Embracing digital literacy through school resilience

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Abstract: This study aimed to describe the school resilience profile and strategies to strengthen digital literacy. It combined quantitative and qualitative data simultaneously through a concurrent mixed-methods research design. Using a multistage random sampling model, a total of 140 people (40 teachers and 100 students) were sampled in this study with the Lameshow formula at SMP N 1 Mungkid. The data were collected using a questionnaire technique through an online Google form and documentation. The results show that the overall resilience of the teachers and students on the digital literacy is at a lower score, which is in the category of 'positive resilience building'. Likewise, findings reveal that several strategies for strengthening school resilience in the digital literacy era involve such as adapting to changing situations and conditions, school interventions to overcome environmental risks and transitions, identifying factors that can help schools overcome crises, skills mapping to identify training needs, identifying the strengths and weaknesses of the education system, and documenting the learning gained based on the availability of school human resources (HR), continuous professional development, communication, network support, adaptation and knowledge-based development.

Keywords: *school resilience, teachers, students, digital literacy*

INTRODUCTION

Having entered the digital era, Indonesia should develop a literacy culture through education to prepare this generation for working collaboratively, thinking critically, and creatively, and communicating effectively in a global situation. Individuals can easily access anything from any source if they participate in character-strengthening and literacy activities. Syaripudin, Ahmad, Ningrum, Banyumurti, and Magdalena (2019) define digital literacy as the ability to find, evaluate, utilize, and communicate information using information and communication technology based on cognitive and technical skills. As a result of th widespread use of the internet, digital technology has been used very rapidly in Indonesia. According to data from 2016 to 2020, there has been a significant increase in the number of internet users. The percentage of the population accessing the internet in 2016 was around 25.37%, while in 2020 it was around 53.73%, representing an increase of 28.36% (Badan Pusat Statistik, 2021). Younger generation (aged 5-24 years) have increased their use of the internet from 33.98 to 59.3% over the last four

years. Of the 25.5% of internet users are children and youth (Jayani, n.d.). It is clear that the development of the digital world directly results in two types of impacts, namely challenges and opportunities.

According to statistics, an average of 25,000 Indonesian children are exposed to negative content per day. A number of parties are concerned about this fact, particularly due to the high driving force of the internet for the younger generation (Nasrullah *et al*., 2017). As well, the younger generation engages in unhealthy internet behavior such as spreading hoaxes, hate speech, and intolerance on social media. A second concern with the younger generation is that the skills they possess in using technology in cyberspace cannot be considered are nt suitable for their age, since the ability to access digital media has not been accompanied by the capability to use it for self-improvement. In an effort to prepare the younger generation to become digitally literate, schools can play a role in developing digital study habits and increasing the use of digital media. However, digital literacy should be combined with digital ethics in order to improve and develop students' character. It was for this reason that the Ministry of Education and Culture initiated the School Literacy Movement Policy (GLS) through Regulation Number 23 of 2015, which was implemented from the PAUD-TK, SD, SMP, and SMA levels by taking into account the mental and psychological growth of children.

Magelang Regency is among the areas that implement the GLS policy, with SMP Negeri 1 Mungkid being one of the schools participating in this policy. The school has implemented a digital literacy and character development program in conjunction with its digital literacy program. Although SMP N 1 Mungkid has regulated digital literacy, there are still problems that have been described previously, such as those involving teachers and students who are not yet prepared for the new era of digital literacy, which makes the adjustment process not run smoothly, as does the learning process as a whole. Teachers and students suffer from this type of pressure. The pressure responses can be triggered by environmental changes, loss of social support networks, academic pressure, the development of peer relationships, and also financial problems. As a result of this condition, resilience is required for them to be able to survive and rise up even in the face of difficult circumstances. A study conducted by Listiyandini (2016) found that having high resilience makes a person more optimistic and believes that everything can change for the better. Hence, this article provides an empirical study by developing school strategies to strengthen the resilience of students and teachers in the face of the digital literacy era.

