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Improving Teacher Research Competence Through Mentoring Model in Independent Curriculum at Elementary School

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Abstract

This study aims to reveal the importance of teachers' research skills as a competency to improve their pedagogical aspects, especially in technology development and research. In fact, the creativity of teachers is still far behind, even though the independent curriculum program has more flexible, exploratory, and borderless innovative programs compared to the old curriculum. This study is field research with a qualitative approach. The research subjects are five teachers, selected using purposive sampling with judgment sampling. Data collection was conducted through interviews, observations, and documentation. The collected data was validated using triangulation, negative case analysis, and member checking before being analyzed using the Miles, Huberman, and Saldana analysis model, which includes: data presentation, data condensation, verification, and conclusion drawing. The research findings indicate that improving teachers' research competencies through the mentoring model can inform and develop their teaching practices, as well as apply an evidence-based approach in classroom learning.

Keywords: *Elementary School, Teacher Research Competence, Mentoring, Independent Curriculum.*

INTRODUCTION

Almost all academics, teachers, even students and college students are "confused" by the big elephant called the Industrial Revolution 4.0 and Society 5.0. History will record that only intelligent people who are able to read the zeitgeist (spirit of the times) will be able to survive and be remembered in every era according to the developments and dynamics that accompany it (Zainuddin, 2008, pp. 87). Teachers are the spearhead of education in Indonesia and the quality of teachers is the main key to the nation's progress (Prastowo, 2020).

As academics, educators, we inevitably have to respond to it. Because, this era has a huge impact on all aspects of education. A great nation is a literate one. Because literacy in a broader sense is all efforts to obtain and explore knowledge (Sutrisno, 2020, pp. 48). The process of changing the way of thinking is part of literacy activities. Literacy

is not just reading or writing which is included in the quadruple of language skills. More than that, 21st century literacy requires all elements to enter the realm of robotic technology and information (Hamruni, 2009, pp. 18). Moreover, the rapid development of multimedia in learning that is developing today is increasingly leading to individual methods by reducing the central role of teachers. All stated above will be strong when the number of higher education and society has realized that formal education is important (Suyanto, JIhad, et al. pp. 17). Almost all children of farmers, fishermen, pedicab drivers to officials can now enjoy higher education.

The Directorate General of Learning and Student Affairs of the Ministry of Research, Technology and Higher Education surveyed 72% of universities stated that their graduates had been prepared for work. However, of that number, only 42% of new graduates who were accepted to work had been well prepared by the university, namely having the competencies needed by the world of work. One of the challenges that has just been left behind is the ASEAN Economic Community (AEC) (Zainuddin, 2008, pp. 66). This era demands educational institutions design the learning outcomes (graduate achievements or learning) with international standards. On the other word, it is not enough if the institution has only national standards, let alone local ones.

To face global challenges in the 21st century, academics in various countries are making movements to review the pedagogy that has been going on so far. There is a spirit to transform the teaching style that is in accordance with this century, including carrying out pedagogic deconstruction. Ancient learning with an emphasis on discipline-based transmission is being reviewed. New learning with a focus on developing various competencies according to the demands of this century is being developed (Sunhaji;, 2009, pp. 21). The main problem is after carrying out deconstruction of the pedagogy that has been going on so far - what is the best way to teach 21st century skills (Abdul Majid, 2014, pp. 42). Discussion of educational problems is something that is never free from the views of educational experts, where discussion of these problems is always the subject of learning and discussion at all times because education is not static but continues to change from one era to the next. Educational problems are indeed very complex because it is impossible to deny that education must interact with humans and their environment.

