



## Understanding Basic Literacy and Information Literacy for Primary Students

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### Abstract

This research describes basic literacy and information literacy for elementary (primary) students. This research is library research. The analysis shows that primary students should understand six basic literacies, including 1). Literacy Read and Write (ability to understand the contents of written texts both explicit and implicit). 2). Numerical Literacy (ability to use basic mathematical symbols and numbers to solve practical problems and analyze mathematical information). 3). Scientific Literacy (ability to understand natural phenomena both scientific literacy and social phenomena). 4). Financial Literacy (ability to understand finance, concepts, management, risks, and skills in the financial sector. 5). Digital Literacy (ability to use digital media, create communication content, and filter information). 6). Cultural Literacy and Civic (ability to understand values, rights, and obligations as Indonesian citizens). Besides, understanding information literacy is also important for students. Several benefits of literacy are 1) training basic skills to read, write, and count, 2) developing to think critically and logically when entering society and facing any situation. 3) having good literacy development correlates with better learning and communication skills, solving logical problems even academic achievement.

### Abstract

Penelitian ini mendeskripsikan literasi dasar dan literasi informasi untuk siswa sekolah dasar (SD). Penelitian ini merupakan penelitian kepustakaan. Analisis menunjukkan bahwa siswa sekolah dasar harus memahami enam literasi dasar, termasuk 1). Literasi Baca Tulis (kemampuan memahami isi teks tertulis baik tersurat maupun tersirat). 2). Literasi Numerik (kemampuan menggunakan simbol dan angka matematika dasar untuk memecahkan masalah praktis dan menganalisis informasi matematika). 3). Literasi Ilmiah (kemampuan memahami fenomena alam baik literasi sains maupun fenomena sosial). 4). Literasi Keuangan (kemampuan memahami keuangan, konsep, manajemen, risiko, dan keterampilan di bidang keuangan. 5). Digital Literacy (kemampuan menggunakan media digital, membuat konten komunikasi, dan menyaring informasi). 6). Literasi Budaya dan Kewarganegaraan (kemampuan memahami nilai, hak, dan kewajiban sebagai warga negara Indonesia). Selain itu, pemahaman literasi informasi juga penting bagi siswa. Beberapa manfaat literasi adalah 1) melatih keterampilan dasar membaca, menulis dan berhitung, 2) berkembang berpikir kritis dan logis ketika memasuki masyarakat dan menghadapi situasi apa pun. 3) memiliki perkembangan keaksaraan yang baik berkorelasi dengan kemampuan belajar dan komunikasi yang lebih baik, memecahkan masalah logis bahkan prestasi akademik.

### INTRODUCTION

Education is important for every individual and nation (Permanasari, 2023). One of the biggest problems in education in Indonesia is the low quality of education (Iman, 2022). The

government has attempted numerous policies to address this issue, but the results do not appear to be significant. Based on multiple literature sources and field observations, the problem of low-quality education was precipitated by students' poor literacy skills in learning and daily life activities. A nation with quality education will have dependable human resources and the ability to compete globally. To achieve quality education, comprehensive and integrated efforts are required, with the implementation of literacy being one of them. Literacy is one of the essential skills that every individual, including students, must possess in an era where information and technology continue to develop at a rapid rate.

One of the important levels of education is to cultivate literacy school at the elementary school level (Maulidah et al., 2019). Early-grade students are in the early age range. This early age is a very important period of child development (Apriani & Ariyani, 2017). Therefore, at this time all the potential that students have needs to be encouraged. Student development that needs attention is language development and literacy skills. Literacy is defined as more than just reading and writing. Students' literacy skills are very important in developing communication skills, both textually, visually, and audiovisual (Nurhayati, 2019). Elementary school was chosen as a means of instilling literacy because it is hoped that by habituating literacy from an early age, students can acquire literacy habits as a provision for the future (Setiawan & Sudigdo, 2019). Early childhood education aims to develop all aspects of child development to bring out their potential optimally (Hidayatussoalihah et al., 2022). Based on the Decree of the Head of Standards, Curriculum and Education Assessment Agency of the Ministry of Education, Culture, Research and Technology No. 008/H/KR/2022 regarding Early Childhood Learning Outcomes including religious values and character, identity, literacy basics, mathematics, science, technology, engineering, and art. Literacy abilities are one of the outcomes of students' education.

Language acquisition should be conceptualized as a developmental sequence (Fajriyah, 2018). Literacy is a wide phrase that refers to a collection of abilities and individual skills in reading, writing, speaking, calculating, and problem-solving that are required for everyday life. Therefore, literacy and language abilities cannot be separated. Literacy is crucial to the existence of a learning society in the current age of knowledge (Nurchaili, 2017). Literacy is traditionally defined as the ability to read and write. Literacy is not limited to reading and writing; critical thinking skills are required to evaluate print, visual, digital, and aural sources of information to develop knowledge, skills, and attitudes (Purwo, 2017). This is what information literacy entails. Literacy can be defined as the ability to locate information through reading and writing. Literacy encompasses much more than just the world of reading and writing, but also educational activities, technological advancements, and scientific research. Thus, the purview of literacy is more complex. Literacy is derived from the English word "letter" and the Latin word "literature"; literacy can also be interpreted as the capacity to comprehend letters/characters and to be visually literate. Because the ability to comprehend facilitates the translation of existing concepts. Literate individuals are those who can read and write or are free of illiteracy.