Literacy refers to the ability to read, write, count, and solve problems with the encouragement of the ability to understand, identify, process, and communicate to achieve goals and participate in society (Hanelahi & Atmaja, 2020; Kurnia & Astuti, 2017; Sutrianto, Rahmawati, Hadi, & Fitriono, 2016). Digital literacy refers to the ability to comprehend and use digital technologies to access, manage, analyze, and integrate new knowledge based on a strong analysis, so that information from multiple sources can be filtered wisely (Kurnianingsih, Rosini, & Ismayati, 2017; Montoya, n.d.; Nasrullah *et al*., 2017; Syaripudin *et al*., 2019).

There are six types of basic literacy, including reading and writing literacy, numeracy, scientific literacy, digital literacy, financial literacy, cultural literacy and civic literacy. The basis for improving literacy culture can be formed by the provision of reading materials

and encouragement to read (Atmazaki *et al.*, 2017). Therefore, it is necessary to establish a pattern of habituation of reading and writing at school as well as in the community. With basic literacy, reading skills can be developed, followed by digital, numeracy, science, finance, cultural, and civic literacy. Increasing advancements in technology and the availability of information, as well as increasingly sophisticated devices, make the world at our fingertips, as is evidenced by the ease with which anything can be accessed from any source. Thus, digital literacy skills are increasingly important, especially in the 21ˢᵗ century.

The current policy of the GLS is outlined in Minister of Education and Culture Regulation Number 23 of 2015 concerning the Develpment of Character. As part of the School Literacy Movement, all students must possess basic literacy skills, one of which is digital literacy. The concept of digital literacy is a manifestation of the response to the onset of the 4.0 revolution. Reading, writing, arithmetic, and other disciplines are all part of digital literacy. For every individual, becoming digitally literate is a challenge as well as a necessity. Literacy consists of the ability to process a variety of information, interpret messages, and communicate effectively with others. The digitally literate individual must therefore be able to work with others in accordance with ethical standards and understand when and how to use technology in order to achieve goals. Accordingly, one indicator of success in the field of education and culture is the extent to which digital literacy has been achieved (Nasrullah *et al.*, 2017).

In general, digital literacy refers to the ability to use information and communication technology, which involves finding, evaluating, utilizing and communicating information (Syaripudin *et al.*, 2019). As it relates to information and communication technology skills, critical thinking, collaboration, and social awareness, digital literacy encompasses a variety of functional skills and knowledge necessary to effectively use digital technology (Harjono, 2019). Therefore, every individual must participate in understanding the importance of digital literacy. As a result of the digital advancements of today, the mindset of the generation that grew up with unlimited access to digital technology should differ from that of the previous generation. Nevertheless, despite the fact that digital technology allows a person to interact with their surroundings, it should be accompanied by accountability for how the technology is used (Nasrullah *et al.*, 2017).

Resilience is needed to succeed and live a fulfilling life. In order to be resilient, individuals need to know, maintain and develop the ability to adapt to conditions or situations when faced with problems. Resilience can be defined as the potential embodied capacity of a dynamic system to successfully adapt to disturbances that threaten its function, survival, or development (Riley & Masten, 2005). Likewise, according to Rutter (1987) states, resilience is not a permanent characteristic of an individual, because it is subject to change when the situation changes. It can be concluded that individuals who have a high level of resilience have the ability to deal with a problem and find a solution to it. Further, resilience refers to a person's ability to continue to develop even when their environment is constantly changing. As such, a resilient person is flexible, intelligent, creative, adaptable, and learns from experience (The Resiliency Center).

Reivich and Shatté (2002) in their book entitled The Resilience Factor reveals that resilience in human life consists of four basic functions. *First,* good resilience is beneficial for a person to be able to leave the bad consequences of previous bitter experiences by

focusing more on personal responsibility to realize the desired adulthood. For example, by overcoming the difficulties experienced in childhood, such as poverty, violence, or a broken home. *Second*, good resilience is beneficial for a person so as not to let the difficulties he faces daily affect his productivity or well-being. *Third*, good resilience is beneficial for a person to be able to get through difficulties in everyday life. For example, dealing with conflicts with colleagues or family and dealing with unwanted events. *Fourth*, good resilience is beneficial for a person to be able to face crisis situations in life such as death or separation that can cause a person's powerlessness. The ability to quickly rise from that powerlessness will depend on the level of one's resilience. *Fifth*, good resilience is useful for someone to help optimize themselves in achieving the best achievements and goals in life. Resilience enables a person to achieve life goals by being open to various experiences and opportunities.

