

PROGRESSIVE LEARNING NETWORK, PLN

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ABSTRACT:

Progressive Learning Network, PLN, is a model for applying the learning theory of progressive inquiry to an individual's life-long learning career. As an approach PLN was initiated during the academy Suiteproject. The model is developed in order to promote scientific research and utilize academic research knowledge and material in all phases of learning. The primary aim is to stretch the photogrammetric curriculum to the entire education line of an individual. We expect that progressive inquire is a suitable pedagogical theory for developing future photogrammetric curricula, rather than to continue with the traditional evolution model. PLN is also considered as a kind of network, where collaborative learning practices will be developed based on progressive inquiry. The network is vertically oriented along growing or aging dimension. On each level it is horizontally directed as for example our scientific and professional society. With the vertical networking our scientific community will be connected to children's learning career. According to PLN, parts of the academic activities can be associated with the primary and secondary schools or with gymnasias, if the learning model is based on theory of progressive inquiry. The network will be social and it will enhance pupils interest both in the subject and the common local environment, where they live. The model and network can naturally be applied to the post-doctoral or continuing professional study levels as well. The learning process of progressive inquiry follows the consecutive phases of problem solving. The concept describes the idea of a potential solution, the algorithm is a part of its analytical description, the simulation provides necessary trust on its validation, and finally, the procedure will describe the practical tooling for its realization. The tools are most probably available, like digital cameras and local orthophotographs, satellite images and maps. The necessary technology of scene reconstruction will be provided by the learning platform. In 2004, we prepared and experienced the first experiments in progressive learning with the secondary school of Maininki in Espoo. The core research group in photogrammetry was our group at TKK. The tasks were for stereo photography and imaging, and for parallax measuring. The school teachers in information technology, mathematics, physics, geography and biology did the exercises. The results were promising. However, it became evident, that the current workload of the teachers will not allow anything, which will only increase the content of the curriculum. New tasks can be adapted to individual courses only if there is an indication of positive effects to the entire learning process in the schools. In 2005, we have proceeded with our experiments jointly with Luma Centre. Luma Centre serves as the network for education, research, development and co-operation, and is coordinated by the Faculty of Science of the University of Helsinki. It is promoting teaching of biology, chemistry, geography, mathematics, physics and technology and enhancing interaction between schools, universities and business and industry. It seeks to encourage children and young people to become involved in scientific activities. The co-partners of the departments in the Faculty of Science come from education administrations, business and industry, industrial organisations, municipalities, and from the Faculty of Biosciences and the Faculty of Behavioural Sciences.