Experts acknowledge that the transmission model is very ineffective in teaching competencies and skills of this century. However, the widespread use of this model continues. In Indonesia, even though various new learning models have been offered in the independent curriculum, the process of achieving competencies in accordance with

this century is still a problem (Rasimin et al. 2024). Learning in schools still emphasizes the aspect of understanding and ends with a test. Based on our observations of PPL (Field Experience Program) (Fitriyah et al. 2023) activities, there are still many learning activities in the classroom that are centered on a teacher. The teacher actively delivers the lesson material and students only act as recipients of the material delivered by the teacher (Resti et al. 2020). Of course, this method also has its benefits. Students have provisions in understanding the lesson material. However, when there is a question whether the material is relevant to the problems faced by students in everyday life, it is difficult to answer (Wijaya, Amiruddin, 2019, pp. 42-43). New teaching methods and ways of processing new lesson materials that are also relevant to the life of the current and future eras are very crucial to develop. The jargon of the global community says that learning in this century must be oriented towards the interests of students in the future (Crain, 2014, pp. 76). Future Learning is a must to be developed in learning, including MI/SD learning that is oriented to the past must also be changed by using a concept that can be a bridge between the past and the present to the future. (Maulidi, 2022)

Pedagogical competence in technology development is currently in high demand. However, in terms of creativity, teachers in Indonesia are still lag far behind, while the independent curriculum program offers a variety of innovative programs that are more exploratory, borderless, and flexible compared to the old curriculum. Based on the phenomenon of the education continuity like this, national education today is facing four main crises, which are related to quantity, relevance/external efficiency, elitism, and management. (Widoyoko, 2014, pp. 76) Furthermore, there are at least six main problems faced by the national education system, namely; first, unprofessional resources; second, equal opportunities for learning; third, the low internal efficiency of the education system; fourth, institutional status. (Abdullah et al. 2015, pp. 34) Therefore, in facing the problems mentioned above, as an urgent step, it is necessary to organize the education system as a whole, especially related to the quality of teachers, and its relevance to the needs of society and the world of work. In this case, there needs a change to provide direction that education is a basic approach in the process of change. Consequently, learning activities must be able to equip students with life skills that are in accordance with the living environment and the needs of students where they are. Likewise, steps or policies to provide solutions to problems that occur in the learning process are quite important strategies that must be carried out democratically by involving various related parties.

METHODS

This study ... This research is field research using a qualitative approach. The researchers used this design since this study aimed to see in detail how teachers' research competencies could be improved through mentoring model with the alignment of the independent curriculum starting from the conceptualization stage to its implementation, and also understanding the phenomena experienced by the research subjects. The research subjects were 5 teachers at Madrasah Ibtidaiyah (NJ) who were as the conceptors and executors of the Teacher Research activities.

The selection of research subjects was carried out using purposive sampling techniques with judgment sampling, in which researchers chose the research subjects based on the purpose of the data to be collected (Moleong, 2015, pp. 38). Data collection was carried out using structured interview techniques to obtain in-depth explanations related to the phenomena being studied. The data collected were then analyzed using the Miles and Huberman technique in the form of data collection, data reduction, data presentation, and conclusions drawing. This technique is used because it has a simple, complete, and easy step to understand the nature and the iterative process being studied.

RESULTS AND DISCUSSION

1. Teacher Research Competence in Independent Curriculum

Teacher Research Competence refers to the abilities and skill aspects possessed by a teacher to conduct research (Kuzmenko et al. 2023). This competence is considered urgent because through research a teacher can develop more effective teaching practices, be able to understand the needs of students better, and contribute to efforts to improve the quality of education as a whole.

Teachers must be able to use research findings to inform and develop their teaching practices, and apply evidence-based approaches to classroom learning. Trilling and Fadel stated that in principle, 21st-century pedagogy must be able to accommodate several aspects related to learning in a balanced way. Some of the principles and characteristics of 21st-century pedagogy include 1) (Istiningsih, et al. pp. 54) student-oriented learning must be balanced with teacher-centered learning, 2) learning oriented towards life skills according to social environmental conditions (contextual), 3) learning supported by the use of technology, 4) learning encourages collaboration, 5) problem-based learning and develops problem-solving skills 6) project-oriented learning, 7)

learning develops high-level thinking skills (HOTS), 8) develops fluency in the use of information, technology and media, 9) encourages reflection and assessment activities through self-assessment or peer assessment, 10) utilizes the environment, members and community leaders around students as learning resources. (Muqowim, pp. 19)

> "Improving teacher competence through mentoring is very important in the implementation of Merdeka Curriculum. Through mentoring, teachers can gain better knowledge and skills in developing student-centred and project-based learning, as well as authentic and continuous assessment. Mentoring also helps teachers improve their ability to develop relevant and contextual curricula, thereby enhancing student learning outcomes. Additionally, mentoring helps teachers boost their confidence and motivation in teaching, enabling them to deliver better and more effective learning experiences to students. As such, mentoring plays a vital role in enhancing the quality of education in the era of the Merdeka Curriculum" (NJ, komunikasi pribadi, 2025).

