



The Analysis of the Role of Science Subject Activator Teachers in the Success of Merdeka Belajar Program at SMP Muhammadiyah 1 Sidoarjo

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Abstract

The purpose of this study is to analyze the role of the science subject teacher in the success of the independent learning program at the junior high school level. The research method used is a qualitative method of case study type. The research was conducted at SMP Muhammadiyah 1 Sidoarjo. The research conducted only focused on one science subject teacher at SMP Muhammadiyah 1 Sidoarjo. Data collection techniques used by researchers are questionnaires, interviews and documentation. From the data obtained, data analysis was carried out using three stages including data reduction, data presentation, and conclusion drawing. The results of this study found that the science teacher plays an important role in improving teacher competence as well as in student learning activities for the success of the independent learning program at the junior high school level which encourages the growth and development of teachers and students in implementing learning in accordance with the independent learning program. From the research that has been done, a science teacher has a role for teachers and students to be able to succeed in the independent learning program at the junior high school level. Further research is expected to find other efforts by science teachers that contribute to the success of Merdeka Belajar program.

How to Cite

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INTRODUCTION

Education is a learning system that exists in every place and every time. Education itself is something that must be done in the process of human life as an effort to mature humans and humanize humans. Education will always develop following the times that are increasingly advanced and developing, therefore the Minister of Education and Culture of the Republic of Indonesia, Nadiem Anwar Makarim, issued the Merdeka Belajar program which aims to meet the needs of education in the era of revolution 4.0 (Suhartono, 2021). There are many factors that affect the world of education, especially the world of education in Indonesia. The factors in the world of education are educators, students, learning methods, materials, and facilities (Andeka et al., 2021). If there is one factor that is not running well, then education in Indonesia cannot run optimally. One of the factors that influence the world of education is the educator factor, where in this case the teacher has a greater influence than other factors. A teacher is required to be able to carry out the learning process optimally. Teachers must have expertise in accordance with the subject area taught and be able to carry out teaching and learning activities interestingly so that students are interested. Educators are required to be able to carry out learning well and be able to improve the abilities that exist in students to the maximum (Wahid et al., 2020). Teachers who have the commitment and desire to continue learning to improve their abilities are needed to be ready to face all kinds of changes related to their duties as educators. (Merdeka et al., 2022).

Teachers must know what steps are needed when faced with a challenge in a new generation or in a new era. As in the era of the Covid-19 pandemic that has occurred, teachers are faced with a new challenge in their learning activities (Susanto et al., 2020). This is a new challenge for teachers because all activities at school, be it the learning process, assessment, or evaluation, must be done online. At that time, a teacher must still be able to implement the competencies of a teacher. Based on the Minister of National Education's regulation on academic qualification standards and teacher competencies, a professional teacher must have 4 professional teacher abilities, namely pedagogical competence and personality competence, professional competence and social competence. The four professional teacher competencies will be obtained through professional education for one year (Sugiyarta et al., 2020). The independent curriculum is different from the previous

curriculum, namely the 2013 curriculum. According to Nisfa et al, the 2013 curriculum carries the mandate of a science-based approach or scientific approach (scientific approach) while the independent curriculum carries the mandate of a project-based learning (Nisfa et al., 2022).

The 2013 curriculum is the curriculum used in learning before the independent curriculum. The approach in this curriculum uses a scientific approach which consists of observing activities (identifying problems), formulating questions, hypotheses, collecting data, processing data, and drawing conclusions and conveying the results (Permatasari, 2017). The independent curriculum uses an enhanced Project Based Learning approach based on constructivist principles, problem solving, research inquiry, and integrated studies (Nisfa et al., 2022). Educational institutions in Indonesia are expected to be innovative, competitive, and able to collaborate so as not to be left behind in the era of the industrial revolution 4.0 which emphasizes the concept of independent learning (Sibagariang et al., 2021). The Minister of Education of the Republic of Indonesia, Makarim in 2020 said that the Merdeka Belajar Program is an effort by the government to reduce the administrative burden that shackles the flexibility of schools and teachers in making innovations (Kurniawan & Anwar, 2022). Teachers are expected to have a "growth mindset" in implementing the Merdeka Belajar program, so that an educator is able to carry out various creativity in learning that is effective and interesting for students (Sugiarto et al., 2022). The Merdeka Belajar program is expected to be able to build "psychological safety" in the learning process so that it will give birth to students who have the habit of asking questions, experimenting a lot, and working a lot without thinking about failure before trying (Marjan Fuadi, 2022).

