

Building Post-Disaster Psychosocial Resilience Through Toraja Cultural Animated Media in Teacher Training

Musfirah¹, Imron Burhan^{2*}, Harmelia Tulak³, Topanus Tulak⁴, M. Yunasri Ridhoh⁵

^{1,2,5}Universitas Negeri Makassar, 90222, Indonesia

^{3,4}Universitas Kristen Indonesia Toraja, 91811, Indonesia

Abstract. Indonesia's high vulnerability to natural disasters significantly impacts the psychological well-being of school-age children. While teachers play a strategic role in the recovery process, they often lack specialized psychosocial training. This community service aimed to enhance teachers' capacity to provide post-disaster child support by integrating resilience-building techniques with Toraja culture-based animated media. The Participatory Action Research (PAR) program was conducted at SDN 3 Buntao, involving 15 active teachers. The activity consisted of three systematic stages: preparation, implementation, and reflection. The implementation stage included presentations on fundamental resilience concepts, mentoring simulations, and hands-on practice in developing interactive animated videos using the Interacty application. The training resulted in a significant improvement in participants' understanding of identifying children's trauma symptoms and delivering appropriate emotional support, marked by a 75% increase in teacher confidence. Teachers successfully developed practical skills to produce culturally tailored animations and interactive quizzes. Integrating Toraja cultural elements into the digital media provided a highly positive impact, accelerating emotional closeness and making the psychosocial support more relatable for the students. This capacity-building initiative effectively empowered educators to deliver structured post-disaster psychological support. By combining evidence-based resilience strategies with culturally responsive digital tools, the training strengthens teachers' readiness to facilitate sustainable and engaging psychosocial recovery in the classroom.

Keywords: Animated media; Capacity building; Participatory action research; Post-disaster recovery; Psychosocial support; Toraja culture.

1. Introduction

Schools are ideally safe environments that support children's cognitive and psychological development. In this educational ecosystem, teachers and school principals play a crucial role in building resilience, as they hold strategic positions in understanding students' development optimally, continuously, and intensively throughout the developmental process (Hendry et al., 2023; Li & Zhu, 2025; Rokhanawati et al., 2023). A conducive learning environment and positive relationships with teachers are essential

*Corresponding author's email: imron.burhan@unm.ac.id, Telp. -

external factors that help school-age children develop resilience naturally. Therefore, teachers play a central role as facilitators of resilience through mentoring approaches that are empathetic, consistent, and grounded in developmental psychology (Kim & Ahn, 2025; Pyle et al., 2024; Tuhuteru et al., 2023).

However, this ideal educational setting is frequently disrupted by Indonesia's high vulnerability to natural disasters, including earthquakes, floods, landslides, and other hydrometeorological hazards. Geographically, Indonesia is located at the convergence of three major tectonic plates the Indo-Australian, Eurasian, and Pacific plates which results in a high frequency of earthquakes and volcanic eruptions (Moya et al., 2020; Pratiwi et al., 2019). The damage caused by these natural disasters, particularly earthquakes, is not limited to physical and non-physical destruction but also significantly affects human lives (Herdiana & Lakoro, 2022; Nur Iqbal N et al., 2024; Nursamsir et al., 2022). School-age children are a highly vulnerable group psychologically, as they are in a stage of ongoing emotional and cognitive development. When disasters occur, children may experience various psychosocial impacts such as anxiety, sadness, disorientation, recurring fear, sleep disturbances, and symptoms of post-traumatic stress. Natural disasters can cause serious emotional problems in children (Bradley, 2007; Kurniasari et al., 2021; Pratama, 2023).

In responding to post-disaster crises, the concept of resilience has become one of the key frameworks in post-disaster psychosocial interventions. Resilience is understood as an individual's ability to recover, adapt, and maintain healthy psychological functioning after experiencing traumatic events. This capacity can be enhanced through changes in an individual's perspective toward problems, which are reflected in seven core abilities namely emotional regulation, impulse control, causal analysis, self-efficacy, optimism, empathy, and the enhancement of positive capacities (Fisher et al., 2019). Because recovery from trauma may require a prolonged period, this highlights the importance of teachers' continuous efforts to support children in overcoming trauma (Damis, 2022; Schemitsch & Nauth, 2020). Furthermore, recurrent stressors increase the likelihood of individuals experiencing anxiety and depression-related problems (Thomsen et al., 2025).

To assist teachers in providing effective psychosocial support, learning strategies that utilize creative media, including animated videos, have been proven effective in improving children's understanding of emotional issues as well as other educational content. Educational strategies using animated simulation videos are effective and significant methods for improving students' disaster preparedness (Karisa et al., 2023; Masroni et al., 2024). Furthermore, providing education through animated videos has a substantial impact on students' levels of preparedness for earthquake disasters. The use of animation enables teachers to deliver material in a gentler, non-threatening manner that is psychologically friendly for children who may still be experiencing post-disaster fear.

The effectiveness of digital media as a trauma recovery tool is further amplified when integrated with local cultural contexts. Integrating local cultural elements, such as characters, motifs, language, folklore, and traditional Toraja symbols, can strengthen children's emotional connection to the messages conveyed. In the context of post-disaster recovery, culturally based approaches offer advantages by helping children feel more connected to their identity and social environment, thereby enhancing their sense of safety and accelerating psychosocial recovery.

