

Evaluation Approach Interdisciplinary in Mitigation Education Disasters in Elementary Schools: Literature Review and Implications

Renni Ramadhani Lubis¹, Siti Irene Astuti Dwiningrum², Supartinah³
^{1,2,3}Yogyakarta State University, Sleman, Indonesia

ARTICLE INFO

Keyword

Evaluation, interdisciplinary
education mitigation disaster

ABSTRACT

This study aims for evaluate approach interdisciplinary in mitigation disaster at school base with analyze in a way detailed from various source literature. This study use method study literature. Technique data collection used that is articles that have been published in journals national and international in 2020-2024, which examines variety approach interdisciplinary used, challenges faced in its application and impact to results study student. Based on results research, it is known that results analysis gives description comprehensive How integration eye lesson can influence effectiveness initiative mitigation disaster level education base. With integrate various discipline knowledge like knowledge nature, science social and civic to in curriculum, we can create more approach holistic and coordinated to situation disaster. Through method learning interdisciplinary and strengthening skills practical, initiative mitigation disaster can become more effective and meaningful for student school basic, helpful they not only understand risk, but also encouraging development of more prevention strategies good. Implications from study this is very important for development policies and practices education related mitigation disaster at school base. Therefore that, this research not only give outlook about successes and challenges approach interdisciplinary, but also inspiring action constructive for increase resilience generation young to future disaster.

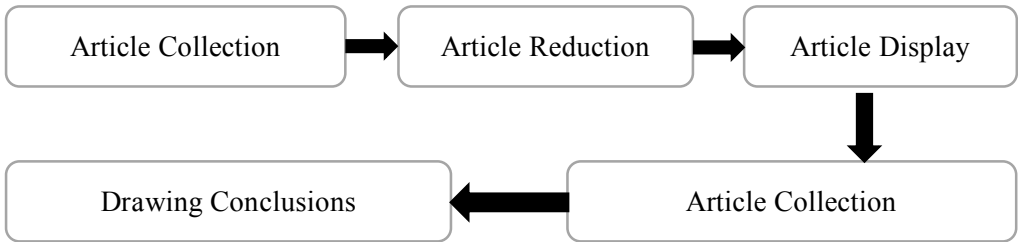
Introduction

Mitigation education disaster at school base is aspect important in effort increase safety and preparedness public to threat disaster nature. School base hold role central as a place where generations young can prepared for face various risk disaster with appropriate knowledge, skills and attitudes (Vu et al., 2023). In a number of decade lastly, approach interdisciplinary has considered as effective approach in strengthen education mitigation disaster in the environment formal education such as school base. Approach interdisciplinary integrate various discipline knowledge and expertise in develop mitigation strategies holistic and integrated disaster (Peek & Guikema, 2021). This matter covers aspects like knowledge social, scientific nature, technology and humanity for increase understanding, response, and adaptation to disaster. In- depth discussion about approach interdisciplinary in the environment school basics are very important for identify successes, challenges, and implications from implementation (Smith & Karr, 2000). Through this study, researcher can identify various approach interdisciplinary that has been applied in context education mitigation disaster at school base. Evaluation deep to literature will disclose patterns general in implementation (Kilsdonk et al., 2017). Such as educational models, methods effective teaching, and factors influential supporters success of the mitigation program disaster. Importance approach interdisciplinary in education mitigation disaster is also visible from increasingly global context complex and dynamic, where risk disaster can changed in a way sudden and necessary fast and coordinated response. With understand contribution of each discipline knowledge in mitigation disaster, school base can develop relevant and responsive curriculum to need local as well as condition different geographies (Farris, 2024). This study not only

will explore approach interdisciplinary in a way theoretical, but also will identify studies empirical that has been done for evaluate its effectiveness. Through synthesis systematic literature, researcher can highlighting the evidence shows contribution positive from approach interdisciplinary in increase knowledge, attitudes, and skills mitigation disaster among student school base. Besides that, this research will dig implications practical from findings the for development policy, teaching, and training for educators. This implication important for ensure that effort mitigation disaster at school base not only based on theory, but also can implemented in a way effective in context real education (Ronan et al., 2015). By overall, research this aim for provide comprehensive guide for practitioners, researchers, and takers decision in design and implement education mitigation sustainable and based disasters evidence at school base. With so, it is expected study this can give meaningful contribution in increase resilience disaster generation young in the future. With background back above, this research will explain review deep about approach interdisciplinary in education mitigation disaster at school base.

