

2nd Workshop on Personalization Approaches for Learning Environments (PALE 2012)

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Abstract. PALE workshop aims to offer an opportunity where interrelated issues regarding personalization approaches in learning environments can be contrasted, such as pedagogic conversational agents, responsive open learning environments, and user modeling for all. Nine submissions have been accepted, which report benefits, challenges and open issues to personalize learning environments.

1. Introduction

The 2nd International Workshop on Personalization Approaches in Learning Environments (PALE) takes place on July 17th, 2012 and is held in conjunction with the 20th conference on User Modeling, Adaptation, and Personalization (UMAP 2012). The topic can be addressed from different and complementary perspectives. PALE workshop aims to offer a fruitful crossroad where interrelated issues can be contrasted, such as pedagogic conversational agents, responsive open learning environments, and user modeling for all. The benefits of the personalization and adaptation of computer applications have been widely reported both in e-learning (the use of electronic media to teach, assess, or otherwise support learning) and b-learning (to combine traditional face-to-face instruction with electronic media - blended learning).

As discussed at the 1st edition of PALE (held in conjunction with UMAP 2011), there are still open issues to be addressed in this field, such as the agents' embodiment, the modeling of the agent behavior for personalization purposes and its storage, personalization of the whole learning environment and its functionalities, finding an appropriate threshold between the learner control and expert guidance, tracking affective states, investigation of innovative learning scenarios, harmonization of educational and technological standards, automatic annotation for accessibility

purposes in existing learning object repositories, as well as appropriate methodologies for the joint evaluation of personalization and accessibility.

In order to foster the sharing of knowledge and ideas to research on these issues, PALE format moves away from the classic 'mini-conferences' approach and follows the Learning Cafe methodology to promote discussions on open issues regarding personalization in learning environments. This means that participants attending the workshop benefit both from interactive presentations and constructive work.

2. Workshop themes

The workshop addresses the following research question: “Which approaches can be followed to personalize learning environments?” Various contexts are to be considered, such as interactive, personal, and inclusive learning environments. More specifically, the topics of the workshop included (not limited to) the following issues:

- Motivation, benefits, and issues of personalization in learning environments
- Approaches for the personalization of inclusive, personal and interactive learning environments
- Techniques and methods
- Results and metrics
- Social and educational issues
- Use of pedagogic conversational agents
- Affective computing
- User and context awareness in personalization of learning environments

3. Contributions

A blind peer-reviewed process by three reviewers with expertise in the area was carried out to select the contributions for the workshop. As a result, 9 submissions were accepted, which report benefits, challenges and open issues to personalize learning environments. The contributions accepted for the workshop have been divided in three sections and are included after this Preface.

The first section groups papers that focus on learner modeling. Lefevre et al. present the PERSUA2 model for a unified personalization of activities, which integrates a wide variety of information on learners and is able to adapt activities while taking into account teachers' pedagogical needs [1]. Ming and Ming investigated the validity of applying topic modeling to unstructured student text data from online class discussion forums to predict students' assessment outcomes and inform instruction [2]. Dennis et al. have analyzed the relationship between personality, performance, performance feedback, emotional support, affective state, and learner motivation and propose a model that takes them into account [3].

The second section focuses on tutoring support, either by designing pedagogical agents or providing support to teachers. Tamayo and Perez-Marín describe the process followed to design a Reading Comprehension Conversational Agent for

Children applying User-Centered Design Techniques engaging both teachers and students [4]. Ginon et al. introduce their approach to personalize existing and animated agents taking into account context and users' knowledge, abilities and preferences [5]. Lefevre et al. introduce their approach designed to assist teachers during personalization of pedagogical activities [6].

In the last section, the papers deal with the support offered by the system. Nussbaumer et al. introduce an approach to stimulate self-reflection of learners about their learning process through user feedback based on a mashup recommender system for personalized learning environment [7]. Costa et al. propose an open learner modeling approach to solve detected cognitive conflicts that can emerge when the learner inspects information of his own learner model, which is inferred by an intelligent tutoring system [8]. Adewoyin and Vassileva discuss the state-of-the-art in online mentorship systems, recommender systems, and trust and reputation mechanisms to support matching groups of mentors and mentees [9].

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