EARLYSTATISTICS: IMPROVING STATISTICS INSTRUCTION IN EUROPEAN ELEMENTARY AND MIDDLE SCHOOLS THROUGH ONLINE PROFESSIONAL DEVELOPMENT OF TEACHERS

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The Meeting of the European Council in Lisbon the year 2000 placed the development of a knowledge-based society at the top of the Union’s policy agenda. The development of a statistically literate society is a key factor in achieving the objective of an educated citizenry. In a world where the ability to analyze, interpret and communicate information from data are skills needed for daily life and effective citizenship, statistical concepts are given an increasingly important role in mathematics curricula. Leaders in mathematics education emphasize the need for active learning strategies, collaborative projects, use of real data, computer simulations and visualizations to permeate mathematics instruction, in order to build students’ conceptual understanding of statistical concepts.

The EarlyStatistics project, which was recently funded by the European Union under the Socrates-Comenius Action, will address the high interest in statistics and the need for further supporting the development of students’ statistical reasoning in mathematics classrooms. Acknowledging the fact that teachers are at the heart of any educational reform, the project will utilize distance education to offer high-quality innovative experiences to geographically-dispersed teachers across Europe. The overall aim of EarlyStatistics is to enhance the quality of statistics education offered in European elementary and middle schools by facilitating intercultural professional development of teachers using exemplary web-based educational tools and resources.

We will offer the opportunity to teachers in different countries to collaborate and build communities of practice in social constructivist learning environments. Long-term sustainability will be assured through support of multilingual interfaces and online services for the accumulation of collective knowledge from teachers and teacher educators. An online knowledge base will offer access to usable and validated pedagogical models, didactic approaches, and innovative instructional materials, resulting in a complete and flexible teacher professional development program. The program will be of use not only to the teachers participating in the course, but also for independent study and to teacher training institutions around Europe as an elicitation device for promoting teacher learning, giving teachers a view into the landscape of practice in statistics instruction throughout Europe that would otherwise be very difficult to observe.