Research Methodology

This study use method study literature. Literature review is a search and research literature with read various books , journals , and publications other related things with topic research , for produce one related article with topic certain (Marzali , 2016). Data collection techniques used that is articles that have been published in journals national and international in 2020-2024. Steps in this study can seen in the picture under this :



Picture 1: Stages of Literature Review (Marzali , 2016)

Results and Discussion

Objective from study that is for evaluate approach interdisciplinary in mitigation disaster at school base with analyze in a way detailed from various source literature. From the results analysis give description comprehensive how integration eye lesson can influence effectiveness initiative mitigation disaster level education base. Disaster at school base with analysis in a way detailed from various source literature. Analysis results give description comprehensive how integration eye lesson can influence effectiveness initiative mitigation disaster level education base. With integrate various discipline knowledge like knowledge nature, science social and civic to in curriculum, we can create a more holistic and coordinated approach to situation disaster. Through method learning interdisciplinary and strengthening skills practical, initiative mitigation disaster can become more effective and meaningful for student school basic, helpful they no only understand risk, but also encouraging development of more prevention good strategies. Based on results search deep from various related sources analysis and review of journals that have published in range time between 2020 to by 2024, as well evaluation comprehensive from various available information in the literature. Results and this review has summarized in a way systematic. Detailed information and findings from this review process can viewed and analyzed more continue in the table this following:

Table 1. Articles according to the variables studied

Writer	Title	Research	Findings
Ihsan et al., (2024)	Polemic on Public Housing Savings (Tapera) : A Study with Approach Interdisciplinary	Descriptive qualitative	Implementation Tapera need a comprehensive and integrative approach, combining draft policy modern public with Islamic values and principles. Required improvement in aspect regulation, mechanism implementation, and governance for increase program effectiveness and minimizing polemic in society .
Williams (2024)	Disaster Education and Research		The results of educational efforts inform effectiveness confirmation cycles and future research questions. Overall, the

			goal is disaster prevention and mitigation of disaster impacts, including increased responder safety, better patient outcomes, and damage mitigation. Advances in research techniques and educational technology can encourage disaster education and research. The use of distance learning and meeting technologies, social media, the ubiquitous accessibility of smartphones and tablets, and high-fidelity simulations have transformed disaster research and education.
Irwanto et al., (2024)	Role of Schools in Mitigation Education Disasters in Children Elementary School at SDN 4 Santong	Descriptive qualitative	The role of schools in Mitigation Education disaster as facilitator that is prepare or facilitate teachers and students in implementation of mitigation education disaster , fine from facet mitigation structural nor non- structural mitigation . Facilitate Exercise planning , training and simulation as well as socialization to danger earthquake earth . School basic 4 Santong in implementation mitigation disaster get constraint costs and sources Power financial , lack of knowledge and skills in mitigation disaster , lack of facility mitigation disaster and lack coordination with party service related mitigation disaster. Impact positive from implementation mitigation disaster that is increased awareness, preparedness and responsiveness emergency, strengthen community school. Whereas negative impact of implementation mitigation disaster at school is costs and sources power, risk error in implementation, feeling fear and anxiety at times simulation as well as disturbance to curriculum school.
Goddess (2024)	Learning Mitigation Disaster Earthquake Bumi Kindergarten Children Slope Mount Merapi Yogyakarta	Descriptive Quantitative	Survey results learning mitigation disaster for child not yet done in a way routine, only 11% of kindergarten teachers schedule implementation learning with topic earthquake every month, 7% of kindergarten teachers schedule did it simulation earthquake earth each the month, as well as the teacher experience difficulty and confusion moment designing as well as learning mitigation disaster appropriate earthquake for kindergarten children. Learning mitigation disaster need given to child kindergarten age living in the area vulnerable disaster earthquake earth like

