

Implementation of Innovations in the Field of Educators Civil Servants of Cirebon Regency

Nurmalasari, Fiqh Fazriyansyah, Qiqi Yuliati Zaqiah

UIN Sunan Gunung Djati Bandung, Indonesia nurmalasari3@gmail.com, fiqihfazrians@gmail.com, qiqiyuliatizaqiah@uinsgd.ac.id

Corresponding Author: Nurmalasari

Article History Received : Aug 13th 2023
Revision : Oct 17th 2023
Publication : Des 30th 2023

ABSTRACT

This article aims to discuss innovation in the field of education and educational staff. With the progress of the times and the challenges of today's increasingly rapid era, ideally educators and education staff must still learn, and be creative in developing themselves with discoveries in the world of education. Teaching and learning activities as a system, always get attention, both in the family, school, and society in general. Even so, teacher education graduates have not been able to fully improve the quality as aspired to. This is understandable because the problem of the quality of education is strongly influenced by many factors, including the quality of teachers, students, methods, tools, learning facilities and infrastructure, curriculum, costs, media, and environmental educational facilities. In the world of education, teachers have multi-role functions, namely as educators, instructors, and trainers. That is, the teacher as an educator refers to fostering and developing the affection of students, the teacher as a teacher refers to where the teacher conducts training and development of knowledge or intellectual brain teasers while the term teacher as a coach refers to the coaching and development of students' skills.

Keywords: Innovation, Educators, Education Personnel.

INTRODUCTION

During this digital reform period, education in Indonesia still needs improvement and quality improvement. One of them is by carrying out educational innovations, to advance the quality of education in Indonesia(Junaedi et al., 2022; Junaedi & Arsyad, 2023; Kusmiarto et al., 2021; Kusumasari, 2018). Especially in the era of globalization which requires us to be able to compete in the midst of other nations that may be more advanced, both in terms of education, as well as science and technology. Because, if we are not able to compete and keep up with the times, the younger generation will not be able to develop the potential that exists within





the nation and state, both human resources and natural resources for the welfare of the nation. So in this case educational innovation is needed (Daar, 2021; Multazamy Rohmatulloh et al., 2022; et al., 2022).

The field of educational technology is a field of study of application science that has a fairly broad spectrum(Parsons, 2021; Scheffel & Wirth, 2022; Stošić, 2015). The true understanding of technology is not only related to the sophistication of hardware resulting from electronics industry products. Technology, when applied to the context of education as a part of social science, is meaningful as a process of processing educational information to be solved to produce products in the form of solutions to educational problems. The definition of education mentioned above specifically includes aspects of learning (instruction). The process of solving problems using intensive discussion and thinking that is tested empirically is identical to the process of raw materials in a factory to produce technological products. This is the similarity in the meaning of technology in the context of engineering with the context of education.

The definition of educational technology according to AECT (The Association for Educational Communications and Technology) in 2008 is a field of science that studies theoretical and ethical practices in facilitating and improving learning performance through the creation, use, and management of appropriate technological processes and resources. Educational technology is an interdisciplinary field of study. The disciplines include education, psychology, communication, computers, information, socio-economic-culture, and engineering.

This integrated study between scientific fields produces products in the form of theories, models, concepts, principles, and procedures used in learning. The theories produced include elaboration, algorithm, component display, instructional design, message design, instructional transaction, and integrated thematic. The resulting models include instructional design (improving instructors' competency, instructional product development, instructional system development, and institutional/organizational development), open and distance learning, and online network learning. The resulting concepts include instruction, students' active learning, bottom-up approach, learning resources, open and distance learning, learning how to learn, knowledge society, learning organization, learning environment, and learning acknowledgment.

The resulting procedures include systematic instructional design, macro & micro organizational strategies of lessons, instructional delivery strategies, learning management strategies, and context-based evaluations.

Paying attention to the products produced, this study program is very suitable for educational actors, especially educators and educational staff (tendik). The resulting products will build a new paradigm for students in carrying out their daily tasks to solve learning problems. Changing the paradigm of teacher-centered





learning to student-centered learning is a topic of study that continues to be developed to be able to teach students so that character is formed to be able to learn independently.