Based on research on the independent learning curriculum conducted by Susilowati, the implementation of the independent learning curriculum has not been carried out optimally due to several obstacles, namely that some teachers do not fully understand independent learning, stick to old habits, and most teachers still use the lecture method and students listen (Susilowati & Author, 2022). In the implementation of the independent learning curriculum, the Ministry of Education and Culture has released a Teacher Activator education program. Research conducted by Vivi et al shows that the mobilizing teacher program in the independent curriculum at SMP (junior high school level in Indonesia) Negeri 2 Jikumerasa has been running, but it cannot be

said to be one hundred percent optimal (Hentihu et al., 2022). Lead teachers are selected individuals who will eventually become candidates for school supervisors, school principals and training program trainers (Satriawan et al., 2021). The mobilizing teacher program will essentially completely change the centralized approach to education reform to a more decentralized one by transferring autonomy and the zone of change to the smallest component of the education system, the teacher (Satriawan et al., 2021).

Based on the results of questionnaires and interviews conducted by researchers at SMP Muhammadiyah 1 Sidoarjo. Graduating as a mobilizing teacher is an extraordinary opportunity for him, because out of several tens of thousands of applicants, he became one of the teachers who passed the selection. He said that a driving teacher has a function as a role model in the success of the independent learning curriculum. As a science teacher who must be a driving teacher in his field, a science driving teacher also has a role to invite the surrounding environment to become a driving teacher through the formation of student character through the Pancasila student profile. In its role in the independent learning program, a driving teacher gets experience for approximately 9 months before officially becoming a driving teacher (Lubis et al., 2023). This experience must be demonstrated to the school environment to invite teachers in the school to jointly succeed the independent learning program at SMP Muhammadiyah 1 Sidoarjo. The mobilizing teacher plays an active role in providing ideas for an effective learning process for each teacher, but there are still some teachers who are still in old habits.

Based on the facts about the role of the driving teacher, the researcher is interested in revealing the role of the driving teacher of science subjects in the success of the independent learning program at SMP Muhammadiyah 1 Sidoarjo. The purpose of this research is to analyze the role of the science teacher in the success of the independent learning program. The researcher hopes that more science teachers will be interested in participating in the Guru Penggerak program so that more teachers are competent and have high integrity to participate in the success of the independent learning program. Becoming a driving teacher not only has tremendous benefits in the success of the independent learning program, but the benefits that can be obtained for oneself in increasing one's integrity as an educator are also

very important and extraordinary benefits.

METHOD

The method used in this research is a qualitative method with a case study approach. Research using qualitative methods according to Mekarisce is a type of research that produces several findings that cannot be achieved using statistical methods or other means of quantification, so that it can be used to reveal a phenomenon that is difficult to understand satisfactorily (Mekarisce, 2020). Case studies are included in descriptive analysis research, namely research focused on a particular case that is carefully observed and analyzed. This analysis is carried out on various factors related to the case under study, the case under study is the role of a science subject teacher in the success of the independent learning program.

The research subject used by researchers in this study is the Science Subject Activator Teacher of SMP Muhammadiyah 1 Sidoarjo. The data collection technique in this study was carried out using questionnaires, interviews, and documentation. According to Hentihu et al, observation in research is to collect data directly and carefully related to research problems through a direct observation process in the field, where researchers are in that place, to obtain valid information (Hentihu et al., 2022). Interviews in this study researchers used Semi-structured interviews were used to facilitate data acquisition. The documentation method was also conducted in this study to obtain documentary data in the form of pictures, regulations, diaries, photos and other stored learning documents. The research instruments used by researchers when collecting data (Table 1).

