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Synchronous hybrid learning in project- and problem-based learning at Tallinn University

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INTRODUCTION

Synchronous hybrid learning workshop was effectively implemented in Tallinn University's Interdisciplinary Focused Environment (LIFE) course; experiences and observations were discussed in a case study.

GENERAL CONTEXT OF THE HYBRID TEACHING PRACTICE

- Implementer: Tallinn University (Tallinn, Estonia)
- Course: Learning in an Interdisciplinary Focused Environment (LIFE)
- Lifetime: Ongoing since October 2020
- Reference: Based on document analysis and participatory observation by Aira Lepik (School of Digital Technologies, Tallinn University)
- Compiled and structured by Tallinn University

ABOUT LIFE COURSE

Learning in an Interdisciplinary Focused Environment (LIFE) is an university-wide project-based course, which is compulsory for all Bachelor and Master level students at. LIFE is a new type of subject at Tallinn University (TU) where students from different study fields collaborate with academics and partners from outside the university to carry out projects focusing on interdisciplinary problems. Thus, LIFE provides an alternative to subject-based education.
The main aim of LIFE course is to support the development of general competences and cooperation skills of students thereby enhancing the competence of solving interdisciplinary problems. The focus of the learning activities is a project, which the students have chosen, having their field of studies/interests in mind.
Within LIFE course, a hybrid project “From profession to occupation” was organized and carried out by Aira Lepik and Anna Šeletski (School of Digital Technologies, Tallinn University).

PARTICIPANTS AND THEIR PREVIOUS EXPERIENCE

Students from different disciplines (there were participants from eleven different study programmes) and different study levels (Bachelor and Master level students) of TU participated in the LIFE course project From profession to occupation. The aim of the project was to identify graduates of Mathematics and Information Science majors of Tallinn University, whose career path would allow expanding the understanding of these majors, and who would be ready to share their career success stories for marketing the majors and recruiting new students.
The following activities were planned to realize the project goal:

- identification and analysis of previous alumni surveys,
- identification and analysis of previous Information Science and Mathematics study programmes marketing materials,
- getting to know the rules of personal data processing,
- getting to know interview types and conducting methods,
- filming and editing interviews,
- creating video clips for the marketing of Mathematics and Information Science majors.

The participants of the LIFE course were from the following study programs: Advertising and Public Relations, Applied Computer Science, Asian Studies, Computer Science, Contemporary Media, Environmental Management, Estonian Philology, Information Science, Law, Linguistics and Language Editing, and Psychology. The previous experiences of the students were very different, but their willingness to contribute to the project allowed everyone to effectively participate in its implementation.

Learning objectives

The main objective of the LIFE course was to support the development of general competences and teamwork skills, which would foster the development of the competence of resolving interdisciplinary problems. The teaching activities of the lecturer in the LIFE course encompassed the skill of involving groups of students to participate actively in the learning process. If the supervisor was a lecturer, one of his/her main tasks was to foster the development of students' thinking and argumentative skills that would contribute to problem solving, metacognitive skills and critical thinking and would help the student to develop into an independent and self-directing learner. The effectiveness of supervisors also determined how well the learning outcome were acquired.
Upon completing the course, the students were expected to be able to:

- make connections and analyse the goals of the project and their possible solutions from the perspective of one's own as well as that of other fields;
- use professional and cross-disciplinary knowledge newly acquired during the project and identify their application potential;
- have knowledge and skills of applying principles of teamwork, including the division of roles, taking responsibility and contribution to group work and time management skills;
- analyse the performance and effectiveness of the project by critically assessing one's own activities and suggesting improvement measures;
- analyse his/her own as well as team members' role and responsibilities when implementing the activities and goals of the project;
- introduce the project results to stakeholders and/or public by using different media channels.

Taking the deeper purpose of problem-based teaching and learning as the basis, LIFE course equipped students with self-management, application of knowledge and lifelong learning skills.

HYBRID TEACHING SCENARIO

Synchronous hybrid learning scenario was created and implemented under the workshop entitled "How to address the media", which was part of the LIFE course. Workshop focused on empowering on-campus and online students to introduce the project results to stakeholders and/or public by using different media channels.
The workshop type and mode of teaching was more or less the same as a regular workshop. First, the teacher (associate professor of media policy of TU) described the goals of the workshop and how it fitted into the LIFE project. Then the participants received a first introduction to the possibilities of creating (news)texts intended for the general public and distributing these texts through the media. All files, records (video clips) and links to the workshop materials were accessible for all participants.
A practical task was also performed during the workshop: students practiced writing news about their LIFE project and chose the most appropriate media to distribute the news. The groups formed for the practical task worked separately in the classroom under the guidance of the teacher and on Zoom (breakout rooms were assigned automatically), but the results of the group work were presented to everyone. All students participated in the discussions.
The basic LIFE course project content was delivered via video conferencing tool Zoom that provided teachers and students a way to meet online synchronously via a personal PC/laptop or cell phone with or without using video. Teachers set up Zoom meetings to conduct project meetings online, as well as record them for later access by students.

