



THE IMPACT OF SOCIAL FRAGILITY ON INTERACTION AND STUDENT SOLIDARITY IN DIGITAL-BASED LEARNING AT MTSN 1 MAKASSAR

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ABSTRACT

This study aims to explore the impact of social fragility on student interaction and solidarity in digital-based learning at MTsN 1 Makassar and formulate alternative solutions to overcome the challenges faced. MTsN 1 Makassar, as a research-based digital madrasah, has achieved significant academic achievements by applying digital technology. However, there are indications that this transformation also brings negative social impacts, such as social fragility characterized by dissociative social interactions, social isolation, weak mechanical and organic solidarity, and low student resilience. This study uses a mixed methods approach. A qualitative approach is applied to explore the factors causing students' social fragility through in-depth interviews, observations, and document analysis. Furthermore, a quantitative approach is used to test the effect of social fragility variables on student interaction and solidarity with statistical analysis based on survey data. The study results indicate that social fragility among MTsN 1 Makassar students is caused by the dominance of digital interactions that reduce direct social involvement. The main factors that trigger social fragility include low social orientation in learning, minimal psychosocial support, lack of collaboration through group projects, and limited digital social skills of students. In addition, it was found that social fragility significantly affects student solidarity and interaction, thus creating a gap in social dynamics in the learning environment. The conclusion of this study emphasizes the need for a balance between technological advancement and student character development to create an inclusive and holistic digital learning ecosystem.

Keywords: Social fragility; digital learning; social interaction; solidarity; self-resilience

1. INTRODUCTION

The digitalization trend of education has spread throughout the world, including Indonesia. As the leading of madrasah, MTsN 1 Makassar has successfully incorporated digital technology into education. This not only shows creativity but also serves as a measure of how

well students perform academically. However, there are challenges of social problems that arise closely related to this achievement.

The digitalization of education changes the dynamics of students' social interactions. Because technology is widely available, students prioritize digital gadgets over face-to-face interactions (Pebriana, 2017). This raises concerns about social fragility, characterized by weak solidarity, lack of meaningful interactions, and social isolation (Septiana & Hidayati, 2022). Another obstacle occurs in terms of fostering unity among students. Because students are more concerned with their success, the mechanical solidarity created by general principles and norms is increasingly neglected. In addition, learning patterns without collaboration have caused organic solidarity based on interdependence to decline.

Social isolation is a common occurrence in online learning environments. Even though technology makes learning more efficient (Sari et al., 2022). However, students' engagement in meaningful social relationships is reduced due to the lack of group activities. Their capacity to build strong social networks is affected by this. A lack of digital social skills exacerbates the dilemma. Students who lack collaborative technology skills often struggle to develop meaningful connections. As a result, they experience marginalization, exacerbating social fragility (Utomo et al., 2024).

Student resilience is also affected by this condition. Students who engage in more digital interactions are usually less flexible regarding social pressure. This reduced resilience hampers efforts to develop resilient student characters. This reality highlights the need for an in-depth investigation into how digitalization affects student solidarity and interaction (Harfiyanto et al., 2015). With more profound knowledge, instructional strategies that emphasize technology while enhancing students' social skills can be created. Thus, this research aims to contribute significantly to developing an inclusive and comprehensive digital education ecosystem.

2. METHODS

This study uses a mixed methods approach to provide a comprehensive understanding of how social fragility affects students' interactions and solidarity in digital-based learning. This strategy combines qualitative and quantitative methods sequentially to answer the predetermined problem formulation. There are four main steps in the research process.