Based on Table 1, the questionnaire lattice above has nine indicators based on two aspects. The nine indicators are that the science teacher knows and recognizes the independent learning curriculum, the teacher simplifies the lesson plan (Learning Implementation Plan) in the teaching and learning process, the science teacher becomes a teacher who shares information with other teachers, the socialization of the independent learning curriculum by the science teacher, the Merdeka Belajar Curriculum is the right strategy and needs to be implemented in optimizing the quality of education, the quality of human resources, facilities and infrastructure, time and mindset (Heryahya & Herawati, 2022).

Table 1. Grid of Questionnaire Sheet Analysis of the Role of Science Subject Activator Teachers in the Success of Merdeka Belajar Program at SMP Muhammadiyah 1 Sidoarjo

No	Aspects	Indicator
1	Science teacher understanding in implementing the independent learning curriculum	Teachers know and recognize the learning independence curriculum Teachers simplify lesson plans in the teaching and learning process Science lead teachers become teachers who share information to other teachers Socialization of learning independence curriculum by the Science Activator Teacher Kurikulum Merdeka is the right strategy and needs to be implemented in optimizing the quality of education
2	Barriers to the implementation of the independent learning curriculum	Quality of Human Resources Facilities and Infrastructure Time Mindset

Source: (Anggila, 2022)

There are eleven documents based on nine indicators (see Table 2). The nine documents are school curriculum documents, workshop certificates, Learning Objectives Flow documents, teaching modules, driving teacher certificates, socialization documentation, documentation of teachers and students in the learning process,

education history of science driving teachers, documentation of supporting facilities for Merdeka Belajar program and driving teachers, student lesson schedules and documentation of average student learning outcomes (Oktavia & Qudsiyah, 2023).

Table 2. Documentation Grid Analysis of the Role of Science Subject Activator Teachers in the Success of Merdeka Belajar Program at SMP Muhammadiyah 1 Sidoarjo

No	Indicator	Document
1	Teachers know the learning independence curriculum	School Curriculum Documents Workshop Certificate
2	Teachers have implemented simplified lesson plans in the teaching and learning	Flow of Learning Objectives (ATP) document Teaching Module
3	Science teachers become teachers who can share information with other teachers on the knowledge that has been obtained	Activator Teacher Certificate
4	Socialization of the independent learning curriculum by the Science Activator Teacher	Socialization Documentation
5	Merdeka Belajar Curriculum is a good policy in improving the quality of education	Documentation of teachers and students in the learning process
6	Quality of Human Resources	Education History of Science Drive Teacher
7	Facilities and Infrastructure	Documentation of Supporting Facilities for the independent learning program and teacher mobilizer and
8	Time	Schedule of Student Class Hours
9	Mindset	Documentation of average student learning outcomes

Source: (Anggila, 2022)

Table 3. Grid of Interview Guidelines Analysis of the Role of Science Subject Activator Teachers in the Success of Merdeka Belajar Program at SMP Muhammadiyah 1 Sidoarjo

No	Aspects	Indicator
1	Science teacher understanding of the implementation of the independent learning curriculum	Teacher Understanding Teacher Involvement in the Curriculum Suitability of Learning with the Curriculum Personal Experiences of IPA Driver Teachers Teacher Education Degree
2	Barriers to the implementation of the independent learning curriculum	Quality of Human Resources Facilities and Infrastructure Time Mindset

Source of Adaptation Anggila (2022)

Based on Table 3, there are nine indicators used in making questions. Nine indicators are made based on two aspects, namely the science teacher's understanding the implementation of Merdeka Belajar Curriculum and the obstacles in implementing Merdeka Belajar Curriculum. The nine indicators used are teacher understanding, teacher involvement in the curriculum, learning compatibility with the curriculum, personal experience of science teacher, quality human resources, time and mindset (Siahaan et al., 2023).