Based on the points stated above, 21st century learning requires a teacher's creativity in developing students' potential. Learning in the past that emphasizes competition is outdated. (Purwanto, 2014, pp. 23) Now, learning needed is learning which can facilitate students to work together or collaborate in diverse teams so as to producing learners to be able to communicating and respecting others. Learning in the form of transmission filled with low-level knowledge aspects (Zainuddin, 2008, pp. 37) that appear in the use of student worksheets in the form of multiple-choice questions must be replaced with learning in the form of reflection.

In addition, 21st century learning has four characteristics, namely; "information (available anywhere and anytime), computing (faster using machines), automation (reaching all routine work), and communication (from anywhere to anywhere)". The developments and progress that occurred in the 21st century caused education to experience multiple leaps from the previous era. Therefore, 21st century skills are an important need in modern world life to strengthen social capital and intellectual capital. (Prastowo, 2020, pp. 49) In fact, conventional learning is still needed to equip students with 21st century skills. Students can be equipped with a number of information about various global challenges and how to face and utilize them. (Azra, 2002, pp. 17) Teachers as planners and managers of learning can help students develop or master skills that are relevant to this. However, transmission as a conventional learning model that emphasizes memorization or application of simple procedures will not be effective in improving the skills needed in this century. (Alfani, 2024) Critical thinking skills, for example, cannot be achieved by presenting a number of facts and concepts. High-level

skills such as critical thinking and creative thinking require a learning approach that can provide space for the formation of these abilities. (Rahmawati, 2022, pp. 54) Changing the position of the teacher from being the center of learning activities to students as the center is indeed nothing new. Giving students more space to develop ideas openly, ask critical questions and connect subject matter with everyday experiences is relevant to learning in the current century.

The development occurred in this era indicates that the world is very dynamic. Humans as the most perfect creatures of all creatures must be able to bring their era to life. (Nasution, 2014, pp. 23) only people who can read the spirit of the era will survive and prosper. Among the solutions offered by the World Economic Forum is strengthening three pillars, namely competence, character, and literacy. The 21st century is full of technological advances; a country needs human resources that have three important pillars. The three important pillars here, are not only about reading and writing but must achieve literacy in reading and writing, science literacy, information technology literacy, (Danim, 2010, pp. 32) and financial literacy. The competencies demanded from the 21st century generation are the ability to have critical thinking, creativity, collaboration skill, and communication skill.

> "Teachers' research competencies are very important in improving the quality of education. According to him, teachers with strong research competencies can identify students' learning issues, develop effective teaching strategies, and evaluate learning outcomes more accurately. The speaker also mentioned that teachers' research competencies can help improve their ability to develop innovative curricula and teaching methods. However, the speaker also noted that many teachers still lack adequate research competencies, so training and development programs for research competencies are needed for teachers"(AR, komunikasi pribadi, 2025).

Critical and creative thinking skills can develop well if there is open space in their own way and according to what they need and the challenges they face. To achieve this, conventional pedagogy in the form of transmission certainly will not support this achievement. In Scott's view, (Kuzmenko, et al. 2023) rethinking pedagogy for the 21st century is as important as identifying new competencies that need to be developed by today's learners. In realizing this, pedagogy must also be able to build collaborative partnerships with parents or the community. (Sutrisno, 2020, pp. 67) The experience of interacting with parents and the community is a source of learning. If this is accommodated by the teacher, learning becomes contextual and meaningful for the lives

of learners. The right pedagogy for education in the 21st century is essentially pedagogy that is able to prepare the best students to be successful in this century.

