

POLITECNICO DI TORINO  
FIRST SCHOOL OF ARCHITECTURE  
Master of Science in Eco-efficient Product Design  
***Honors theses***

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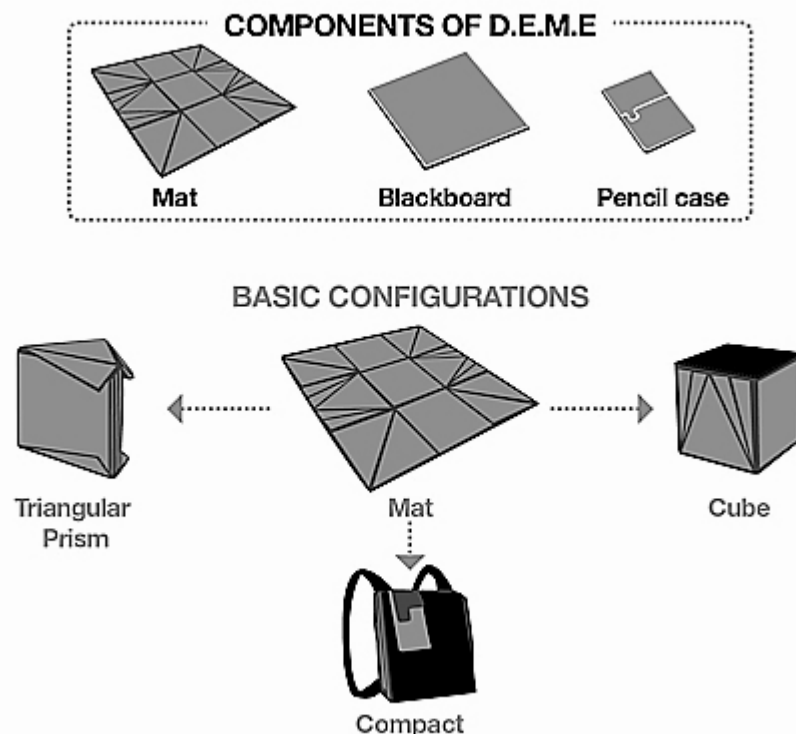
**Emergency Design in Colombia: Analysis and Proposal for a Temporary Learning Space**