The data analysis carried out is descriptive analytical based on facts found in the field and then becomes a generalization or theory. The research stage starts from a preliminary study

by analyzing the phenomenon leading to a case study. Researchers use different data collection techniques to get data from the same source, namely questionnaires, documentation, and interviews. The data validity technique used triangulation techniques and retrieves the data. The data analysis technique used in this research is according to Miles and Huberman, namely data reduction, data presentation, and conclusion drawing.

RESULT AND DISCUSSION

Based on the results of questionnaires, documentation and interviews can be presented in Table 4.

Table 4. Questionnaire Results

No.	Indicator	Statement	Response
1	Teachers know the Merdeka Belajar Curriculum	Driver Teachers are familiar with the learning independence curriculum	Agree
2	Teachers have implemented simplified lesson plans in the teaching and learning process.	Driver Teachers have made simplified lesson plans in the teaching and learning process.	Agree
3	Science teachers become teachers who can share information with other teachers on the knowledge that has been obtained.	Science lead teachers become teachers who share information with other teachers	Agree
4	Socialization of the Merdeka learning curriculum by the Science Activator Teacher	Socialization of the independent learning curriculum by the Science Activator Teacher	Agree
5	Merdeka Belajar Curriculum is a good policy in improving the quality of education	Merdeka Belajar Curriculum as a good policy to improve the quality of education	Agree
6	Quality of Human Resources	The quality of a teacher's human resources is an obstacle to the implementation of an independent curriculum	Disagree

7	Facilities and Infrastructure	School facilities and infrastructure become obstacles in the implementation of an independent curriculum	Disagree
8	Time	Limited time in learning is an obstacle in the implementation of an independent curriculum	Disagree
9	Mindset	Differences in mindset between teachers are an obstacle in the implementation of the independent learning curriculum	Disagree

Based on Table 4, it can be seen in statement number 1 that the Activator Teacher has understood and recognized the independent learning curriculum that has been implemented at SMP Muhammadiyah 1 Sidoarjo. Statement number 2 states that the Activator Teacher has made simplified lesson plans in the teaching and learning process. In statement number 3, the science activist teacher stated that he had become a teacher who shared information with other teachers. Statement number 4 states that the Science Promoter Teacher has conducted socialization about the independent learning curriculum. Statement number 5 states that a driving teacher has implemented the independent learning curriculum in his school as a good policy to improve the quality of education. Statement number 6 states that the quality of a teacher's human resources is not an obstacle in implementing the independent curriculum. In statement number 7, the facilities and infrastructure available at school are not an obstacle in implementing the independent learning curriculum, so the facilities and infrastructure at SMP Muhammadiyah 1 Sidoarjo are suitable as facilities and infrastructure in implementing the independent learning curriculum. Statement number 8 states that time constraints in learning are not an obstacle in implementing an independent curriculum. Statement number 9 states that differences in mindset between teachers are not an obstacle in the implementation of the independent learning curriculum.

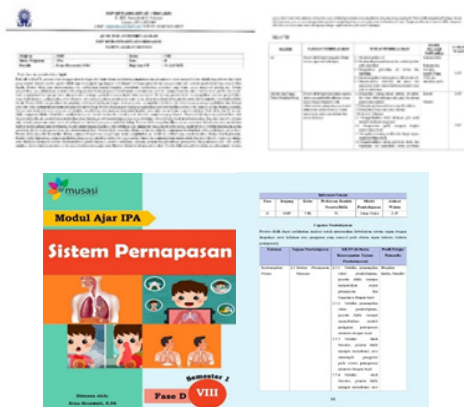


Figure 2. Document Implementation of Making Simplified Lesson Plans in The Teaching and Learning Process

