Chapter 9
Cloud–Based Learning: Personalised Learning in the Cloud

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ABSTRACT
The chapter initially presents styles and types of education, clarifying the differences between differentiation, individualisation and personalisation. To implement personalised learning the learning paradigm must be adopted. According to research we can distinguish different types: e-learning, i-learning, m-learning and u-learning. Many organizations have developed a virtual learning environment (VLE) as a supplement to the traditional type of education. So the existing VLE should be adjusted to a personal learning environment (PLE) that places the focus on the appropriation of different tools and resources by the learner, whereby the learner is situated within a social context which influences the way in which they use media, participate in activities and engage in communities. Finally, a checklist with criteria has been used to weigh the quality of personalised learning courses. This work was realized in the context of the “School on the Cloud” Project.

INTRODUCTION
Today’s evolution in education shows a shift from the traditional classroom teaching (more 19th century style) to a more personalised approach (21st century learning). Every learner has his own learning method/skills, so he should have the opportunity to expand his skills and knowledge, exercise and adjust their learning rhythm according to their interests in combination with the curriculum. As the protagonist of the learning process is the learner we should adapt to his previous learning and construct the learning process after that. This means more than just the introduction of ICT, it also involves a whole new thinking about education.

In this chapter, based on literature review, we first look at styles and types of education, clarifying the differences between differentiation, individualisation and personalisation. Next a global definition of personalised learning is given.
To implement personalised learning the learning paradigm must be adopted. According to research we can distinguish different types: e-learning, i-learning, m-learning and u-learning. These were not always successful as many organizations have developed these into a virtual learning environment (VLE) only as a supplement to the traditional type of education.

So, the existing VLE should be adjusted to a personal learning environment (PLE) that places the focus on the appropriation of different tools and resources by the learner, whereby the learner is situated within a social context that influences the way in which they use media, participate in activities and engage in communities.

But it opens also a discussion on the learning in the future in a broader context: not only the learning process, but also the learning material, the learning place and the attitudes and skills of the learner will need to be adjusted.

Workgroup 3 of the School on the Cloud network analysed all existing criteria for a good personalised learning course, and gave each of them a weight. Thus, a checklist with criteria was created that can be used to control the quality of a personalised learning course is developed. For each criterion indicators are given that can help to adjust existing personalised learning courses.

THE STORY OF JOHN, OR HOW EDUCATION COULD BE

Ever asked yourself how different education could be? Let’s just look at the story of John. John is a 21st century learner and this is a normal school day for him.

John enters the school door, has a look if there is anything new in the intercultural area, greets his friends who are doing a small game in the playground section and checks his mobile device. There he finds that one of his colleagues posted a question to their professor, still being unanswered. So, he decides to meet members of another group in the cantina, joining them for an orange juice. They had already advanced, so they indeed can help.

John and his colleagues continue to get data from the open data cloud, using the free open-source software to analyse and compile it, preparing a cool interactive visualization.

After two hours, the chair reports to John’s device that he is sitting for two hours. This is where Theresa comes into the learning story. She is a yoga trainer and guides the team to the relaxation room, showing them some new exercises to relax their neck muscles.

Right after they finished their exercise they hear the “bell of good ideas”. They move to the school’s amphitheatre and wait for the announcement. One of their colleagues just had the idea of using a 3D-pen to create individual models of chocolate for their Christmas party.

Then the team goes back to work. They proceed very well, achieving the “flow” state. Suddenly the system warns “15 minutes left until automatic shutdown for today”. They concentrate and finish their work, having the evening for their outdoor non-school related activities and games.

Although at first glance this seems to be a faraway dream, it can become reality. Many schools in the world are already starting with the transformation from the ‘19th century style’ education to what should be the ‘21st century education’ (Figure 1). But the transition takes long, and includes a mind shift on all levels: school (buildings), teachers and certainly the learners.