Homm_ICT for Hands On Multi Media Laboratories in Museums

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Abstract

Proposal to develop HOMM: a prototype of ICT based tools for hands on multi-media activities in museums. Multidisciplinary teams will build specific contents of the application to support, test and evaluate it in a network of museums. Museums are identified as agents of economic and social development supporting lifelong learning.

1. Hands on laboratories and ICT in museums: fostering complex networks of competences

The HOMM project (www.homm-museums.org) is promoted by Officina Emilia Museolaboratorio of the University of Modena and Reggio Emilia, Italy, and Crafts Museum (National Handicrafts & Handlooms Museum) New Delhi, India. Since 2000, Officina Emilia has developed hands on laboratories in science, technology, history and society to enhance the understanding of the processes and contexts of local development, in order to support the education system and encourage innovation. Crafts Museum, originally set up in 1956, has recently embarked on a major restructuring programme to upgrade its facilities and exploit the possibilities offered by its large collection of handcrafted objects and the vast endowment of Indian craft traditions and technical skills held by craftspersons. The two museums share certain common issues. First, the mechanical industries in Italy and the craft sector in India are both repositories of abundant skills and knowledge that need to be sustained for future growth. Second, the regeneration of competence networks in these sectors is crucial to sustain employment and livelihoods. Third, exposure to skills and practices in these sectors is an important instrument for education and innovation. The final goal of the project is to develop a new identity for museums as effective education and training centers for a much wider range of users, complementing the knowledge gained in more formal centers of secondary and tertiary education with the unique inputs and approach that museums can provide. The project is therefore intended to draw in the participation of various other stakeholders, especially policymakers at national, regional and local levels who will be crucial in order to broaden the project's reach and to involve new visitors who are not traditional users of museums.

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2. HOMM prototype

Hands on laboratories are increasingly used within museums to support informal learning. ICT tools can enhance knowledge acquisition before, during and after a museum visit, and enable a focus not only on the object or final output but also on the processes involved in producing artifacts, their history and community relationships. ICT tools offer the opportunity to connect and share information with other users and create networks of users. The design and evaluation of new approaches to learning are also possible with ICT, adding an important reflexive dimension to such innovative projects. A variety of communication tools, appropriate to different ages and audiences, is necessary to support the different levels of learning implicit in the idea of 'lifelong learning' (LLL) from 'cradle to maturity'. By combining principles of LLL with ICT, museums can become important alternative sites for non-formal education, now seen as a crucial part of education strategy, for a wide range of users. Such projects enhance participation in cultural activities related to education and training, and may be targeted to disadvantaged or marginalized groups, thereby helping to enhance social cohesion and foster active citizenship.

HOMM will be developed initially with respect to Officina Emilia Laboratories in Modena, Italy, and Crafts Museum (National Handicrafts & Handlooms Museum), in New Delhi, India. The prototype consists of several multimedia applications designed for different groups of users in all the phases of visitor-museum interaction. A pathway will be developed to spread the use of the prototype to other museums in the network interested to adopt it. This will involve: (a) defining the appropriate format for laboratory activities with different groups of users; (b) developing a prototype for demonstration that is targeted at different groups of users and at different phases of interaction in the two museums; (c) identifying a network of software experts, manufacturers and retailers of hardware, graphic designers, video technicians and researchers in different disciplines – engineering, education, economics, sociology, crafts, textiles, museum practice etc. Multimedia products will be produced specifically to demonstrate the HOMM application. These will include video clips, 3D modelling, graphic design slideshows. The multimedia production will be modular and scalable and will cover historical, social, economic, technical and organizational topics. The goal is to create a network of museum experiences that promote learning across communities through informal workshops on technology, culture and society. Expanding the set of museums using the products developed will make the investment required to develop the ICT tools more attractive and viable because of significant economies of scale; it will also allow economies of scope, thanks to the sharing, evaluation and development of effective practices from which all the partners will benefit, even if these are not offered by each of them; it will help satisfy the growing demand for informal education that museums can uniquely provide. The design of the evaluation methodology and the monitoring of its implementation will be carried out in the network of museums testing the prototype. A multidisciplinary project team is envisaged to develop the multimedia content: computer and mechanical engineers, product and graphic designers, experts in complex systems, communication, museum technologies, education planning, crafts, and researchers in history, technology and economics.