Based on Figure 2, a. Learning Objective Flow Document, the Learning Objective Flow Document in the Figure is an example of an Learning Objective Flow Document in grade 8 science subjects at SMP Muhammadiyah 1 Sidoarjo. The Learning Objective Flow Document is one of the learning tools in the Merdeka curriculum, b. Teaching Module, the teaching module in the Figure is a science teaching module on respiratory system material for grade 8 semester 1. The teaching module was made by the science teacher as a learning tool in implementing the independent learning curriculum. Both documents are used to support the independent learning program that has been implemented, namely by making Learning Objective Flow Document and Teaching Modules in implementation of learning.



Figure 3. Document Science Teacher Drivers Become Teachers Who Can Share Information With Other Teachers

Based on Figure 3, the document is a Certificate of Education Completion. The document indicates that a science teacher at SMP Muhammadiyah 1 Sidoarjo, Mrs. Erna Herawati, has passed the 2022 teacher education program held online and offline by the Indonesian Ministry of Education and Culture.



Figure 4. Socialization Document on The Learning Independence Curriculum By The Science Activator Teacher

Based on Figure 4, the documentation shows that the science teacher is able to become a role model in the independent learning curriculum. In Figure 4, a science teacher becomes a resource person in an independent curriculum development activity. This activity was carried out at SMP Muhammadiyah 1 Sidoarjo.

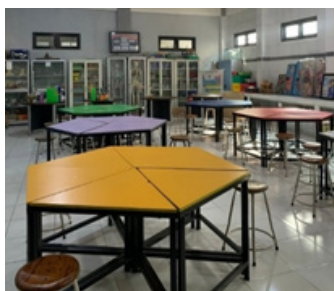


Figure 5. Facilities and Infrastructure Document

Based on Figure 5, these facilities and infrastructure are used by a science teacher in supporting student-centered learning activities in accordance with the independent learning program in science subjects. Figure 5 shows the science laboratory room at SMP Muhammadiyah 1 Sidoarjo which is equipped with supporting facilities in science learning.

The results of the interview with the science activist teacher at SMP Muhammadiyah 1 Sidoarjo stated that the activist teacher is a learning leader who encourages holistic student growth and development, is active and proactive in developing other educators to implement student-centered learning, and becomes a role model and agent of transformation of the educational ecosystem for the realization of the Pancasila student profile. The driving teacher does not label the subject, so all teachers of any subject can become a driving teacher, because I am a science teacher, for my scope is in science subjects. The driving teacher does not only carry out his duties as an educator or science teacher who conveys material to his students, but a driving teacher must be able to innovate and make changes. A driving teacher must be student-centered, independent, collaborative, innovative and reflective. Learning must be in favor of students and learning is designed according to student learning needs. Of course, the driving teacher, especially my science subject, must be able to provide an example to other teachers in implementing an independent curriculum that emphasizes student skills and self-development and creates a liberating learning climate.

A driving teacher in science learning is able to create science learning that is fun, creati-

ve, innovative, apply digitalization and facilitate students' talents and interests through differentiated learning. The strategy as a driving teacher in the science subject that he teaches is to design student-centered learning and according to the needs of differentiated students, conduct independent learning through an independent teaching platform, participate in webinars and participate in learning communication. The reason why the driving teacher of science participates in the selection of driving teachers is to develop my professional competence as a teacher, increase knowledge to improve performance as a teacher, upgrade knowledge, add a lot of insight and friends and as a way of being grateful that there are many out there who are much better than him so that his knowledge can be adopted, imitated and modified, the driving teacher education program which lasts 9 months and 10 days challenges him to be able to follow both online and offline all activities and materials that are useful for me as an educator. The teachers at SMP Muhammadiyah 1 Sidoarjo are very supportive of the activities of the teacher mobilizer program, especially when implementing concrete actions from the material or modules that I have learned. They support the science teacher disseminators with enthusiasm and take an active role as good participants. They also apply the results of the dissemination in their teaching and learning activities.