Literacy then develops the skills of reading, writing, speaking, and listening. Literacy is now understood to refer not only to reading and writing but also to knowledge of a far wider range of subjects that carry equal or more weight. This expansion of the concept has occurred over time. These changes are the result of several factors, including the expansion of meaning as a result of increased usage, the advancement of information technology and technology, and changes in analogy (Abidin et al., 2021). Literacy is the ability to comprehend and manipulate information through reading and writing. The definition of literacy is constantly evolving in response to the challenges of the times. Literacy was limited to reading and writing in the past. When literacy in a broad sense is already in use. Six categories of fundamental literacy must be mastered: reading and writing literacy, numeracy literacy, scientific literacy, financial literacy, digital literacy, and cultural and civic literacy.

Each form of literacy contributes to an individual's development and daily life. Through the Directorate of Schools, the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) endeavors to build the capacity and competence of the school community

to enhance the basic literacy skills of the school community, in particular students. One of these initiatives is the design and development of a fundamental literacy program, which includes reading literacy, writing literacy, numeracy, scientific literacy, digital literacy, financial literacy, and cultural literacy for school members as a general target and students as a specific target.

Basic literacy in students is a solid foundation for understanding, interpreting, and participating in this increasingly complex world. Basic literacy is a basic ability that must be possessed by every individual. Basic literacy in students refers to the basic skills needed to read, write, and understand information well. More than just mastering reading and writing skills, basic literacy also includes understanding content, critical thinking, and effective communication skills. Basic literacy lays the foundation for lifelong learning, enabling students to learn independently, access information resources, and participate actively in society. Types of basic literacy in students include a variety of skills that are interrelated and mutually supportive.

The goal of fundamental literacy is to develop the skills, attitudes, and comprehension of various sources and learning aids, including the use of the environment, to make learning more active and creative. Additional supporting activities, such as an introduction to the six fundamental literacy skills, are required to optimize the active and creative learning process (Rahmawati, 2022). Literacy consists of the necessary abilities and skills in reading, writing, speaking, calculating, and solving problems. Reading, writing, arithmetic, science, digital, finance, culture, and civic engagement are the components of fundamental literacy.

There have been numerous previous studies on basic literacy. Herawati et al. (2019) state report that 67.3% of State Vocational High School pupils in Makassar City scored in the medium category for literacy. In the median category for numeracy literacy, with a percentage of 70.7%. 71.3 percent of individuals have a moderate level of scientific literacy. 66.0 percent of individuals have a moderate level of digital literacy. 72.7 percent of respondents rated their financial literacy as moderate, while 72.0 percent rated their cultural literacy as moderate. According to Harahap et al. (2022), 58.89% of students possessed inadequate reading literacy skills on average. The average scientific literacy rate among students is 46.93%, which is a very low rate. The average percentage of pupils who are mathematically literate is 57.67%, which is regarded as insufficient. Therefore, it can be concluded that the literacy skills of elementary school pupils in Padangsidempuan remain inadequate. The average percentage of students with reading, science, and mathematics literacy is 54.46 percent, proving this point. The researcher wishes to elaborate on literacy and the significance of literacy for primary (elementary) students in light of the antecedent explanation. Therefore, the purpose of this study is to describe the fundamental literacy and information literacy of secondary students because one of the important levels of education is to cultivate literacy school at the elementary school level. Early-grade students are in the early age range. This early age is a very important period of child development. Therefore, at this time all the potential that students have needs to be encouraged.

## **METHOD**

The writing methodology used in this article is library research. This research contains a literature review of the importance of literacy in education from various sources. The purpose of using library research is to prepare the first step in making a research plan by utilizing literature to obtain data in the field. The sources referred to in this article are various kinds of reference sources such as primary sources (journals, research data, research reports, etc.), and secondary sources in the form of books and research articles. After these references became the basis for thinking in making this article. Then, the next step is to synthesize information or ideas for solutions to the various problems that occur from the reference sources that are collected.

## **Findings and Discussion**

### **The Importance of Literacy in Education**

Literacy is a vital component of education. Literacy is a fundamental skill that all students must possess. Literacy enables students to comprehend and apply the knowledge they acquire in school. Literacy is very beneficial for students. This is a beginning for students to be able to broaden their horizons as much as possible; it is anticipated that with a deeper comprehension, students will contribute to the future advancement of Indonesian education. The modern significance of literacy abilities as the foundation for mastery of science and technology (Fajriyah, 2018). Technological literacy is the capacity to comprehend how devices function, technology applications, and how to achieve optimal results using technology-based products. Human literacy comprises scientific, linguistic, and numeric literacy skills that cultivate communication, collaboration, critical thinking, and innovative and creative abilities.

Purwo (2017) states that literacy is essential for creative and productive learning. The literacy movement in elementary schools can foster critical thinking skills that are essential for the implementation of creative-productive learning. The significance of a balanced curriculum. (2) Exploratory activities on creative-productive learning necessitate literacy skills such as reading, writing, and information organization to solve problems and discover new ideas. (3) Literacy skills will enable students to investigate, undertake observation, interviews, and experiments, as well as be discerning in arranging information from diverse sources, thereby enhancing the implementation of creative productivity in elementary schools. Literacy incorporates the ability to read and write as well as data literacy, technological literacy, and human literacy. The ability to discern, analyze, and derive logical conclusions from gathered data and information constitutes data literacy.

To face the digital era, parents must also be able to use technology to introduce early literacy to their children at an age-appropriate level (Inten, 2017). Students will enjoy literacy culture if they participate in literacy activities and receive support from all family members, for example. Students who grow up in a literate environment will have access to a wealth of information, be able to broaden their horizons of the world, and eventually contribute to the advancement of themselves, their families, society, and Indonesia. Besides, literacy development can be done by teachers to create, organize, and develop materials, media, strategies, and activities contained in teaching materials that will later be applied or applied in the process of learning in class according to the level of early childhood (Amalia et al., 2022).

