Chapter 7
Improving Learner Experience Within Educational Nooks in Digital Libraries

Desislava Paneva-Marinova
Bulgarian Academy of Sciences, Bulgaria

Radoslav Pavlov
Bulgarian Academy of Sciences, Bulgaria

ABSTRACT
This chapter presents solutions for personalized observation and enhanced learning experience in digital libraries (DLs) by special smart educational nooks. Main factors related to the DLs user experience and content usability issues are considered. During the user experience design, the users’ needs, goals, preferences, and interests have been carefully studied and have become the starting point for the new DLs functionality development. This chapter demonstrates several educational nooks or their components, such as learning tools in a digital library for fashion objects, a smart learning corner in an iconographical art digital library, an ontology of learning analysis method, and some educational games for art and culture in which authors are co-developers.

INTRODUCTION
The emergence of knowledge society and knowledge-based economy signifies a new era for education and training - the ubiquitous learning. The ubiquitous learning aims at replacing old-fashioned time/place/content-predetermined learning with a just-in-time/at work-place/customized/on-demand process of learning by new ICT-based tools (Pavlov, Paneva, Pavlova-Draganova, & Draganov, 2007). Moreover, the new educational strategies point to the investigation and the deployment of workable learning methods, approaches and scenarios for better understanding, creative thinking and experience, learning-by-doing and learning-by-authoring, engaging learners in more active participation during the perceiving of knowledge. Many questions are asked:

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- What tasks could be interesting and attractive and could stimulate learners’ desire to work?
- How could learners’ creativity be activated and stimulated?
- What contemporary software environments can be used in order to attract learners in more active participation in the learning process?
- How to improve the knowledge understanding by the usage of imperceptible and unobtrusive approaches and tools—desirable for students as well as for teachers?
- How to help the user in exploring the information resources about the chosen learning domain by offering the most suitable tools: provisioning of suitable and necessary services (improved searching and grouping of resources, creative resource usage), providing automatic simultaneous access to the resources of more than a single system (learning management system, digital cultural ecosystems, digital library, repository, archive, etc.), flexibility regarding the order of the suggested information objects, resource recommendation, object reuse, analysis and generation of resources, etc.?
- How to describe the selected resources in a given context and to determine the conditions and use cases—cognitive or educational goals, analysis, creative use, etc.?
- How to help the learner not just to view, but to also gain knowledge?
- How to provide knowledge in the most suitable way and form, intuitive and eligible?
- How to adapt the offered information content for each individual learner or group in order to achieve their cognitive goals and tasks, etc.

The difficulties in solving these issues are related to the lack of common models and workable solutions regarding the effective and context-dependent usage of the available e-resources, content presentation in the most suitable way for the different learners (content adaptation and customization), necessity for clear definition of the learner’s needs, goals, interests, increase and generalisation of user experience in the learning platforms, provisioning of meaningful learning.

The aim of this chapter is to demonstrate some solutions for effective usage of digital libraries (DLs) content for learning purposes through tools and services to improved content observation and enhanced learning experience. Main factors, related to the DLs user experience and content usability issues are considered. Users’ cognitive needs, goals, preferences, and interests have been carefully studied and become the starting point for the new DL functionality. This chapter presents several educational nooks or their components, which become applicable learning tools in different digital libraries. Special attention is paid on the modern educational games, providing the learners with a form of fun, motivating learning goals, high interactivity, and active immersion in the virtual learning world.

BACKGROUND

Libraries have always been a valuable source of knowledge resources. Their contemporary technological equivalent - digital libraries also pretend to hold this highly-valued position mainly due to the variety of content resources and the provisioning of easy access to them. A digital library is not just a static digital content repository, but also a system with a dynamic federation of functional units satisfying a wide variety of users’ content requests (Arapi, Paneva-Marinova, Pavlov, & Christodoulakis, 2016). Fox et al. (1995) observe that the expression ‘Digital Library’ evokes a different impression in each person, ranging from the simple computerisation of traditional libraries to a space in which people communi-