

School-based Disaster Risk Reduction Approach in Building
Resilience of Primary Education System
in Central Vietnam

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EXECUTIVE SUMMARY

Background of the thesis

Extensive damages caused by natural disasters are being reported daily all over the world, especially in developing countries where people live in poverty, lack of infrastructure, lack of education, and limited access to technologies. The level of damages by disasters is highly dependent on the level of preparedness of local and national bodies, as well as on the capacity of communities and individuals to manage the hazard. Inappropriate structural measures, lack of planning for disaster risk reduction, unaware about disaster risks, and lack of cooperations among different stakeholders will contribute to largely increasing of disaster devastation. Thus raising people awareness on risks, providing them the systematic knowledge on disaster risk reduction, and building their capacity to be resilient to disasters are of tremendous importance. In this context, disaster risk reduction education comprising both education governance and educational activities, which originates from school and spearheads effects to community, is essential for reducing risk and building resilience to disasters.

In the context of increasing damages from disasters, the highly recognition on importance of disaster preparedness and response, as well as the vital role of school and school education for disaster risk reduction, this research is an attempt to contribute toward efforts on reducing risk and building resilient capacity in the education sector. It tries to find out appropriate approach for facilitating disaster risk reduction education from school level. The target of the study is primary education system in Central Vietnam, one of the regions most impacted by natural disaster in Vietnam.

In order to investigate the implementation of disaster risk reduction education in practice, this research concentrates on advancing two key important aspects of educational resilience including educational governance and educational activities. Educational governance includes activities related to educational management, policies,

guidance, processes and decision-making on the implementation of disaster risk reduction. Meanwhile, educational activities mentions to all teaching and learning activities inside or outside of school, which target school students. On this basis, comprehensive understanding of disaster risk reduction education will be considered to provide a strategic approach for building resilience of the primary education system in Central Vietnam. The ultimate purpose of the study is to maximize effectiveness of educational governance and educational activities in a way that help to strengthen educational resilience to natural disasters.

Research objectives and questions

While it is widely recognized the important role of school and school-based education for disaster risk reduction, a comprehensive approach that takes into account various aspects from school structural and non-structural safety, external relationship between school and community, teacher training, and integration of disaster risk reduction has not been paid sufficient attention. This research seeks to develop an innovative approach on disaster risk reduction education, which encompasses far more than educational activities in school and also considers educational governance on disaster risk reduction.