The ability to recognize thoughts and belief structures, harness the power to increase accuracy and flexibility of thinking to regulate emotions and behavior more effectively, are the keys to success in becoming a resilient person. These abilities can be measured, taught, and improved (Jackson & Watkin, 2004). The level of resilience, therefore, is not determined by how many difficulties have been passed as a determinant of success or failure in facing difficult circumstances, but rather determined by: the level of accuracy in considering a difficult situation; the number of alternatives and the variety of scenarios that can be imagined; ability to be flexible; and ability to continue life to seize new opportunities.

The development of individual resilience requires a synergy between the factors that contribute to resilience. According to Reivich and Shatté (2002), resilience includes seven abilities called "7 factors of resilience", including emotion regulation, impulse control, empathy, optimism, causal analysis, self-efficacy, and reaching out to others. There are also protective factors, which refer to balancing factors or factors that protect individuals from risks posed by risk factors (Riley & Masten, 2005). In either case, these factors can be internal or external to the individual. The ability to regulate emotions, intellectual abilities, a positive self-concept, and ability to solve problems are examples of protective factors that come from within an individual. Meanwhile, protective factors from outside the individual include support from family, friends, society, and even the government.

Various techniques can be used to foster resilience, including humor, relaxation techniques, and positive thinking. As a result, resilience is not considered a fixed characteristic since it can be taught or improved. Researchers have demonstrated that individuals who engage in skills training to improve resilience feel stronger, more confident, feel comfortable connecting with others, are eager to discover new experiences, and are more willing to take risks as a result of their research on skills training to improve resilience (Reivich & Shatté, 2002).

The role of schools in formal education is to educate students so that they can develop personal characteristics and become resilient to changes and challenges in today's digital age. It is expected that schools, which are one of the most important settings and are also a critical environment, will develop the resilience of teachers and students to the greatest extent possible. Teachers, education staff, and students must all work together to build school resilience. The involvement of teachers in improving school resilience is certainly

supported by aspects such as personal competence, social competence, school culture, and school infrastructure (Condly, 2006; Henderson & Milstein, 2003; Kiswarday, 2012; Poliner & Benson, 2017). In this regard, Bartusevičienė, Pazaver, and Kitada (2021) explains that institutional resilience depends on the availability of human resources, continuous professional development, communication, network support, adaptation, and knowledge-based development. As a result of the descriptions provided by the two experts, it is concluded that teachers' role in improving school resilience is primarily determined by the use of human resources, social capital, school culture, communication, network support, school infrastructure, adaptation, and knowledge-based development, among other factors.

In order to build school resilience, it is necessary to strengthen all aspects that are a part of the system. Henderson and Milstein (2003) explains that the stages in building school resilience are determined by six aspects, namely aspects of improing relationships with schools, aspects of establishing clear and consistent rules, aspects of teaching life skills, aspects of caring and support, aspects of realizing and communicating the expectations that are taught, as well as aspects of opportunities for achievement.Teachers have an important role to play in building school resilience by mobilizing all aspects to make students more resilient.

METHOD

The study used a descriptive approach that combines quantitative and qualitative methods (mixed methods) in order to describe the research results in their actual form. A quantitative approach was used as the primary method and a qualitative approach as a secondary method. Mixed methods strategies such as this are known as concurrent mixed methods (Creswell, 2012). With the combination of these two approaches, comprehensive data was expected to be obtained. As part of this descriptive research, a mix of methods (quantitative and qualitative) was used to describe the resilience of schools, teachers, and students in SMP N1 Mungkid in the era of digital literacy, and formulate strategies for strengthening the resilience of teachers, school, and students. At SMP N 1 Mungkid, the study was conducted using two samples namely teachers and students. It was conducted using a proportional multistage random sampling approach which was implemented by dividing the population into two parts and then sampling from each segment (Table 1).

