**Title:** Fostering Students’ Decision Making at University of Maribor (Slovenia) with Authentic Situations Through Moodle’s HSP Activities

**Authors:** Nino Fijačko, Miro Puhek, Natalija Špur, Katja Breznik, Lucia Klasinc, Sebastijan Frumen

**Abstract:**

The most perfect example of learning would probably take place in a safe environment, where students would be able to learn from real/authentic examples, where wrong decisions would not have any negative consequences (e.g., health risks, financial costs). Especially, if the environment would force the self-regulation of activities, as this would directly test the impact of the consequences on the situations performed and take responsibility for student’s learning. One of the key goals in the pedagogical process along with the strengthening of knowledge is also the development of transferable competencies. The latter is particularly important in the context of employment and greater competitiveness in the labour market, which has constantly been changing in recent years and requires lifelong learning and adaptation.

Scenario-based learning is founded on the theory of situated learning, which predicts greater efficiency if the learning itself takes place in the same situation or context as will be used later. Namely, students remember the content better and more permanently by directly experiencing situations that they will later encounter in practice because in a similar situation, it is easier to visualize the content or recall information. Learning activities, therefore, take place with the help of pre-prepared scenarios in which students make decisions with the ultimate goal of solving a given problem. The steps of individual decisions are carefully planned and, as a rule, simulate an authentic situation that enables scenarios to have real-life experience in a safe environment (e.g., debriefing, debugging, technical training for specific situations, customer service, team development, response in unfamiliar environments). In addition to professional knowledge, students must include/develop a wide range of transferable competencies to successfully solve the problem. Among the latter, problem-solving, critical/analytical thinking and decision making are most common. Course scenarios are often set non-linearly and offer students more opportunities for feedback based on selected decisions to which there are more possible/correct answers. Effective feedback helps students overbridge the gap between current knowledge and learning outcomes.

The presentation aims to give an insight into didactical and technical support for implementing scenario-based learning with Moodle and presenting a practical design of activity in the case of a bachelor’s degree program at the UM Faculty of Health Sciences (FHS). More specifically, HSP activities were used for implementing scenario-based learning. HSP is an open-source tool that can be used to create a variety of interactive web-based learning objects. All 17 faculties of the UM use one central installation of the Moodle Learning Management System (Moodle UM), which is enabled for students and teachers through digital identification.

Centre for Teaching Support of the University of Maribor (CTS UM) (Department of Education and Study) provides guidelines and support to university teachers (hereafter teachers) for using innovative learning approaches (e.g., flipped learning, gamification, blended learning, project-based learning, problem-based learning) and information and communications technology (ICT) in the pedagogical process. At the CTS UM, we prepared didactical guidelines for implementing scenario-based learning in the pedagogical process, where two accessible practical examples for integration in Moodle UM were presented (available in Slovene in “Iškalanik gradiv” at didakt.um.si). A more basic approach allows the use of a Lesson activity, which is designed by combining the collection of individual pages and checking knowledge with the help of questions (with a linear or dynamic design of buttons). The visually refined approach is enabled by HSP activities (branching scenarios, interactive videos,
interactive books, etc.), which on the other hand, encourage participants to interactively use content with the support of an intuitive user interface. With the aim of training teachers for using of H5P activity in the Moodle UM, we prepared an online workshop, "H5P to Include Interactive Content in Moodle UM". The workshop includes an overview of 46 supported H5P activities and an extensive collection of “Treasury of Cases” (in Slovene “Zakladnica primerov”). Cases are collected in Moodle’s Glossary, where users can test embedded practical examples from different fields of study. To foster the creation and exchange of ideas, all content is uploaded with permission to download it (licence CC-BY-SA), so users can check behavioural settings of activities or adapt them to their context. A random Glossary block is used on the first page to additionally present the content. Finally, for the purpose of recording videos, the teacher can also rent a CTS UM video camera, which is intended exclusively for capturing the pedagogical process and can be rented by employees free of charge.

As an example of good practice, we implemented scenario-based learning using interactive videos at the UM FHS. Nursing teachers from UM FHS, recognized the opportunity in H5P to develop interactive videos for enriching students' psychomotor skills, confidence, self-efficacy, and critical thinking. In UM FHS we started creating the interactive videos with H5P because we noticed that students learn nursing procedures (e.g., basic life support or venepuncture) from unreviewed sources like the YouTube platform. In the process of developing interactive videos with H5P, we faced challenges like creating nursing scenarios that are based on evidence, handling filming accessories, and the time complexity of editing with H5P. Students are also involved in capturing recordings and making interactive videos.

In the future, more examples of scenario-based learning would like to be fostered at UM. The presented good practice will, therefore, also serve as a potential pilot for other teachers and mutual sharing of experiences within the environment of Pedagogical Network UM (in Slovene “Pedagoška mreža”).