to enhance independent learning, strengthen students' hard and soft skills, and align learning outcomes with the needs of the industrial and professional world. In addition, the identified research trends can serve as a reference for curriculum developers and policymakers in designing more adaptive and innovative learning models. **Limitation:** This study is limited to bibliometric data obtained from Google Scholar through the Publish or Perish application, which may not fully represent all relevant publications indexed in other databases such as Scopus or Web of Science. In addition, the analysis focuses on publication mapping and keyword relationships, without examining the empirical effectiveness of MBKM e-modules on student learning outcomes. **Future Research:** Future research is recommended to expand data sources by including international databases to obtain a more comprehensive mapping of MBKM e-module research. Further studies should also focus on empirical evaluations of the implementation of MBKM e-modules, particularly their impact on students' competencies, soft skills development, and readiness for the world of work. In-depth research on challenges related to infrastructure readiness, lecturer digital competence, and the long-term effectiveness of project-based learning within MBKM is also needed to strengthen the sustainability of this policy.

ACKNOWLEDGEMENTS

Author would like to express sincere and profound gratitude to the promoter and co-promoter for their invaluable guidance, academic supervision, and continuous

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

encouragement throughout the completion of this doctoral research. Their constructive suggestions, critical insights, and scholarly dedication have significantly contributed to the improvement and completion of this study. Author also gratefully acknowledges the Indonesia Endowment Fund for Education (LPDP) for the financial support provided through the Doctoral Program Completion Scholarship 2025, which made it possible to successfully complete this research and the doctoral program. The support from LPDP has been instrumental in facilitating the research process and ensuring the sustainability of academic activities during the final stage of the doctoral study.

REFERENCES

Alexandrova, L., Mozhaeva, G., Karabasheva, M., Lapina, M., & Rugelj, J. (2020). Use of IT for student-centered learning approach to education at modern university. CEUR Workshop Proceedings SLET-2020: International Scientific Conference Innovative Approaches to the Application of Digital Technologies in Education, 32–40.

Aprianti, R., Ambarwulan, D., & Purwahida, R. (2023). Improving high school students' conceptual knowledge using contextual E-Module on optical devices topic. Journal of Physics: Conference Series, 2596(1), 012073. https://doi.org/10.1088/1742-6596/2596/1/012073

Ayudia, I., & Prasetya, C. (2023). Analysis of Digital Media Needs in Science Learning in Elementary Schools. Journal of Elementary School Teaching, Query date: 2025-02-01 21:31:33. https://journals.eduped.org/index.php/jpsd/article/view/314

Baharuddin, M. (2021). Adaptation of the independent curriculum of independent learning of the independent campus (Focus: MBKM model of study program). Journal of Teacher and Learning Studies, Query date: 2023-10-16 09:55:44. http://www.e-journal.my.id/jsgp/article/view/591

Cahyani, M., & Gusman, T. (2023). Design and Validity Test of Problem Based Learning-Based Chemistry Physics Lecture Module. Orbital: Journal of Chemistry Education, Query date: 2025-02-0121:31:33. https://jurnal.radenfatah.ac.id/index.php/orbital/article/view/17499

Delita, F., Berutu, N., & Nofrion, N. (2022). Online Learning: The Effects of Using E-Modules on Self-Efficacy, Motivation and Learning Outcomes. Turkish Online Journal of Distance Education, 23(4), 93–107. https://doi.org/10.17718/tojde.1182760

Frananda, M., Kurnia, M., Jaja, J., & ... (2023). Independent curriculum for independent campus learning to meet the needs of 21st century learning. ... Education..., Query date: 2025-02-01 21:31:33. https://ejurnal.ikippgribojonegoro.ac.id/index.php/JPE/article/view/2868

Haspen, C. D. T., Syafriani, S., & Ramli, R. (2021). The Validity of the Ethnoscience-Based Guided Inquiry-Based High School Physics E-Module to Improve Students' Creative Thinking Skills. JEP EDUCATION JOURNAL (JEP), 5(1), 95–101. https://doi.org/10.24036/jep/vol5-iss1/548

Herbert, N. (2020). Development of interactive electronic modules (e-modules) in chemistry class XI science high school. At-Tadbir: Journal of Educational Management ..., Query date: 2023-10-1612:12:43. http://ejournal.kopertais4.or.id/sasambo/index.php/atTadbir/article/view/3751

