# LEARNING INDEPENDENCE AND SCIENCE LITERATURE ABILITY OF STUDENTS IN LIMITED DIRECT LEARNING IN ISLAMIC PRIMARY SCHOOL

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## ABSTRAK

Pandemi Covid-19 memicu pelaksanaan sistem pendidikan di Indonesia mengalami perubahan, salah satunya dengan pelaksanaan pembelajaran tatap muka terbatas (TMT). Untuk menunjang pembelajaran tatap muka terbatas siswa diharapkan memiliki kemandirian belajar, selain itu dengan adanya kurikulum merdeka belajar menuntut siswa menguasai kemampuan literasi. Salah satu kemampuan literasi adalah kemampuan literasi sains. Penelitian ini bertujuan untuk mendeskripsikan tingkat kemandirian belajar siswa dan kemampuan literasi sains siswa dalam penerapan sistem pembelajaran tatap muka terbatas pada jenjang sekolah dasar keislaman. Dengan adanya penelitian ini diharapkan dapat dijadikan landasan dalam mendesain pembelajaran supaya kemandirian belajar dan kemampun literasi sains dapat terlatihkan sejak dini. Metode dalam penelitian ini menggunakan pendekatan kuantitatif jenis survey. Sampel dalam penelitian ini adalah siswa kelas IV MI, dengan menggunakan instrument angket kemandirian belajar dan tes kemampuan literasi sains siswa. Teknik analisis data menggunakan statistik deskriptif. Hasil penelitian menunjukkan bahwa tingkat kemandirian belajar siswa masih rendah yaitu 28%, sedangkan kemampuan literasi sains siswa juga rendah yaitu 48%. Salah satu faktor rendahnya kemandirian belajar dipengaruhi karakteristik siswa jenjang dasar sendiri dan kemampuan literasi sains siswa tidak dapat dilatihkan seketika dan harus bertahap sesuai dengan jenjangnya.

**Kata Kunci**: Kemandirian belajar, Kemampuan Literasi Sains, Pembelajaran Tatap Muka Terbatas, Sekolah Dasar

## *ABSTRACT*

*The Covid-19 pandemic has triggered changes in the implementation of the education system in Indonesia, one of which is the implementation of limited face-to-face learning (TMT). To support limited face-to-face learning, students are expected to have independent learning, in addition to the existence of an independent learning curriculum that requires students to master literacy skills. One of the literacy skills is scientific literacy skills. This study aims to describe the level of student learning independence and students' scientific literacy skills in the application of the face-to-face learning system limited to the Islamic elementary*

*school level. With this research, it is hoped that it can be used as a basis for designing learning so that independent learning and scientific literacy skills can be trained from an early age. The method in this study uses a survey type quantitative approach. The sample in this study were students of class IV MI, using a learning independence questionnaire instrument and a student's scientific literacy ability test. The data analysis technique used descriptive statistics. The results showed that the level of student learning independence was still low, namely 28%, while the scientific literacy ability of students was also low, namely 48%. One of the factors of low learning independence is influenced by the characteristics of the elementary level students themselves and students' scientific literacy skills cannot be trained immediately and must be gradual according to their level.*

***Keywords:*** *Learning Independence, Scientific Literacy Ability, Limited Face-to-face Learning, Elementary School*

## INTRODUCTION

Since the start of the Covid-19 pandemic era, education in Indonesia has undergone several technical changes in its implementation. In early March 2020, distance learning became an alternative for the government, so students were required to study from home with parental guidance under teacher coordination (Onde et al., 2021). However, the implementation of distance learning implemented by the government encountered several obstacles, some of which were the lack of supporting infrastructure, the level of teacher readiness, and the level of student adaptation (Lie et al., 2020). Following up on several problems that arose during the technical implementation of distance learning, in early 2021 several Ministries agreed to decide to carry out Face-to-face Learning with various provisions in it (Kemendikbud RI, 2020).

Over the past few months, research related to the implementation of the Limited Face-to-Face (TMT) learning system in several sample schools explained that face-to-face learning activities continued normally despite the limited time available in accordance with government regulations (Nissa & Haryanto, 2020), most people Parents agree with the limited implementation of face-to-face learning (Powa et al., 2021), but in terms of the implementation of the

teaching and learning process in the classroom, the delivery of material only conveys the important points and emphasizes the completion of practice questions, so students are required to focus on following learning (Onde et al., 2021). The limited time, the lack of delivery of learning materials, as well as the demands for the achievement of the planned competency standards, require teachers, students, and parents to work together to work together to answer these challenges.