All teachers participate in the success of the merdeka Belajar program, by activating the merdeka Mengajar platform they can learn independently, take real action and upload evidence of real action to share on the merdeka Belajar platform through sharing teachers. Applying self-learning modules in teaching and learning activities so that a conducive, creative, innovative, fun learning ecosystem is formed and students actively participate because their learning needs are met. Teachers have opened the mindset that learning resources are not only books, it can be the internet through Google sites or in nature/ the environment. Teachers realize that students have the right to determine their own way of learning to achieve the same goals with different student styles. As a driving teacher in teaching and learning activities, I create science learning based on student needs, implement differentiated learning of content, process and product, make innovation and creativity in learning so that learning is fun. The role of the science teacher for teachers and employees is as a role model for change in the field of education, being a coach, creating creative and innovative programs that bridge students'

talents and interests that train 21st century skills and have the character of the Pancasila student profile. As a science teacher, she has many opportunities to develop the school because she serves as the curriculum supervisor. The driving teacher

Science teachers often meet with great people in curriculum communication, I also participate in MGMP IPA cluster, I am also active in community organizations, a resource person at IKM (Implementation of Merdeka Curriculum). The plan that will be carried out to further suc-

ceed the independent learning program at SMP Muhammadiyah 1 Sidoarjo is that the program to be carried out in junior high schools must facilitate student learning needs, encourage teachers to carry out differentiated learning, encourage teachers to join the driving teacher program by the Indonesian Ministry of Education and Culture, hold workshops related to the implementation of independent learning, encourage teachers to be active in the independent learning platform.

Table 5. Credibility of Data

Indicator	Questionnaire Results	Documentation	Interview	Description
Some teachers know and recognize the independent learning curriculum	✓	✓	✓	Data Credible
Teachers simplify lesson plans in the teaching and learning process.	✓	✓	✓	Data Credible
Science lead teachers become teachers who share information with other teachers	✓	✓	✓	Data Credible
Socialization of the learning independence curriculum by the Science Activator Teacher	✓	✓	✓	Data Credible
Merdeka Belajar Curriculum is the right strategy and needs to be implemented in optimizing the quality of education.	✓	✓	✓	Data Credible
Human Resource Quality	✓	✓	✓	Data Credible
Facilities and Infrastructure	✓	✓	✓	Data Credible
Time	✓	✓	✓	Data Credible
Mindset	✓	✓	✓	Data Credible

Based on Table 5, there are 9 indicators declared credible, which include: some teachers know and recognize the independent learning curriculum, teachers make simplified lesson plans (lesson plans) in the teaching and learning process, science activist teachers become teachers who share information with other teachers, socialization of the independent learning curriculum by science activist teachers, Merdeka Belajar curriculum is the right strategy and needs to be implemented in optimizing the quality of education, the quality of human resources, facilities and infrastructure, time, and mindset.

The independent learning program has been implemented at SMP Muhammadiyah 1 Sidoarjo since July 2022. Before implementing the Independent Curriculum, schools need to

understand the regulations and prepare supporting documents in implementing the Independent Curriculum (Miladiyah et al., 2023). The independent learning curriculum is implemented with a diversity of intracurricular learning so that students can adjust to their competencies and talents. Based on research conducted by Anggara, et al, the form of activities carried out in the independent learning curriculum at the junior high school level consists of three main activities, namely intracurricular activities, activities to strengthen the profile of Pancasila students, and extracurricular activities (Anggara et al., 2023). The learning process in the implementation of the Merdeka Curriculum refers to the profile of Pancasila students, which aims to produce graduates who are able to be competent and uphold

character values (Rahayu et al., 2022).