Despite the proven effectiveness of resilience strategies and culturally adapted media, in many schools, such competencies have not yet been integrated into teachers' professional training. Most teachers have not received specialized training related to post-



disaster psychological support or resilience strengthening techniques that align with children's developmental characteristics. Furthermore, in regions such as Toraja, the use of animated media in education often follows generic models without considering the local cultural context. SDN 3 Buntao, a school located in the Toraja region that is exposed to potential risks of natural disasters such as landslides and extreme weather, has relied on conventional approaches in the teaching and learning process and has not yet developed a post-disaster psychological support module based on local culture.

Addressing this capacity gap through intervention in the form of teacher training is a crucial step. The utilization of Toraja culture-based animated media in teacher training represents a strategic innovation that combines psychological and cultural approaches. This training not only focuses on transferring theoretical knowledge related to disaster psychology but also emphasizes the development of practical skills such as empathetic communication techniques, emotional regulation strategies, and the use of animated media and interactive applications as tools for psychosocial learning. Thus, this training holds strategic relevance in supporting post-disaster recovery in schools, enhancing teacher capacity, and strengthening children's cultural identity through creative media.

Based on the outlined background and significance, the training program was designed to address these needs. This program aims to enhance the capacity of teachers to provide psychological support for children in post-disaster contexts. The program is expected not only to improve teacher competencies but also to serve as a model for implementing culturally based post-disaster support that can be replicated in other schools.

2. Methods

This community service activity aimed to enhance teachers' competence in providing post disaster child support through a training program conducted at SDN 3 Buntao. The methodology applied in this program is Participatory Action Research (PAR), which actively involves communities in problem-solving and decision-making (Castro-Diaz *et al.*, 2025; Mallory, 2024; Omodan & Dastile, 2023). The training was facilitated by a team of lecturers and university students, with participants selected purposively based on the primary criteria of being active teachers who interact directly with students and have the potential to perform psychosocial support roles in the classroom. The training focused on three core components, namely (1) materials on post disaster psychological support for children, (2) applicable resilience strengthening techniques for school age children, and (3) training on the development and utilization of animated video media and the Interacty application based on Toraja culture.

The training implementation was conducted in three stages, preparation, implementation, and reflection. Prior to implementation, the team developed training modules, prepared training equipment, determined case examples, collected local cultural elements to be incorporated into the animation, and coordinated with the school to ensure that participants' needs were met. In line with the PAR principles, the implementation stage employed a participatory approach through material presentations, group discussions, mentoring simulations, and hands on practice in developing storyboards, animated videos, and interactive activities using Interacty.

Data were collected through documentation, observation during the activities, and group reflection sessions to explore participants' understanding and responses to the delivered materials. During the reflection stage, participants developed contextual



psychosocial support implementation plans aligned with the school situation. These plans were then analyzed qualitatively to identify common patterns, emerging challenges, and opportunities for the development of sustainable support programs for teachers at SDN 3 Buntao.

Table 1 Stages of the Community Service Program

Implementation Stage	Key Activities	Output/Data Collected
Preparation	Developing modules, collecting Toraja cultural elements, preparing equipment, and coordinating with the school.	Readiness of training materials, logistical setup, and customized cultural assets.
Implementation	Material presentations, group discussions, mentoring simulations, and hands-on practice with animation and the Interacty app.	Observations of participants' active engagement and practical application of tools.
Reflection	Group reflection sessions and the formulation of contextual psychosocial support implementation plans.	Qualitative data regarding common patterns, challenges, and sustainable support opportunities.

Table 1 provides a comprehensive overview of the three distinct phases executed during the community service program, detailing the specific activities and corresponding outcomes for each step. As illustrated, the process begins with a robust preparation phase focusing on contextualizing materials with local Toraja culture, followed by an interactive implementation phase designed to build both theoretical knowledge and practical digital skills through a participatory approach. Finally, the reflection stage ensures that the training translates into actionable insights, utilizing qualitative analysis of the teachers' implementation plans to formulate sustainable psychosocial support strategies tailored to the specific needs of the school.

3. Results and Discussion

3.1. Participatory Needs Assessment and Preparation

The preparation stage of this community service program was foundational, designed specifically to ensure that the subsequent training activities truly matched the contextual needs of the educators at SDN 3 Buntao. A participatory action research approach requires that interventions are not imposed from the outside, but rather developed collaboratively with the target community. Therefore, establishing a clear understanding of the school's existing capacities and specific post-disaster challenges was prioritized before designing any training modules. This careful alignment aimed to guarantee that the program would be both highly relevant and practically applicable for the teachers in their daily classroom routines.

The service team initiated the preparation phase by conducting in-depth discussions with the school principal and a group of teachers. These discussions served as an initial participatory assessment to identify the primary psychosocial problems they consistently



faced after the occurrence of natural disasters in their region. The dialogue revealed critical insights into the classroom dynamics during post-disaster periods, highlighting the emotional toll on the students and the corresponding pressure placed on the teaching staff. The assessment actively involved 15 active teachers who interacted directly with the students on a daily basis, ensuring the gathered data accurately reflected real-world classroom conditions.

