

OUTPUT NO 1 AND 2 OF ADULET PROJECT (ADVANCED USE OF LEARNING TECHNOLOGIES IN HIGHER EDUCATION) IN HUNGARY

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Abstract

Within the frame of the European Erasmus+, AduLeT project [1] wants to improve the teaching quality of lecturers by enhancing their skills concerning the use of technologies in an advanced way. It also aims at training the lecturer on how a specific teaching method can be combined with a certain technology in addition to providing guidelines, best practice and strategy concepts for lecturers and universities. As such the project will contribute to the modernization of Europe's Higher Education systems for education and training. This support system will be implemented as a community of practice (CoP) with all the results of the project and driven by pedagogical aspects. The CoP should also provide the possibility to get into contact with other lecturers and share experiences about teaching with Technology Enhanced Learning (TEL). The need of the CoP with these components has been proven before the start of the project through the analysis of different surveys..

1 Introduction

The number of useful technologies for a variety of educational purposes is already quite large and constantly rising. Nevertheless there is still a lack of formal training and of supporting digital skills within faculty training. At the same time, higher education institutions all over Europe are expected to take into account innovative technologies and scenarios such as Open Educational Resources (OER) or Massive Open Online Courses (MOOCs) [2], but only a small number of universities actually does.

AduLeT has the primary target group of lectures at the partners' universities. These lecturers mainly have low skills in the advanced use of ICT within teaching or do not have enough time. The analysis of multiple studies before the project identified: the following barriers concerning the advanced use of learning technologies in higher learning: (1) time, (2) motivation, (3) institutional/cultural factors and (4) self-efficacy/self-confidence

All the partners of the AduLeT consortium face almost the same barriers to a different extend. The aim of AduLeT is to provide lecturers an environment with helpful information for their teaching.

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The partners of AduLet project are:

Partner 1 - Germany: Pädagogische Hochschule University of Education, Ludwigsburg
(Coordinator: Birgit May, Annika Jokiaho)

Partner 2 - Hungary: John von Neumann (former Pallas Athene) University

Partner 3 - Finland: Humak- University of Applied Sciences

Partner 4 – the Netherlands: Open Universiteit Nederland

Partner 5 - Spain: Universidad Computelense de Madrid

Partner 6 – Portugal: Polytechnic Institute of Braganca,

Partner 7 – Italy: PIXEL: Associazione Culturale

2 Scientific background of the project

The most relevant sectoral priority for AduLeT project is supporting lecturers in higher education to use learning technologies in an advanced way in their teaching in order to improve the quality and relevance of higher education. The project aims to have a direct impact on the target group involved in the project: Lecturers and teaching staff at the universities involved in the project by further developing their skills and knowledge about active and recently developed forms of Technology Enhanced Learning (TEL) in university teaching. The lecturers will get to know which teaching methods are suitable for TEL scenarios. Moreover guidelines for the effective use of TEL tools will be developed. In this way lecturers will acquire digital skills and learning methods.

The cross-cultural cooperation and the exchange about the country-specific TEL situation at universities at the European level is fundamental to this project. The persons involved in the project serve as multipliers in their institutions as well as their regions. In this way, the project approach accomplishes the idea of using participatory approaches and TEL based methodologies and more strategic and integrated use of TEL and open educational resources (OER). To improve the awareness of lecturer and trainers in the advantages and perils of TEL is an important part of the project. This is in accordance with the aims of the strategic framework “Education and Training 2020” i.e. digital competence.

The most relevant horizontal priority is to improve achievement in relevant and high-level basic and transversal competences in a lifelong perspective. In everyday university teaching there is still room for improvement regarding the use of TEL approaches, especially in keeping up with recent developments like MOOCs (Massive Open Online Courses) or OER. While there are many reasons underlying this thought, some have been identified as being key issues. For instance that TEL approaches are only to a limited extent part of training for teaching at universities and that practice guidelines to the application of TEL-based approaches in daily teaching activities are sparse.

The project also found inspiration in the INTACT project [3] and its basic idea: helping schools to get the most out of digital technologies. The universities have higher capacities to train their staff in digital skills.

To support the lecturers, AduLeT develops:

-A Community of practice: a support system is to be implemented as a community of practice (CoP) with all the results of the project. The CoP also provides the possibility to get into contact with other lecturers and to share experiences about teaching with TEL. The CoP will also provide a possibility to improve and extend the existing results of AduLeT after the project ended.