The educational environment plays a very important role in the implementation of education, because the living environment is also called as an institution where the educational process takes place. In general, the environment can be seen from three things, namely family, school, and society. (Hamalik, 2013, pp. 23) The ideal family from an Islamic perspective is a family that is Sakinah, Mawaddah, and Rahmat. A family profile like this really needs to be formed in order to educate students according to the principles of Islamic teachings. (Launay, et al. pp. 23) Parents must be aware of the importance of continuing education, namely schools in educating their children professionally. In this case, parents must be able to choose good schools for their children, participate in their children learning process improvement, and evaluate how the learning process held by the schools as an institution that carries out the mandate of parents and society. Then, the educational practice is applied in society where students are required to play a role in creating comfort, public order and concern for education and are expected to be actively involved in improving the quality of education in their environment. The last is the need for harmonious collaboration between the three educational environments, so that integrated education is formed and has a relationship with Islamic teaching values. (Crain, 2014, pp. 43) With this kind of integration, it is hoped that Amar Ma'ruf Nahi Mungkar can be upheld in society, in other word, society that is universally blessed can be realized.

Teachers must not only be able to see what is happening in the classroom, but also need to know what to do about what is seen, teachers must be able to think more clearly about the teaching activity itself, how to organize it, and its conceptualization. (Mulyono, 2004, pp. 44) Therefore, effective teachers use maximum competence. They clearly understand to work within the framework of a consciously chosen learning strategy. Effective teachers have a target of achievement in designing a method to organize the options they make, means, they are invited to be under their own control.

> "Improving teacher competence through mentoring is very important in the implementation of Merdeka Curriculum. Through mentoring, teachers can gain better knowledge and skills in developing student-centered and project-based learning, as well as authentic and continuous assessment. Mentoring also helps teachers improve their ability to develop relevant and contextual curricula, thereby enhancing student learning outcomes. Additionally, mentoring helps teachers boost their confidence and motivation in teaching, enabling them to

> deliver better and more effective learning experiences to students. As such, mentoring plays a vital role in enhancing the quality of education in the era of Merdeka Curriculum" (NJ, komunikasi pribadi, 2025).

Good teachers have a true understanding of how to teach, they do not have rigid techniques and insist on using them, so that it helps the smoothness and ease of students in learning. (Launay, pp. 54) good teachers are flexible in their teaching style and adjust it in every day teaching, if necessary. (Zarka, et al. pp. 33-35) They understand the little things that can impact students' ability to learn, such as the climate and atmosphere in the classroom. (Langgulung, 1987, pp. 13) He has an understanding of the nature of students and their development as teenagers.



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Figure 1. 21st Century Learning Pattern Chain

Teachers at schools play a complex role, and teaching is only one of the many things they do. They also do research, advisory, professional services, consultation, and involvement in the governance process of their educational institutions. (Sukiman et al, 2020) In Law No. 14 of 2005 concerning teachers and lecturers, it is stated that, as professional staff, teachers have the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students. In the most exclusive institutions, many teachers also manage business units, trade practices, or carry out side professional practices. (Syakur, 2007) Some teachers are busy with many things besides teaching. Therefore, there is a great temptation for teachers to improvise when entering the classroom.

> "The main supporting factors in improving teacher competence through the mentoring model are support from the school principal and the

> availability of experienced mentors. According to him, with support from the school principal, teachers can feel more motivated to improve their competence, while experienced mentors can provide effective guidance and feedback. In addition, open and honest communication between mentors and mentees is also very important in improving the effectiveness of mentoring" (TR, komunikasi pribadi, 2025).

Learning in humans is a formal object of educational technology, both as individuals and those who are members of organizations. Learning does not only take place in the scope of schooling or mentoring. Learning can be done anywhere and by anyone in a way and what is appropriate to the conditions and needs. However, in its implementation, it still focuses on solving problems in the field of schooling. While the field of educational technology has a wide reach.

> "In implementing the mentoring model in Merdeka Curriculum, teachers face several obstacles. One of the main obstacles is the lack of understanding among teachers about the principles of Merdeka Curriculum and how to implement them in classroom learning. In addition, teachers also experience difficulties in developing student-centered and project-based learning, as well as authentic and continuous assessment" (SA, komunikasi pribadi, 2025).