Table 1
Population and number of samples

No	Sample Type	Population	Sample
1	Teacher	43	40
2	Student	753	100
	Total	796	140

A sampling size technique was employed in this study based on the Lameshow *et al.* formula' (2009):

$$n = \frac{Z^2 1\frac{\alpha}{2} P(1-P)N}{d^2(N-1)Z^2 1\frac{\alpha}{2} P(1-P)}$$

Note:
n = Minimum sample size
N = Population size
Z = Standard value of normal distribution α= 0,05 with Cl 95% (1,96)
P = Proportion of occurrence (0,5)
D = Acceptable absolute deviation (10% = 0,1)

Hence, the minimum sample size in this study is:

$$n = \frac{(1,96)^2 . 0,5 \ (0,5)796}{(0,1)^2(796-1) + (1,96)^2 0,5(0,5)}$$

$$n = \frac{764,359}{8,9104}$$

$$n = 86 \ \text{people}$$

To avoid drop-outs, the number of samples was rounded up to 140 for each group of teachers (40) and students (100), or a total of 140 for both groups. In the next step, 140 teachers and students of SMP N 1 Mungkid will be randomly selected through a lottery.

A data collection method was used in this study, included Google forms and Android applications, which can be accessed at https://bit.ly/ResiliensiSekolahPersonal. Table 2 presents the aspects of school resilience as well as personal resilience (teachers and students).

Table 2
School resilience instrumental grid and personal resilience (Teachers & students)

Variable	Aspect	Item Number	Number of Items
School Resilience	1. Aspects of improving relations with schools	1-6	6
	2. Aspects establish clear and consistent rules.	7-12	6
	3. Aspects of teaching life skills	13-17	5
	4. Aspects of caring and support	18-24	7
	5. Aspects of realizing and communicating the expectations that are taught	25-30	6
	6. Aspects of the opportunity to participate	31-36	6

In addition to questionnaires, researchers conduct interviews directly in the field. The interview question guide refers to the formulation of research questions that include a description of the resilience of schools, teachers and students in the face of the digital literacy era. Documentary studies were used to obtain secondary data, both those reported by official institutions and reports made by other parties that are relevant/supporting the research objectives. The details were shown in Table 3.

Table 3
Techniques, respondents and information targets

No	Technique	Respondent	Information Target
1	Questionnaire (with online application)	Teacher - Student	The resilience of schools, teachers and students in the face of the digital literacy era
2	Documentation	Researcher	Data relevant to research

The process of data analysis was carried out at the time of data collection and after data collection. The process of qualitative data analysis is carried out using qualitative analysis according to Milles and Huberman (1994) which includes the three stages. *First*, data reduction. The process of selecting, separating, paying attention to simplification, abstracting and transforming rough data that emerges from written records in the field, which is then stated in a complete and detailed report. *Second*, presentation of data. An attempt to compile a collection of information that has been obtained in the field which is presented clearly and systematically so that it will facilitate in drawing conclusions. *Third*, drawing conclusions and verification. The researchers tried to understand, analyze and find the meaning of the data collected, and finally after the data is collected a conclusion will be obtained.

The research data in the form of numbers (quantitative) were analyzed computationally using the help of Microsoft Office Excel program to describe the resilience of schools, teachers and students of SMP N 1 Mungkid in facing the era of digital literacy. The results were analyzed descriptively with the Microsoft Office Excel program using the categorization method based on the percentage calculation as follows:

$$Acquisition\ value = \frac{raw\ score}{maximum\ score} \times 100$$

School resilience assessment categories or also called decision criteria, were divided into lower scores; in the scale of positive resilience building; and higher scores; in the category of a need for improvement (Lower Score ≤ 50%; Higher Score ≥ 51%).

