

**Press release**  
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## **Design Thinking in STEM for educators in South Africa: Siemens Stiftung cooperates with Hasso Plattner School of Design Thinking at the University of Cape Town**

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**The Design Thinking in STEM project is based on developing creative potential while confronting challenges that face our world. To ensure the project's long-term continuation in South Africa, Siemens Stiftung is cooperating with Africa's first design thinking school, the HPI School of Design Thinking at the University of Cape Town, since May 2021. Known as the d-school, it will offer training to educators in the design thinking method and for facing the Sustainable Development Goals (SDGs), which provide a thematic framework for addressing specific issues. This also encourages central future skills for learners – such as innovation, creativity, empathy, and collaboration – which are taught using an interdisciplinary and solution-based approach.**

### **Innovative teaching method for complex 21st century problems**

Educators for STEM subjects (science, technology, engineering, and mathematics) face the unique challenge of presenting broad and complex subject matter to their students in a way that is accessible and relevant for their everyday lives. The Design Thinking in STEM project aims to support schools and educators in South Africa with a holistic, design-based approach to nurturing the creative potential in students while preparing them for the challenges of the 21st century. Design thinking is a team-based iterative approach to understanding and solving complex problems. It is rooted in people, in an understanding of place, and in a process that helps unlock the insights and the creative collaboration needed to generate innovation.

Moreover, the methodology provides a solution based approach breaking complex problems down into manageable steps. “Most of the SDGs focus on the largest problems facing the world, but these are also felt locally and have a direct impact on the lives of many people. Design thinking has proven to be an excellent method for understanding these exceptionally complex problems on a personal and local level and for coming up with solutions,” says Christine Niewöhner, Senior Project Manager Education at Siemens Stiftung, on the teaching method's potential.

The d-school, which launched in 2015 as Africa's first design thinking focused institute, has already offered numerous workshops and programs at universities and schools in different parts of the continent. At the Design Thinking in STEM project, educators are introduced to the design-based teaching concept and the potential it offers for STEM education. At the same time, they create possible ways for implementing the method in STEM lessons. Richard Perez, founding director of the d-school, sees an exceptional opportunity in design thinking to explore a human-centered approach to problem solving in a collaborative and creative environment. “When we talk about design thinking, it's not about the end object. We're talking about the thinking process behind getting to the end object,” he says.

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### **Design thinking in school practice**

Teachers of previous workshops are enthusiastic about the positive effects of the innovative teaching and learning methodology. Thus, Genevieve Saville, who teaches design at Thomas More College in Durban, says it shifted her role “from teacher to facilitator” as learners discovered how to shape their own projects and experiences. And her colleague Vincent Oberholzer, technology teacher, explains it added another layer to his teaching: “(Previously, we would) know what we’re doing, we’d know how we’re doing it, but the kids always asked why we’re doing it. Now, we’ve added the ‘why’ to it, which makes a big difference.”

The Western Cape Education Department (WCED) and the Schools Development Unit at University of Cape Town (UCT SDU) are additional partners in the Design Thinking in STEM project.

### **About Siemens Stiftung**

As a nonprofit foundation, Siemens Stiftung promotes sustainable social development, which is crucially dependent on access to basic services, high-quality education, and an understanding of culture. The foundation’s international project work supports people in taking the initiative to responsibly address current challenges. Siemens Stiftung has worked closely with Latin American education ministries, universities, and STEM education projects for ten years in developing and implementing solutions and programs. Technological and social innovation plays a central role. Siemens Stiftung’s actions are impact-oriented and conducted in a transparent manner. [siemens-stiftung.org/en](https://www.siemens-stiftung.org/en)