The position of teachers as managers and facilitators of learning is increasingly interesting when the individuals who become students are adults. By utilizing technology, especially research skills as a learning medium, teachers can carry out their roles anywhere. (Affandi, 2023, pp. 54) Armed with a notebook connected to the internet, teachers can explore various problems which are then examined to find a solution. Traditional classrooms that are limited by dividing walls are replaced by electronic classrooms. (Al-Ibrashi, 1990) There are not only materials and information needed, the development of media has quite an impact on learning patterns, learning processes and the development of learning models. One of the media that is always able to be used as the spearhead in presenting learning information in any model, approach, is grouped in the AVA (Audiovisual Aids) classification. (Rachman, 2022.) The group of media included in the AVA category has a central function and position in efforts to package learning.

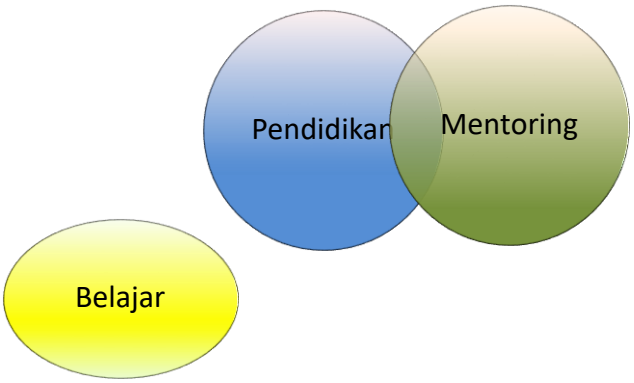


Figure 2 Learning (Adult Learning Scheme)

This image shows where the field of educational technology is. Based on references to the symptoms that are used as the main study of educational technology above, it has described the development of technology as follows; the application of educational technology is not only in general education, it applies in schools, mentoring is carried out by institutions, institutions or departments, (Rofik, 2019) The application of educational technology is also widely developed outside of educational institutions. Learning activities are not only carried out by individuals, but also by groups and organizations.

a. Implementation of Independent Curriculum at Elementary Schools

The Curriculum provides freedom to all elements in the educational unit, from schools, teachers, to students. This curriculum brings significant changes to the learning system in Indonesia. The burden on teachers becomes lighter, allowing them to be more flexible in teaching and reducing the administrative burden, so that their role as educators feels more comfortable (Praticya, Putra, et al. 2021). The advantages of the Merdeka Curriculum according to (Szabó et al. 2021) include;

1) More concise and in-depth, this curriculum emphasizes essential materials and the development of student competencies according to their stages. The learning process becomes more in-depth, meaningful, unhurried, and enjoyable.

2) More freedom, this curriculum provides independence for students, teachers, and schools. For students, freedom means there are no elective

programs in high school, so they can choose subjects according to their interests, talents, and aspirations. For teachers, this freedom allows them to teach according to the stage of achievement and development of students. Meanwhile, schools are given the authority to develop and manage the curriculum and learning according to the characteristics of the educational institution and its students.

3) More relevant and interactive, project-based learning opens up opportunities for students to actively explore current issues such as the environment, health, and others. This method supports the development of character and competencies that are in line with the Pancasila Student Profile, and are relevant to students' daily lives. (Mulyasa, t.t., hlm. 20)

The implementation of Merdeka Belajar is an innovation from the Ministry of Education, Culture, Research and Technology to create superior human resources (HR). This policy strengthens the role of all individuals in the world of education and has gone through four stages of improvement, including infrastructure and technology updates (Slack, Priestley. 2022) . In the Merdeka Curriculum, teachers are expected to keep up with the times by mastering technology, so that the insights provided students can compete at the global level (Wiguna. 2009) To support this, not only learning is implemented through technology, but also the entire educational administration. This policy was welcomed by various parties, especially teachers as the main target, because it is considered more effective and efficient.