The percentage calculation value (%) was converted into the form of words and sentences were given meaning (interpretative) by reducing data (selection, concentration, simplification and abstraction of rough data) in accordance with the research objective to describe the resilience of schools, teachers and students in facing the era of digital literacy. SPSS for Windows was carried out to formulate strategies for strengthening the resilience of schools, teachers and students in facing the era of digital literacy.

Thus, the data analysis process proceeded from the initial stage to the drawing of conclusions and verification of the results. During this stage, the researcher attempted to understand, analyze and find meaning in the data collected. After the data has been collected, a conclusion was reached.

FINDINGS AND DISCUSSION

SMP Negeri 1 Mungkid is located on Jalan Raya Magelang–Yogyakarta, Blabak, Mungkid, Magelang, Central Java. With its strategic location, situated near the highway, SMP Negeri 1 Mungkid is easily accessible and can be used as a centre for student and

teacher activities throughout Magelang Regency. The school has been in operation since 1961. Since 2015, it has been selected as one of the most prestigious schools in the Magelang region.

The school's vision is closely related to its goals and ideals. Accordingly, SMP Negeri 1 Mungkid has a vision of "Realizing Quality Schools with Global Insight and Environmentally Friendly Based on Faith and Taqwa". This shows that SMP Negeri 1 Mungkid organizes education that is oriented towards leading schools in continuous improvement efforts, emphasizing the process of preparing students with basic intellectual abilities to enter a competitive life, and has an understanding of the importance of integrating environmental values based on faith and devotion. In addition to preventing pollution and environmental damage, the school also strives to preserve the environment as part of its main curriculum. The following facilities and infrastructure support digital literacy activities: libraries, language laboratories, and computer laboratories.

Resilience is the ability to cope with difficult situations in life. As defined by Bahar, Koçak, Samancıoğlu Bağlama, and Çuhadar (2020). Resilience is the ability to cope with adversity, trauma, tragedy, or threats such as family and relationship problems, serious health problems, and financial stressors, and involves the ability to bounce back from adversity (experiences and successes to overcome transformations) (Bahar *et al.*, 2020). This explanation explains school resilience as the ability of schools to adapt and remain steadfast in difficult circumstances. The following will discuss how SMP N 1 Mungkid is coping based on teachers' and students' perceptions in relation to digital literacy.

Figure 1 illustrates how teachers and students perceive the level of resilience of SMP N 1 Mungkid in the era of digital literacy. Overall, SMP N 1 Mungkid has a low level of resilience on a positive resilience building scale, which, based on feedback from teachers (31%), and students (31%), indicates good school resilience in the era of digital literacy. The statements of teachers and students indicate that based on Figure 1 above, the resilience of