Developments in technology, communication, and information, as well as changes in a more democratic and open society, will result in pressure and demands for the professionalism of educators (Agustian & Salsabila, 2021; Budiman, 2017; Carrión-Martínez et al., 2020; García-Hernández et al., 2023; "On the Development of Information and Communication Technologies in Education of the Future: The Possibilities of Cloud Computing Technology," 2023). One that can be pursued to increase the professionalism of educators and education staff is through the adoption of innovations or the development of creativity in the use of educational technology that utilizes the latest information and communication technologies. For that, we need innovation in the field of manpower.

METHODS

The research methodology adopted for this study, titled "Implementation of Innovations in the Field of Educators Civil Servants of Cirebon Regency," involves a meticulous library research approach. This method entails a comprehensive review of diverse literature sources, including academic journals, books, conference proceedings, and relevant publications. The selection of literature is guided by predefined criteria, ensuring alignment with the research topic and objectives, credibility of the sources, and recency of publication.

During the extensive review process, the researchers critically examine existing literature to gain profound insights into the innovations implemented in the field of educators among civil servants in Cirebon Regency. The systematic synthesis of information involves identifying common themes, patterns, and significant findings across the literature. This process enables the extraction of key insights and connections, forming the basis for the structured discussion that follows.

Furthermore, the researchers apply a rigorous approach to distill extensive information into core components, focusing on key findings, essential concepts, and relevant data. This systematic reduction ensures a concise representation of the synthesized information, emphasizing its relevance to the implementation of innovations in the field of educators among civil servants in the Cirebon Regency.

By adopting the library research method, this study establishes a robust foundation rooted in existing knowledge, allowing for a nuanced exploration of the subject matter through the lens of established scholarly works. The structured discussion provides a platform for highlighting connections, discrepancies, emerging trends, and the implications of innovations in the context of civil service education in Cirebon Regency.



RESULT AND DISCUSSION

Nature and Types of Educators and Education Personnel

According to Law Number 20 of 2003 concerning the National Education system, Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills. needed by himself, society, nation, and state.

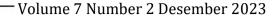
Educators are people who carry out activities in the field of education. Functionally the word educator can be interpreted as a giver or distributor of knowledge and skills. If explaining that educators are associated with the field of duties and work, then the inherent variable is the educational institution. This shows that educators are a particular profession or expertise inherent in someone whose job is to educate or provide education. It is this educational staff as a support that needs to be considered as stated in Law No. 20 of 2003 concerning the Education System.

Power education referred to here is as outlined in Government Regulation (PP) Number 38 of 1992 dated July 17, 1992. In the PP [Article 3 paragraph (1) to (3)] it is stated:

- 1. The educational staff consists of teaching staff, education unit managers, inspectors, supervisors, researchers, and development in the field of education, librarians, laboratory assistants, learning resource technicians, and examiners.
- 2. Educators consist of supervisors, teachers, and trainers.
- 3. Education unit managers consist of school principals, directors, heads, rectors, and heads of non-school education units.

Thus, in general, education personnel can be divided into four categories, namely:

- 1. Educators, consisting of supervisors, teachers, and trainers.
- 2. Educational functional staff, consisting of inspectors, supervisors, researchers, and developers in the field of education and librarians
- 3. Educational technical personnel, consisting of laboratory assistants and learning resource technicians
- 4. Education unit management personnel, consisting of school principals, directors, heads, rectors, and heads of non-school education units
- 5. Other personnel who deal with managerial or administrative issues of education Education andPPTG Competency-Based Educator and Education Personnel Training in particular and Education Personnel Education (PTK) generally consist of two types, namely pre-service education and in-service education. According to Page and Thomas (1978), preservice education is a term most commonly used by teacher education institutions, which refers to education and training conducted by





university or college education institutions to prepare students who wish to pursue a career in teaching. Meanwhile, in-service education is "training undertaken during a break in professional service or in conjunction with it (eg. After school or in the evening) as distinct from initial training".

In the United States, a new trend is currently developing in the education, training, and development of educational personnel, especially teachers. According to Abdal-Haqq in ERIC Digest (Supriadi, 1977), the new trends in education, training, and development of teachers in question are:

- 1. Based on the Exercise program
- 2. Preparing teachers to test and access their practical abilities
- 3. Organizing with a collegiality approach
- 4. Focuses on teacher participation in the decision-making process regarding essential issues in the school environment
- 5. Helping teachers who are seen as weak in certain aspects of their competence.