> "The mentoring model in independent curriculum can improve teachers' research competencies. According to him, with intensive and structured mentoring, teachers can acquire better research knowledge and skills. Teachers can learn how to design research, collect and analyze data, and develop research results into concrete actions in learning. This mentoring model also helps teachers improve their analytical and self-reflection skills, thereby improving the quality of learning in the classroom. In addition, mentoring also facilitates teachers to share experiences and knowledge with colleagues, thereby creating a collaborative and innovative learning community" (TR, komunikasi pribadi, 2025).

However, in its implementation, there are still several obstacles faced by schools. Many older teachers have difficulty keeping up with technological developments. They need more time to learn the use of educational technology before they can implement it in learning. To overcome this problem, schools need to hold more intensive training, such as through KKG activities. This training is important to improve teachers' abilities and enthusiasm in the learning process, because in addition to gain knowledge, they also gain motivation. Teachers who do not participate in training tend to teach without applying relevant and up-to-date methods. (Suyanto, JIhad et al. pp. 11-12) The role of educational technology in the perspective of Merdeka Belajar in the 4.0 era is very important for teachers in understanding the essence of educational technology itself. (Le et al. 2023) Teachers do not only view educational technology as devices, machines, computers, or other artifacts, but also as systems and processes that lead to desired outcomes. This is in line with the policy of the new program "Merdeka Belajar di Era 4.0," which emphasizes skills in literacy, numeracy, and character surveys.

> "The mentoring model is very effective in improving teacher competence. According to him, with experienced and dedicated mentors, teachers can gain better knowledge and skills in managing classrooms, developing curricula, and improving the quality of learning. Mentors can provide constructive feedback and help teachers identify areas for improvement" (RW, 2025).

In addition to age factors, lack of awareness and understanding among teachers is also an obstacle. Many teachers are reluctant to participate in training, so that the application of educational technology in learning is less than optimal and tends to be monotonous. In this situation, motivation and support from the school environment are needed. Teachers need to understand the importance of using educational technology to improve student understanding. In addition, sharing knowledge outside of formal forums is needed to help teachers who are left behind. This individualistic approach needs to be facilitated by schools in order to create equality in the learning system. The key to the success of the education system lies in the learning process that occurs in the classroom. No matter how good the curriculum and programs are implemented, if learning in the classroom still uses old mindsets and paradigms, the results will certainly not be optimal. Changes will only be limited to names and administration without having a real impact on the world of education. Conveyed similar

obstacles in the implementation of Independent Curriculum as follows;

1) Lack of understanding and awareness of independent curriculum. This can be solved by increasing the delivery of information and training to all stakeholders, including schools, teachers, and parents. In-depth socialization of the concept, objectives, and benefits of independent curriculum can help reduce resistance and strengthen understanding of this policy.

2) Limited resources. This can be addressed by increasing budget allocation for education and ensuring the availability of adequate resources, such as textbooks, technological devices, and training for teachers. In addition, the government can establish partnerships and seek sponsorships to obtain additional resources.

3) Challenges of curriculum design. To overcome this, a collaborative approach is needed between schools, teachers, and education experts. Providing effective curriculum guidelines and examples as well as training in designing relevant and varied curricula can help improve teachers' understanding and skills in implementing Merdeka curriculum.

4) Measurement and assessment. In terms of measurement and assessment, it is important to develop instruments that are in accordance with the learning approaches and strategies in the independent curriculum. The government and educational institutions need to provide guidance and training to teachers to develop comprehensive assessment instruments that are in line with the learning methods applied.

5) Coordination and support. In order for the implementation of the Merdeka curriculum to be successful, effective coordination between all stakeholders is needed. Active involvement of all parties in the implementation process will increase the synergy and success of this curriculum.

The application of educational technology in Independent Curriculum has a positive impact on students, such as making learning more enjoyable through reciprocal interactions between students and teachers. In addition, students' learning motivation increases, making them more enthusiastic in learning activities. This has an impact on increasing students' understanding about the

material being taught. In line with this, conveyed the impacts felt by students in the implementation of the Independent Curriculum including: (1) Learning becomes more enjoyable; (2) Students are more enthusiastic during face-to-face meetings; and (3) There are projects that strengthen the Pancasila Student Profile.