### **Basic Literacy Skills**

Improving the quality of education can be done by instilling a culture of literacy. Cultivating a culture of literacy in schools can be done by strengthening the six literacies base. In 2015, the World Economic Forum or World Economic Forum confirmed that mastery of the six basic literacy, namely literacy, numeracy, scientific literacy, digital literacy, financial literacy, and civic cultural literacy, is one of the 21st-century competencies that are needed by all citizens of the world, especially students. The World Economic Forum or World Economic Forum also confirmed that mastery of these six basic literacy is one of the 21st-century competencies that are needed by all citizens of the world. The World Economic Forum or World Economic Forum is also known as the World Economic Forum. Implementation of the six basic skills can be done in activities extracurricular and extracurricular activities at school. Instilling a culture of teacher literacy is one of the main spearheads implementations of mastery of six basic literacy skills.

In the context of education, implementing basic literacy is very important (Permanasari, 2023). However, basic literacy is a must-have basis before learning more complex material. By mastering basic literacy, students will be able to understand the material being taught more easily and be able to apply it in everyday life. Basic literacy in students is an important foundation in equipping them to function well in a modern society full of information and challenges. The six types of basic literacy that students must master, namely reading-writing, numeracy, science, digital, finance, and cultural-civic, form a strong foundation in the teaching-learning process. With a holistic and sustainable approach, we can improve basic literacy in students and equip them to face the future with confidence and comprehensive skills. The development of these six types of

basic literacy is an effort so that Indonesian citizens have the skills of the 21st century to become human beings who can think critically, creatively, communicatively, and collaboratively as well as character. As a basis for achieving stated goals in building Indonesia's golden generation in 2045 (Jaelani, 2022). Applying these six basic literacy in the world of education is important for creating quality education. In this case, the role of the teacher must be to create a conducive learning environment and encourage students to develop their basic literacy skills.

There are some steps that teachers can take to implement basic literacy in learning: 1) Creating a conducive learning environment. Teachers must create a conducive learning environment for students. This includes good room settings, adequate lighting, and a comfortable atmosphere. With a conducive environment, students will feel comfortable and focused on learning. 2) Using effective learning methods. Teachers must use effective learning methods and follow the material being taught. Effective learning methods will make it easier for students to understand the material being taught and be able to apply it in everyday life. 3) Establish good interactions with students. Teachers must have good interactions with students so that students feel comfortable in learning. This includes giving rewards and positive feedback, as well as encouraging students to actively participate in learning. 4) Improving students' ability to think critically and creatively. Teachers must encourage students to think critically and creatively in learning. This can be done by giving assignments or projects that require critical and creative thinking, as well as providing space for students to argue and debate about a topic. 5) Integrate basic literacy in learning in the curriculum. Teachers must integrate basic literacy into the curriculum so that students can develop basic literacy skills in a structured and systematic way. This can be done by inserting basic literacy material into existing subjects, or by creating special basic literacy subjects. 6) Using a variety of learning resources. Teachers must use a variety of learning resources so that students can develop basic literacy skills better. This can be done by using books, digital media, or other learning resources that are relevant to the material being taught. 7) Provide opportunities for students to learn independently. Teachers must provide opportunities for students to learn independently. This can be done by giving assignments or projects that require independent problem-solving, or by giving students opportunities to research and explore topics they are interested in. To create support for quality education, in addition to implementing the six basic literacy in learning, the role of parents is also very influential. In this case, what parents can do is provide guidance and support, as well as facilitate students with relevant learning resources. The role of teachers and parents is very influential in developing students' basic literacy skills. Therefore, good cooperation is needed between teachers, parents, and students in creating quality education.

Therefore teachers must understand the six basic literacy and how to implement them in school. Although currently learning in schools is carried out in a limited way, this is not the case become an obstacle to implementing the six basic literacy. Schools and teachers can adjust all literacy activities in schools based on the existing situation. For example, during the teaching and learning process, the teacher can implement the six basic literacy activities by continuing to comply with health protocols and other applicable regulations. A school is a place of transformation of literacy culture. Every school should be able to instill a culture of literacy. Planting literacy culture in schools can be developed through the implementation of activity six basic skills. Six basic literacy skills can be implemented to instill a culture of literacy and improve the quality of education.

### **1. Reading and Writing Literacy**

Reading and writing literacy include all aspects of basic literacy because all other aspects of basic literacy, including numeracy, scientific, technological, financial, cultural, and civic literacy, rely on reading and writing abilities as fundamental competencies. Literacy development activities for reading and writing have two primary focuses: first, activities for developing reading and writing skills; and second, activities for improving literacy content abilities (fields of study or

themes in the text read or written). Developing reading and writing skills is the primary goal of literacy development activities for reading and writing.

Reading and writing are important activities. Literacy, which refers to the capacity to read and write, is a talent that ought to be held by every person. These talents assist us in comprehending and effectively processing and conveying information to others. According to Basyiroh (2017), the ability of students to read and write is intimately connected to their progress toward literacy, which is developed in tandem with this skill (Rahman et al., 2021). The purpose of developing fundamental literacy in students from a young age is to teach children to read and write from a young age and to foster a love of reading and writing. This is the purpose of fostering fundamental literacy in students at a young age. To be successful in the sphere of education, the ability to read and write is indispensable. Students who can read and write well will have an easier time comprehending the content that is being presented to them, and they will also be able to articulate their ideas more clearly.