			Yogyakarta, and necessary exists innovation learning mitigation disaster earthquake earth so that the teacher does not again experience difficulty and confusion moment designing as well as do learning mitigation disaster appropriate earthquake for kindergarten children.
Asrizal et al., (2023)	The Impact of Science Learning Materials Integrating Natural Disasters and Disaster Mitigation on Students' Learning Outcomes: A Meta Analysis	Meta Analysis	teaching materials that are integrated with natural disasters and disaster mitigation have a big influence on student learning outcomes. In the teaching materials category, science modules that integrate material on natural disasters and disaster mitigation have the highest influence. In the category of integration of natural disaster material and disaster mitigation, disaster mitigation material has the greatest influence compared to natural disaster material and in the school level category, the application of integrated science teaching materials for natural disasters and disaster mitigation has a high impact when applied at the junior and senior high school levels, and an even higher impact at the junior high school level.
Suarmika et al., (2022)	Reconstruction of disaster education: The role of indigenous disaster mitigation for learning in Indonesian elementary schools	Qualitative Analysis	There are three patterns or forms of disaster mitigation based on traditional knowledge, namely belief, knowledge and technological engineering, while the disaster learning process uses several learning methods that are integrated in each subject. The findings of this research recommend the Missed Link model in learning disaster mitigation in elementary schools.
Fitria et al., (2022)	Disaster Mitigation Through Comic Moral Dilemmas For Elementary School Students	Quantitative and Qualitative	Understanding Disaster mitigation through comics for elementary education students is one solution that needs to be implemented in Indonesia to create a disaster resilient generation and with comics students' understanding of disaster preparedness will improve. Disaster mitigation awareness education from an early age is a very positive effort to instill a spirit of preparedness and concern for potential disasters and efforts to overcome them in a nation's young generation to support a better future.
Cruz & Ormilla (2022)	Disaster Risk Reduction Management Implementation In The Public Elementary Schools Of The Department Of Education, Philippines	Comparative Descriptive	Demonstrate that the district implements safe learning facilities and environments; establishing and managing school-based DRRM; and that the DRRM program is integrated into the curriculum for the benefit of students, personnel, parents and stakeholders visiting the school. This shows that the community involved in

			implementing the DRRM program is fully prepared with school facilities ready, while disaster preparedness activities are still being improved. School personnel know and understand DRRM programs and activities. In addition, the level of disaster preparedness in elementary schools is closely related to the level of DRRM implementation in terms of safe learning facilities and environments, school risk reduction management, and the integration of DRRM into the student curriculum. In addition, the implementation of DRRM in public elementary schools in the district is directly and significantly related to the level of awareness and understanding of the personnel involved.
SeyihogYlu et al., (2021)	The Design And Implementation Of A Teacher Training Program For Improving Teachers' Disaster Literacy: Interdisciplinary Disaster Education Program (IDP)	Quantitative and Qualitative	IDEP statistically increases teacher literacy regarding natural disasters. In addition, the survey results highlight that various learning activities (experiments, modeling, workshops, rock/soil analysis, coding, augmented reality, and STEM applications, etc.) related to natural disasters contribute to much of teachers' professional and personal knowledge. especially disaster management.
Backhouse et al., (2020)	Rethink: Interdisciplinary evaluation of academic workspaces	Literature Review	This research begins to fill this gap through a scoping literature review specific to academic workspaces and a new approach to academic workspace evaluation (AWE). The AWE approach focuses on the alignment of people, purpose and place, which differentiates it from the dominant post-occupancy evaluation focus of budget, time, environmental performance and user satisfaction. The main finding of this research is that change management as an integral aspect of the project design process as important to the success of a future-focused academic workspace project as its spatial design.
Williams (2024)	Disaster Education and Research		The results of educational efforts inform effectiveness confirmation cycles and future research questions. Overall, the goal is disaster prevention and mitigation of disaster impacts, including increased responder safety, better patient outcomes, and damage mitigation. Advances in research techniques and educational technology can encourage disaster education and research. The use of distance learning and meeting technologies, social media, the ubiquitous

			accessibility of smartphones and tablets, and high-fidelity simulations have transformed disaster research and education.
Irwanto et al., (2024)	Role of Schools in Mitigation Education Disasters in Children Elementary School at SDN 4 Santong	Descriptive qualitative	The role of schools in Mitigation Education disaster as facilitator that is prepare or facilitate teachers and students in implementation of mitigation education disaster, fine from facet mitigation structural nor non- structural mitigation. Facilitate Exercise planning, training and simulation as well as socialization to danger earthquake earth . School basic 4 Santong in implementation mitigation disaster get constraint costs and sources Power financial , lack of knowledge and skills in mitigation disaster , lack of facility mitigation disaster and lack coordination with party service related mitigation disaster. Impact positive from implementation mitigation disaster that is increased awareness, preparedness and responsiveness emergency, strengthen community school. Whereas negative impact of implementation mitigation disaster at school is costs and sources power, risk error in implementation, feeling fear and anxiety at times simulation as well as disturbance to curriculum school.
Goddess (2024)	Learning Mitigation Disaster Earthquake Bumi Kindergarten Children Slope Mount Merapi Yogyakarta	Descriptive Quantitative	Survey results learning mitigation disaster for child not yet done in a way routine, only 11% of kindergarten teachers schedule implementation learning with topic earthquake every month, 7% of kindergarten teachers schedule did it simulation earthquake earth each the month, as well as the teacher experience difficulty and confusion moment designing as well as learning mitigation disaster appropriate earthquake for kindergarten children. Learning mitigation disaster need given to child kindergarten age living in the area vulnerable disaster earthquake earth like Yogyakarta, and necessary exists innovation learning mitigation disaster earthquake earth so that the teacher does not again experience difficulty and confusion moment designing as well as do learning mitigation disaster appropriate earthquake for kindergarten children.
Asrizal et al., (2023)	The Impact of Science Learning Materials Integrating Natural Disasters and Disaster Mitigation on Students'	Meta Analysis	teaching materials that are integrated with natural disasters and disaster mitigation have a big influence on student learning outcomes. In the teaching materials category, science modules that integrate