Positive impacts for teachers include ease in finding information. With the platforms and applications available, teachers can quickly and efficiently prepare learning materials for students. this positive impact is due to the curriculum which is now simpler and more enjoyable, because it focuses on developing students' potential and giving them the freedom to learn according to their interests.

> "However, other teachers also stated that there were several obstacles in implementing the mentoring model, such as a lack of time and resources for mentoring, as well as differences in learning styles and needs between teachers. According to them, to overcome these challenges, thorough planning and flexibility in the implementation of mentoring are necessary, so that it can be tailored to the needs and learning styles of each teacher. As a result, mentoring can be effective and significantly improve teachers' competencies" (SA, komunikasi pribadi, 2025).

The negative impacts of implementing educational technology in Independent Curriculum for students include less than optimal school assessment activities. The use of mobile phones, which is the most common and frequently used technology, is often ineffective in assessments because the small screen size makes questions unclear. In addition, students tend to underestimate and rush assessment activities because they are more interested in playing games. the negative impacts of Independent Curriculum for students arise due to rapid changes in the curriculum, which causes a decline in student achievement. This happens because students have not been able to adjust to the new learning system.

Negative impacts on teachers include decreased literacy skills. Because all information is easily available, teachers rarely read and write, both inside and outside the classroom. It stated that the use of digital tools in teaching can motivate, support, and facilitate teachers and students. The focus of the digital era is not only on learning facilities, internet access, and online resources, but

also on the readiness of teachers to have good digital literacy skills. Digitally literate students understand how, why, and when to use digital tools. They are able to utilize digital technology to explore opportunities, channel creative ideas, analyze information, and think critically.

In the field of curriculum, we see how many ideas and efforts to improve the curriculum have been initiated by various well-known educational figures. Various curricula have been created and many of them have been implemented, such as independent curriculum. (Nasution, 2014, pp. 56) What was initially expected, eventually turned out to cause other problems so that the curriculum was abandoned and changed. The character of the curriculum shapes and is shaped by various external relationships with knowledge, perspectives, and practices in the domain of education, policy studies, evaluation of teaching methodology, educational psychology, and so on. (Hamalik, 2013. pp. 17) the fields above have direct relevance to the curriculum when compared to other fields of study, these more relevant fields need to be analyzed more broadly and in depth.

b. Mentoring Model for Improving Teacher Research Ability

Mentoring strategy for improving teacher research ability is a systematic approach to assist teachers to improve their pedagogical competence skills in conducting research. Some experts believe that a subject is truly mastered only when a student is able to teach it to others. Teaching with mentoring strategy provides an opportunity for other individuals to learn something well at the same time. Then, it becomes a resource for other individuals, and an easy strategy to obtain large class participation and individual responsibility. This strategy provides an opportunity for each individual to be able to act as a teacher to other individuals. The strategies that can be taken using the mentoring model include;

1) Needs Mapping

Needs analysis: identifying existing research skills and those that still need to be improved; specific objectives: determining specific mentoring objectives according to the needs of individual or group of teachers.

2) Resource Provision

Research materials: providing reading materials, tutorials, and other resources that support efforts to improve teachers' research skills; access to journals and databases: providing teachers with access to a variety of relevant journals, research databases, and scientific literature.

3) Training and Workshop

Technical training: conducting training related to research methodology, data analysis, and scientific writing; practical workshop: conducting workshops that allow teachers to practice directly conducting research under the guidance of mentors.

4) Individual Mentoring

Mentoring: Conducting individual mentoring sessions where mentors can provide direct feedback on the research being conducted by the teacher; periodic review: Scheduling periodic review sessions to evaluate progress and provide suggestions for improvement.

5) Collaborative Network Development

Research collaboration: encourage collaboration between teachers or with other researchers to enrich research experience; practitioner communication: form research groups or communities to share knowledge and experience

6) Evaluation and Follow-up

Progress assessment: conducting research on teachers' ability after mentoring to see the improvement aspects that have occurred; continuous reinforcement: Providing further support after mentoring such as further development or refreshing of learning materials.

7) Motivation and Appreciation

Award: giving awards or recognition of validity to teachers who have successfully demonstrated improvements in their research skills; motivation: providing encouragement and motivation to continue

improving and applying research skills in the learning process.