From the results of various analyses of several literature, Bruce Joyce (1990) identified training components that have been studied in several ways. In a system, either individually or in combination, these components work independently. The main components of the training are:

- 1. Presentation of theory
- 2. Demonstration or demonstration of skills or models
- 3. Simulated practice and class settings
- 4. Structured feedback
- 5. Open-ended feedback
- 6. Provision for applications

The Education and Training of Educators and Education Personnel applies a competency-based training approach which is oriented towards achieving the ability of the trainees to complete their tasks as a whole.

Determination of training strategy:

- a. Based on the characteristics of the trainees
 - Experience
 - Ability to manage, communicate, and Cooperation
 - Enjoyed work
 - Educational background
 - Have initiative and creativity as well as a sense of responsibility, loyalty, and discipline
- b. Based on the characteristics of the training method
 - Training goals
 - Training materials
 - Characteristics of trainees



- Allocation of training time
- Supporting facilities
- c. Based on grouping (organizing training participants)
 - Individual
 - Group

Training scenario

- a. Preparation stage (design step)
 - Identify the training material needs of prospective trainees
 - Identify the capabilities that the prospective trainee already has
 - Analysis of the training material needs of prospective trainees
- b. Program development stage (design program step)
 - Formulation of training objectives
 - Determination of training materials
 - Determination of training strategies and methods
 - Determination of training facilities
 - Timing of training
 - Determine the components to be evaluated
 - c. Implementation stage (implementation step)
 - Initial test (pretest)
 - Build the atmosphere (ice breaking)
 - Learning contract (learning contract)
 - Presentation of material
 - Field survey plan simulation
 - Field survey
 - Reflection on the results of the field survey
 - Preparation of the MBS program development plan
 - Presentation of material
 - Training reflection
 - Final test (posttest)
 - Evaluation and follow-up stage
 - Training goals
 - Training materials
 - Training strategies and methods
 - Coach
 - Training facilities
 - Training time



Continuous Professionalism Development Innovation for Educators and Education Personnel

The field of educational technology is a field of study of application science that has a fairly broad spectrum. The true understanding of technology is not only related to the sophistication of hardware resulting from electronics industry products. Technology, when applied to the context of education as a part of social science, is meaningful as a process of processing educational information to be solved to produce products in the form of solutions to educational problems. The definition of education mentioned above specifically includes aspects of learning (instruction). The process of solving problems using intensive discussion and thinking that is tested empirically is identical to the process of processing raw materials in a factory to produce technological products. This is the similarity in the meaning of technology in the context of engineering with the context of education.

The definition of educational technology according to AECT (The Association for Educational Communications and Technology) in 2008 is a field of science that studies theoretical and ethical practices in facilitating and improving learning performance through the creation, use, and management of processes, as well as appropriate technological resources. Educational technology is an interdisciplinary field of study. The disciplines include education, psychology, communication, computers, information, socio-economic-culture, and engineering.

The integrated studies between scientific fields produce products in the form of theories, models, concepts, principles, and procedures used in learning. The theories produced include elaboration, algorithm, component display, instructional design, message design, instructional transaction, and integrated thematic. The resulting models include instructional design (improving instructors' competency, instructional product development, instructional system development, and institutional/organizational development), open and distance learning, and online network learning. The resulting concepts include instruction, students' active learning, bottom-up approach, learning resources, open & distance learning, learning how to learn, knowledge society, learning organization, learning environment, and learning acknowledgment.

The resulting procedures include systematic instructional design, macro & micro organizational strategies of lessons, instructional delivery strategies, learning management strategies, and context-based evaluations. Paying attention to the products produced, this study program is very suitable for educational actors, especially educators and educational staff (tendik). The resulting products will build a new paradigm for students in carrying out their daily tasks to solve learning problems. The paradigm shift from teacher-centered learning to student-centered learning is a topic of study that continues to be developed to be able to teach students to form character to be able to learn independently.



Characteristics of Innovation

Rogers (1983) suggests five characteristics of innovation including: 1. relative advantage, 2. compatibility, 3. complexity, 4. trialability, 5. observability(Rogers, 2010).

Relative advantage is the degree to which an innovation is perceived as better/superior than what was previously available. This can be measured from several aspects, such as economic, social prestige, comfort, satisfaction, and others. The greater, the relative advantage felt by adopters, the faster the innovation can be adopted. Compatibility is the degree to which the innovation is perceived as consistent with the prevailing values, past experiences, and needs of adopters. For example, if an educational technology innovation is an educational concept that has similarities with classical education regarding the role of education in conveying information. But between the two there are differences. In educational technology, the priority is the formation and mastery of competence or practical abilities,

In this educational theory, educational content is selected by a team of experts in specific fields, in the form of objective data and skills that lead to vocational abilities. The content is arranged in the form of a program design or teaching design and is delivered using the help of electronic media and students learn individually. Students try to master a large number of materials and activity patterns efficiently without reflection. His new skills were soon used in society. The teacher functions as a learning director, with more management tasks than delivering and deepening material.