Literacy to read and write has a very fundamental position, function, and role strategic. It means so because this literacy does not only underlie the overall meaning types of literacy that exist now but also becomes the mainstay and foundation of mastery of other literacy skills. Thus, literacy is the deepest element in all types of literacy. This makes literacy the main support for the realization of a literate society and a reading and writing culture literacy skills (reading and writing) in the early grades play an important role in determining learning success (Sismulyasih, 2018). At this level, learning reading and writing needs an introduction. Neither of these skills develops on its own, but necessary taught. If literacy learning (reading and writing) in the early grades is not strong, then at the stage of reading and advanced writing students will experience difficulty to be able to have the ability adequate reading and writing. In this case, the teacher is one of the main spearheads in the implementation of mastery of literacy skills.

Quality education is an important requirement in the era of increasingly competitive global competition. Policymakers at the central level are certainly aware of this. To make the world of quality education, of course, many factors are related and influence each other. Therefore, one of the government's efforts to make quality education is through increasing literacy culture both reading and writing (Suragangga, 2017). Cultivating a literacy culture that is nurtured from an early age will have a positive impact on students one form of literacy is reading-writing. There is National Literacy Movement made by the government is a real picture of how important it is to grow literacy culture in life (Ifadah, 2020). As prospective educators, teachers should have a broad understanding of literacy culture for early childhood. (Basyiroh, 2017) states that the program for developing students' literacy skills includes planning a program for developing literacy skills, the program implementation process, the use of teaching materials, learning media, and program support facilities.

Under Regulation Minister Number 23 of 2013, the Ministry of Education and Culture launched a school literacy program in the year 2013. The purpose of the movement was to offer aid to students in the process of establishing a culture of reading and writing within the context of the educational setting. (Mitasari, 2017). According to Safitri & Dafit (2021), the function of the teacher in the School Literary Movement, also known as Gerakan Literary Sekolah (GLS), is to act as a facilitator by providing services to aid the learning process and to act as a motivator for students in the learning process. This is all part of the teacher's responsibility to lead students in identifying the appropriate reading materials. Within the context of the School Literacy Movement, this is the function that the educator performs in the process of reading. While it is the responsibility of the teacher of writing to train students in the process of generating written work, the teacher also functions as a facilitator by giving students with opportunity to engage in activities that bring them joy. The school literacy movement is a program that should be adopted as quickly as possible in the education sector. This is because it helps students improve their abilities in listening to others, speaking in front of others, reading, and writing. This is due to the fact that the program is really important. Students' literacy skills are inextricably linked to their

capacity to meet the criteria of reading skills, which in turn lead to the competence to interpret, research, and apply knowledge.

## 2. Numeracy Literacy

Numerical literacy is the understanding of and the capacity to apply a variety of numbers and symbols to solve everyday issues, followed by the ability to analyze those problems in a variety of formats, and finally, the ability to comprehend the findings of the analysis to make predictions and judgments (Khakima et al., 2021). In addition to being able to interpret the quantitative information that is all around us, the capacity to interpret numerical data is also included in the definition of numeracy. The ability to grasp numbers, symbols, and quantitative information (such as graphs, tables, and charts), and then to use one's interpretation of the results of an analysis to make predictions and judgments is strongly tied to having numeracy abilities. Students can implement their mathematical knowledge in the actual world if they possess strong numeracy literacy skills (Mulyati & Watini, 2022). So, numeration is the ability to employ the concept of numbers and skills in arithmetic operations in ordinary situations (Iman, 2022).

Mathematical literacy is a component of mathematics. Therefore, the components of numeracy literacy implementation cannot be isolated from mathematics content (Ekowati et al., 2019). However, numeration is distinct from mathematical competence. Both are predicated on the same knowledge and skills, but the distinction rests in how this knowledge and skill is empowered. A person's math knowledge alone does not constitute numeracy abilities. However, numeration is distinct from math proficiency (Dantes & Handayani, 2021). The distinction resides in the empowerment of this knowledge and skill. Mathematical knowledge alone does not confer numeracy skills on a person. Numeracy is the ability to apply mathematical concepts and norms to real-world problems that are frequently unstructured, have multiple solutions, have no complete solution, and are influenced by non-mathematical factors. According to Perdana & Suswandari (2021), numerical literacy includes three components: arithmetic, numeracy relationships, and arithmetic operations. Counting is the ability to verbally enumerate an object and identify the number of objects. The ability to distinguish the quantity of an object as more, less, taller, or shorter is related to numerical relations. In contrast, arithmetic operations are the ability to perform addition and subtraction as fundamental mathematical operations.

Mahmud & Pratiwi (2019) describes how a child's numeracy skills can be determined through informal numeracy, numeracy knowledge, and formal numeracy. At the informal numeration level, pupils can count coherently and identify the characteristics of objects. Informal numeration is prevalent from infancy to early elementary school. Students' numeracy skills evolve toward the numeracy knowledge stage as they enter the early years of elementary school. Abilities with numbers progress toward abstract concepts. Students get instruction in the language and symbols of mathematics as part of their formal education. Because the application of arithmetic operations creates mathematical difficulties that are not restricted to everyday life, students are taught increasingly sophisticated mathematical operations when they move on to the formal enumeration level. Students will learn to perform fundamental arithmetic operations including addition, subtraction, multiplication, and division. The teacher incorporates fundamental arithmetic operations into word problems so that students can better comprehend the concept of using arithmetic operations. Therefore, the teacher should be able to implement literacy numeration at school. The benefits of learning numeracy literacy for students namely students have the knowledge and skills in planning and good management of activities, students can do calculations and interpretation of existing data in everyday life, and students can make the right decisions in every aspect of life.