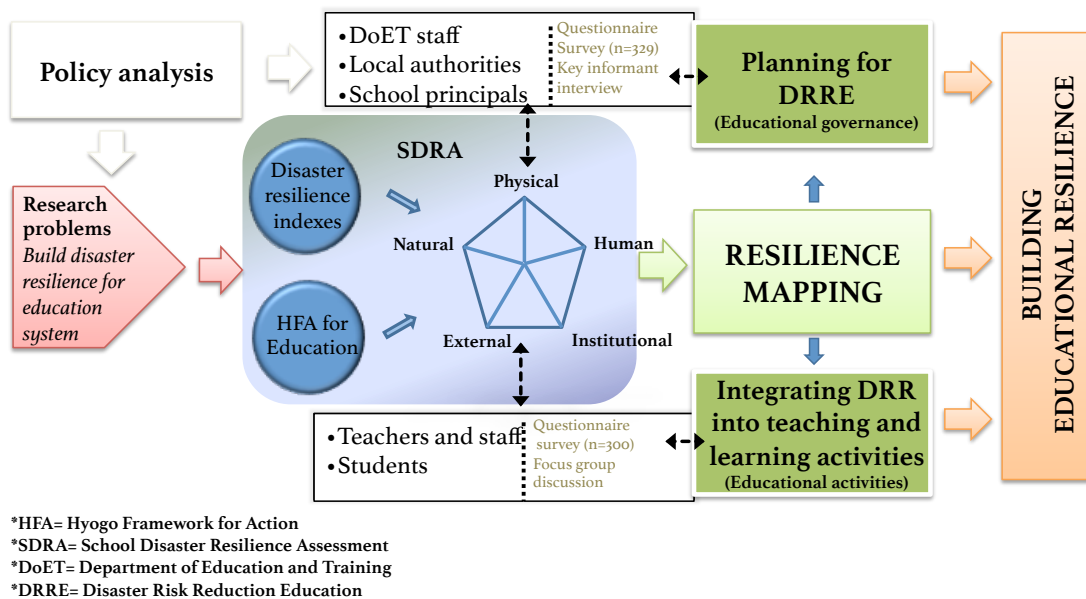


Figure E.1 Research framework

The study targets primary education in Central Vietnam to investigate the level of school resilient to disasters and advance understanding on the implementation of disaster risk reduction education from school level. The specific objectives are as the following:

- To assess resilient level of primary schools looking into different aspects of disaster risk reduction education;
- To examine disaster risk reduction education planning using school-based approach with involvement of various stakeholders, including formulation of a model for integration of disaster risk reduction into teaching and learning activities;
- To develop a strategic framework and step-wise process for the implementation of school-based disaster risk reduction education toward building resilience for primary education system

To tackle the objectives as mentioned above, the study quests for answers of the following questions:

- What are the key factors of educational disaster resilience and in what way schools can be assessed in a certain level of resilience to climate-related disasters?
- How to plan for disaster risk reduction education, as well as to integrate disaster risk reduction into teaching and learning activities?
- How to operate school disaster risk reduction education in a way that helps to enhance resilience for the primary education system?

Key findings of the research

The research is an attempt to develop an assessment tool for measuring resilient capacity of schools, named School Disaster Resilience Assessment (SDRA). The analysis shows variations among the implementation of disaster risk reduction education, which resulted in different resilient level between regions. This has important implications on the need for case specific approaches in addressing disaster risk reduction education differently base on the local context. The case study of rural schools in Da Nang City highlights the highest resilience of physical conditions, human resources, institutional

issues and external relationships, whereas lowest in natural conditions. This proves that educational resilience can be built based on the improvement of school capacity on physical conditions, human resources, institutional issues and external relationships. Analysis the strategies of rural schools in Da Nang City has illustrated a focus on some key aspects of different aspects. For example, to improve human resources, the foci are on enhance teacher capacity through teacher training; for institutional issues, integration of disaster risk reduction into school curriculum, development of disaster risk reduction materials and set up earlier warning system in schools are highlighted; to improve external relationships, the schools has established a strong relationship between school and community, simultaneously strengthened schools' capability to be used as evacuation for community. As a result, despite the limited financial supports from outsources and severe impacts of disasters such as typhoons, salinity, and heat waves, the rural schools in Da Nang City show the highest level of resilience to disasters among regions. The results from the two-year analysis (2011-2013) of SDRA in urban schools in Hue City also stressed on the highest and also the most important contribution of Human resources and Institutional issues. Training for teachers, students, as well as involvement of parents in disaster risk reduction activities need to be enhanced through development of school strategies but also through teaching and learning activities in schools. Compare to the quickly change of human resource, particular teachers' factor, the external relationships are difficult to be improved, thus focus on reinforcement of external relationships are also crucial for the increase of educational resilience. There is a need for a strategy to manage the relationship between school and community, to prevent the downward trend of this factor in the face of urbanization and development.

Based on the result from resilience assessment, the process to formulate action plan for the implementation of disaster risk reduction education was examined. At first, 51 educational disaster resilience actions were proposed base on the framework of SDRA through focus group discussions with participation of DoET staff, school principals and school teachers. Then stakeholder analysis was carried out to understand different role of stakeholders in the implementation of disaster risk reduction education in school. Results show that the leading role of teachers was identified for most of the actions. DoET staff and local government were considered as the two most important supporters for the

practice of disaster risk reduction education. Simultaneously, time schedule for completing each action was defined using the scale of short term (2 years), medium term (from 2 to 5 years) and long term (more than 5 years). There are 42 actions in Hue Province and 49 out of the total of 51 actions expect to be accomplished within the period of 2 years (short-term). Prioritizing the top 20 actions that need for facilitate disaster risk reduction education shows that both in Hue Province and Da Nang City, actions aiming to improve Human resources and Institutional issues are strongly focused. This finding was again confirmed when studied about the implementing mechanism for these 20 actions in specific schools, especially in rural school of Da Nang City. For examples, rural school in Da Nang City (Hoa Khuong primary school) has set up the regular check for school buildings by cooperating with local government, local DoET, experts, NGOs, and local community. The school has given a very strong suggestion to these stakeholders that their roles on disaster risk reduction education should be included into their annual action plan. In general, it can be assumed from the interview of rural school in Da Nang City that the school strategies on disaster risk reduction education focus on encouraging the leading role of teachers and students whenever relevant, as well as the involvement of parents and cooperation with other organizations.

