Partner Presentation Form

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Picture of the contact person

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Picture of the contact person

Type of organisation:

SME	☐	School	☐	University	X☐	Public Authority	☐
Training	☐	No Profit	☐	NGO	☐		

Other (Specify)

Fields of action :

SMEs	☐	Youth	☐	Universities	X☐	Public Authorities	☐
Equal opportunities	☐	Schools	X ☐	Unemployed	☐		

Other (Specify)

Description of the organisation

The Faculty of Education of the University of Pretoria is the largest contact Faculty of Education in the country and a leader in teacher education and training. Our core function is to train quality teachers, education psychologists, leaders and managers in education. In its pursuit of teaching excellence, the Faculty has embraced the university's hybrid teaching and learning model which is an optimal blend of face-to-face and virtual (or online) learning opportunities for students. This model provides the best of both worlds – face-to-face teaching where it is most suitable, but enriched by the wide range of virtual learning tools. The teacher-students are required to complete methodology courses in their chosen fields and are required to complete 14 weeks of teaching practicum in schools during their 4-year degree courses.

The University of Pretoria has traditionally prioritised community involvement and has therefore developed a relationship with these communities to not only present courses to teachers and students, but to enter into discussions with local education departments and provincial directorates. This project will equip SMTE to promote OEPS and inspire teachers to become self-directed in upskilling themselves and upgrading their practices.

Experience of the organization in previous European projects

As a top global university, we have a number of agreements with universities and institutions around the world which form a broad framework for a range of activities like staff and student exchange, research collaboration, expanding on teaching and learning expertise and increasing cultural understanding and cooperation. We currently have more than 100 active institutional agreements and over 90 at faculty level. Over the last two decades, we have partnered with over 330 institutions around the world.

Experience and Expertise of the organization in the project's subject area

Capacity development through the development of professional teacher identity and knowledge, both content and pedagogical, has been at the core of SMTE's raison d'être. Promoting self-directed learning and practice is part of the methodology curricula in mathematics, science and technology education programmes that our department offers. We are also involved in the training and upskilling of partners in STEM education nationwide. Partnerships with South African institutions and European partners will facilitate the creation, adaptation and sharing of self-directed OERs in STEM fields, ensuring continuous

access and relevance for lecturer and teacher-students.

Contributions that can be provided to the project

South Africa has a much-documented need for improvement in STEM education in particular for both school students and teacher-students. Teacher training in the STEM education field is faced with challenges brought about by the lack of open educational resources and self-directed open educational practices. Equitable access to resources, even basic resources like electricity, is contextually restricted. The government is well aware of the importance of STEM education in progression toward economic development and global competitiveness, so innovation and development in this area are encouraged. Given our background in this area, we are well positioned to inform the project managers and participants as to the STEM education needs that are prevalent in Africa in general and in South Africa in particular.

Reasons of involvement in the project

This project will allow the University of Pretoria to gain deeper insight into the context- specific challenges faced by South African STEM education, the better to adapt its offering to the detailed needs that are identified. This will also raise the level of the fit-to-purpose training events and professional development courses in South Africa by networking the design and development of sustainable curriculum material for STEM teacher education in South Africa. In so doing, OERs for STEM courses and foci in methodology modules that cater to the specific needs of South African STEM teacher education will be created. National and international collaboration with teacher-students and lecturers to define objectives and outcomes for STEM teacher education will allow modification of the subject-specific methodologies.

This project will also facilitate the presentation of training courses all over the country in which SMTE is already involved, and will give the SMTE lecturing staff the expertise and the opportunity to explain and drive the self-directed open educational practices that lie at the core of this project. Self-directed learning and knowledge about open educational resources will allow these lecturers not just to gain knowledge in periodic short courses, but to sustain and maintain their growth and development as professionals in this sector.

Contact Persons' Experience and Expertise

Prof Sonja van Putten and Prof Willem Rauscher each have a doctorate focusing on developmental aspects of teacher education, namely professional mathematics teacher identity and critical thinking respectively. They are both lecturers of undergraduates and post graduates, also mentoring Masters and doctoral students. Prof van Putten is a specialist in mathematics education methodology, and has had many articles and book chapters published in this field. Prof Rauscher is a specialist in the subject of technology education and is an internationally recognised expert and author in his field. He is on the editorial board of two leading journals.