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Herpratiwi, H., & Tohir, A. (2022). Learning Interest and Discipline on Learning Motivation. International Journal of Education in Mathematics, Science and Technology, 10(2), 424–435. https://doi.org/10.46328/ijemst.2290

Misbah, M., Khairunnisa, Y., Amrita, P. D., Dewantara, D., Mahtari, S., Syahidi, K., Muhammad, N., Prahani, B. K., & Deta, U. A. (2021). The effectiveness of introduction to nuclear physics e-module as a teaching material during covid-19 pandemic. Journal of Physics: Conference Series, 1760(1), 012052. https://doi.org/10.1088/1742-6596/1760/1/012052

Mulyana, E., Juariah, J., Suherman, A., & ... (2022). Implementation of the Project Based Learning Model in order to improve creative thinking skills. ... : Journal of Education ..., Query date: 2025-02-01 21:31:33. https://jurnal.untan.ac.id/index.php/JPIPS/article/view/54119

Nanggala, A., & Suryadi, K. (2020). Analysis of the Concept of Independent Campus in the Perspective of Civic Education. Global Citizen Journal: A Scientific Journal ..., Query date: 2023-10-23 12:16:10. http://ejurnal.unisri.ac.id/index.php/glbctz/article/view/4545

Nasucha, M., & Khozin, K. (2023). Synergizing islamic religious education and scientific learning in the 21st century: A systematic review of literature. ... Islamic Religious Education (Journal of ..., Query date: 2025-02-01 21:31:33. https://jurnalftk.uinsa.ac.id/index.php/jpai/article/view/4110

Philip, P. (2022). Integration of Spiritual Attitudes and Social Attitudes in Indonesian Language Learning Based on the Independent Learning Curriculum in Grade VIII Students of Citra Bakti Junior High School. Stylistics: Journal of Language and Art Education, Query date: 2025-02-0121:31:33. https://ojs.mahadewa.ac.id/index.php/stilistika/article/view/2320

Pramana, M., Jampel, I., & ... (2020). Improving biology learning outcomes through problem-based learning e-modules. Edutech Journal..., Query date: 2023-10-16 11:54:38. https://ejournal.undiksha.ac.id/index.php/JEU/article/view/28921

Purwanto, A., & Risdianto, E. (2022). Analysis of the Need for the Development of Digital Teaching Materials for Geophysics Courses Based on the LMS Moodle Platform to Support the Implementation of the MBKM Curriculum. Journal of Coil Physics, Query date:2023-10-1609:55:44. https://ejournal.unib.ac.id/kumparan_fisika/article/view/19208

Rizali, F., & Partha, M. (2021). DEVELOPMENT OF COLT-BASED ECONOMICS LEARNING E-MODULES AT SMA NEGERI 5 SAMARINDA. Journal of Prospects: Science Education ...,Querydate:2023-10-1612:02:29. https://jurnal.fkip.unmul.ac.id/index.php/prospek/article/download/810/514

Rochana, R., Darajatun, R., & Ramdhany, M. (2021). The effect of the implementation of the independent campus policy on student interest and involvement. ... of Business Management Education ..., Query date: 2023-10-23 12:04:50.

Sholeh, M., Rohman, H., Suwandi, E., & ... (2023). Transformation of islamic education: A study of changes in the transformation of the education curriculum. Educational journals ..., Query date: 2025-02-01 21:31:33. https://ejournal.uin-suka.ac.id/tarbiyah/jpai/article/view/6770

Sodik, F. (2020). Tolerance Education and Its Relevance to the Social Dynamics of Indonesian Society. Tsamratul Fikri, Query date: 2024-02-05 06:22:59. https://riset-iaid.net/index.php/TF/article/view/372

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

Suharno, S., Rifai, R., & Sudrajat, A. (2023). Multicultural encounters within kampus merdeka: A study on educational policy impact to bolster diversity. Journal of Education Horizons, 42(2), 539–548. https://doi.org/10.21831/cp.v42i2.58223

Suryati, L., Jalinus, N., Abdullah, R., & Rahmadhani, S. (2023). The Impact of the Implementation of the Independent Curriculum in the Perspective of Constructivist Philosophy on Vocational Education. ... Dan Educational Development, Query date: 2025-02-01 21:31:33. https://www.academia.edu/download/109067244/26792.pdf

Tinggi, D. (2020). MBKM Guidebook. Independent Learning Guidebook-Independent Campus, Query date: 2023-10-16 10:20:44.