Judging from the type of approach, TMT learning can be categorized into student centered learning, thus encouraging students to always actively participate in every learning activity. By actively participating in learning, learning initiatives will be formed from within students, which will then develop their learning independence (Sanjaya, 2021). Independence can be interpreted as self-regulation, which says that a person is able to incorporate their 'values and reasons' into a rational decision-making process according to their wishes (Jones, 2019). Independence is very important in growing intrinsic motivation (Wu, 2013), Students' independence is considered to be able to trigger higher-order thinking, especially when students develop their understanding through the process of implementing education (Teimourtash & Yazdani Moghaddam, 2017). able to solve problems in learning (Purwaningsih & Herwin, 2020).

With good learning independence, it is hoped that students will be able to prepare for AKM (Minimum Competency Assessment) as a substitute for the National Examination in the midst of limited face-to-face learning. The existence of a policy on AKM (Minimum Competency Assessment) requires the existence of several abilities that must be possessed by students. Among them are literacy and numeracy skills.

The international literacy evaluation conducted by the OECD (Organization for Economic Cooperation and Development) through the Program for International Student Assessment (PISA) shows that the scientific literacy value of Indonesian students is still low at level 1 and ranks Indonesia 60th out

of 72 countries (OECD, 2019). The low PISA scores related to students are unusual for the type of high order thinking skill (HOTS) questions that dominate on scientific literacy questions equipped with diagrams, pictures, maps, tables, and charts (Anagnostopoulou, K., Hatzinikita, V . & Christidou, 2012). Scientific literacy ability can be explained as the ability to solve problems and make decisions with the knowledge they have according to their level and being able to take advantage of the surrounding technology (Anagnostopoulou, K., Hatzinikita, V. & Christidou, 2012). Scientific literacy as measured through PISA is applied only to students aged 15 years (Hadi & Mulyatiningsih, 2009), namely to students at the junior high school level. So it is necessary to measure the scientific literacy ability of elementary level students by adopting PISA questions, so that students' scientific literacy skills can be trained as early as possible. In a previous study (Kadaritna, et al 2020) the research was conducted at the general elementary school level, and not yet at the basic religious level. Based on the previous explanation, students' learning independence and scientific literacy skills are important points in an effort to optimize the TMT learning system as a preliminary study by researchers, therefore researchers intend to analyze them and find out the level of learning independence and scientific literacy skills of students in Tuban district through aresearch entitled "Profile of Independent Learning and Scientific Literacy Ability at Elementary School Level".

## DISCUSSION

### Independent Learning

Learning independence is a learning activity carried out by students without relying on the help of others to achieve material understanding with awareness of themselves and can apply it to everyday problems around them (Suhendri, 2011). In addition, self-regulated learning can be defined as self-initiated actions which include goal setting and regulatory efforts to achieve goals, time management, and regulation of the physical and social environment (Kurniawan, 2020). In line with this, Hidayat, et al (2020) also stated that learning independence is a learning activity

that is carried out by a person without relying on the help of others as an increase in knowledge, skills, or achievement development, which includes determining and managing their own teaching materials. , time, place, and utilize various learning resources. In addition, Badjeber (2020) Learning independence refers to the willingness and ability of each individual to learn on their own initiative, with or without the help of other parties in determining learning goals, learning methods, and evaluating learning outcomes. This means that students who have independent learning will be more creative and superior than students who have not developed the initiative to learn from within themselves.

Learning independence is a very important character instilled in students (Purwaningsih & Herwin, 2020). So that with the independence of learning students can learn independently. Independent learning is a learning activity carried out by students with little or no help from outsiders, even students can be responsible for making decisions related to the learning process (Mulyaningsih, 2014). Independent learning requires strong motivation so that students can do their work independently. That motivation can encourage the intention to learn independently.

Learning independence has several indicators including: a) initiative and intrinsic learning motivation, b) the habit of diagnosing one's own learning needs, c) setting learning goals/targets, d) monitoring, regulating, and controlling learning, e) viewing difficulties as challenges, f) utilizing and searching for sources of relevant learning materials, g) selecting, and implementing learning strategies, h) evaluating learning processes and outcomes, and i) self-efficacy (Ariyanti, 2019. Through independent learning students can explore their own potential because of learning Independent will build knowledge that is already known and form new knowledge responsibly. In its development, learning independence is influenced by factors that come from within and from outside students. Aisah et al (2018) explained that internal factors that influence student learning independence are aspects of discipline, motivation, responsibility,

initiative, and self-confidence. This is in line with Dewi (2017) which states that there are five internal aspects of a person that affect his or her learning independence, including (1) discipline; (2) confident; (3) motivation; (4) initiative; and (5) responsibility.