	Learning Outcomes: A Meta Analysis		material on natural disasters and disaster mitigation have the highest influence. In the category of integration of natural disaster material and disaster mitigation, disaster mitigation material has the greatest influence compared to natural disaster material and in the school level category, the application of integrated science teaching materials for natural disasters and disaster mitigation has a high impact when applied at the junior and senior high school levels, and an even higher impact at the junior high school level.
Suarmika et al., (2022)	Reconstruction of disaster education: The role of indigenous disaster mitigation for learning in Indonesian elementary schools	Qualitative Analysis	There are three patterns or forms of disaster mitigation based on traditional knowledge, namely belief, knowledge and technological engineering, while the disaster learning process uses several learning methods that are integrated in each subject. The findings of this research recommend the Missed Link model in learning disaster mitigation in elementary schools.
Fitria et al., (2022)	Disaster Mitigation Through Comic Moral Dilemmas For Elementary School Students	Quantitative and Qualitative	Understanding Disaster mitigation through comics for elementary education students is one solution that needs to be implemented in Indonesia to create a disaster resilient generation and with comics students' understanding of disaster preparedness will improve. Disaster mitigation awareness education from an early age is a very positive effort to instill a spirit of preparedness and concern for potential disasters and efforts to overcome them in a nation's young generation to support a better future.
Cruz & Ormilla (2022)	Disaster Risk Reduction Management Implementation In The Public Elementary Schools Of The Department Of Education, Philippines	Comparative Descriptive	Demonstrate that the district implements safe learning facilities and environments; establishing and managing school-based DRRM; and that the DRRM program is integrated into the curriculum for the benefit of students, personnel, parents and stakeholders visiting the school. This shows that the community involved in implementing the DRRM program is fully prepared with school facilities ready, while disaster preparedness activities are still being improved. School personnel know and understand DRRM programs and activities. In addition, the level of disaster preparedness in elementary schools is closely related to the level of DRRM implementation in terms of safe learning facilities and environments, school risk reduction management, and

			the integration of DRRM into the student curriculum. In addition, the implementation of DRRM in public elementary schools in the district is directly and significantly related to the level of awareness and understanding of the personnel involved.
SeyihogYlu et al., (2021)	The Design And Implementation Of A Teacher Training Program For Improving Teachers' Disaster Literacy: Interdisciplinary Disaster Education Program (IDP)	Quantitative and Qualitative	IDEP statistically increases teacher literacy regarding natural disasters. In addition, the survey results highlight that various learning activities (experiments, modeling, workshops, rock/soil analysis, coding, augmented reality, and STEM applications, etc.) related to natural disasters contribute to much of teachers' professional and personal knowledge. especially disaster management.
Backhouse et al., (2020)	Rethink: Interdisciplinary evaluation of academic workspaces	Literature Review	This research begins to fill this gap through a scoping literature review specific to academic workspaces and a new approach to academic workspace evaluation (AWE). The AWE approach focuses on the alignment of people, purpose and place, which differentiates it from the dominant post-occupancy evaluation focus of budget, time, environmental performance and user satisfaction. The main finding of this research is that change management as an integral aspect of the project design process as important to the success of a future-focused academic workspace project as its spatial design.

