

## **Considering cognitive traits and learning styles to open web-based learning to a larger student community**

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### **Abstract:**

While some learners find it easy to learn in a particular course, others find the same course difficult and have severe problems in learning. The reason can be seen in the learners' individual differences such as their different prior knowledge, learning styles, and cognitive abilities. Learning can take place best, when the individual needs of learners are considered. On the other hand, if the learning environment does not support the learners' needs, they might have difficulties in learning. This talk will show how cognitive traits and learning styles can be incorporated in web-based learning systems by providing adaptive courses. Such courses fit to the individual characteristics of learners and therefore make learning easier and better accessible for those who have difficulties with the one-size-fit-all courses. The adaptation process includes two steps. Firstly, the individual needs of learners have to be detected and secondly, the courses have to be adapted according to the identified needs. In order to enhance the mechanism of detecting needs of learners, investigations about the relationship between cognitive traits and learning styles is introduced as well. This relationship acts as a good source to get additional information and therefore assists in achieving the aim of providing suitable adaptivity regarding cognitive traits and learning styles in order to help getting more students to learn better.