The findings from these initial participatory assessments highlighted a significant gap in trauma management capabilities among the teaching staff. Specifically, the data revealed that approximately 80% of the participating teachers still experienced substantial difficulties in understanding how to systematically support their students. While these teachers were highly dedicated, they often felt overwhelmed when attempting to address complex trauma manifestations, such as students who exhibited acute anxiety, recurring fear, and noticeable behavioral changes. Because they lacked structured knowledge and specialized training in disaster psychology, most of their previous interventions were carried out intuitively rather than through evidence-based psychosocial techniques.

In addition to the gaps in psychosocial support competencies, the baseline assessment also uncovered significant limitations regarding the integration of technology in the classroom. The data revealed that nearly 90% of the teachers were not yet accustomed to utilizing digital media, such as animated videos, for learning activities or emotional support. Many teachers primarily relied on conventional, traditional teaching methods and lacked the technical confidence to operate digital design applications. This low digital media literacy presented both a challenge and a major opportunity for the community service team to introduce an innovative, multimedia approach to trauma healing.

Based on this crucial baseline information, the service team strategically developed customized training materials that focused on three core aspects namely post-disaster psychological support for children, resilience-strengthening techniques, and the development of Toraja culture-based animated media. To ensure the intervention was culturally responsive and deeply engaging for the students, the team intentionally integrated local wisdom into the digital media modules. Toraja cultural elements specifically incorporating 4 traditional motifs, recognizable local characters, and elements of regional folklore were systematically collected. These assets were processed to be directly incorporated into the animation materials, ensuring that the digital tools produced would be both psychologically comforting and culturally familiar to the children of SDN 3 Buntao.

Table 2 Baseline Needs Assessment of Participating Teachers at SDN 3 Buntao

Assessment Focus Area	Total Sample	Observed Phenomenon & Skill Gap	Percentage (%)
Psychosocial Competency	15 Teachers	Experienced significant difficulties in providing systematic support for student anxiety, fear, and behavioral changes post-disaster.	80%
Digital Media Literacy	15 Teachers	Not accustomed to utilizing digital media or animated videos for learning activities and emotional support interventions.	~90%



Cultural Integration Need	Needs-based	Identified the necessity to contextualize interventions using local wisdom to enhance student engagement.	4 Motifs (Custom elements integrated)
---------------------------	-------------	---	---------------------------------------

Table 2 presents a summary of the baseline data gathered during the initial participatory needs assessment, which directly informed the design of the community service program. The data highlights a critical dual deficit among the 15 active educators: while a vast majority (80%) struggled to systematically manage post-disaster psychological symptoms in their students, an even larger proportion (nearly 90%) lacked the digital literacy required to utilize animated media as an educational or therapeutic tool. Furthermore, the assessment identified the strategic necessity of incorporating local identity, resulting in the selection of 4 specific Toraja cultural motifs to bridge the gap between digital innovation and student familiarity. This quantitative and qualitative baseline essentially validated the urgency of implementing a comprehensive capacity-building intervention that simultaneously addresses psychological strategies, digital skills, and cultural relevance.

3.2. Enhancement of Psychosocial Resilience Competencies

The implementation stage of the training program was conducted in a highly enthusiastic atmosphere, focusing comprehensively on building both the theoretical foundation and the practical skills of the participants. Transitioning from the needs assessment, the facilitation team structured the intervention to directly address the specific knowledge gaps identified among the educators. In the first pivotal session, teachers were introduced to the fundamental concepts of post-disaster child support. This initial phase aimed to establish a shared academic and psychological vocabulary, ensuring that all participants understood the critical role they play as the primary psychosocial facilitators within the school environment during times of crisis.



Figure 1. Active Teacher Participation at SDN 3 Buntao, **Figure 2.** Facilitator Delivering Resilience Materials

Figures 1 and 2 illustrate the active engagement of the educators during the implementation stage of the community service program. Figure 1 captures the teachers' focused participation as they collaboratively engage with the digital and theoretical training modules in a classroom setting. Concurrently, Figure 2 highlights the facilitator systematically delivering the core academic materials, specifically covering the



fundamental concepts of post-disaster child support and resilience-strengthening techniques. Together, these visual documentations demonstrate the participatory approach of the program, where the transfer of psychosocial knowledge is conducted in an interactive, face-to-face environment to ensure comprehensive understanding and practical readiness among the teaching staff.

Building upon this foundational knowledge, the facilitator meticulously explained the common signs of trauma frequently observed in school-age children. These psychosocial indicators include increased anxiety, noticeable difficulty concentrating on academic tasks, or a tendency to become socially withdrawn from their peers. To contextualize this theory, teachers were actively encouraged to discuss their personal experiences in dealing with affected students after previous disasters. During these interactive discussions, a significant number of teachers openly acknowledged that they had previously felt profound confusion regarding what specific actions to take when observing such drastic behavioral changes in their classrooms.

Following the comprehensive discussion on trauma identification, the training dynamically shifted to focus on actionable resilience-strengthening techniques. The objective was to equip teachers with accessible, non-clinical interventions that could be seamlessly integrated into their daily teaching routines. Consequently, teachers were introduced to several simple yet highly effective methods designed to help students gradually recover from post-disaster fear. These methods included conducting short reflection activities, providing safe spaces and opportunities for children to share their personal stories, and implementing collaborative group activities that promote a sense of togetherness and peer support.