Reform and Indonesian Education Innovation, is it Important?

Development is a continuous process covering all aspects of human life including social, economic, cultural, political, and other aspects. The goal is to improve the welfare and prosperity of the nation.

In the course of the process of economic development requires high-quality educational resources. Therefore it was decided to carry out a thorough reform of the role of education. However, so far, the efforts in this direction have not yet reached a high target, because the unbalanced role of Indonesian education in the nation-building process is because the policymakers—in this case, the government—are still not united in realizing the role of education that can boost development progress. nation's economy.

Our educational problems are increasingly complex and increasingly loaded with challenges. Government policies and programs to improve the quality of education do not seem to provide a solution to the growing educational problems (Azis et al., 2021; Faradiba & Lumbantobing, 2020; Hammada, 2020; Kadi & Awwaliyah, 2017; Rohman, 2022). Education reform is needed to be able to renew the entire education system and its role in the development of this nation. The time





required is not short. It requires sacrifice and willingness from all related parties, such as the government, educational institutions, the Ministry of education, and Indonesian education implementers. Education reform must also provide opportunities for anyone to develop new steps or ways to improve the quality of education.

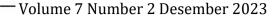
Educational reforms and innovations have a goal so that education can run more effectively and efficiently in achieving Indonesia's national education goals. The government and society must be willing to work together to achieve the desired quality of human empowerment. To be by the changing times, the education system must also be adapted to the latest demands.

Indonesian education is the main core to support the development of human resources whose role is very important for the development of a nation. For this reason, an educational strategy is needed to make educational programs evenly distributed throughout the country. These programs include:

- 1. Provision of education by the needs of the Indonesian people
- 2. Education that can be accounted for back to the community as the main resource is also the user of the results of the education itself.
- 3. Education is carried out transparently and democratically without reducing the quality of education
- 4. Efficient education administration
- 5. Opportunities to learn as broadly as possible from the people of Indonesia so that the basic capabilities of our society will increase.
- 6. Reducing educational bureaucratic difficulties which are often an obstacle to the smooth running of the current educational process.

With the massive reforms in various fields since the fall of the New Order government, the education sector is also not to be outdone. The Indonesian education system has been changed and adjusted in an autonomous manner which is expected to bring fresh air and improvements in the education system that has been used so far. However, because this system is still new, of course, we still have a lot to learn and struggle to solve the various obstacles that lie ahead. There are several new steps to carry out the reconstruction of education to build a new paradigm of the post-reform education system, as follows:

- 1. Create a new vision of Indonesian education so that all components of society can be widely empowered
- 2. A clear educational mission to make the community participate actively in it
- 3. Develop learning potential and creativity
- 4. Development of a democratic learning system so that there is no grouping of teaching





5. Curriculum policies should be adapted to the environment and other components of the nation such as science, technology, culture, art, society and religion.

If these steps can be realized, then Indonesian Education will hope to lead to a higher quality of national life.

Teacher reform began with the declaration of teachers as a profession by President Susilo Bambang Yudhoyono on 14 December 2004, two months after he was appointed. A year later, on December 15, 2005, Law number 14 of 2005 concerning Teachers and Lecturers was issued.

The following is a program for fostering and developing the teaching profession launched by the government in innovations for the continuous professional development of educators and education staff, namely:

- 1. Qualification upgrade
- 2. Teacher certification
- 3. Competence improvement
- 4. Career development
- 5. Reward and protection
- 6. Teacher needs planning
- 7. Teacher allowance
- 8. And other benefits

Apart from that, to increase professional development, below are some prepositions for improvement in the context of professional development, namely the following.

- 1. Educational tasks or activities in a sustainable position can develop teacher professional competence regularly, improve school quality, and enrich the repertoire of the individual teacher's life
- 2. The form of in-service education can accommodate the goals to be achieved
- 3. Many training methods are very effective but are still not fully utilized in the inservice education system
- 4. Research exercises will encourage teachers to come up with professional development ideas
- 5. Barriers to applying experience demand a large-scale expansion of training activities for teachers.
- 6. Teachers can be effective trainees compared to other staff
- 7. Many potentially effective development resources are weak or misused today
- 8. A productive atmosphere allows everyone to carry out development activities in other words, implementation, conversion
- 9. Active people tend to be more active in "crossing out," and feel more self-assured



10. Government collaboration with schools and personnel or community leaders is essential. Principals, teachers and community members, university personnel, and technical assistants all appear to be vital to establishing a favorable environment and their involvement is crucial.