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The research process consists of four stage or phase. Phase One: Qualitative Approach. a. Through in-depth interviews, the study subjects included students, teachers, principals, and parents of students at MTsN 1 Makassar. This technique sought to understand the causes of students' social fragility fully. The theoretical framework of social interaction, solidarity, and the effects of digitalisation formed the basis of the interview guide structure. To discover the causes of social fragility, interview sessions were videotaped and analysed for themes; b. Participatory observations were conducted in the classroom during teaching and outside when students

interacted with each other in the school environment. Group dynamics, levels of social engagement, and student interaction behaviours were the main topics of these observations. Field notes were used to record data, which were then examined to find trends in social interactions; c. Document analysis: Some things examined include academic reports, extracurricular activity records, and digital-based learning evaluations. This information is used to determine how much students' social participation is affected by the use of technology. The results of this stage are used to create social vulnerability variables, which serve as a basis for collecting quantitative data.

Phase Two: Quantitative Methods. The impact of primary variables on student interaction and solidarity was examined using quantitative methods after being determined during the qualitative phase. The following are examples of quantitative stages: a. Research and survey instruments were developed based on the findings of the qualitative analysis. The level of social fragility, social interaction, and student solidarity were assessed using the Likert Scale. Before being widely used, the validity and reliability of the instrument were evaluated by a preliminary trial on a small sample; b. To ensure the diversity of data, samples were taken from students of MTsN 1 Makassar using stratified random sampling techniques; c. Offline and online surveys were used to collect data; d. Statistical analysis was conducted to ensure the substantial impact of social fragility variables on student interaction and solidarity, and quantitative data were examined using regression tests and route analysis. The findings of the quantitative analysis support the previous qualitative conclusions.

Phase Three: Data Integration. At this point, combining qualitative and quantitative data generates a comprehensive understanding of the phenomenon under study. Integration is achieved using a side-by-side comparison strategy, where results from both approaches are contrasted to identify similarities and support each other's conclusions.

Phase Four: Data Validation Procedure: a. Method triangulation: To ensure consistency of qualitative results, data from observation, interviews, and document analysis are compared; b. Quantitative Validity and Reliability Test: Cronbach Alpha coefficient is used to assess the reliability of the constructs, and Confirmatory Factor Analysis (CFA) is used to assess their validity; c. The member checks to ensure that the researcher's interpretation aligns with the informant's objectives and that the informant confirms the qualitative interview findings.

3. RESULTS AND DISCUSSION

The Impact of Digitalization on Student Interaction and Solidarity

According to this study, the digitalization of teaching at MTsN 1 Makassar has significantly changed the way students interact with each other. Becoming a digital madrasah, technology has increased learning efficiency and made knowledge more straightforward to obtain (Sitepu, 2021; Calora et al., 2023). On the other hand, traditional face-to-face communication patterns have changed due to the prevalence of digital device-based interactions (Wijayati et al., 2019). Field observation findings revealed that rather than working in groups, students were more often involved in solitary digital activities, such as obtaining learning materials or completing

assignments independently. Students' meaningful social contacts became less intense due to these changes.

One of the significant effects of the typical individual interaction pattern is the problem of social isolation. Students rarely form close interpersonal bonds in digital settings because their devices usually absorb them. When students decide not to engage in group activities requiring face-to-face conversation, this isolation becomes even more pronounced (Koreshkova & Ivanov, 2024). Teacher interviews revealed that many students felt more comfortable communicating online than in person, which ultimately hindered their capacity to understand social dynamics fully (Muflih et al., 2017).

In the educational environment, mechanical solidarity, which should be the basis of social interaction, has declined drastically. This is because the shared values used to be reinforced by face-to-face interaction are weakening. Instead of creating a group identity based on shared values and principles, students tend to prioritize individual success more. Students' sense of belonging and social cohesion declines with this mechanical solidarity, leading to a breakdown in group dynamics (Schmank & Buchkremer, 2024).

In addition, there is less organic solidarity based on interdependence between people. Students often complete their work alone in digital learning without peer help or support. This lack of interdependence reduces the emotional bonds that should be created through collaboration and teamwork (Lestari et al., 2024). These results imply that the way students develop interpersonal relationships has changed due to digital interaction patterns, which impacts their capacity to collaborate in a broader social environment.

