

A Public Presentation with a following Questions & Answer session:



Physics for Street Children

(Physik für Straßenkinder)

Tuesday July 30, 2019 4:00-5:30pm,
Science and Mathematics Complex SAMC106, SUNY-Buffalo State
(parking in Lots I-37 or I-39)

Frau Professorin Dr. Manuela Welzel-Breuer, *Pädagogische Hochschule Heidelberg University of Education* and Herr Dr. Elmar Breuer, *Gymnasium Englisches Institut Heidelberg University of Education*.

The speakers received the 2015 Georg - Kerschensteiner - Preis of the German Physical Society for this project.

Since 2002 we have been part of an international collaboration project called “Patio 13- School for Street Children” in Colombia. The aim of this project is to find ways to educate children who live in the street, disconnected from the official school system and without any regular life and future. The existence of street children is an increasing problem worldwide. According to the *UN Convention of 1998 on Human Rights of the Child*, society has the responsibility to find ways to offer them adequate contexts and possibilities for learning – even in science. Within our project, we are co-operating with a teacher training institution in Colombia and linking cultural aspects of education with previous experiences in pedagogy for street children with modern ways of teaching science. Together with advanced preservice teachers we developed, implemented and investigated different ways to teach physics as part of a curriculum for street children (*Physik für Straßenkinder*) using an Inquiry Based Science Education (IBSE) approach, simple experiments and material. Later, we adapted these ideas for two series of physics experiments used with refugees in Germany (*Physik für Flüchtlinge*). One major challenge was to enable the Colombian teacher students and German multipliers to apply the methods of inquiry-based learning. The project was evaluated using Design Based Research methods (DBR) via video-recording analysis. In this presentation we will report on the approaches we developed, the results we achieved and our conclusions.

Welzel-Breuer, M. & Breuer, E. (2018): *Physics (not only) for street children. A practical handbook with suggestions for experimentation*. Heidelberg: Springer spectrum. DOI: 10.1007 / 978-3-662-57663-2 <https://www.springer.com/en/book/9783662576625>

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