Furthermore, results from the investigation on experiences and needs of teachers in teaching and learning disaster risk reduction in school show that the majority of teachers experienced teaching disaster risk reduction education, in particular in the subjects of Vietnamese, Ethics, Science and Nature (for grade 1, 2, and 3) and Vietnamese, Geography and History (for grade 4 and 5). This creates an opportunity for the textbook-driven approach to be applied in the context of Vietnam, especially in the beginning phase of disaster risk reduction education. Results from reviewing the textbooks of all subjects of the primary level illustrate that the disaster risk reduction related issues exist in the current curriculum, yet insufficient for students to perform actions. The most challenge for teaching disaster risk reduction education is that since the curriculum in Vietnam is centrally controlled, the localization, which is crucial for learning disaster risk reduction education, is still neglected. Local education, life skill education and extra-curricular activities were found as potential addresses to resolve the problems. While local education provides students chance to understand about natural disasters in the local

context, life skill education equips students with necessary skill to response to disaster and reducing damages. However, there is an obstacle that life skill education is still under national control and local education are provincially control whereby the content is not yet enough to satisfy the variation of students' characters, teachers' ability, schools' strategies, or of local socio-cultural conditions, in particular specific educational context. For example, there are different types of disasters associated by different topography and weather in Hue Province, yet the content of local education are generalized for mountainous, coastal and plain alike in the province. At the end, the chapter proposed that a focus on extra-curricular activities, which are decided by schools, is important to overcome existing bottlenecks, also contribute to strengthen the relationship between school and community.

