

The **Department Formation and Learning (DFA)** is one of the five **Departments of the University of Applied Sciences of Southern Switzerland (SUPSI)**. Its mission includes initial and continuing education of the teachers of the Southern part of Switzerland and applied research in the field of systems of schooling and education in general. At present, it provides initial teacher education to about 180 pre-service primary education teachers (Bachelor of Arts in Pre-primary and Primary Education), 200 pre-service secondary education teachers (Master of Arts in Secondary Education), and continuing education to over 300 in-service teachers (mainly in the form of Certificates of Advanced Studies). All these programs combine theoretical modules, professional modules and research activities, in order to allow the development of scientific and professional skills. Applied research at DFA focuses in particular on the understanding and innovation of the local school system, on teacher education and on education in general. This includes a clear focus on mathematics and science teaching and learning, which is researched by a pool of experienced researchers and teachers.

The curriculum that is most relevant for the present project is the Master of Arts in Secondary Education for the group of prospective mathematics teachers. Beside the general modules (educational sciences, pedagogy, psychology, etc.), these students follow specific modules devoted to the theoretical and practical aspects of mathematics education. In particular, the practical modules combine periods of professional practice in secondary schools of southern Switzerland, with practical modules that are given by two teachers together: a mathematics education teacher and an educational sciences teacher. This form of team-teaching allow a continuing interaction and dialectic between educational sciences and mathematics education, that is one of the most peculiar characteristics of the DFA. One of the main arguments that are discussed in the practical modules are both formative and summative assessment, that thanks to the collaboration of the two teachers and the integration of direct practical experiences can be addressed with a wide spectrum. The researchers involved in the present project proposal are also involved, with different roles, in the practical and theoretical modules devoted to mathematics education in the Master and have therefore a direct link to the students and to the secondary schools in which the students do their professional practice. Approximately half of the 35 secondary schools that exist in Southern Switzerland, receive DFA's students for their professional practice.

website: <http://www.supsi.ch/dfa>