Tupan, T., Rahayu, R., Rachmawati, R., & ... (2018). Bibliometric analysis of research development in the field of instrumentation science. READ: Journal ..., Query date: 2025-02-05 10:19:40. https://www.researchgate.net/profile/Rochani-Rahayu/publication/329940210_ANALISIS_BIBLIOMETRIK_PERKEMBANGAN_PENELITIAN_BIDANG_ILMU_INSTRUMENTASI/links/5ca54a47458515f7852229ba/ANALISIS-BIBLIOMETRIK-PERKEMBANGAN-PENELITIAN-BIDANG-ILMU-INSTRUMENTASI.pdf?_sg%5B0%5D=started_experiment_milestone&origin=journalDetail&_rtd=e30%3D

Voak, A., Fairman, B., Helmy, A., & Afriansyah, A. (2023). Kampus Merdeka: Providing Meaningful Engagement in a Disruptive World. Journal of Higher Education Theory and Practice, 23(8). https://doi.org/10.33423/jhetp.v23i8.6076

Wekerle, C., Daumiller, M., & Kollar, I. (2022). Using digital technology to promote higher education learning: The importance of different learning activities and their relations to learning outcomes. Journal of Research on Technology in Education, 54(1), 1–17. https://doi.org/10.1080/15391523.2020.1799455

Widayanti, R., & Thedy, A. (2021). Implementation of the Independent Learning Policy of the Independent Campus (Mbkm) in the Information Systems Program, Faculty of Computer Science, Esa Unggul University. Abdimas Journal, Query date: 2023-10-16 09:55:44. https://digilib.esaunggul.ac.id/public/UEU-Journal-23096-11_2193.pdf

Widodo, S., & KATMININGSIH, Y. (2022). Meta-analysis: PBL learning model on students' mathematical critical thinking skills. ... : Journal of Education ..., Query date: 2025-02-01 21:31:33. http://repository.unpkediri.ac.id/id/eprint/9532

Wu, N., & Liu, Z. (2021). Higher education development, technological innovation and industrial structure upgrade. Technological Forecasting and Social Change, 162, 120400. https://doi.org/10.1016/j.techfore.2020.120400

Yuningtyas, L. (2023). Problem Based Learning E-Module for Facilitating Sociology Learning in the Digital Era. Edutech Undiksha Journal, Query date: 2023-10-27 09:21:20. https://ejournal.undiksha.ac.id/index.php/JEU/article/view/58123

Yusuf, M., & Arfiansyah, W. (2021). The concept of "freedom of learning" in the view of constructivist philosophy. AL-MURABBI: Journal of Studies ..., Query date: 2023-10-23 12:14:33.

Zhang, W. (2022). The Role of Technology-Based Education and Teacher Professional Development in English as a Foreign Language Classes. Frontiers in Psychology, 13. https://doi.org/10.3389/fpsyg.2022.910315

IJORER : International Journal of Recent Educational Research
Homepage : https://journal.ia-education.com/index.php/ijorer
Email : ijorer@ia-education.com

p-ISSN : 2721-852X ; e-ISSN : 2721-7965
IJORER, Vol. 7, No. 1, January 2026
Page 200-216

*Ade Holisoh (Corresponding Author)
Doctoral Education, Department of Post Graduate Program, Universitas Sultan Ageng Tirtaysa, Serang, Indonesia
Jl. Raya Jkt Km 4 Jl. Pakupatan, Panancangan, Kec. Cipocok Jaya, Kota Serang, Banten 42124
Email: dosen02069@unpam.ac.id

John Pahamzah
Doctoral Education, Department of Post Graduate Program, Universitas Sultan Ageng Tirtaysa, Serang, Indonesia
Jl. Raya Jkt Km 4 Jl. Pakupatan, Panancangan, Kec. Cipocok Jaya, Kota Serang, Banten 42124
Email: john.pahamzah@unpam.ac.id

Sholeh Hidayat
Doctoral Education, Department of Post Graduate Program, Universitas Sultan Ageng Tirtaysa, Serang, Indonesia
Jl. Raya Jkt Km 4 Jl. Pakupatan, Panancangan, Kec. Cipocok Jaya, Kota Serang, Banten 42124
Email: sholeh.hidayat@unpam.ac.id