DEVELOPING A SUSTAINABLE APPROACH TO TEACHING SCHOOL SAFETY AND ADVOCACY IN THE CLASSROOM

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ABSTRACT

The Earthquake Engineering Research Institute’s School Earthquake Safety Initiative (SESI) is a global and collaborative network of diverse, expert, and passionate professionals who are committed to creating and sharing knowledge and tools that enable progressive, informed decision making about school earthquake safety. The Classroom Education and Outreach SESI subcommittee uses education in the classroom to create an ongoing dialogue with parents, students, teachers, and administrators to develop advocates for earthquake school safety. It works to bring together EERI regional and student chapters to collaborate on delivering activities and serving as an expert resource for stakeholders. K-12 engineering curriculum aligned with standards that come with well-defined documentation and can be easily taught to a range of teachers for broad dissemination have been developed for 4th grade and high school physics classes. Both the 4th grade and high school curricula lead students through hands-on and research activities to learn basic earthquake engineering design principles such as the effects of earthquake-resisting elements like diagonal bracing and shear walls. They make use of an electronic instructional shaking table that tests structures under representative earthquake loading.

This SESI classroom outreach program provides a way for members to share their expertise and enthusiasm with members of the public. It utilizes the existing members of both EERI Student Chapters and EERI Regional Chapters to complete lesson delivery in their region. The goal of engaging existing EERI chapters in delivering these lessons is to use chapter internal

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organizational structures and annual leadership transfer to facilitate the sustainability of this outreach program over time. Furthermore, teaching K-12 students about earthquake engineering concepts should reinforce the knowledge and skills of participating university students and young professionals. The objective of partnering student instructors with professionals is to enhance the networking and knowledge of participating university students while also providing school teachers and administrators access to experts in earthquake risk reduction. This past year, two new EERI student chapters and EERI regional chapters were trained to deliver the SESI curriculum in their respective regions to test our model for broad dissemination. This paper will describe the equipment and lessons used to teach school children and teachers about earthquake engineering and earthquake safety, will highlight challenges and lessons learned in training the new chapters on implementation of the curriculum, and will summarize next steps to ensure a more sustainable training and dissemination approach.