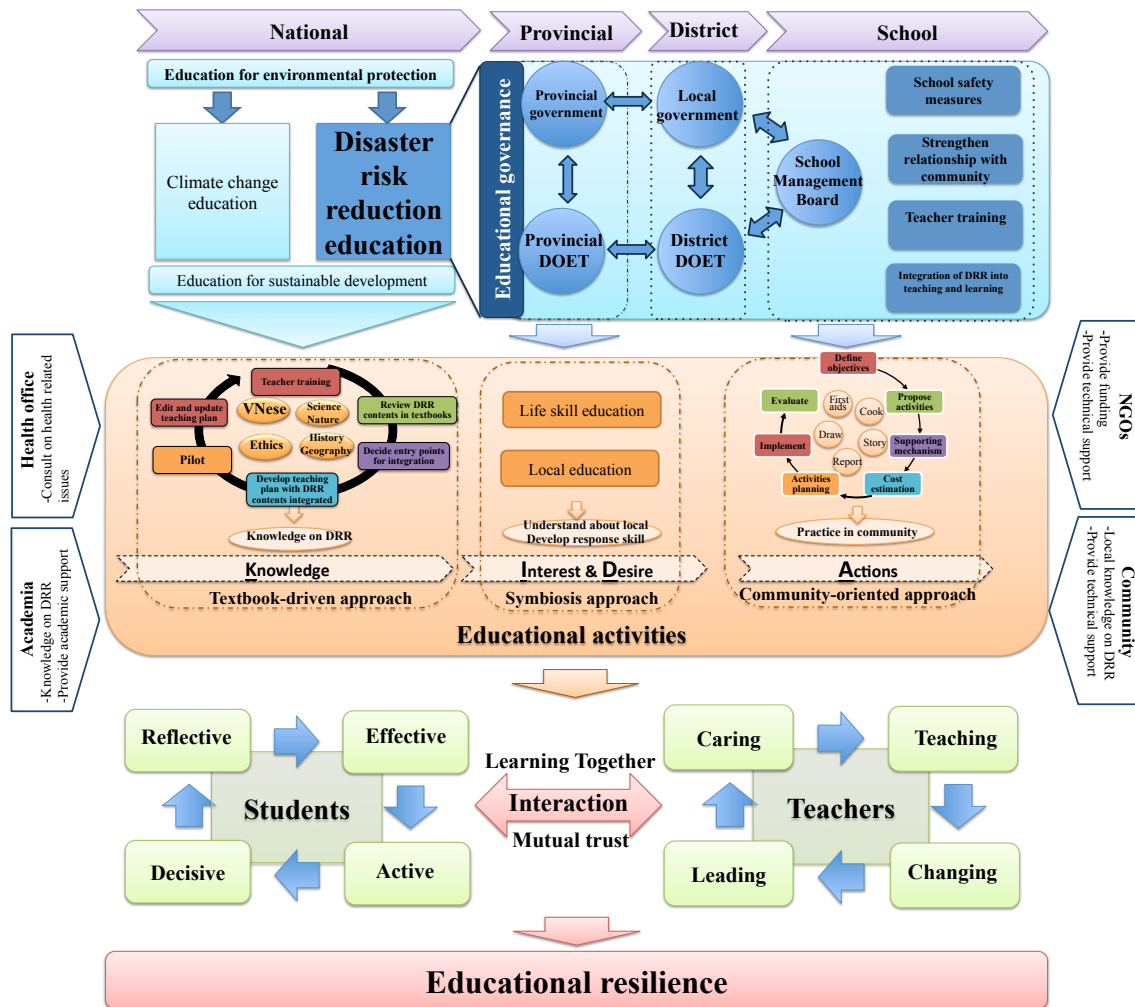


Figure E.2 Framework to promote school-based DRRE

From the key findings of school resilience assessment and teachers' assessment in Central Vietnam, the study proposes framework to promote disaster risk reduction education should include different activities and approaches in facilitating governance and educational activities. The framework was built up on the concept of educational resilience, school safety, "Knowledge-Interest-Desire-Action" (KIDA) model, and different approaches including textbook driven approach, symbiosis approach, and community-oriented approach. The involvement of various stakeholders from school teachers and students, educational staff, local government, local community, NGOs, Health Center, and other organizations are emphasized. As the two identified components of the framework are led by school teachers and students, a school-based approach is crucial for the implementation of disaster risk reduction education. The main objective of the school-based disaster risk reduction education is to optimize the use of both internal and external school resources in effective way to minimize and reduce negative impacts of natural disasters, and contribute to the enhanced resilience for the education sector and for the community as a whole.

5 Way forward

Although education is very much rooted in the local context, there are still basic principles of education, which are universal and can be applied to different regions. Accordingly, the set of resilience indicators, the process of school-based planning for disaster risk reduction education, as well as the process of integration of disaster risk reduction education into teaching and learning activities in this study although developed along with the specific conditions of Central Vietnam can be repeated by modifying and making it compatible with other regions, particularly for the cities or provinces located along coastal line.

Findings and limitations of the research have given a lot of spaces for further exploration about disaster risk reduction education, either supplement or fulfill the research results or elaborate more about different aspects of this study. For example, study on the mechanism to bridge the policy gap from national to local level is needed. Of which, scaling up school-based advocacy and developing linkages between local and

national level can be considered as one potential way. Another focus for future research is to investigate the impacts of local economic development to the level of educational resilience. In one way, economic growth is one of the important factors for the improvement of resilience. In other hand, economic development will cost people's time and efforts, thus limit their involvement in public activities. Study on the advantages and disadvantages of economic growth on educational resilience will therefore of extreme importance. Besides, study on incorporation of developmental issues such as gender, health, food security, etc. in order to bring together disaster risk reduction education with different types of educations such as climate change education, educational for all and education for sustainable development is required for a sustained resilience. The issues on how to define and monitor the effectiveness and efficiency of the implementation of disaster risk reduction education and building resilience for the education sector are also needed. Attention can also be paid on the application of school-based disaster risk reduction education at regional level, whereby establishment of regional focal point for schools located in different geographical and socio-economic conditions.