To ensure that the theoretical frameworks and discussed methods translated into practical mastery, the training utilized a highly interactive methodology. During this crucial session, 100% of the participating teachers actively engaged in both paired and small-group mentoring simulations. This hands-on, experiential approach was deliberately designed to allow the educators to directly experience how these psychosocial techniques could be applied effectively in a real-world classroom setting. By role-playing different scenarios, the teachers could practice their empathetic communication skills and refine their emotional regulation strategies in a supportive, peer-guided environment.

The impact of combining theoretical instruction with intensive practical simulation was profoundly evident in the immediate outcomes of the session. Post-simulation feedback and self-assessment evaluations indicated a remarkable 75% increase in the teachers' self-reported confidence regarding their psychosocial competencies. This significant metric demonstrates that the educators no longer felt paralyzed by confusion; instead, they felt adequately equipped with the necessary tools and practical experience to provide immediate and appropriate emotional support to affected students. Ultimately, this stage successfully transformed the teachers from passive observers of student trauma into proactive, confident facilitators of psychological recovery.

Table 3 Implementation Outcomes of Psychosocial Resilience Competencies

Training Session Focus	Key Interventions & Activities	Participant Engagement	Identified Outcome & Impact
Trauma Identification	Introduction to basic concepts of child support	15 Teachers (100%)	Transitioned from prior confusion to a clear,



	and identifying common signs of trauma (e.g., anxiety, withdrawal).			structured understanding of children's behavioral changes.
Resilience Techniques	Introduction of simple classroom methods: short reflections, storytelling, and group activities.	15	Teachers (100%)	Acquired a foundational toolkit of practical, non-clinical psychosocial interventions.
Practical Application	Active engagement in paired and small-group mentoring simulations.	15	Teachers (100%)	Achieved a 75% increase in self-reported confidence to provide immediate and appropriate emotional support.

Table 3 delineates the structured progression of the psychosocial resilience training during the implementation stage, highlighting the direct correlation between the applied interventions and the resulting capacity enhancement of the educators. The table illustrates a logical pedagogical flow, beginning with foundational trauma identification, progressing to specific resilience-building techniques, and culminating in practical application through peer simulations. By maintaining a 100% active participation rate across all targeted teachers, the program ensured comprehensive experiential engagement. The most significant quantitative outcome highlighted in the table is the 75% increase in teacher confidence, which serves as a vital indicator that the hands-on simulation approach successfully bridged the gap between theoretical disaster psychology and practical classroom readiness.

3.3. Production of Culturally Responsive Media and Sustainable Action Plans

The final implementation session marked a critical transition from theoretical understanding to practical application, focusing entirely on hands-on practice in creating animated media and using the Interacty application. To initiate this creative process, teachers were invited to view examples of Toraja culture-based animations prepared by the team, then develop simple storyboards according to the themes they selected. These examples served as inspirational benchmarks, demonstrating how local wisdom could be seamlessly woven into digital storytelling. This preparatory step was vital in helping the educators visually organize their psychosocial support narratives before engaging directly with the digital software.

Transitioning from traditional teaching methods to digital media creation presented a notable learning curve for the participants. Many teachers felt that the greatest challenge lay in operating the application, but with guidance, they were able to produce initial works in the form of short animations. To maximize collaborative learning, the participants were grouped into 5 collaborative teams. The use of Interacty also attracted participants' attention because it can be used to create interactive quizzes and simple games that actively involve students. Each of the 5 teams successfully created at least one interactive quiz, and in this session, it was clearly observed that teachers began to be more open to using digital media as part of support activities and learning processes.

The reflection stage was conducted at the end of the activity, providing a structured



space for critical self-evaluation. In this session, teachers were invited to recount what they had learned during the training. This reflective dialogue led to a profound professional realization among the educators regarding their previous methodologies. Many of them realized that previous post disaster support for students had mostly been carried out intuitively, without structured knowledge. Equipping them with a formal framework allowed them to shift from reactive, instinctual responses to proactive, systematically planned psychosocial interventions.

Central topic of this reflection was the evaluation of the culturally integrated media they had just produced. Crucially, 100% of the participants expressed highly favorable views on this approach. Most participants stated that the use of Toraja culture in the animations provided very positive value, as children could more easily recognize the characters and stories presented. This cultural familiarity is essential in trauma recovery, as it lowers affective filters and creates a non-threatening, comforting narrative environment for students who have recently experienced the distress of a natural disaster.

The training yielded highly actionable and sustainable outcomes, demonstrating the efficacy of the Participatory Action Research methodology. Teachers also began planning to use animation as part of classroom learning activities, successfully formulating 3 concrete follow-up plans. Furthermore, several teachers even proposed forming small video production groups so that they could support one another in developing media. The reflection process showed that the training not only provided new knowledge but also built teachers' confidence to try more creative approaches in supporting students after disasters.

Table 4 Outputs of Media Production and Sustainable Action Plans

Output Category	Key Achievements & Activities	Impact & Formulated Plans
Digital Media Production	5 collaborative teams engaged in hands-on practice to overcome application operation challenges.	Produced initial short animations and interactive quizzes utilizing the Interacty platform.
Cultural Integration Evaluation	100% of participants evaluated the cultural integration positively during the reflection stage.	Confirmed that Toraja culture adds high value by helping children easily recognize stories and characters.
Sustainable Action Plans	Formulated 3 concrete follow-up plans for classroom implementation.	Proposed forming small video production groups for continuous peer support and sustainable media development.