-Teaching methods: basis of the teaching methods is a template which already exists (TMT). This template will be reviewed and several descriptions for different teaching methods based on this template will be developed.

-Guidelines for the effective use of TEL tools: the TEL tools as well are described with a template that already exists (TTT). Also this template is to be reviewed and several descriptions for TEL tools will be developed.

-The existing surveys mentioned above will be enriched by modern research technologies, tailored to the partners’ needs and performed at each partner university. The results and additionally a guideline of how to enrich, tailor and perform such surveys will also be published on the CoP.

-Case studies: a collection of already existing strategies, support concepts and facts about TEL will be summarized and linked on the CoP to provide the lecturer with further information.

In this way the project will make a strong contribution to the modernization of Europe's higher education systems for education and training by focusing on a pedagogical approach rather than technologies to enable high quality teaching. The widespread skills and experiences that are demanded to deal with the challenge of improving lecturers' skills, knowledge and attitude to use more active different forms of TEL could not be performed by a single university. Carrying out this project enables high quality results e.g. in the development of the guidelines and the concepts for the CoP. All partners have skills in different areas, which allows the consortium to achieve a highly skilled partnership that will contribute to the European Higher Education in the field of the project topic. AduLeT aims to support lecturers to bring TEL approaches into their daily teaching practice. Therefore, we aim to set up teaching methods for TEL, guidelines for the effective use of TEL tools to be used in these methods and a collection of case studies. To achieve this goal, AduLeT aims to integrate TEL-based elements into the trainings for university lecturer. This way AduLeT aims to improve achievement in relevant competences for TEL in a lifelong learning perspective.

3 Methods and objectives of Output No 1 and 2 of the project at the Hungarian partner

Before the start of the project, the consortium gathered on the one hand a collection of teaching methods combined with suitable TEL tools based on an existing template. The already existing templates still need modifications and adjustments to AduLeT needs and more concrete examples for the use of the TEL tools with teaching methods will be developed later on during the AduLeT project.

On the other hand the consortium evaluated and summarized existing studies and based itself on two of them for the project's relevant facts: (a) the used research methods in the study and (b) the barriers, results, conclusions of the studies about why an advanced use of technology was not guaranteed during teaching. In order to overcome the barriers for the advanced usage of learning technologies in higher education, the first steps in the AduLeT project were to improve the templates for the description of teaching methods and TEL (Technology Enhanced Learning) tools, as well as to involve the primary target group of lecturers into the design process. Both templates represent the basis for AduLeT's further work. Therefore the project members started right at the beginning to design these templates.

In the first quarter of the year 2017 both templates were finalized and provided to the AduLeT team. The staff of each universities were responsible to improve the existing template for teaching methods, to develop concepts for the "build the community", to create a collection of teaching methods, to evaluate and test the developed collection of teaching methods, as well as to plan and conduct multiplier events.

The primary target group (lecturers of the participating institutions) are involved in the development of the outputs right from the beginning with two "build the community" workshops at each university. During these workshops the partners review the existing collection together with the lecturers and prove the use of the methods and technology for teaching practice at the universities.

Output No 1 of AduLeT project (teaching methods for TEL) contains two different products:

- 1) the teaching method template (TMT) which is a standardized, structured template for the description of an individual teaching method for technology-enhanced learning (TEL) support.
- 2) the teaching methods (TM) that are a structured, standardized collection, describing educational scenarios, pedagogical approaches and connected TEL approaches.

Goal of TMT is to help educators to describe TEL-based methods in a structured, standardised way and to help lecturer to find and reuse these methods. A TMT is to be prepared in a way that simplifies the creation of a corresponding database scheme as basis for a searchable system.

A teaching method at least comprises an educational scenario to cover, learning goals to achieve, an approach to reach these goals, and TEL tools and methods helpful to achieve the goal. A teaching method as a term is understood in AduLet project as in the followings:

- it is a logical process through which knowledge is obtained.
- it is organised in a succession of logical steps or stages aiming at achieving (a) predetermined goal(s).

- it comprises a set of methodologies, strategies and techniques, tools and learning activities (Figure 1).