It's good that from now on we as parents start paying more attention to the existence of a teacher because they are our children can become more useful human beings in the future. And be a teacher who always innovates in his field so that he becomes a more professional and dignified teacher.

Innovation in the context of the State Civil Apparatus

The State Civil Apparatus or ASN in the field of education can cover various aspects, including education management, teaching, learning, evaluation, and community participation. Some examples of educational AN innovations that can be applied include:

- 1. Use of Information and Communication Technology (ICT): educational ASNs can utilize ICT to increase the efficiency and effectiveness of administrative processes, data management, and internal communications. The use of educational information systems, mobile applications, or online platforms can help optimize the educational process, such as managing student data, managing academic activities, or managing finances.
- Technology-Based Learning: ASN education can adopt technology-based learning methods, such as blended learning or e-learning, which integrate the use of technology in the learning process. This can increase the accessibility, flexibility, and interactivity of learning, and help students develop relevant digital skills for the future.
- 3. Development of Digital Educational Content: ASN education can produce innovative digital educational content, such as e-books, learning videos, or multimedia-based learning applications. Digital educational content can be adapted to the needs and interests of students and enables learning to be more interesting, challenging, and interactive.
- 4. Improvement of Teaching Methods: ASN education can adopt innovative teaching methods, such as flipped classrooms, cooperative learning, or problem-based learning, which emphasize active participation, collaboration, and practical application. Innovative teaching methods can increase students' understanding, engagement, and motivation in learning.
- 5. Use of Alternative Assessments: ASN education can adopt innovative alternative assessments, such as project-based assessments, portfolios, or authentic assessments, which explore students' abilities and potential holistically and comprehensively. Alternative assessments can provide a more accurate picture of student achievement and encourage the development of relevant skills.



- 6. Community Involvement in Education: ASN education can actively involve the community in the educational process, such as involving parents, local communities, or other stakeholders in decision-making, development programs, or educational activities. Collaboration between ASN education and the community can increase the relevance, quality, and impact of education for students.
- 7. Innovation-Based Resource Management: ASN education can adopt innovations in resource management, such as budget management, time management, or education management.

CONCLUSION

In the face of the swiftly evolving contemporary era, educators and educational staff must remain dynamic learners, consistently fostering creativity and embracing discoveries within the educational landscape. The pivotal system of teaching and learning, situated within the family, school, and broader society, demands continuous attention to address the challenges posed by the present times.

Despite this awareness, the full realization of elevating the quality of education, particularly among teacher education graduates, remains a formidable task. The multifaceted nature of educational quality underscores the intricate interplay of factors such as teacher competence, student engagement, methodological approaches, educational tools, infrastructure, curriculum design, financial considerations, media utilization, and the environmental context of educational facilities.

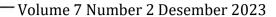
Recognizing the intricate roles that teachers play as educators, instructors, and trainers underscores their multifaceted responsibilities. Beyond imparting knowledge, educators are entrusted with nurturing students' affections, engaging them in intellectual pursuits, and honing their skills. This holistic approach to teaching emphasizes the need for continuous professional development, adaptability to emerging methodologies, and an unwavering commitment to fostering a conducive learning environment.

In essence, the journey toward enhancing the quality of education involves a comprehensive and collaborative effort. It requires a concerted focus on addressing the myriad factors that influence the educational landscape. Embracing innovation becomes not only a choice but a necessity, as it offers a pathway to overcome challenges and enrich the educational experience for both educators and students alike. Through a commitment to innovation, education can evolve in tandem with the demands of the contemporary era, nurturing a generation equipped with the skills and knowledge essential for success in a rapidly changing world.