## 3. Scientific Literacy

Scientific literacy is the scientific knowledge and skills to be able to identify questions, acquire new knowledge, explain phenomena based on scientific knowledge, draw conclusions based on facts, understand the characteristics of science, awareness of how science and technology shape

the natural, intellectual, and environment culture, and a willingness to be involved and concerned with issues related to science (Iman, 2022). The scientific knowledge and skills necessary to identify questions, acquire new knowledge, explain scientific phenomena, and draw conclusions based on fact, as well as an understanding of the characteristics of science, an awareness of how science and technology shape the natural, intellectual, and cultural environment, and a willingness to participate in and care about scientific issues, are all components of scientific literacy. Specifically, scientific literacy refers to the ability to identify questions, acquire new knowledge, explain scientific phenomena, and draw conclusions based on fact.

Scientific literacy is the understanding and application of scientific principles in daily life. This skill encompasses knowledge of nature, environment, and technology. Scientific literacy is crucial for preparing students from elementary education through college with the critical thinking, creative, collaborative, and communication skills necessary for the 21st century. Students' scientific literacy can be developed and improved with the aid of appropriate methods and technology (Lestari, 2020). Therefore, students need to have scientific literacy from an early age to provide a basic description of science and improve other aspects of development for early childhood (Zahro et al., 2019). In addition to the application of scientific literacy, it can develop students' abilities in developing science, it can also improve scientific thinking in early childhood. In addition, scientific literacy can also develop the mindset of early childhood by building a character of responsibility towards oneself and the universe. With the application of scientific literacy in early childhood education it is hoped that it will build and develop scientific literacy skills of early childhood educators so that they can implement scientific literacy in student-oriented learning to understand and apply science concepts, using media that is concrete and able to provide an understanding of science to early childhood.

In this digital era, scientific abilities are very important, because rapidly developing technology requires human resources who can apply scientific principles. (Iman, 2022) states that principles that form the basis of scientific literacy for school students are as follows: (1) Contextual, meaning that it takes into account the local wisdom and development of the times; (2) Fulfillment of the social, cultural, and social needs of the state; (3) Adherence to quality standards of learning that are aligned with 21st-century learning; (4) Holistic, meaning that it is integrated with a variety of other literacies, and (5) Collaborative and participatory. Everyone is obligated to provide their support to the growth of scientific literacy because of the necessity of incorporating scientific literacy into early childhood education. By instituting scientific literacy, early childhood is expected to be flexible and adaptable, capable of social interaction, productivity, initiative, and independence, and able to think scientifically (Zahro et al., 2019).

Elementary school is the first formal place for students to learn science learning (Aiman & Ahmad, 2020). One of the lessons in elementary school plays an important role in Natural Sciences or science (Dwisetiarezi & Fitria, 2021). Challenges in the era of globalization can be faced by equipping students with science. Science can be integrated with other learning content in Elementary Schools. The experience that students get in learning science that is carried out properly will provide knowledge, concepts, and skills in science as a basis for continuing to a higher level of education (Windyariani, 2017).

The ability of students to recognize ideas, comprehend, explain, and communicate science, as well as apply science in everyday life, whether in the classroom or the world around their residences, is what we mean when we talk about scientific literacy. This enables students to have a positive attitude and sensitivity to self and environmental interactions (Arlis et al., 2020). The science learning process should develop various aspects of development in early childhood as well as various abilities or early childhood character values. One of them is the ability to think scientifically in early childhood, activities can be carried out through the discovery and processing of information with a scientific approach, namely observing, measuring, classifying, asking questions, solving problems, communicating, and so on.

Primary students need to be exposed to science for them to develop the habits of being curious, having a good attitude, and having a knowledge of the link that exists between science,

the environment, technology, and society. This is the objective of giving elementary school children scientific education. In addition, the development of one's knowledge and comprehension of scientific ideas that are helpful and practical in one's everyday life is something that has to be worked on. As a result, creative and innovative thinking on the part of teachers is required to select learning models and approaches that are adequate and relevant to the requirements and development of pupils. Many other topics and activities may be combined with scientific ones.

#### **4. Financial Literacy**

Financial literacy is knowledge and skills to implement an understanding of concepts and risks, skills to be able to make informed decisions effectively in a financial context to enhance individual and social financial well-being and participation in the community environment (Iman, 2022). Financial literacy must be mastered by students to be more involved in global affairs in the global era. Financial literacy entails not only the ability to manage one's finances (income and expenditures) but also the application of concepts and risks to make informed decisions that are effective and precise. Its purpose is to enhance the financial well-being of individuals, families, and communities.

In general, financial literacy or financial intelligence is the knowledge and skills necessary for survival through the management of financial assets (Ariyani, 2018). However, this knowledge is not taught in elementary school, so difficulties can arise when adults are unable to manage their assets. Financial education in institutions prepares students to become experts at managing family finances. Financial literacy is the capacity to comprehend and effectively manage personal finances. Money management, investment, and financial planning are some of the talents that fall under this category. Students who have a strong understanding of financial concepts will be able to efficiently manage their funds and understand the necessity of doing so. Financial literacy is the knowledge and skills to apply a grasp of ideas and risks, the ability to make effective decisions in a financial environment to promote individual and societal financial well-being, and the capacity to engage in society. Financial literacy may be defined as the knowledge and skills to apply a comprehension of concepts and risks.