Figure 1. School resilience according to teacher and student perceptions in facing the era of digital literacy
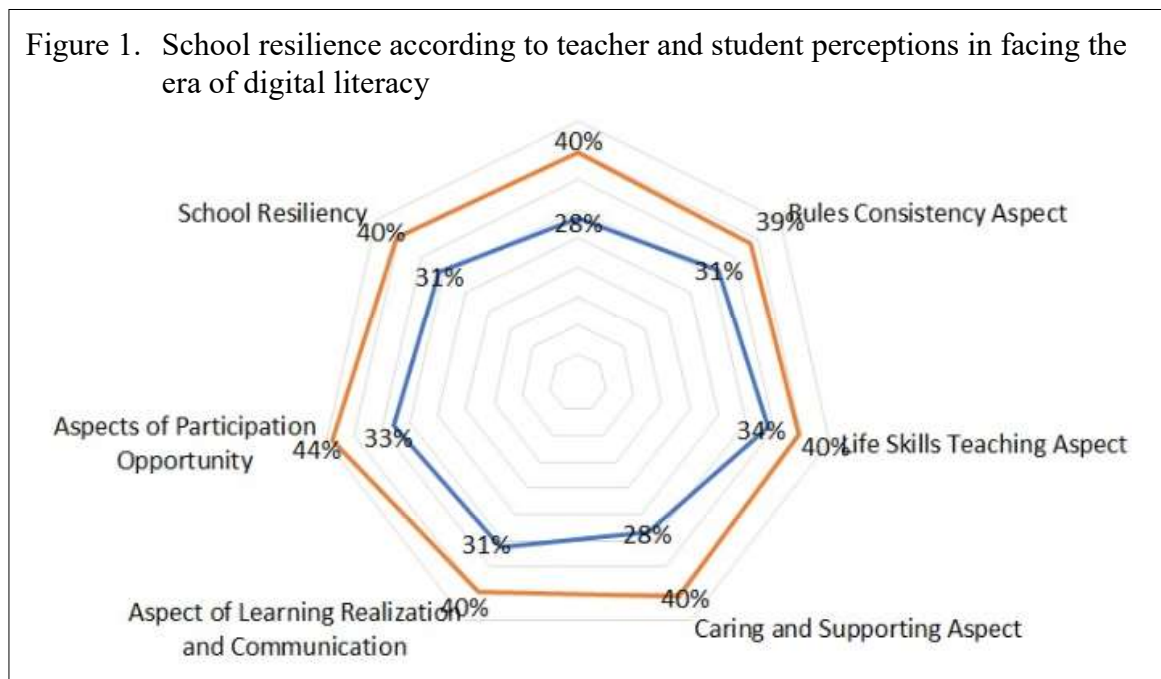
SMP N 1 Mungkid is in the lower score category of the positive resilience building scale with an average of 36%. There is an approximately 9% difference in perception scores between teachers and students regarding school resilience in the digital era.

In particular, the level of school resilience based on its constituent aspects consisting of aspects such as improving relations with schools, establishing clear and consistent rules for teaching life skills, caring and support, understanding and communicating the expectations taught, and providing opportunities to participate.

Aspects of Improving Relationships with Schools. As shown in Figure 1, the resilience of SMP N 1 Mungkid in facing the digital literacy era in terms of improving relationships with schools is 40% among students as a whole and 28% among teachers. Based on these data, both according to the perceptions of teachers and students, the resilience of SMP N 1 Mungkid in terms of improving relations with schools in dealing with the era of digital literacy is in the low percentage category of the positive resilience building scale. This explains that both teachers and students have positive relationships with adults in the school environment. Both students and teachers participate in interesting activities during and after lessons. The school's teachers are also well-interacted with each other and involved in the preparation of the school's vision and mission, and parents have a positive relationship with the school. Nevertheless, SMP N 1 Mungkid needs to emphasise increasing the percentage of school resilience in order to improve relations with schools.

Aspects of Establishing Clear and Consistent Rules. Figure 1 indicates that the resilience of SMP N 1 Mungkid in facing the digital literacy era in terms of establishing clear and consistent rules pertaining to students as a whole is 39%, while when it comes to teachers it is 31%. Based on these data, both according to the perceptions of teachers and students, the resilience of SMP N 1 Mungkid in terms of establishing clear and consistent rules in dealing with the digital literacy era is within the lower score category of the positive resilience building scale, and is included in the low percentage number. This explains that, in the opinion of teachers and students, the physical environment of the school is supportive of students' participation in all school activities. As well, teachers and students have a clear understanding of the school's expectations for behavior and obey the regulations that support them. They also feel that they have access to a caring team where they can discuss problems they are facing. Additionally, teachers in schools are considered to understand the school's expectations and adhere to them consistently. Teachers at this school exhibit effective behavior that can serve as a model for students and other adults, and the school promotes ongoing discussions about norms, rules and the different goals to which teachers and students are expected to strive. Nevertheless, SMP N 1 Mungkid needs to improve the clarity and consistency of the rules to ensure that schools are able to adapt to changes as they arise.

