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Creating educational opportunities: Experimento in South Africa

Modern offerings for science and technology education

Science and technology education is vital worldwide to enable individual opportunities in life, social development and political inclusion. In its Education working area, Siemens Stiftung therefore seeks internationally to strengthen science and technology education. Since 2012, it has been working to do that with its education program Experimento in South Africa. The objective is to train educators in how to use Experimento and promote an understanding of science and technology among learners.

Experimento offers educators a practical and curriculum-oriented selection of topics in the areas of energy, health and the environment. Some 130 experiments encourage learners to grapple with scientific and technical interconnections and develop values-based conduct. Experimento is based on the principle of learning through discovery and is used in four languages, in three continents and in eleven countries. Practical experience with Experimento in the past years shows that educators can develop and convey a better understanding of science and technology. That has a positive impact on teaching, demonstrably enhances learners' teamworking skills, and results in significantly better examination performance.



Bridging the gap

Experimento ensures a continuous growth in knowledge from preschool to matriculation. To enable successful implementation of the educational program at schools in South Africa, we cooperate with special Science Competence Centers (SCCs) in Johannesburg, Cape Town, Durban and Mthatha. At the same time, Siemens Stiftung is working with universities and German International Schools on directly integrating the Experimento concept into the educator training curriculum.



Two elements of the program promote teaching and learning:

- Further training for local educators: oriented toward practice and certified by SACE

Use of Experimento cannot succeed without the support of dedicated educators. That is why educators are given workshops in Experimento's didactic and methodological approaches in specially developed seminars. They pass on their knowledge to learners as part of teaching. The Experimento seminars have also been certified as an official further training tool in accordance with the criteria set forth by the South African Council for Educators (SACE). Educators who attend Experimento seminars at the University of Cape Town and successfully pass the exam receive credit points that serve as proof of qualification to be submitted to SACE.

- Modern materials: Suited to the curriculum and freely accessible

Experimento meets the latest requirements for the national education agenda. Its high-quality teaching and learning materials dovetail perfectly as a subset into the South African curriculum. So that all learners can be encouraged in accordance with their individual skills as far as possible, the teaching and learning materials will be freely licensed as Open Educational Resources (OER) and accessible through Siemens Stiftung's media portal. Using the media portal, educators can download and customize the materials to their own liking and share them among each other.

<https://medienportal.siemens-stiftung.org>

In order to meet the requirements for teaching and learning in South Africa, Siemens Stiftung works in close cooperation with the following educational partners.

- Sci Bono Discovery Centre
- University of Cape Town
- University of the Western Cape
- Walter Sisulu University

Helping learners discover and understand scientific and technical interrelationships: That is the approach pursued by Siemens Stiftung with its international educational program Experimento.

Contact

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As a non-profit corporate foundation, we promote sustainable social development, which is crucially dependent on access to basic services, high-quality education, and an understanding of culture. To this effect, our project work supports people in taking the initiative to responsibly address current challenges. Together with partners, we develop and implement solutions and programs to support this effort, with technological and social innovation playing a central role. Our actions are impact-oriented and conducted in a transparent manner.