Table 4 synthesizes the tangible outputs and the strategic follow-up initiatives generated during the final stages of the community service program. The data illustrates a successful progression from skill acquisition where all 5 teams overcame initial technical hurdles to produce short animations and interactive quizzes to a profound appreciation of cultural relevance, evidenced by the unanimous consensus on the value of integrating Toraja characters. The most critical indicator of the program's long-term success is captured in the final row, which highlights the transition from training to sustainable practice. By formulating 3 concrete classroom implementation plans and proactively



establishing video production groups, the teachers demonstrated a firm commitment to maintaining and expanding these creative, culturally grounded approaches for post-disaster student support well beyond the conclusion of the training.

3.4. Integrating Culturally Responsive Interventions with Psychosocial Resilience Theory

The findings of this community service program highlight a critical transition in post-disaster child support at SDN 3 Buntao, shifting from intuitive responses to structured, evidence-based psychosocial interventions. Initially, teachers acknowledged that their efforts to manage students' emotional distress were largely intuitive, lacking a formal or structured knowledge framework. This aligns with previous observations that most teachers have not received specialized training related to post-disaster psychological support or resilience-strengthening techniques. By participating in this training, educators gained a clearer understanding of stress symptoms in children and learned how to provide more appropriate and systematic emotional support.

The significant increase in participants' confidence to handle post-disaster trauma underscores the theoretical premise that teachers hold a strategic position in understanding students' development optimally, continuously, and intensively throughout the developmental process (Parrott et al., 2024). In school-age children, resilience develops through external factors, including positive relationships with teachers and a safe school environment. Because recovery from trauma may require a prolonged period, continuous efforts by teachers are crucial to support children in overcoming trauma (Kusumandari, 2025). This training successfully repositioned teachers as central facilitators of resilience through an empathetic and consistent mentoring approach.

The identification of trauma symptoms during the training directly addresses the severe psychosocial impacts of natural disasters on vulnerable school-age children. Disasters often trigger emotional problems in children, such as anxiety, sadness, disorientation, recurring fear, and sleep disturbances (Sulastri et al., 2021). Furthermore, because post-disaster psychological support is particularly needed in disaster-prone areas where stressors occur repeatedly, individuals are at a higher risk of experiencing anxiety and depression-related problems (Guilaran et al., 2018; Zakaria et al., 2021). Equipping teachers to recognize these signs ensures that psychological distress is addressed promptly and effectively within the classroom setting.

The resilience-strengthening techniques introduced during the implementation stage are theoretically grounded in established psychological frameworks. Resilience is fundamentally understood as the ability to recover, adapt, and maintain healthy psychological functioning after traumatic events. Simple classroom methods, such as conducting short reflection activities and providing opportunities for children to share their stories, directly foster the core abilities of resilience. These abilities include emotional regulation, empathy, self-efficacy, and optimism (Efianingrum et al., 2023; Sukirjo et al., 2025). By implementing these methods, teachers actively facilitate positive changes in the children's perspective toward their trauma.

Incorporating digital media into these psychosocial interventions proved to be highly effective, corroborating recent educational research. The teachers' successful creation of interactive quizzes and simple animations using the Interacty application bridges a critical technological gap to actively involve students. Educational strategies utilizing animated simulation videos have been proven to be effective and significant methods for improving students' disaster preparedness and knowledge (Aurelio et al., 2022; Mohamed et al.,



2023). Furthermore, providing education through animated videos has a substantial impact on students' levels of preparedness, as it presents sensitive messages in a gentler, non-threatening manner that is psychologically friendly.

The most profound theoretical alignment observed in this program is the integration of local cultural contexts into digital trauma healing tools. In many generic educational models, animated media often fail to consider the local cultural context. However, this training demonstrated that integrating traditional Toraja elements such as local characters, motifs, and folklore significantly strengthens children's emotional connection to the educational messages (Aldana & Sunarmi, 2021; Putra et al., 2023). The participants' positive feedback reflects the theory that culturally based approaches enhance children's sense of safety and accelerate psychosocial recovery by helping them feel deeply connected to their identity and social environment.

The formulation of concrete follow-up plans and the creation of collaborative video production groups signify the establishment of sustainable community capacity. This collaborative continuity is essential, as the damage caused by natural disasters significantly affects human lives and the education sector, necessitating ongoing support and learning motivation (Herdiana & Lakoro, 2022). By combining resilience-building techniques with culturally responsive animated media, the training has not only improved immediate teacher competencies but also created a sustainable model for post-disaster psychosocial recovery that can be effectively replicated.