Student resilience is also affected by social fragility. When faced with social pressures, more digitally connected students typically demonstrate lower flexibility (Syahyudin, 2020). They are less comfortable with interpersonal difficulties or resolving disputes. This suggests that while technology helps children in the classroom, it may also hinder their capacity to build interpersonal skills necessary for future success (Aramburuzabala et al., 2024).

According to the findings, there are four leading causes of students' social fragility: lack of organic solidarity, decreased mechanical solidarity, increased social isolation, and low associative social contact. These elements work together to produce a negative cycle that makes it difficult for students to adapt to increasingly complex social environments. Neglecting the social-emotional components of digital-based learning further supports these elements (Prasetyo et al., 2023).

Despite its importance, technology often neglects students' social lives. Teachers are still lacking in providing psychosocial support to concentrate more on using technology to achieve academic goals. Students who lack digital social skills are socially excluded, worsening their social isolation (Sianturi, 2021). Students need support from classmates and teachers to overcome these obstacles, but interview findings indicate that this component is still not receiving enough attention.

Poor digital social skills among students constitute a significant problem in the digital world. Many students still do not know how technology creates meaningful social and learning relationships. They use technology more often to fulfill personal needs, such as getting

information or completing assignments independently (Amarulloh et al., 2019). This inability exacerbates social isolation and makes group programs to increase social interaction less successful.

The main focus of this study was also the changing social patterns in the school environment. It was observed that students who used to participate in social activities were now more likely to spend time on their digital devices. Students' interpersonal relationships were of lower quality due to these changes and a significant increase in social distance (Plaza de la Hoz et al., 2024). As a result, students felt less involved in the school community, ultimately impacting overall social dynamics.

This social vulnerability affects the ecosystem of school-level solidarity in addition to interpersonal relationships. Mechanical and organic solidarity is eroded when students do not participate in extracurricular activities or group initiatives. Students are less likely to be motivated to engage in group social activities when they do not feel emotionally connected to the school community (Nychkalo et al., 2024).

Solutions to Overcome Social Fragility

This study suggests cooperative strategies that combine technology and social learning as a first step in addressing social fragility. One suggested tactic is increasing student participation in group-based activities such as class debates, social simulations, or cooperative projects (Gutiérrez-Santiuste & Ritacco-Real, 2023). In addition to fostering mechanical and organic unity, these exercises teach students the value of interpersonal relationships in achieving success for all (Azis, 2019).

Teachers play a vital role in helping students develop their social character. According to this study, educators who actively use technology to foster principles of solidarity can help students use gadgets to form deep connections (Ambarwati et al., 2022). To ensure that students can communicate successfully both face-to-face and online, digital social skills training is also necessary (Zebua, 2023).

In addition, school regulations must combine social character development with academic success. One way to help students who feel socially isolated is through mentoring or mentoring programs. Students can learn how to create positive and healthy interpersonal relationships in the right direction, ultimately strengthening school-level solidarity (Dewi et al., 2021).

The findings of this study also suggest that technology needs to be viewed as a tool rather than an end in itself. Programs that encourage students to engage directly with one another should be implemented in conjunction with using technology in the classroom (Al-Hawamdeh et al., 2023). Using this comprehensive strategy, educational institutions can build a welcoming and comprehensive learning environment where students can develop resilient and strong character traits and achieve academic success (Pakai, 2022; Kartini & Dewi, 2021).

4. CONCLUSION

There are several advantages of digitizing education to improve students' academic achievement. However, digitization also presents risks, such as the possibility of social fragility,

which can disrupt the quality of student-to-student interactions. As a result, achieving the right balance between the use of technology and developing students' social character is very important. One approach to help students improve their social skills, even in a digital setting, is integrating technology into the classroom with cooperative activities and promoting social interaction. In addition, there is an urgent need for training that emphasizes developing digital social skills so students can use technology responsibly without compromising their face-to-face communication skills. Regular monitoring and assessment are also important to ensure that student's academic progress keeps pace with their growth in social competence. This will help create a generation of people who are not only intellectually intelligent but also have the necessary social skills.

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