**Science Literacy**

The term literacy is defined as the ability to read and write, then develops to include the process of reading, writing, speaking, listening, imagining, and seeing (Amri & Rochmah, 2021; Siskawati et al., 2021). Facing the demands of the times, the Indonesian people are expected to master at least six types of literacy, namely: literacy, numeracy, science, digital, financial, and culture and citizenship (Liestari & Muhardis, 2020). One type of literacy that must be mastered is scientific literacy, which is a person's ability to use scientific concepts including knowledge, scientific skills, and scientific technology to care about issues related to science and apply them in everyday life (OECD, 2019; Sukowati et al., 2017; Thahir et al., 2021).

The National Research Council (2012) states that the set of scientific competencies required for scientific literacy reflects the view that science is an ensemble of social and epistemic practices common to all sciences, framing all competencies as action. Scientific literacy skills are not only related to understanding scientific concepts, but also understanding the scientific process, as well as its applicative abilities in everyday life (Sukowati et al., 2017). Meanwhile, the analysis of scientific literacy skills according to the Program Internationale for Student Assessment (PISA) relates to three aspects including: explaining scientific phenomena; evaluate and design scientific investigations; interpret scientific data and evidence.

This research was conducted at MI NU Hidayatun Najah Tuban in December 2021 in class IV, which consisted of 26 students. Before conducting the research, the researcher validated the instruments arranged according to the indicators adopted from Gormally et al. (2012). The validation of the student's scientific literacy ability test carried out by researchers was expert validation, namely experts in the field of science. As for the results of the

research that has been carried out, the results of the independent learning and scientific literacy abilities of students are described as follows.

**Student Learning Independence**

Based on the results of research that has been carried out by researchers through questionnaires distributed to class IV students of MI NU Hidayatun Najah Tuban, totaling 26 students

In general, student learning independence in face-to-face learning is limited to low, only 1 indicator has reached 50%. Meanwhile, other indicators have not reached 50%. This is because elementary age children still like to play, move and like to do things directly. This is in accordance with the opinion of Desmita (2016) in general, the characteristics of students at elementary school age include enjoying playing, enjoying moving, enjoying working in groups, and enjoying feeling or doing things directly.

**Students' Science Literacy Ability**

Based on the results of research that has been carried out by researchers, which were tested on fourth grade students of MI NU Hidayatun Najah Tuban, totaling 26 students, it showed that the highest student's scientific literacy ability was indicator 2, namely making graphs accurately from the data, namely 85%. While the results of the analysis of students' low scientific literacy skills are indicator 7, namely making inferences, predictions, and drawing conclusions based on quantitative data, which is 4%.

In general, the scientific literacy ability of the fourth grade students of MI NU Hidayatun Najah shows that they tend to have low scientific literacy skills for each indicator. This can be seen from the 7 indicators of scientific literacy ability analyzed, 2 indicators show the percentage of correct answers is below 25% and the percentage of correct answers of all indicators is below 50%.

The inability of students in scientific literacy skills proves that students have not been able to solve problems in everyday life scientifically and communicate the results of experiments carried out in writing. The inability of these students shows that learning science or science class IV at MI NU

Hidayatun Najah Tuban has not been implemented according to the nature of science.

One of the factors that cause students' scientific literacy skills to be low, among others, are students who are not accustomed to completing tests of scientific literacy skills or problems related to science process skills which are the main part of scientific literacy.

Based on the results of the analysis of students' initial scientific literacy abilities, it is necessary to have learning that can practice science process skills so that students are accustomed to doing things related to scientific literacy activities including identifying scientific questions, providing scientific explanations of phenomena and using scientific evidence. According to Diana et al. (2015), so that scientific literacy skills can be improved properly, teachers are encouraged to start introducing and teaching material using various strategies that can train scientific literacy skills, including teaching material through experiments that can stimulate high-level thinking and are contextual in nature.

According to Rizkita et al. (2016), increasing scientific literacy skills can be done through learning that emphasizes problem solving skills which can be done with Problem-Based Learning (PBL) strategies. Probosari (2016) provides research results that the level of scientific literacy increases through inquiry-based learning. In line with that, (Creswell & Creswell, 2018) recommends a learning cycle learning model in practicing scientific literacy skills. In addition to learning, increasing scientific literacy skills can also be improved

By developing practical instructions in accordance with research

## CONCLUSION

Based on the research that has been done, it can be concluded that the level of learning independence and scientific literacy skills of students in face-to-face learning is limited in class IV MI NU Hidayatun Najah is low. Low learning independence is due to the characteristics of elementary level students who still like to play, move and do anything directly. Meanwhile, students' scientific literacy skills are low because students' scientific literacy

skills cannot be trained instantly, but require a process of training.

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