Science Activator teachers have simplified lesson plans as a form of implementation of one of the independent curriculum policies. The policy in preparing lesson plans is expected so that teachers and students have plenty of time to interact so that students become more active and learning becomes more interesting (Anjelina et al., 2021). This is in accordance with the statement conveyed by Rahmadayanti and Hartoyo in their research, namely the teaching module in the Merdeka Curriculum is a learning document that contains the objectives, steps, learning media, and assessments needed in one topic based on the flow of learning objectives (Rahayu, Rosita, Rahayuningsih, 2021). Simplifying the administration of learning tools is expected to convert teacher time spent on administration into learning activities and improve skills. (Arviansyah & Shagena, 2022).

Science Activator Teachers are used as role models in the implementation of the independent learning program at the junior high school level. Science Activator Teachers are used as role models for the independent learning program because science activator teachers have the ability to be able to encourage increased student achievement, teach creatively, develop themselves actively within school institutions and outside school institutions, encourage holistic student growth and development, become role models for other teachers for student-centered learning, become role models and agents of transformation for the education ecosystem, always innovate and create, and master technology according to 21st century skills and the industrial era 4.0. Based on research conducted by Jannati, et al, teachers have the role of creating a discussion place with fellow teachers to collaborate in improving the quality of learning (Jannati et al., 2023). A science teacher who becomes a driving teacher is a teacher who has the desire to develop his professional competence abilities as a teacher, increase knowledge to improve performance as a teacher, increase knowledge and add insight. According to Huta-uruk & Panjaitan in their research, the mobilizing teacher program is a teacher professionalism development program that is connected through training activities and collective teacher activities (Huta-uruk & Panjaitan, 2022).

Based on research conducted by Lubis, et al, the lead teacher will be a model teacher or role model who will be recommended to other teachers in terms of learning development techniques, such as creating learning methods or lesson plans

(Lubis et al., 2023). The science teacher conducts socialization to other teachers when in the school environment regarding the implementation of the Merdeka Curriculum, this is in accordance with Ningrum and Suryani's statement in their research that the driving teacher is a motivating teacher as well as an agent who is a future principal, school leader and curriculum trainer (Ningrum & Suryani, 2022). The character of a driving teacher is designed as a future education patron who carries out learner-centered learning and empowers fellow teachers in the school environment. (Mansyur, 2021).

The driving teacher of science subjects has an important role in the success of the Merdeka Belajar program at the junior high school level. The driving teacher of science subjects does not only carry out his duties as an educator or science teacher who conveys material to his students. A driving teacher must be able to become a role model and agent of transformation of the education ecosystem for the realization of the Pancasila student profile. In accordance with the concept of the independent learning program by Nadiem Makarim, who was driven by his desire to create a happy learning atmosphere without being burdened by achieving certain scores or grades. The Merdeka Curriculum Policy is expected to form students into competent individuals in their fields with high morals and can be useful for the community environment later (Marisa, 2021). Merdeka Belajar policy is a strategy in improving the quality of education which is expected to run in a directed, organized, planned and sustainable manner in order to realize the best generation of graduates with guaranteed quality education (Sari, 2019).

Before officially serving as a science teacher, a science teacher must go through a training phase that is conducted for 9 months and 10 days, which takes place offline and online, until then officially becoming a science teacher. A teacher mobilizer is equipped with the right knowledge and skills that will help them to contribute effectively to curriculum development and implementation (Sunarni & Karyono, 2023). The science teacher must side with students and the learning that takes place is designed according to student learning needs to instill independent, collaborative, innovative and reflective attitudes. Science Activator Teachers must be able to provide examples to other teachers in implementing an independent curriculum that emphasizes student skills and self-development and creates a liberating learning climate. The role of the science

teacher in joint discussion activities carried out with teachers is as a coach for other teachers to be able to carry out learning in accordance with the independent learning program. As the driving teacher of science subjects, he must be able to provide examples to other teachers on the application of an independent curriculum that focuses on student skills and self-development and creates a liberating learning climate. This statement is in line with Manao et al's research which states that the driving teacher program is useful for improving the quality of teachers in teaching, so that educators can obtain various trainings to broaden the insights and abilities of educators so that educators can work with the government to realize Merdeka Belajar (Hutauruk & Panjaitan, 2022).

