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## Pocket sized authentic, dialogical and mobile learning

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This article deals with the development measures for the current academic year at HAMK Professional Teacher Education Unit, as connected with developing the teacher education study module in a more mobile and collaborative format. The selected study module was the Networks in professional education. The aim was to deepen and extend vocational training into teachers networks. With the planning launch, we wanted to find a pedagogical model based on interaction and collaborative learning for the implementation of the study module learning process.

A natural choice was the **DIANA** (Dialogical Authentic Netlearning Activity) model, developed by Principal lecturers Helena Aarnio and Jouni Enqvist. The original roots of the model are from the turn of the new millennium and, from the perspective of dialogical and collaborative working, the basic principles also apply splendidly to the modern world of mobile devices. The key point of departure in the birth of the Diana model was to clarify how netbased learning becomes a reality. Implementation of the model requires a genuine dialogical learning community, commitment on the part of learners and the teacher, and a solid presence on the net. (Aarnio & Enqvist 2001, 11-13.)

#### The DIANA model

Authentic dialogical learning on the net and community-based, constructive professional expertise can be segmented into an operational model by which it is easy to discern the components of learning as well as the dynamics of the model. The DIANA model is made up of four cornerstones (Fig. 1), which support authentic learning dialogically. (Aarnio & Enqvist 2001, 30 - 31.)

The developers of the model (Aarnio & Enqvist 2003; 2004), refer to net-based teaching, but the model is equally well-suited to modern, flexible and mobile learning environments. The peer learning groups had an important role. Moreover, there was a desire to link the dialogical learning process to collaborative knowledge-building and thinking.

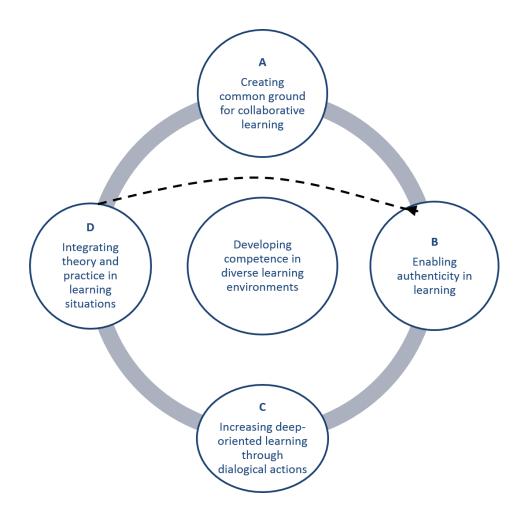


Fig. 1. The four cornerstones of the DIANA model (Aarnio & Enqvist 2014).

According to Aarnio (2014), operations compliant with the four cornerstones (Fig. 1) segment and structure the learning process. Cornerstone A creates the common ground for collaborative and dialogical learning. Cornerstone B deepens authenticity in learning community and student worked-out authentic questions and design connected with the learning goals of the study module. Deep-oriented learning through dialogical actions take place in the next cornerstone C. Students are working and building knowledge together about the subject being studied. Cornerstone D links theory and practice together. The students weave synthesis in a community-based manner as well as look for missing pieces (new questions) vs the learning goals of the study module.

## mLearning apps

With the learning process being open and transparent, learning often becomes meaningful. When the problem of learning or competence is real, the authentic situation arouses the interest to clarify the matter more deeply and also from theoretical starting points. It's possible to learn in authentic learning environments with mobile devices. This needs teachers guidance.

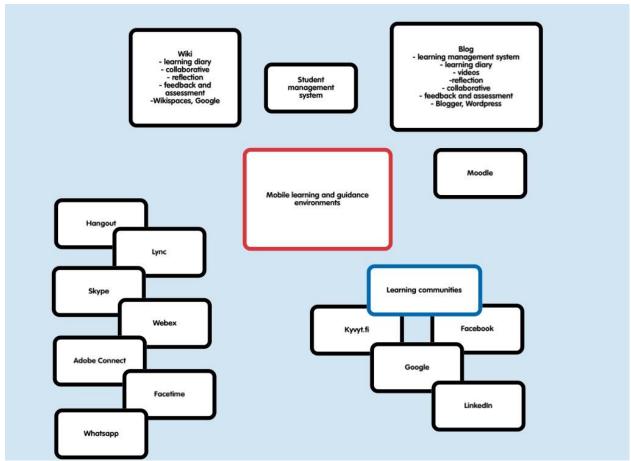


Fig. 2 Mobile learning environments

Nowadays net and mobile applications are abundantly available. Some examples of applications which may be used in mobile learning are segmented in the figure (Fig. 2).

## Fits in a pocket

The planning of the learning process was launched from the learning goals set in the study module. After this, the process was configured in accordance with the four cornerstones of the DIANA model, observing the dynamics of the pedagogical model. In the planning of the learning process, the authenticity of the learning process was regarded as important.

The students created a common ground for working and for goal-oriented learning. The structured dialogical learning process enabled the development of competence and knowledge-building interactively. The selected applications and programs generated authentic and dialogical learning on their part, in addition to mobile learning. All learning and working environments in use were appropriate for mobile devices and enabled studying that was independent of location.

#### **Conclusions**

On the basis of the survey we conducted, it is possible to say that there was a need for dialogicality and authentic learning in a supporting mobile study module. Future vocational teachers need increasingly more flexible information and communication technology-related usage skills, combined with pedagogical knowledge.

After the development work and realization, it must be noted that the study module's learning outcomes surprised us positively. Authentic learning and dialogical community, as well as the building of knowledge, established enough space for even the most diverse kinds of final products. Each peer learning groups' own authentic question settings enabled this. The learning results of the study module were significantly impacted by the students' peer learning groups strong sense of community, which inspired, encouraged and enabled each one to bring their own strengths into dialogical learning.

The adaptation of the model to various vocational fields and mobile functions is possible, and the student teachers considered that they had obtained expertise for their own teacherhood.

Authenticity as a mobile teacher was significant to this development process. From our perspective, the courage to teach authentically during this study module created the possibility for the creation of and support for authentic learning situations, whilst believing in the results of authentic and dialogical learning.

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