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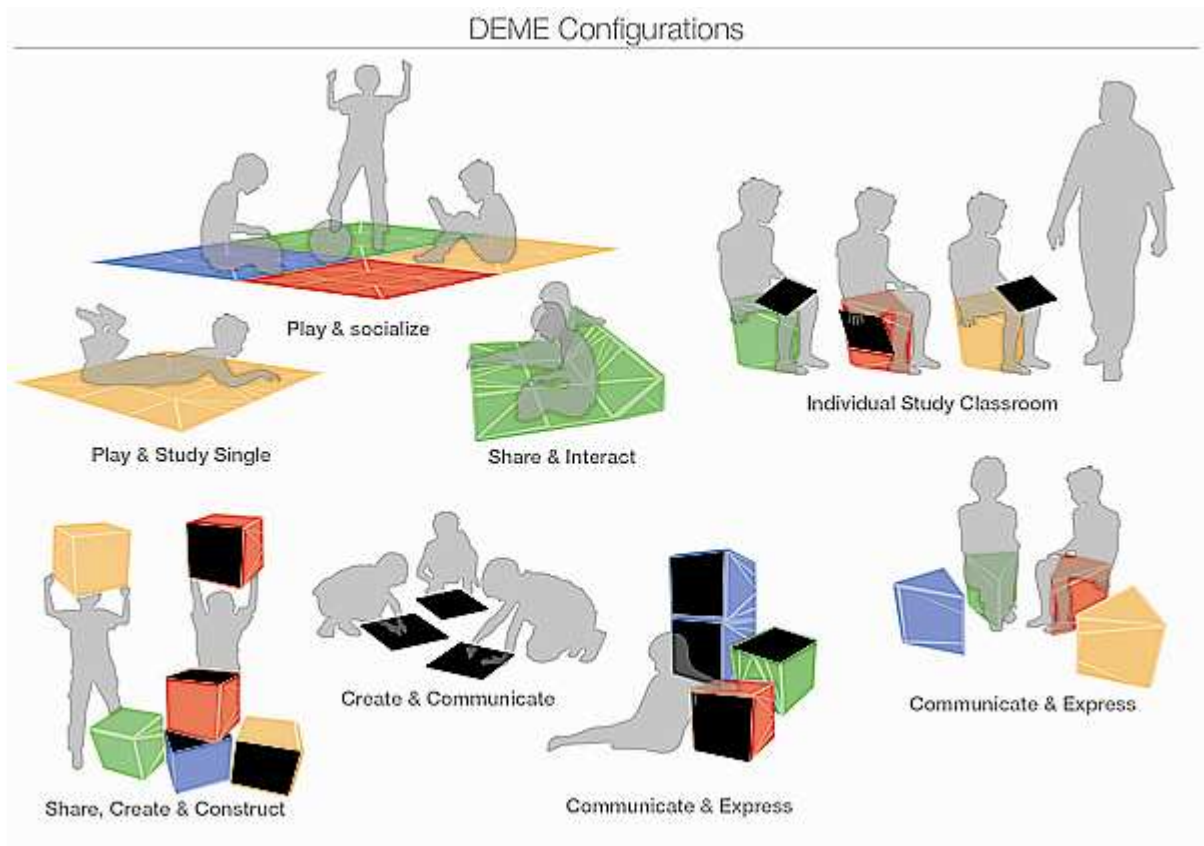
The central theme of this thesis is Emergency Education in the Colombian context. According to UNICEF about twenty children's rights are violated when they cannot access education during an emergency situation. To guarantee children an education during these cases helps them recover physically and emotionally, it gives them a sense of normalcy and helps them understand that there will be a future after the emergency. During 2010-2011 Colombia was affected by heavy rains that created a series of floods, overflowing rivers and landslides leaving more than 3 million victims in Colombians. This created an educational emergency in the country, many schools were destroyed, others were used as shelters, and as a result many children were left without access to education during a time of transition. The Colombian government proved to be unprepared to face this situation creating insufficient responses.

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DEME Components and Basic Configurations