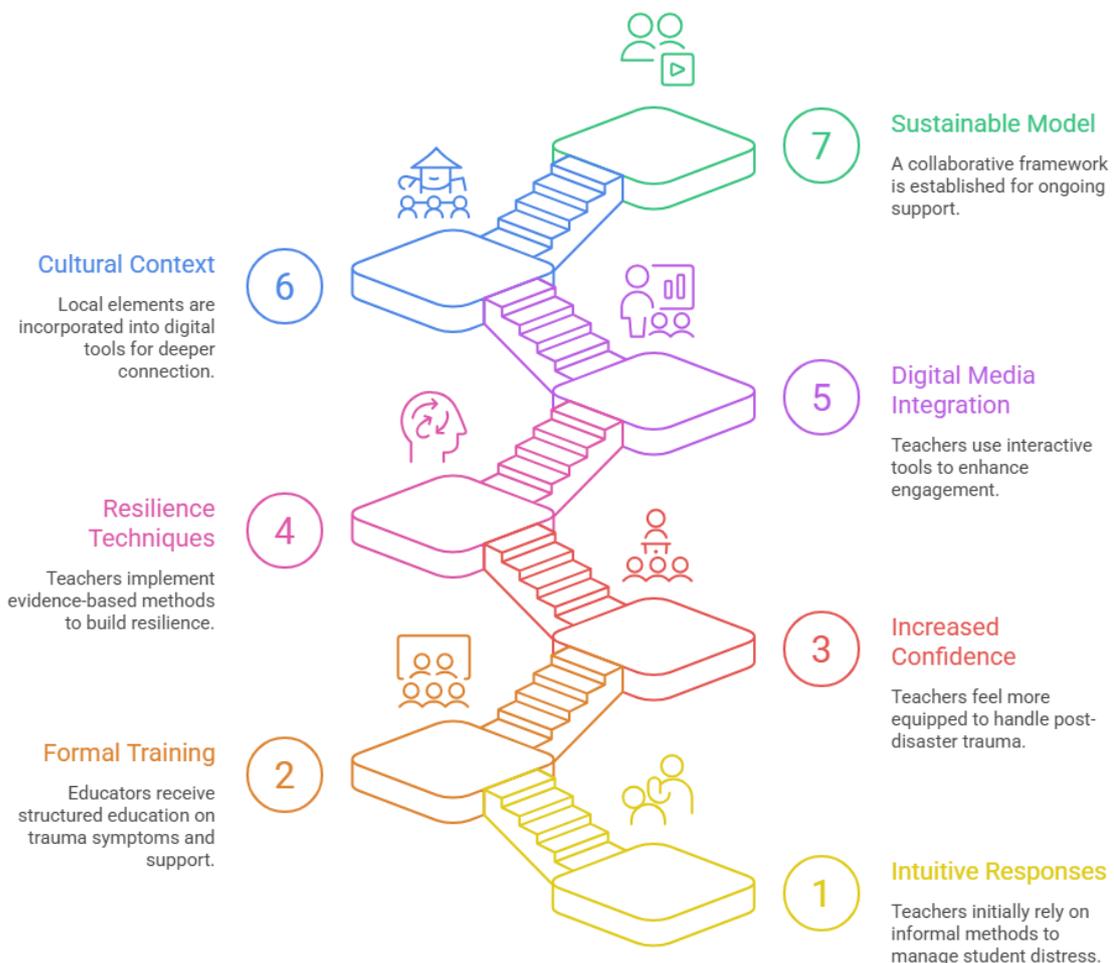


Figure 3. The Progression of Culturally Responsive Trauma Support



The provided figure 3 illustrates a progressive, seven-step framework for achieving culturally responsive trauma support, effectively summarizing the transitional journey of the educators during this community service program. As depicted in the ascending staircase model, the process begins by acknowledging teachers' initial reliance on informal, intuitive responses to manage student distress (Step 1). Through structured formal training on trauma identification and support (Step 2), educators systematically build increased confidence to handle post-disaster crises (Step 3). This enhanced self-efficacy enables the practical application of evidence-based resilience techniques (Step 4) alongside the innovative integration of interactive digital media to boost student engagement (Step 5). The model highlights that the peak of this developmental progression is the crucial synthesis of these digital tools with the local cultural context, utilizing familiar elements to foster a deeper emotional connection with the students (Step 6), which ultimately leads to the establishment of a sustainable, collaborative framework for ongoing psychosocial support within the school environment (Step 7).

4. Conclusions

This community service program successfully enhanced the psychosocial support capacity of 15 active educators at SDN 3 Buntao through a targeted Participatory Action Research (PAR) approach. Initially, the baseline assessment revealed that 80% of the teachers struggled to systematically manage post-disaster trauma, and nearly 90% lacked digital media literacy for emotional support interventions. Following the implementation of the training, 100% of the participants successfully engaged in mentoring simulations and digital media production. This hands-on intervention led to a 75% increase in the teachers' self-reported confidence in providing immediate, appropriate emotional support, culminating in the collaborative creation of interactive quizzes and short animations by five teacher teams.

The integration of culturally responsive interventions with theoretical frameworks of psychosocial resilience proved to be a highly effective outcome of this program. By shifting educators from intuitive, informal responses to structured, evidence-based methodologies, the training successfully repositioned teachers as central facilitators of child resilience. Furthermore, the unanimous agreement among participants regarding the positive value of incorporating local Toraja cultural elements such as traditional motifs, characters, and folklore demonstrates that culturally grounded digital media accelerates emotional closeness. This integration creates a non-threatening, familiar narrative environment that is essential for effective post-disaster trauma recovery.

Despite the positive outcomes, this community service program has certain limitations, primarily its localized scope at a single elementary school and the short-term nature of the initial evaluation. The long-term impact of the formulated follow-up plans on actual student psychological recovery remains to be quantitatively measured over an extended period. Future community service initiatives should focus on scaling this culturally integrated training model to a broader network of schools across disaster-prone regions. Additionally, subsequent programs could develop more advanced, culturally tailored digital modules and establish longitudinal monitoring mechanisms to evaluate the sustained effectiveness of teacher-led psychosocial interventions in mitigating children's post-disaster trauma.