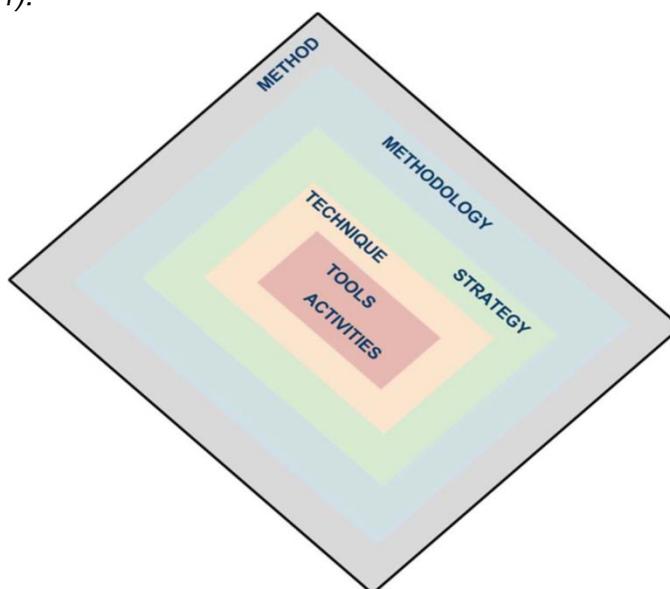


Figure 1: The concept of a teaching method and tools in AduLeT project (project material)

The TMT is based on the teaching method template as developed within the ICOPER project [4]. As our core goal we want to identify the main methods that can be used in the learning [5]. The template is organised in three main sections: the overview section should allow a teacher to identify the method as being appropriate for the learning objective at hand (or not). The details section should help to understand and apply the teaching method in a specific educational situation. The comments section comprises collected experiences and reflections about the teaching methods and represents a growing experience in applying it.

All project partners contributed to the development of the teaching method template. During the period between November 2016 and 31 August 2017 our team focused on and contributed to IO1 and OI2. We thoroughly analysed the teaching method template. After the kick-off meeting in November 2016, where the template was provided at first we ourselves filled in the template to see in to its efficiency. We did desk-top research on teaching methods, we collected several of them. Then we were collecting good examples for teaching method templates. After doing so, two exemplary templates were sent to 5 lecturers who teach disciplinary methodology at our university so that they would assess and evaluate the template. Out of the 5 lecturers two responded and gave positive feedback about the template. They confirmed that using the terms for teaching method in the sense AduLeT provided the TMT can be a useful tool when choosing a method for your teaching scenario.

Output No 2 aims to give guidelines for the effective use of TEL tools comprising a template for the structured and standardized description of TEL Tools and the collection of TEL tool. The guidelines for the effective use of TEL tools are a structured, standardized collection, describing TEL tools in a way that enables teachers to find, select and apply appropriate tools supporting specific teaching methods [6]. The guidelines comprise two further constituents: the TEL tool template (TTT) and the collection of TEL tools (CTT).

The TEL tool template (TTT) is a standardized, structured template for the description of an individual TEL tool. The template is required to gain a consistent level of description and allows to systematically describe and categorize heterogeneous TEL tools. This template complements the teaching method template (TMT): while the TMT describes a pedagogical approach and relates this to possible TEL tools, the TTT describes all usage

related and technical details of the tool in order to allow an educator to make use of it.

A TEL tool description covers: technology related aspects, prerequisites, requirements, usage related aspects and relates the TEL tool to teaching methods, where it can be applied. The collection of TEL tools is a structured, standardized collection, describing TEL tools according to the TTT It aims to serve as a collection of reusable, applicable tools, which lecturer can select and easily apply in their education.

4 Outcomes of Output No 1 and 2 of AduLeT project in Hungary

To ensure an early involvement of the important target group at the partners' university, a first "build the community" workshop was to be held in project month 08 to month 09. These workshops serve to evaluate the teaching methods and also to include the ideas of the lecturer. The first "build the community practice" was held on 28 June, 2017 at the Hungarian partner, at our university. During the workshop, we had the following topics on our agenda (based on a template common with all project partners:

Present the AduLeT-project (PPT) and hand out the project booklet

Present the Teaching Method Template and collect feedback/improvements of the lecturers

Present the TEL-Tool Template and collect feedback/improvements of the lecturers

Present the Grid and collect feedback/improvements of the lecturers

Brainstorming: further Teaching Methods

Brainstorming: further TEL Tools

Follow up: Who would like to try out which Teaching Methods and TEL tools in their teaching?