Source: Document Review by Author

From various results found in the table above, results the relevant with title this study that is evaluation approach interdisciplinary in education mitigation disaster at school basic, because know importance approach interdisciplinary in integrate mitigation disaster to in curriculum and practice teaching at school base. This result show that approach comprehensive and integrated that includes various aspect start from policy tapera, education mitigation disaster, utilization technology to learning models based knowledge traditional is kumci strengthening education mitigation disaster. This evaluation highlighting challenges and opportunities in implementation mitigation disasters in schools and recommendations for approach more interdisciplinary Good in mitigation future disaster. From the results research above, is known that results study related with application approach interdisciplinary in education mitigation disaster at school base. Approach interdisciplinary in a way significant increase understanding student about various aspect disaster nature, like causes, impacts and mitigation strategies (Yildirim et al., 2024). For example, integration sciences social help student understand factors social and cultural influences response public to disaster, meanwhile sciences natural give information base about symptoms disaster and technical handling it. Approach interdisciplinarity also plays a role important in development skills practical student in face disaster (Ye & Xu, 2023). Studies case show that schools that use it approach this succeed practice his students in technique evacuation, help first and management circumstances emergency, so increase readiness they in respond circumstances emergency.

However, the evaluation is also revealing a number of challenge in application approach interdisciplinarity in schools base. One of challenge biggest that is how difficult it is coordinate various discipline science and policy education for integrate a complete and integrated curriculum (Rojas et al., 2024). This matter always need support from leader school and collaboration tightly between teachers and staff school. Besides that is, fulfillment need source adequate power also becomes factor decider success application approach interdisciplinary (Al- Hammouri et al., 2024). Besides that is, fulfillment need source adequate power also becomes factor decider success application approach interdisciplinary. A successful school in training mitigation disaster often choose access to ongoing teacher

training, technology supporter like device soft simulation disasters, and infrastructure physique for support practice mitigation. Identify a number of factor possible success support application approach interdisciplinary that is strong commitment from all over holder interests, incl government, schools, communities and institutions self-subsistent society, for work the same create education mitigation effective and sustainable disasters. Adaptation curriculum and teaching strategies with circumstances local (Nalbantoglu & Bumen, 2024). Every area have characteristics specific disaster, so method teaching mitigation disaster at school base must customized with needs and context respective geography. Implications from results review literature this is very important for form policies and practices in the field (Kraus et al., 2024). Recommendation the covers necessity develop guidelines national or regional support application approach interdisciplinary in training help disaster, as well investment in training sustainable and sourcing power coach. Based on discussion from results research above, is known that approach interdisciplinary own potency big for strengthen education mitigation disaster at school base. With consider existing challenges and optimizing them factor supporters, us can increase readiness students and community school in face various threat disaster in the future come.

Conclusion

This study discusses importance approach interdisciplinary for strengthen education mitigation disaster at school base. Integrate discipline knowledge like knowledge social, scientific nature, engineering, and humanities has proven give approach holistic in prepare student face disaster nature and circumstances emergency other. Approach interdisciplinary give framework comprehensive which is not only increase understanding student about risk disaster, but also strengthening ability school for respond situation emergency with more good. But this study, identify a number of a must challenge overcome in apply approach interdisciplinary. This challenges that is more coordination good from various holder interests in the field education, development adapted curriculum with change condition disaster local, and fulfillment need source adequate power for overcome this challenge, must exists close collaboration between government, institutions education, and society For support effective and sustainable implementation. Based on results research, it is known that results analysis give description comprehensive how integration eye lesson can influence effectiveness initiative mitigation disaster level education base. With integrate various discipline knowledge like knowledge nature, science social and civic to in curriculum, we can create more approach holistic and coordinated to situation disaster. Through method learning interdisciplinary and strengthening skills practical, initiative mitigation disaster can become more effective and meaningful for student school basic, helpful they not only understand risk, but also encouraging development of more prevention good strategies. Implications from this study is very important for development policies and practices education related mitigation disaster at school base. Therefore that, this research not only give outlook about successes and challenges approach interdisciplinary, but also inspiring action constructive For increase resilience generation young to future disaster.