REFERENCES

- Agustian, N., & Salsabila, U. H. (2021). Peran teknologi pendidikan dalam pembelajaran. *Islamika*, *3*(1), 123–133.
- Azis, D. K., Saihu, M., Hsb, A. R. G., & Islamy, A. (2021). Pancasila Educational Values in Indicators of Religious Moderation in Indonesia. *FITRAH: Jurnal Kajian Ilmu-Ilmu Keislaman*. https://doi.org/10.24952/fitrah.v7i2.4475
- Budiman, H. (2017). Peran Teknologi Informasi Dan Komunikasi Dalam Pendidikan. Al-Tadzkiyyah: Jurnal Pendidikan Islam. https://doi.org/10.24042/atjpi.v8i1.2095
- Carrión-Martínez, J. J., Luque-de la Rosa, A., Fernández-Cerero, J., & Montenegro-Rueda, M. (2020). Information and communications technologies (ICTs) in education for sustainable development: A bibliographic review. In *Sustainability (Switzerland)*. https://doi.org/10.3390/SU12083288
- Daar, G. F. (2021). Indonesian Higher Education of Innovation In Learning English In The Pandemic And New Normal Period. *Journal of English Education*. https://doi.org/10.31327/jee.v6i2.1577
- Faradiba, F., & Lumbantobing, S. S. (2020). PERBANDINGAN PENERAPAN KEBIJAKAN PENDIDIKAN INDONESIA DENGAN FINLANDIA. *SCHOOL EDUCATION JOURNAL PGSD FIP UNIMED*. https://doi.org/10.24114/sejpgsd.v10i1.18067
- García-Hernández, A., García-Valcárcel Muñoz-Repiso, A., Casillas-Martín, S., & Cabezas-González, M. (2023). Sustainability in Digital Education: A Systematic Review of Innovative Proposals. In *Education Sciences*. https://doi.org/10.3390/educsci13010033
- Hammada, M. (2020). *Educational Acpects in Environmental Problem in Indonesia*. https://doi.org/10.4108/eai.22-10-2019.2291467
- Junaedi, D., & Arsyad, M. R. (2023). Potensi Disruptif Digital di Negara Berkembang. *Comit: Communication, Information and Technology Journal*. https://doi.org/10.47467/comit.v1i1.35
- Junaedi, D., Supriyatna, R. K., Arsyad, M. R., & Amalia, R. S. (2022). Peluang dan Ancaman Disruptif Digital untuk Negara Berkembang. *Sci-Tech Journal*. https://doi.org/10.56709/stj.v2i2.71
- Kadi, T., & Awwaliyah, R. (2017). INOVASI PENDIDIKAN: UPAYA PENYELESAIAN PROBLEMATIKA PENDIDIKAN DI INDONESIA. *JURNAL ISLAM NUSANTARA*. https://doi.org/10.33852/jurnalin.v1i2.32
- Kusmiarto, K., Aditya, T., Djurdjani, D., & Subaryono, S. (2021). Digital transformation of land services in indonesia: A readiness assessment. *Land*. https://doi.org/10.3390/land10020120
- Kusumasari, B. (2018). Digital democracy and public administration reform in Indonesia. *International Journal of Electronic Governance*. https://doi.org/10.1504/IJEG.2018.095937
- Multazamy Rohmatulloh, D., Sudrajat, D., Asnaeni Am, S., Kunci, K., Digital, I., Pesantren, K., & Kebangkitan Islam Dan Kajian Ilmiah, P. (2022). Digital Innovation in Pesantren Education: Prediction To Welcome Global Islam Awakening. *Jurnal Pendidikan Islam*.





- On the development of information and communication technologies in education of the future: the possibilities of cloud computing technology. (2023). *Futurity Education*. https://doi.org/10.57125/fed.2023.25.03.03
- Parsons, T. D. (2021). Ethics and educational technologies. *Educational Technology Research and Development*. https://doi.org/10.1007/s11423-020-09846-6
- Prastyanti, S., Adi, T. N., Sulaiman, A. I., & Windiasih, R. (2022). Education Services for Students during the Covid-19 Pandemic. *Education Quarterly Reviews*. https://doi.org/10.31014/aior.1993.05.03.548
- Rogers, E. M. (2010). *Diffusion of innovations*. Simon and Schuster.
- Rohman, F. (2022). Problem Based Learning in Islamic Religious Education: The Case of the Indonesian Pesantren. *Global Journal Al-Thaqafah*. https://doi.org/10.7187/GJAT072022-5
- Scheffel, M., & Wirth, J. (2022). Educational technologies. *Unterrichtswissenschaft*. https://doi.org/10.1007/s42010-022-00160-z
- Stošić, L. (2015). The importance of educational technology in teaching. *International Journal of Cognitive Research in Science, Engineering and Education*. https://doi.org/10.23947/2334-8496-2015-3-1-111-114