According to Rapih (2016), a student's education in financial literacy should not only include an introduction to money, but also an introduction to sensible financial management and the capacity to regulate spending by being able to discriminate between their requirements and their wants. Students will get more used to practicing fiscal restraint after they have developed an understanding of the distinction between necessary things and those that are only desirable. Literacy in the 21st century must include an understanding of basic financial concepts as one of its core components. Understanding Financial literacy is required to educate individuals who are cognizant and comprehend how to manage their finances prudently and follow their requirements. Financial education should begin as soon as feasible, preferably in infancy or early childhood (Ariyani, 2018). So, the students can manage their finances, which is directly related to their future standard of living (Rakhmawati et al., 2021).

Financial literacy is character education because it teaches students to develop a perspective for effective financial management, the primary means of ensuring survival and attaining financial security. Literacy education finance will result in learning outcomes in which students understand the concept of financial education and use it responsibly following their age (Yuwono, 2020). Financial literacy is character education because it teaches students to develop a perspective for effective financial management, the primary means of ensuring survival and attaining financial security. Literacy education finance will result in learning outcomes in which students understand the concept of financial education and use it responsibly following their age (Oktaviani et al., 2022). Financial literacy education for students is not merely an introduction to money and nominal terms, but also an understanding of the concept of properly managing finances and the ability to control financial expenses by distinguishing between needs and wants. Financial literacy

can inculcate character traits such as the ability to allocate funds, exercise emotional control, and differentiate between desires and needs (Sari & Sa'ida, 2021).

Introduce students to financial literacy at a young age, and they will become acclimated to managing their finances properly and accurately in the future. Financial management is essential for managing finances, and one way to do so is to save (Korselinda et al., 2022). Saving should begin at a young age because it will play a crucial role in the future. Saving is one method of money management. Financial literacy is one of the fundamental subjects that must be taught to young children (Ariyani et al., 2022). In the field of psychology, the act of refraining from spending money during the present period to have access to it at a later date is referred to as saving. Students learn frugal habits and financial responsibility when they participate in activities that encourage saving money. Even in the face of more complicated economic and financial events, such as the introduction of digital markets, students' financial literacy has to be increased. This is because digital money makes it necessary for students to interact with digital currency. Families, formal and non-formal institutions, as well as other parties involved in students' daily lives, must collaborate to enhance students' literacy skills. The family must be the first to teach students how to effectively manage their finances. Next is the school, which, as a site where students learn and gain exposure to a variety of new objects and experiences, must also provide a solid financial management education.

A person's financial capability is not only measured by his or her ability to earn a sufficient income but also by his or her capacity to manage finances prudently and appropriately. Financial literacy education is crucial for gaining a deeper understanding of money (Ariyani et al., 2022). Understanding money is a crucial aspect of education, including in preschool and primary school. When they reach a productive age in the future (essential life skills), financial literacy is a crucial provision for them to possess. Students' financial literacy is the primary foundation for future financial management.

## **5. Digital Literacy**

Digital literacy is the understanding and application of digital technology in ordinary life. This ability encompasses the utilization of computers, the Internet, and other digital applications. In the current digital era, digital literacy skills are essential because almost every aspect of existence involves digital technology. The concept of digital literacy can be used to assess the quality of student work in a digital environment (Sujana & Rachmatin, 2019). Anjarwati et al. (2022) state that digital literacy is an attitude, ability, and individual connection when using digital technology or when accessing a communication tool, then managing and integrating the next one to analyze and evaluate the obtained information to build new knowledge (Tuna, 2022). Digital literacy generally refers to the ability to use and comprehend the application of information and communication technology in the field of education. Students' digital literacy includes the ability to use digital devices as a learning instrument (Simbolon et al., 2022).

Digital literacy is the capacity to acquire, comprehend, and utilize digital information from diverse sources (Naufal, 2021). Literacy, in the context of education, leads to the development of subject-specific knowledge as well as inquisitiveness and creativity in students. Students need to be literate or have the capacity to absorb and assimilate information that helps them learn and understand the rapid development of technology to provide quicker access to knowledge (Fitria, 2021a). This will allow for easier learning and comprehension. The problem of an ever-increasing volume of information that is available from digital sources calls for digital literacy as another vital component in finding a solution to the problem.

Today's culture is challenged by extremely rapid technological progress. Moreover, the community must select and filter information. Digital literacy in schools, not just using the internet to search for information or entertainment. Literacy should be a means to form abilities for students in thinking analytically, synthesizing, analyzing, critical, imaginative, and creative (Iman, 2022). Therefore, the implementation of digital literacy in schools is important to achieve awareness of all stakeholders in viewing literacy skills as a measure of the progress of a nation.

The implementation of digital literacy can be used as an alternative to interesting learning using digital resources.

Digital literacy can function as a social reference to facilitate learning. By utilizing source-digital resources, students focus not only on comprehending the material but also on the process of utilizing information technology creatively. Regarding digital literacy, ethics, and collective awareness of social media for students in schools, it is necessary to educate according to the required use and to offer protection against cyberbullying, addictive games, social media victims, and time management victims. Control functions that can be performed by schools and coordination with parents of students and the local community can be integral components of a healthy internet for students of all grade levels.

Utilization and understanding of digital literacy need to be developed to foster student character values in the 21st century (Dewi et al., 2021). The advancement of technology in the field of education creates several benefits, including enhanced learning abilities and easier access to education. However, if its use is not accompanied by the cultivation of character education, it will result in a crisis of values or a decline in values. Integrating digital literacy into character education for students is crucial to achieving technological development (Sherli et al., 2022).