These strategies can be tailored to the specific context and needs of the school or educational institution. A structured and sustainable approach will help teachers not only develop their research skills but also apply them to improve the quality of education in Indonesia. (Oktradiksa et al. pp. 2024), One of the best ways to develop active learning is to provide learning tasks that are completed in small groups. Peer support, diversity of views, knowledge and expertise, help to create collaborative learning between one part which is valuable for the learning climate in the classroom. However, collaborative learning is not always effective. There will be unequal participation, poor communication, and confusion rather than real learning.

The above components, either individually or in combination, are arranged in such a way for the development of educational activities, both pre-service education and in-service education. With a certain rhythm and style, the right model, practice with simulated conditions, and in the classroom combined with the use of feedback, the desired changes may be obtained. When implementing this new approach, a theory is needed. The presentation of the theory is done through discussion and training participants in this case teachers to apply it. This must be done as well as possible.

The theory of the new approach must be well presented and demonstrated accompanied by practice in simulated conditions with good and consistent feedback. Furthermore, it is applied in the classroom, accompanied by further provision and utilization of feedback. If all these components are implemented well, this activity will provide maximum contribution to improving teacher skills accompanied by certain satisfaction.

One of the most important goals of education today is to acquire skills for the modern workplace. There are technical skills such as writing and operating digital devices, and there are non-technical skills such as listening attentively and speaking clearly. As individual teachers struggle to learn new skills and develop existing skills, they need to practice them effectively and get useful feedback. The following strategies represent various ways to develop a teacher's skills in facing the demands of the educational revolution era. Some are intense and some are entertainment specifically designed for the purpose of

playing different roles in the aspects highlighted. The world is getting more advanced. Human culture is limitless, all we know is the limits of the discussion that must be given to students, according to their age and intelligence. (Purwanto, 2014, hlm. 28) Moreover, a teacher who can answer students' questions clearly and broadly, even if the quality is higher than what students should know, will be more interesting and encourage the students' souls.

Most literature discussing mentoring issues contains the results of studies on mentoring elements. The elements linked in the mentoring process are combined in various ways, which are directed at creating conditions for professional development in a good future rhythm, based on style or mastery of new approaches et al. 2024, pp. 43) . From the analysis of research results on mentoring activities, we can build and test various models and programs in the position that are considered suitable. However, many development models that are considered most likely to be built now, mentoring programs have certain limitations because they cannot be demonstrated to solve all problems surrounding education.

From the description above, it is clear that the teacher's job is hard. The teacher's job is not only teaching. So, to fulfill the task as a teacher, not just anyone can do it. As a good teacher must meet the requirements contained in Law No. 12 of 1954 concerning the basis of education and teaching in schools for all of Indonesia, in article 15 it is stated about teachers as follows. (The main requirement to become a teacher besides a diploma and other requirements concerning physical and spiritual health, are the characteristics that are needed to be able to provide education and teaching as intended. Many of the teachers feel that the job of a teacher is low when compared to office or company work, for example. This may be because the public's view of teachers is still narrow and narrow-minded. A view that is generally materialistic, only tends towards worldliness.

CONCLUSION

Good teachers have a good understanding on how to teach. They do not have rigid techniques and insist on using them so that it helps the smoothness and ease of students in learning. Learning in humans is a formal object of educational technology, both as individuals and those who are members of organizations. Learning does not only take place in the scope of schooling or mentoring. The research findings revealed

several mentoring models: 1) needs assessment, 2) workshops, 3) resource provision, 4) individual mentoring, 5) collaborative network development, 6) evaluation and follow-up, and 7) motivation and appreciation. These mentoring models can inform and develop teachers' teaching practices and apply evidence-based approaches in classroom learning.

Most teachers in schools play a complex role. Teaching is just one of the many things they do; they are also engaged in research, advisory, professional service, consultancy and involvement in the governance processes of their educational institutions. These strategies can be tailored to the specific context and needs of the school or educational institution. A sustainable and structured approach will help teachers not only develop their research skills but also apply them to improving the quality of education in Indonesia.

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