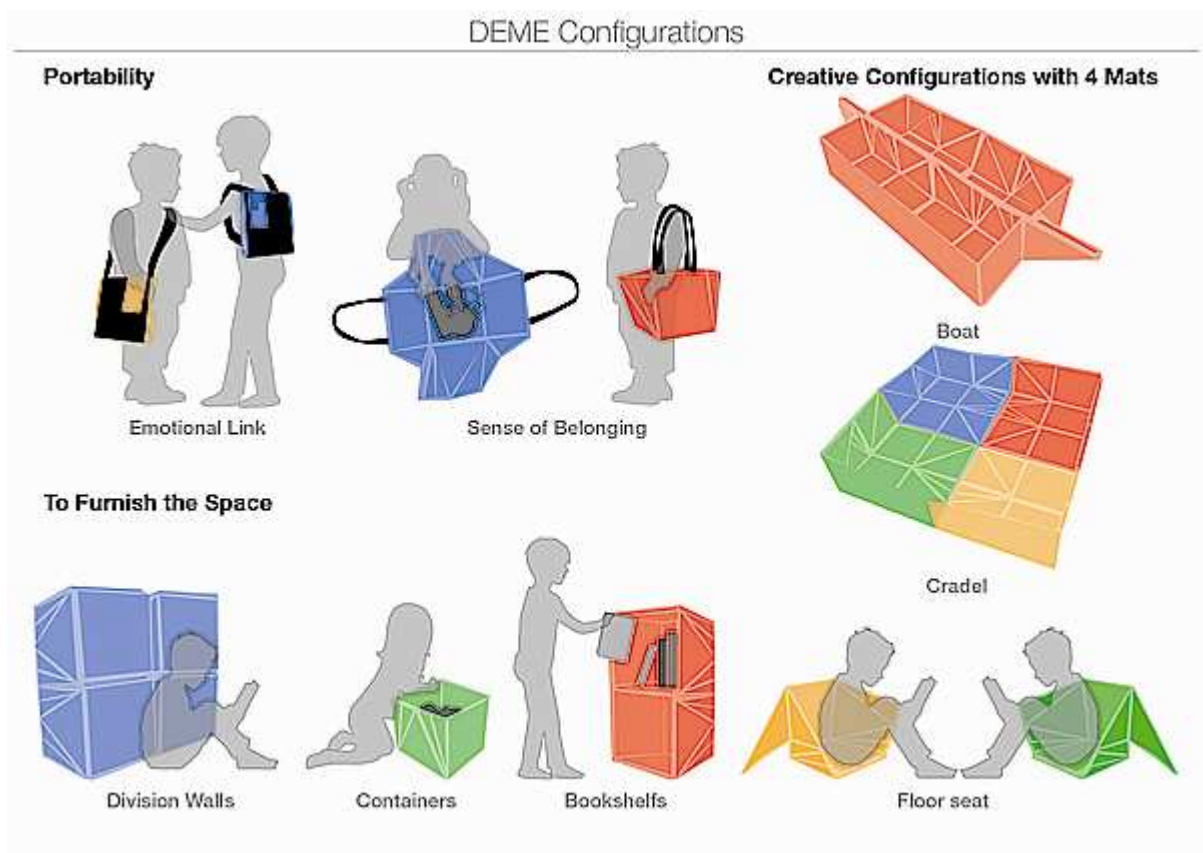


Currently there is a common response to educational emergencies called “Temporary Learning Spaces” established and developed by different non-profit organizations such as UNICEF, Save the Children or World Vision. A TLS is a protected environment where children can participate in various activities in which the main objective is to help to rebuild their lives after the crisis while trying to reduce the academic delay. These spaces are not only an infrastructure but also a recovery atmosphere. The kind of activities developed inside a TLS can be classified as cognitive, physical, creative or communicative activities. Each kind has different objectives and requires different supplies some of which are consumable and others non-consumable.



An analysis of the TLS helped to identify two main requirements: on one hand the need to offer a constant change of the characteristics of the space and on the other hand to reduce the use of consumable supplies inside TLS. Based on this analysis and requirements the idea to create “Support for Activities” was born, that is to create a system that allows the development of different kinds of recovery activities inside a TLS.

As a response to this “Support for Activities” a proposal to be introduced and implemented inside a TLS was developed. This proposal was called DEME, which stands for “Dynamic Educational Module for Emergencies”. The DEME is a system of modules for children that when put together with other modules allows to develop recovery activities, creating an appropriate space to play and learn, offering versatility of the space while reducing the use of materials and supplies. The DEME was designed to be of individual use, whereas each child will have one, but at the same time it will enhance group activities since it motivates children to share, interact, socialize, express and reach a state of wellbeing.



DEME is composed of 3 components, a mat, a blackboard and a pencil case, but the most important component is the mat. This mat is made of two layers of fabric with boards in its interior. This mat has rigid structure that through a system of folds and laces allows it to create different configurations, it is a bidimensional element that when folded becomes tridimensional. When joined with the other two components it becomes compact and transportable.

As a complement a system of production and distribution for the DEME has been established, creating a system that allows it to be freely reproduced anywhere in the world through a web page. This site contains all the technical specifications needed to produce the DEME, but encouraging the use of local materials and producers. This type of production and distribution allows the characteristics of the materials to be modified according to the needs of every subject, of the territory and the characteristics of the emergency, while using local producers that benefits the local economy and generates a local response to the emergency.

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