With the existence of technology in society that is increasingly sophisticated, it also has bad effects, but of course, there are also many positive impacts. The good impact of technology is that technology can present complete references with concrete examples from various learning sources, besides that students can also get some information even about news around the world, and also technology can make it easier to send messages between users. However, technology can also have a negative impact, especially for elementary school students where they still really need the assistance of their parents because they are still not able to determine themselves correctly and can think long-term to solve a problem (Anjarwati et al., 2022).

## **6. Cultural and Civic Literacy**

Cultural literacy is the capacity to comprehend and engage with Indonesian culture as a national identity. Iman (2022) explains that one of the six fundamental literacy skills taught at the family, school, and community levels is cultural and civic literacy. Cultural literacy is the capacity to comprehend and appreciate Indonesian culture as a national identity. In contrast, civic literacy is the knowledge of the rights and responsibilities of citizens. Consequently, cultural and civic literacy is the capacity of individuals and communities to conduct themselves following the social status of the environment as a component of a culture and nation. Cultural and civic literacy is the ability of individuals and communities to influence their social environment as members of the culture and the state (Safitri & Ramadan, 2022). This ability includes an understanding of cultural differences, tolerance, cooperation, and participation in social activities. In today's global era, cultural and civic literacy skills are needed, because society is increasingly open and requires human resources who can interact with various cultures.

Cultural and civic literacy are abilities of someone who understands and can act as a society social environment around because is part of a culture and nation. Both cultural and civic literacy in the 21st century is very important for students to master today (Ahsani & Azizah, 2021). Cultural and civic literacy must be introduced from the start because students must know the culture, customs, beliefs, race, and ethnicity Indonesian nation. not only that Of course, students must also be instilled love of the motherland and keep preserving its existing culture. Therefore, students will have a patriotic soul and respect each other.

Cultural and civic literacy is knowledge and skills in understanding and acting toward Indonesian culture (Nudiati & Sudiapermana, 2020). Cultural and civic literacy not only saves and develops national culture but also builds and preserves the identity of the Indonesian nation amidst a global society. Therefore, cultural and civic literacy in the family, schools, and communities are closely related to local wisdom in the environment. It is hoped that a variety of local wisdom can be implemented by internal teachers in the form of various activities or activities at school. Cultural and civic literacy guides and invites people to better understand and act

towards Indonesian culture as a national identity and understand the rights and obligations of citizens in greater depth.

The development of cultural and civic literacy is an integral component of elementary school or primary education (Kabari et al., 2023). Cultural and civic literacy involves an understanding of local, national, and global culture, as well as an understanding of the rights and obligations of active and responsible citizens. With a better understanding of the development of cultural and civic literacy in elementary schools, students can contribute to shaping the younger generation who have a strong understanding of culture, civic and the values that underlie national and state life. Therefore, the experience gained by students will provide value and meaning (Iman, 2022). The nation's literacy culture can be developed through the main door with books or materials adequate for reading and interest in reading (Utami & Muzakki, 2020). Implementation of literacy culture can be done starting with the teacher determining what topics to study for students in cultural literacy activities and civic. Then students can assign tasks related to abilities in writing and reading (literacy) culture and civic.

In the increasingly advanced era of globalization, students need to have a strong understanding of various cultures and nationalities. Elementary school is an ideal place to build this understanding early on (Putri & Nurhasanah, 2023). Cultural and civic literacy refers to an understanding of various aspects of culture and civic values, as well as the ability to interact effectively with individuals from various cultural backgrounds. The results of the study show that cultural and civic literacy are implemented with project-based learning, cooperative learning, contextual approaches, and problem-based learning. Cultural and civic literacy programs have made a significant contribution to the development of global diversity in elementary schools including an increasing understanding of diversity, building inclusive and respectful attitudes, developing intercultural communication skills, and encouraging responsible global behavior.

Literacy programs need to be designed to help students develop understanding, skills, and positive attitudes towards culture and civic. In addition, religious activities integrated into school programs also provide students with a strong moral and spiritual foundation. (Darmawan et al., 2023) The cultural literacy and civics program in elementary schools is cooperation in cleaning the school grounds and tidying up the gardens. Students are invited to participate in this activity to develop a sense of responsibility towards the school. Literacy in education is inseparable from the pedagogical concepts of art, multiple methods of knowing, and multiple intelligences, which have been shown to increase the efficacy of the student learning environment (Sari, 2018). Literacy is an approach to learning that was devised in recognition of the diversity and complexity of students' cultural perspectives and the diversity of their learning. Therefore, it is believed that literacy education can prepare students to study and perform in the 21st century.

### **Information Literacy**

In addition to fundamental literacy, which was discussed previously, information literacy is also essential for primary students. In this global era, the government must provide and facilitate educational systems and services following Article 31, Paragraph 3 of the Constitution of 1945: "The government seeks and organizes a national education system that increases faith and piety as well as noble character to educate the life of the nation, which is governed by the Constitution." The verse stresses that the literacy program must also include efforts to develop human potential, which encompasses intellectual, emotional, linguistic, aesthetic, social, and spiritual intelligence, as well as adaptability to improvements in technology and information. Moreover, the verse also highlights that the program must include the capacity to adapt to technological and informational developments (Maelasari, 2021). Ferguson (2003) explains that information literacy is comprised of fundamental literacy, library literacy, media literacy, technology literacy, and visual literacy. The components of literacy are described as follows:

1. **Basic Literacy.** It is the ability to listen, speak, read, write, and count in conjunction with the analytical skills necessary to calculate, perceive, communicate, and describe (draw) information based on personal understanding and conclusion.