HARDWARE AND SOFTWARE USED

Open-source e-learning software platform Moodle was exploited for the design and delivery of the course materials, including lecture notes, PowerPoint presentation, handouts, open educational resources (OER), assignments, required and additional readings. The course was designed following a standard folder structure: Study Guide, Background Materials, Assignments, Literature, Useful Links and Resources.
Platform Trello was used for joint project works.
Zoom platform was deployed for communication and collaboration in real-time for online students. The following Zoom tools were used: Breakout rooms, Non-verbal feedback, Chat, Screen Sharing.
For group work students used mostly Zoom, Microsoft Teams, Slack, Facebook groups and e-mails as communication tools.

INTERACTION AMONG PARTICIPANTS

On-campus students were more likely to communicate amongst themselves, and online-students preferred to communicate in Zoom. The division into group work also resulted from the format of participation in the workshop (participation in the classroom or via Zoom). However, both types of students were equally involved in the presentation of the results of the group work.

ASSESSMENT

The LIFE course was assessed on a non-differentiated assessment scale. To pass the course, students had to complete the compulsory tasks listed on the outline of the course, and tasks that were necessary for carrying out the substantial activities of the project. Students have to fulfil six mandatory tasks, in addition to tasks assigned by the supervisor(s). The mandatory tasks included:

- creating the action plan,
- completion of the mid-term report,
- participation in the mid-term week feedback session,
- making the project portfolio,
- presentation of LIFE project results,
- self-reflective report.

STUDENT EVALUATION

In order to assess the satisfaction of students with the LIFE project, all students must submit the self-reflective report that consisted of four parts:

1. **Introduction**: Why did you join the project? What were your expectations?
2. **Team, roles and contribution**: How did the group dynamic and collaboration work? If you experienced conflicts then how did you solve them in your group? How would you evaluate your and your team members' contribution? Why did such group dynamic form?
3. **Personal development**: What did you learn whilst doing the project, specifically related to your activities? Which experiences were the most important ones? What were the difficulties and victories? What would you do differently in the future?
4. **Summary**: What feelings and thoughts do you have by the end of the project? What will you take with you for the future? What would you recommend to the supervisors and developers of the LIFE course?

Based on the feedback obtained, there was a general positive reaction. Although it's been said that there was room for improvement. The majority of the students agreed that the

workshop objectives were clearly stated and achieved, the topics presented were relevant and the workshop was easy to follow. Most students agreed that their expectations were met. All students, except one, declared that they had learned new skills. According to some students, there was a lack of communication between the on-campus and online students, and the lecturer who conducted the workshop sometimes "forgot the students who were in Zoom".
Most students were satisfied with the hybrid learning process. In addition to the above, unstable audio was also cited as a problem, preventing comments mediated through Zoom from being tracked. The majority of the respondents agreed that the teacher was professional in his work, supported the participants effectively and showed interest in and enthusiasm for the subject.

Teacher evaluation

The lecturer who conducted the workshop found that the situation in which on-campus and online students participated in the study at the same time, was challenging (e.g. dividing attention equally between the online and on-site students, the delays in communication in order to accommodate online students by repeating comments from on-site students). He emphasized that all students and the teacher should be able to interact with each other by seeing and hearing each other: only this situation would stimulate a feeling of community.

Quality assurance

Effective quality assurance mechanisms were used to ensure the existence, availability and allocation of resources and technological infrastructure to support student achievement of LIFE course learning outcomes, and demonstrate continuous improvement.

Time commitment

The workshop lasted two academic hours (twice 45 minutes). The total volume of the LIFE course project was 6 ECTS. In addition, it took one day to plan the workshop. Before the workshop, 15 minutes were spent to setting up the technology in the classroom. An additional one hour was spent on student feedback analysis.

Transferability and sustainability

The described case study can easily be transferred to other LIFE projects. Every semester, dozens of LIFE projects are launched at TU, each of them deals with the basic principles of communication with the media, which formed the core of the implemented hybrid workshop.