References

- Al- Hammouri , T., Almeida-Magana, R., Soukup, T., & Lamb, B. (2024). Implementation of streamlining measures in selecting and prioritizing complex cases for the cancer multidisciplinary team meeting: a mini review of the recent developments. *Frontiers in Health Services* , 4 , 1340320.
- Asrizal , A., Hikmah, N., Febriya , D., & Mawaddah , F. (2023). The Impact of Science Learning Materials Integrating Natural Disasters and Disaster Mitigation on Students' Learning Outcomes: A Meta Analysis. *Journal Science Education Research* , 9 (9), 586-595.
- Backhouse, S. E., Newton, C., Naccarella , L., Fisher, K., & Cleveland, B. (2020). Rethink: Interdisciplinary evaluation of academic workspaces.
- Cruz, R.D.D., & Ormilla , R.C.G. (2022). Disaster Risk Reduction Management Implementation in the Public Elementary Schools of the Department of Education, Philippines. *International Journal of Disaster Risk Management* , 4 (2), 1-15.
- Dewi , DJK (2024). Learning Mitigation Disaster Earthquake Kindergarten Children's Earth on the Slope Mount Merapi Yogyakarta. *Awladuna : Journal of Early Childhood Islamic Education* , 2 (1), 30-46.
- Farris, P. J. (2024). *Elementary and middle school social studies: An interdisciplinary, multicultural approach* . Waveland Press.
- Fitria , R., Hakam, KA, Nurbayani , S., & Supriatna , A. (2022, November). Disaster mitigation through comic moral dilemmas for elementary school students. In *IOP Conference Series: Earth and Environmental Science* (Vol. 1089, No. 1, p. 012068). IOP Publishing.
- Ihsan, M., Rofiq , A., & Khusnudin , K. (2024). Polemic on Public Housing Savings (Tapera) : A Study with Approach Interdisciplinary . *Gulawentah : Journal Social Studies* , 9 (1).
- Irwanto , A., Arzani , M., & Rahayu , F. (2024). Role of Schools in Mitigation Education Disasters in Children Elementary School at SDN 4 Santong . *Current Journal Psychology and Education* , 3 (2), 80-84.

- Kilsdonk, E., Peute, L. W., & Jaspers, M. W. (2017). Implementation factors influencing the success of guideline-based clinical decision support systems: a systematic review and gaps analysis. *International journal of medical informatics*, 98, 56-64.
- Kraus, S., Bouncken, R.B., & Yela Aranega, A. (2024). The burgeoning role of literature review articles in management research: an introduction and outlook. *Review of Managerial Science*, 18 (2), 299-314.
- Marzali, Amri. (2016). Writing a Literature Review. ETNOSIA: Journal Indonesian Ethnography. Vol. 1, No.2 Pg. 27-36 <https://doi.org/10.31947/etnosia.v1i2.1613>
- Nalbantoglu, U.Y., & Bumen, N.T. (2024). Changes in the curriculum adaptation skills of teachers as a result of professional development support: A Turkish case study. *Teaching and Teacher Education*, 137, 104386.
- Peek, L., & Guikema, S. (2021). Interdisciplinary theories, methods, and approaches for hazards and disaster research: An introduction to the special issue. *Risk Analysis*, 41 (7), 1047-1058.
- Rojas, Estrada, E.G., Aguaded, I., & Garcia-Ruiz, R. (2024). Media and information literacy in the prescribed curriculum: A systematic review on its integration. *Education and Information Technologies*, 29 (8), 9445-9472.
- Ronan, K.R., Alisic, E., Towers, B., Johnson, V.A., & Johnston, D.M. (2015). Disaster preparedness for children and families: a critical review. *Current psychiatry reports*, 17, 1-9.
- ŞeyihogYlu, A., Kartal, A., Tekbıyık, A., Sezen Vekli, G. Ü. L. Ş. AH, & Birinci Konur, K. (2021). The design and implementation of a teacher training program for improving teachers' disaster literacy: interdisciplinary disaster education program (idep). *Problems of Education in the 21st Century*, 79.
- Smith, J., & Karr-Kidwell, P. J. (2000). The Interdisciplinary Curriculum: A Literary Review and a Manual for Administrators and Teachers.
- Suarmika, PE, Arnyana, IBP, Suastra, IW, & Margunayasa, IG (2022). Reconstruction of disaster education: The role of indigenous disaster mitigation for learning in Indonesian elementary schools. *International Journal of Disaster Risk Reduction*, 72, 102874.
- Vu, BD, Nguyen, HT, Dinh, HVT, Nguyen, QAN, & Ha, XV (2023). Natural disaster prevention literacy education among Vietnamese high school students. *Education Sciences*, 13 (3), 262.
- Williams, K. A. (2024). Disaster education and research. In *Ciotton's Disaster Medicine* (pp. 415-420). Elsevier.
- Ye, P., & Xu, X. (2023). A case study of interdisciplinary thematic learning curriculum to cultivate "4C skills". *Frontiers in Psychology*, 14, 1080811.
- Yildirim, Y., Cirak, B.N., & Akin, A. (2024). How can research-based studio experience assist in tackling natural disasters? *Natural Hazards*, 1-17.