2. Library Literacy. It provides an understanding of how to distinguish between fiction and non-fiction reading, utilizes reference and periodical collections, comprehends the Dewey Decimal System as a classification of knowledge that facilitates the use of libraries, comprehends the use of catalogs and indexes, and can comprehend information when writing, conducting research, or solving problems.
3. Media Literacy. It is the ability to comprehend the purpose of using various forms of media, such as print media, electronic media (radio media, television media), and digital media (Internet media).
4. Technology Literacy. It is the ability to comprehend the entirety of technology, including hardware and software, as well as ethics and decorum in its use. Next, the ability to comprehend printing, presenting, and Internet access technologies. In practice, it is also a knowledge of how to use a computer (Computer Literacy), which includes turning the computer on and off, storing and managing data, and operating software programs.
5. Visual Literacy. It is an advanced level of comprehension between media literacy and technology literacy that fosters the development of learning skills and requirements by employing visual and audiovisual material critically and with respect.

The ability of students' media literacy, technology, and visual literacy cannot be separated. Through media capabilities such as digital media, it can take advantage of technological literacy capabilities to access students' learning needs (Hidayatussoalihah et al., 2022). Students already understand how to access technology, such as watching YouTube which can educate students' abilities. Students' visual literacy skills have also developed, such as when the teacher shows pictures or visuals of the sub-theme of celestial bodies that will be studied, students will be able to think and express ideas or opinions from the visuals or images shown.

Information literacy skill helps students to know information. In teaching literacy skills information, there must be a process to help students understand information, filter information, process, and present information (Nurhasanah, 2016). Information literacy is the skill required for searching, analyzing, and using information (Ghasya et al., 2018). It is an advanced level of comprehension between media literacy and technology literacy that facilitates the development of learning skills and requirements through the critical and respectful use of visual and audiovisual material. The interpretation of unrelenting visual content, whether in print, audible, or digital form (the combination of these three is known as multimodal text), must be effectively managed. However, it contains a substantial amount of manipulation and entertainment that must be filtered according to ethical and decency standards.

Information literacy skill is a set of abilities that must be possessed by someone to obtain and create the information required (Nita et al., 2023). regardless of age, if someone has the ability and opportunity to search for information, then that person needs to have this skill. Starting from realizing the information needs to be sought, realizing which information sources we want to use, using what method to obtain the information, how to evaluate the information so that the information used is the best, the last how the information will be used and how to conduct information retrieval (Ayuni et al., 2022).

The importance of information literacy skills should be owned by elementary school teachers because elementary school teachers are educators for students who have an age range of 7-12 years (Yasin, 2022). At this age, teachers can instill a love for science very easily, even elementary school-age students can continuously progress from spontaneous movements and reflexes to habits acquired toward intelligence. Elementary school students are also active and imitative beings according to the concrete pre-operational cognitive development phase. Therefore, elementary school teachers should not give wrong information to students during the teaching and learning process.

According to Kurnianingsih et al. (2018), cultivating information literacy needs to be implemented since elementary and middle school so that when students enter tertiary institutions, students have the provision to use library facilities in tertiary institutions effectively and efficiently. Therefore, information literacy learning that will be implemented in an integrated

manner with the information literacy learning process requires careful planning. One of them is designing an information literacy learning curriculum at the basic level. Muhajang & Pangestika (2018) explain that there is a positive effect of information literacy on student learning effectiveness. This means that the research hypothesis is acceptable because information literacy contributes to student learning effectiveness. The existence of information literacy activities will encourage students to increase their knowledge to achieve their learning goals.

Astari & Muhroji (2022) state that the teacher plays a role in developing students' information literacy skills including (1) increasing students' understanding of information literacy skills by utilizing libraries and reading corners; (2) teaching students to understand correct information; and (3) teach students to ensure that the information obtained from electronic media (internet) is correct in advance. Besides, collaboration between teachers and school librarians is urgently needed to integrate information literacy skills into the process of teaching and learning activities in schools (Kurnianingsih et al., 2018). Both teachers and librarians at schools and madrasahs play an important part in developing students' critical thinking skills and forming their personalities. To educate kids on information literacy abilities as part of the learning process, teachers as educators are the persons who have (Fitria, 2021b) the primary channel of communication with students while the students are in school.

## Conclusion

The Ministry of Education and Culture's Guidelines for the School Literacy Movement require students to grasp six essential literacy categories: 1) Literacy Read-Write and interpreting written materials. Reading-adept students can gather information, develop conclusions, and express ideas. Literacy in writing involves writing clearly and efficiently. Proficient writers arrange, employ good linguistic structures, and apply the right grammar. 2) Numerical literacy involves understanding, using, and communicating math. This literacy helps students solve problems, apply concepts to real-world circumstances, and reason rationally. 3) Scientific literacy entails understanding science. Scientific literacy helps students identify questions, create hypotheses, gather and evaluate evidence, and draw conclusions from research. Digital literacy. Digital literacy is using technology properly. 4) Digital literacy helps students find information online, assess sources, and use a range of digital technologies for learning. Financial literacy Fifth. 5) Financial literacy is understanding financial ideas, risks, skills, motivation, and decision-making. Mastering money improves personal and social finances. 6) Cultural and Civic literacy is understanding Indonesia's diverse cultures and national identity. Civic literacy is understanding and exercising citizen rights in daily life. Students need information literacy too because students need this skill to gather and create knowledge.

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