Aspects of Teaching Life Skills. As shown in Figure 1, the resilience of SMP N 1 Mungkid in facing the digital literacy era is 40% for students as a whole, and 34% for teachers. According to these data, both according to the perceptions of teachers and students, SMP N 1 Mungkid has a low score on the positive resilience building scale in terms of teaching life skills to cope with the digital era, and is included in the low percentage category. Hence, both teachers and students agree that schools provide the necessary training for members of the school community to be able to effectively meet

the expectations of the community. Furthermore, students and teachers are able to use the skills of assertive behavior, healthy conflict resolution, decision making, problem solving, and stress management. Students and teachers engage in a cooperative learning process that focuses on both social and academic skills. Moreover, teachers in schools emphasize the importance of cooperation in completing assignments, as well as interpersonal skills to perform organizational functions more effectively and professionally, which are useful for streamlining teaching and learning processes. The school must, however, improve its teaching of life skills in order for SMP N 1 Mungkid to be able to adapt to change, particularly in the era of digital literacy.

Aspects of Caring and Support. According to Figure 1, the resilience of SMP N 1 Mungkid in the face of the digital literacy era in terms of caring and support is 40% among students as a whole and 28% among teachers. Based on these data, both according to the perceptions of teachers and students, SMP N 1 Mungkid's resilience in terms of caring and support in facing the digital literacy era is within the low percentage category of the positive resilience building scale. This explains how the school provides a means for all members of the community to develop the skills they require. In addition, the school promotes a lifelong learning philosophy. There is a sense of care and support for students in the school environment, and they receive recognition and awards from the school. Furthermore, teachers are also treated well and valued at school, receive a variety of recognitions and awards, and feel supported by the school's climate and spirit. It is necessary, however, for SMP N 1 Mungkid to improve school resilience in terms of caring and support so that schools are able to adapt to the changing environment, especially in this era of digital literacy.

Aspects of Realizing and Communicating Expectations Taught. Figure 1 indicates that the resilience of SMP N 1 Mungkid in coping with the digital literacy era can be summed up as 40% when it comes to realizing and communicating the expectations taught by students as a whole, while 31% when it comes to teachers. In light of these data, as well as the perceptions of teachers and students, SMP N 1 Mungkid's resilience in terms of achieving and communicating the expectations that are taught in the digital literacy era was in the lower score category on the positive resilience building scale, and it ranked among the low percentage groups. Most students believe they will succeed in the future, and no one labels them negatively. Teachers also believe in the success of community members and receive an award or achievement for taking risks. Further, the school provides a development plan for students and staff that includes clear objectives, regular reviews, and supportive feedback. However, SMP N 1 Mungkid needs to improve its school resilience in terms of recognizing and communicating expectations that are taught, so that schools are able to adapt to changes that occur, especially in the era of digital literacy.

Aspect of Opportunity to Participate. Figure 1 indicates that SMP N 1 Mungkid's resilience in facing the digital literacy era is 44% according to students, while 33% according to teachers. This data indicates that the resilience of SMP N 1 Mungkid in terms of being able to participate in the digital literacy era is in the lower score category on the positive resilience building scale, corresponding to the low percentage group. Students and teachers are involved in the decision-making process at the school, including the development of regulations. In addition, each member of the school community (students, parents, and staff) is viewed as a resource, rather than a problem, object, or client, and a school climate encourages courage to take all risks.

Table 5
Tesilience in SMP Negeri 1 Mungkid according to teachers and students

No	Aspect	Category/Scale	Teachers	Students
1	Improving relationship with schools	Lower score Positive resilience building	28%	40%
2	Establishing clear and consistent rules	Lower score Positive resilience building	31%	39%
3	Teaching life skills	Lower score Positive resilience building	34%	40%
4	Caring and support	Lower score Positive resilience building	28%	40%
5	Realizing and communicating the expectations that are taught	Lower score Positive resilience building	31%	40%
6	Opportunity to participate	Lower score Positive resilience building	33%	44%

There is, however, a need for SMP N 1 Mungkid to improve school resilience in terms of opportunities for students to participate, so that schools are able to adapt to the changing environment, especially given the advent of digital literacy.