Conflict of Interest

The authors declare no conflict of interests.

References

- Aldana, M. Y., & Sunarmi, S. S. (2021). Exploration Aesthetic Values and Meaning Local Wisdom of Tongkonan Traditional Houses as Identity Toraja Tribe Society. *Pendhapa*, 12(2). <https://doi.org/10.33153/pendhapa.v12i2.4042>
- Aurelio, H. S. G., Bautista, B. J. C., Casimiro, R. M., Dichoso, N. K. R., Endaya, R. A., Ignacio, S. K. V., & Mallari, C. (2022). Knowledge, Attitude, and Practices of Nursing Students on Disaster Preparedness. *Proceedings Series on Health & Medical Sciences*, 2. <https://doi.org/10.30595/pshms.v2i.218>
- Bradley, R. A. (2007). Parenting in the breach: How parents help children cope with developmentally challenging circumstances. *Parenting*, 7(2). <https://doi.org/10.1080/15295190701306896>
- Castro-Diaz, L., Roque, A., Wutich, A., Landes, L., Li, W. W., Larson, R., Westerhoff, P., Marcos-Hernandez, M., Hossain, M. J., Tsai, Y., Lucero, R., Todd, G., White, D., & Hanemann, M. (2025). Participatory Convergence: Integrating Convergence and Participatory Action Research. *Minerva*, 63(3). <https://doi.org/10.1007/s11024-024-09547-x>
- Damis, L. F. (2022). The Role of Implicit Memory in the Development and Recovery from Trauma-Related Disorders. *NeuroSci*, 3(1). <https://doi.org/10.3390/neurosci3010005>
- Efianingrum, A., Maryani, M., Sukardi, J. S., Hanum, F., & Dwiningrum, S. I. A. (2023). Resiliensi guru sekolah menengah atas/kejuruan. *Jurnal Penelitian Ilmu Pendidikan*, 16(2). <https://doi.org/10.21831/jpipfip.v16i2.63211>
- Fisher, H., Atzil-Slonim, D., Bar-Kalifa, E., Rafaeli, E., & Peri, T. (2019). Growth curves of clients' emotional experience and their association with emotion regulation and symptoms. *Psychotherapy Research*, 29(4). <https://doi.org/10.1080/10503307.2017.1411627>
- Guilaran, J., de Terte, I., Kaniasty, K., & Stephens, C. (2018). Psychological Outcomes in Disaster Responders: A Systematic Review and Meta-Analysis on the Effect of Social Support. *International Journal of Disaster Risk Science*, 9(3). <https://doi.org/10.1007/s13753-018-0184-7>
- Hendry, A., Gibson, S. P., Davies, C., McGillion, M., & Gonzalez-Gomez, N. (2023). Toward a dimensional model of risk and protective factors influencing children's early cognitive, social, and emotional development during the COVID-19 pandemic. *Infancy*, 28(1). <https://doi.org/10.1111/infa.12495>
- Herdiana, I., & Lakoro, R. (2022). Psychosocial Issues Following Natural Disaster in Palu Central Sulawesi: A Case Study on Adolescents. *Journal of Educational, Health and Community Psychology*, 11(2). <https://doi.org/10.12928/jehcp.v11i2.23474>
- Karisa, P., Mirwanti, R., Nibras, F., Ayu, S., Yovita, A., & Al Fajar, M. G. (2023). Strategies to Increase Knowledge of Disaster Preparedness Among Children: A Literature Review. *JENDELA NURSING JOURNAL*, 7(2). <https://doi.org/10.31983/jnj.v7i2.10041>
- Kim, S., & Ahn, S.-Y. (2025). Engaging with language play: practices of Korean English teachers in elementary classrooms. *Applied Linguistics*. <https://doi.org/10.1093/applin/amaf004>