Science Activator Teacher is a teacher who is able to create science learning that is fun, creative, innovative, and applies digitalization and facilitates students' talents and interests through differentiated learning. The implementation of this learning is supported by school facilities as support in the success of the independent learning curriculum at the junior high school level. In science learning, supporting facilities are very important, this is in accordance with the results of research conducted by Siboro et al at SMPN 10 Pematangsiantar that 65.61% of students' science learning outcomes are influenced by the completeness of learning facilities, while 34.39% is influenced by other factors (Joni Wilson Sitopu, 2020). Science teachers at Muhammadiyah Junior High School use laboratory facilities in supporting science learning activities, this is in line with Sulistyanto's statement in his research, that laboratory facilities affect teaching and learning activities which ultimately affect the effectiveness of learning (Sulistyanto, 2017).

Learning activities are currently timed for the implementation of the Pancasila Learner Profile Strengthening Project (P5). P5 is learning that combines cross-disciplinary, practice-based knowledge about understanding material and solving problems that are directly solved by students (Affiza, 2022). According to Harefa in his research, a science teacher in improving students' talents not only involves certain skills, but also relates to the role of developing natural abilities that require development and training to acquire knowledge and skills (Harefa et al., 2022).

Based on research conducted by researchers, all teachers at SMP Muhammadiyah 1 Sidoarjo are very supportive of the activities of the driving teacher program. This support can be

seen when a driving teacher conducts socialization about learning based on independent learning, all teachers support and are eager to take an active role as good participants. Teachers also apply the results of socialization from a driving teacher in their teaching and learning activities. The driving teacher of science in succeeding the independent learning program has an effective strategy, namely by designing student-centered learning and according to student needs, differentiating, conducting independent learning through the independent teaching platform, participating in webinars and participating in learning communities. This statement supports the results of Helmi's research which states that differentiated learning can help students achieve optimal learning outcomes, because the activities they produce are in accordance with their learning interests (Ipa et al., 2023). Differentiated learning is learning activities that support students to learn according to their unique abilities, preferences and needs (Gusteti & Neviyarni, 2022).

CONCLUSION

Based on the results of the study, it can be concluded that the science teacher has an important role in the success of the independent learning program at SMP Muhammadiyah 1 Sidoarjo. The role of the science teacher includes: 1) the science driving teacher already knows about the Merdeka Curriculum and has participated in socialization activities regarding the implementation of the Merdeka Curriculum, so that the science driving teacher will share information about the implementation of the Merdeka Curriculum with the teachers, and the school, 2) the science driving teacher has simplified the lesson plans in learning activities as one of the implementations of the Merdeka Curriculum, 3) the science driving teacher has passed the driving teacher education, so that the driving teacher has been equipped with material about the Merdeka Curriculum and is required to be able to convey information to other teachers in the school, 4) the science driving teacher carries out socialization about the Merdeka Curriculum and provides information about the implementation of learning using the Merdeka Curriculum to all teachers at SMP Muhammadiyah 1 Sidoarjo, 5) The driving teacher of science stated that the independent learning program that has been implemented is a good program in improving the quality of education, especially at SMP Muhammadiyah 1 Sidoarjo, 6) the driving teacher of science is a graduate from science edu-

cation, according to the subject he teaches, but to become a driving teacher, all subject teachers can take part in the selection of driving teachers and have the opportunity to become a driving teacher according to the subject they teach, 7) the driving teacher uses the facilities and infrastructure already available at school as support in implementing learning in the Merdeka Curriculum, 8) the science driving teacher states that the time of activities and learning at school is not an obstacle in implementing the Merdeka Curriculum, 9) the results of science learning taught by the science driving teacher show a satisfactory average score. In future studies, researchers hope that there will be more than one driving teacher with different schools who are resource persons in the study, so that the data analysis will be more in-depth.

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