Based on the data presented above, it can be concluded that SMP Negeri 1 Mungkid has a lower score category of positive resilience building scale (teachers at 31% and students at 40%). In terms of the aspects involved in forming resilience, SMP N 1 Mungkid can be described as in Table 5.

Several strategies can be used to improve personal resilience for both teachers and students, including adapting positively to difficult life situations, establishing positive relationships, developing emotional insight, balancing professional and social life, and enhancing spirituality. According to Bahar *et al*. (2020), this is useful for developing an individual's mental life, strengthening their personal goals, and developing problem-solving skills through experiences that serve as guides for future experiences. Meanwhile, the development of personal abilities to increase personal resilience can be achieved by establishing positive interpersonal relationships, flexibility, critical thinking, creativity, optimism, self-efficacy, humour, protecting moral boundaries, emotional intelligence, and problem-solving. The most effective strategies for strengthening the resilience of schools, teachers, and students to the digital age are to continue to adapt to the changing conditions and situations.

School intervention is necessary for addressing environmental risks and transitions, identifying factors that assist schools in overcoming crises, mapping skills for identifying training needs, identifying strengths and weaknesses of the education system, and documenting the lessons learned, taking into account the availability of school human resources (HR), continuous professional development, communication, network support, adaptation, and knowledge-based development. Table 6 presents some details about strategies for strengthening the resilience of schools, teachers, and students.

Table 6

Strategies for strengthening school resilience from teacher and student perceptions

School	Teacher	Student
Schools encourage ongoing discussions about the norms, rules and goals expected by teachers and students to build a literacy culture.	Teachers are involved in the process of preparing school programs to support the strengthening of literacy culture.	Students have good relationships with adult figures in the school environment to realize a literacy culture.
The school provides the training needed for members to build effective communication.	Teachers build empathetic communication with all school members.	Students are actively involved in learning process activities to improve literacy.
Schools provide a vehicle for developing social skills for all school members.	Teachers design creative and innovative learning processes to develop student resilience. .	Parents of students have a positive relationship with the school to strengthen student resilience.
The school socializes the philosophy of lifelong learning for school residents.	The teacher becomes a model for students to be passionate about learning and become a resilient person.	Students are motivated to become resilient and achievers.
Schools build a climate to build productive school performance.	Teachers are able to work cooperatively and emphasize the importance of the values of cooperation in completing tasks.	Students have a caring team to share about the problems they face.
Schools build a healthy and socially friendly environment.	Teachers have interpersonal skills to carry out organizational functions more effectively and professionally which are useful for streamlining the teaching and learning process.	Students have and are able to use the ability to behave assertively in conflict resolution, decision making, problem solving and the ability to manage stress.
Schools provide opportunities for all school members to develop their potential optimally.	Teachers do not give negative labels to students but play a role in developing the potential of each student.	Students engage in a cooperative learning process that focuses on social and academic skills.
The school provides a development plan for teachers, education personnel and students with clear objectives, regular reviews, and supportive feedback.	Teachers have a strong target and belief to be able to realize a program to build school resilience.	Students have confidence to succeed in building a resilient personality and have high literacy.

CONCLUSION

In terms of resilience building, teachers and students at SMP Negeri 1 Mungkid are in the lower score category when it comes to digital literacy. In spite of this, students exhibited high scores regarding the opportunity to participate while teaching of life skills as the most important aspect for teachers. As a result of these findings, students believe that school resilience, based on the forming aspect, needs to be immediately repaired and improved in light of the era of digital literacy. According to students, this is an aspect of participation, whereas according to teachers, this is an aspect of teaching life skills. Thus, teachers and students play a vital role in the implementation of digital literacy policies and in the development of life skills related to digital literacy.

The strategy for strengthening the resilience of schools, teachers, and students in the era of digital literacy is to continuously adapt to changing circumstances. In addition, school

interventions are needed to address environmental risks and transitions, identify factors that assist schools in overcoming crises, map skills to identify training needs, identify strengths and weaknesses in the educational system, and document lessons learned in light of the availability of human resources (HR), continuous professional development, communication, network support, adaptation, and knowledge-based learning.

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