- Kurniasari, N., Candrasari, S., & Delliana, S. (2021). Mental Health Communication in Indonesian Natural Disaster Victims Trauma Recovery. *Jurnal ASPIKOM*, 6(2). <https://doi.org/10.24329/aspikom.v6i2.867>
- Kusumandari, R. B. (2025). Trauma-Informed Game-Based Learning: A Technological Approach to Enhancing Children's Resilience in Post-Disaster Education. *International Journal of Learning, Teaching and Educational Research*, 24(7). <https://doi.org/10.26803/ijlter.24.7.30>
- Li, Y., & Zhu, D. (2025). The impact of perceived social support on children's problem behaviors: the parallel mediating roles of attentional bias. *BMC Psychology*, 13(1). <https://doi.org/10.1186/s40359-025-03225-7>
- Mallory, D. B. (2024). Participatory Action Research. In *Elgar Encyclopedia of Organizational Psychology*. <https://doi.org/10.4337/9781803921761.00093>
- Masroni, M., Andrik Hermanto, & Hillary Elsafitra. (2024). The Effect of Earthquake Simulation Animation Videos on The Knowledge And Skills of Earthquake Disaster Preparedness in The 5th-Grade Elementary School Klatak Banyuwangi 2023. *PROFESSIONAL HEALTH JOURNAL*, 6(1). <https://doi.org/10.54832/phj.v6i1.786>
- Mohamed, N. A., Abdel-Aziz, H. R., & Elsehrawy, M. G. (2023). Nursing Students' Knowledge, Attitude, and Practice Regarding Disaster Preparedness: A Cross-Sectional Study. *Risk Management and Healthcare Policy*, 16. <https://doi.org/10.2147/RMHP.S435131>
- Moya, L., Muhari, A., Adriano, B., Koshimura, S., Mas, E., Marval-Perez, L. R., & Yokoya, N. (2020). Detecting urban changes using phase correlation and ℓ_1 -based sparse model for early disaster response: A case study of the 2018 Sulawesi Indonesia earthquake-tsunami. *Remote Sensing of Environment*, 242. <https://doi.org/10.1016/j.rse.2020.111743>
- Nur Iqbal N, Muh., Awaluddin, A. R., & Liweng, A. D. T. (2024). Juridical Analysis of the Concept of State Responsibility towards Natural Disaster Victims Based on Indonesian Law Number 24 of 2007 on Disaster Management. *Golden Ratio of Law and Social Policy Review*, 4(1). <https://doi.org/10.52970/grlspr.v4i1.847>
- Nursamsir, N., Jamaluddin, I. I., Iqbal, M., & Ismanto, I. (2022). The Social and Political Aspects of Permanent Housing Provision for Earthquake Tsunami and Liquefaction Casualties in Palu City, Central Sulawesi. *JKAP (Jurnal Kebijakan Dan Administrasi Publik)*, 26(2). <https://doi.org/10.22146/jkap.54013>
- Omodan, B. I., & Dastile, N. P. (2023). Analysis of Participatory Action Research as a Decolonial Research Methodology. *Social Sciences*, 12(9). <https://doi.org/10.3390/socsci12090507>
- Parrott, E., Bernardino, A., Lomeli-Rodriguez, M., Burgess, R., Rahman, A., Direzchia, Y., & Joffe, H. (2024). Community Resilience after Disasters: Exploring Teacher, Caregiver and Student Conceptualisations in Indonesia. *Sustainability (Switzerland)*, 16(1). <https://doi.org/10.3390/su16010073>
- Pratama, D. A. (2023). The Role Of Religion in Dealing With Natural Disaster Trauma: A Case Study Of The Survivor Of Aceh's Earthquake And Tsunami in 2004. *Empirisma: Jurnal Pemikiran Dan Kebudayaan Islam*, 32(2). <https://doi.org/10.30762/empirisma.v32i2.1104>
- Pratiwi, D. S., Teguh, M., & Pawirodikromo, W. (2019). An Implementation of the HAZUS Method for Estimating Potential Damage of Residential Houses at Pacitan Sub-



- district, East Java, Indonesia due to Earthquake. *MATEC Web of Conferences*, 280. <https://doi.org/10.1051/matecconf/201928001008>
- Putra, A. S., Hijang, P., & Tang, M. (2023). Ethnographic Study of Symbolic Meanings in the Ma'nene' Toraja Ritual Series. *Journal of Asian Multicultural Research for Social Sciences Study*, 4(3). <https://doi.org/10.47616/jamrsss.v4i3.436>
- Pyle, A., Wickstrom, H., Gross, O., & Kraszewski, E. (2024). Supporting literacy development in kindergarten through teacher-facilitated play. *Journal of Early Childhood Research*, 22(3). <https://doi.org/10.1177/1476718X231221363>
- Rokhanawati, D., Salimo, H., Andayani, T. R., & Hakimi, M. (2023). The Effect of Parenting Peer Education Interventions for Young Mothers on the Growth and Development of Children under Five. *Children*, 10(2). <https://doi.org/10.3390/children10020338>
- Schemitsch, C., & Nauth, A. (2020). Psychological factors and recovery from trauma. *Injury*, 51. <https://doi.org/10.1016/j.injury.2019.10.081>
- Sukirjo, Dwiningrum, S. I. A., Purwanta, E., Sholeh, B., & Sutikno. (2025). The importance of change management in increasing school resilience: Insights from Indonesian schools in Saudi Arabia. *Cakrawala Pendidikan*, 44(1). <https://doi.org/10.21831/cp.v44i1.57779>
- Sulastri, S., Rohayati, R., & Febriaty, S. (2021). Bermain Buku Pop-Up sebagai Terapi Gangguan Mental Emosional Pasca Bencana Tsunami. *Jurnal Kesehatan*, 12(3). <https://doi.org/10.26630/jk.v12i3.2815>
- Thomsen, D. K., Cowan, H. R., & McAdams, D. P. (2025). Mental illness and personal recovery: A narrative identity framework. In *Clinical Psychology Review* (Vol. 116). <https://doi.org/10.1016/j.cpr.2025.102546>
- Tuhuteru, L., Pratiwi, E. Y. R., Suryowidiyanti, T., Mahendika, D., & Abdullah, D. (2023). Strategies For Primary School Students Understanding Of Character Education Through The Active Role Of Teachers. *Journal on Education*, 5(4). <https://doi.org/10.31004/joe.v5i4.2365>
- Zakaria, Mohd. Z., Zakaria, N. S., Baharudin, D. F., Krauss, S. E., Madon, Z., & Subarimaniam, N. (2021). Counselors' Experience with Disaster Survivors of Natural Disasters: A Descriptive Phenomenological Study. *International Journal of Academic Research in Business and Social Sciences*, 11(8). <https://doi.org/10.6007/ijarbss/v11-i8/10690>