The following teaching methods were used to fill in our TMT:

- 'jigsaw' method (2 templates were given on this)
- peer assisted learning (PAL)
- reciprocal teaching (RT)

The attendants of the meeting (8 lecturers of John von Neumann University Faculty of Pedagogy) made the following suggestions for improvement on TMT:

- the template as such was found good and useful by the participants. Still, they made some suggestions.
- it would be advisable to include what technical requirements are needed for the method (hardware and software). Or it could be mentioned in the Graphical Representation part.
- key words for each method would be useful as they could make the search among the list of methods easier.
- certain taxonomy/system could have been created from the collected methods; each method could be incorporated into this system. E.g 'cooperative learning includes the following methods: the jigsaw technique, assignments that involve group problem-solving and decision making, laboratory or experiment assignments, peer review work.

At the end of the workshop, the lecturers evaluated it based on a common evaluation questionnaire. The 8 participants gave the following answers.

Six out of the 8 participants strongly agree, two agree that the workshop is useful for their daily teaching work. None of them were neutral or even disagreed (*Figure 2*).

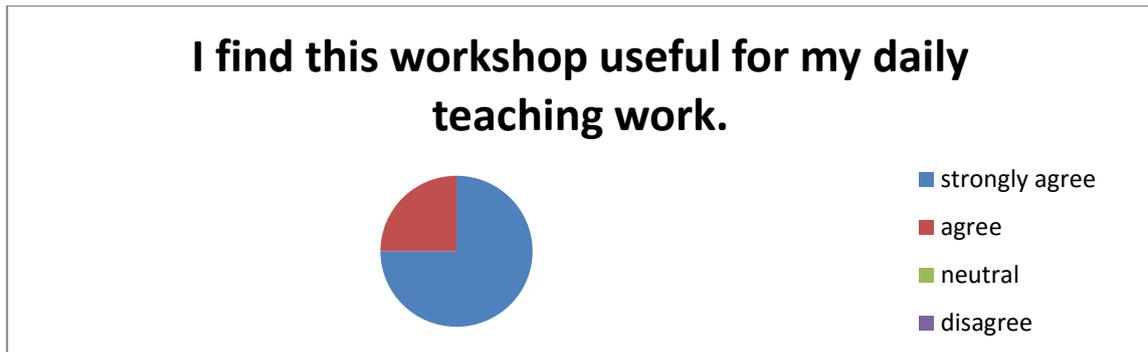


Figure 2: The responses for the 1st question of the evaluation questionnaire at the national meeting

Seven out of the 8 participants strongly agree, one agrees that the templates for Teaching methods and TEL tools have a useful structure. None of them were neutral or even disagreed (Figure 3).

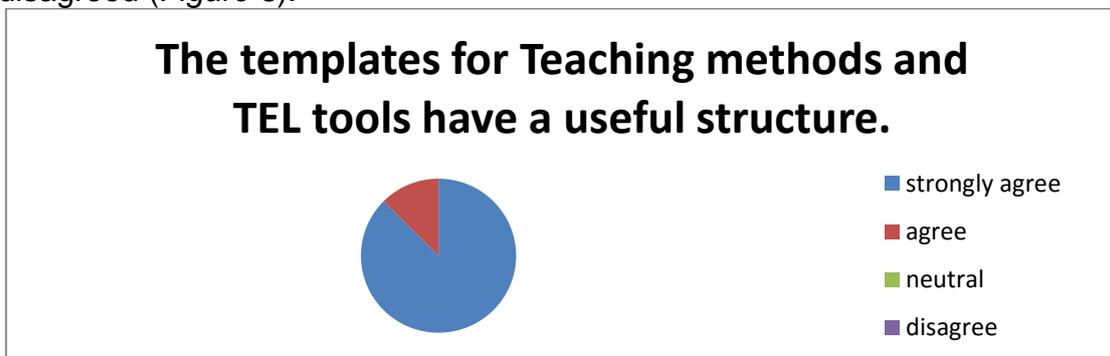


Figure 3: The responses for the 2nd question of the evaluation questionnaire at the national meeting

Regarding the TEL teaching method / TEL tools, three out of the 8 participants strongly agree that they would use them far in their practice, four agree and one of them is neutral; none of them disagreed (Figure 4).

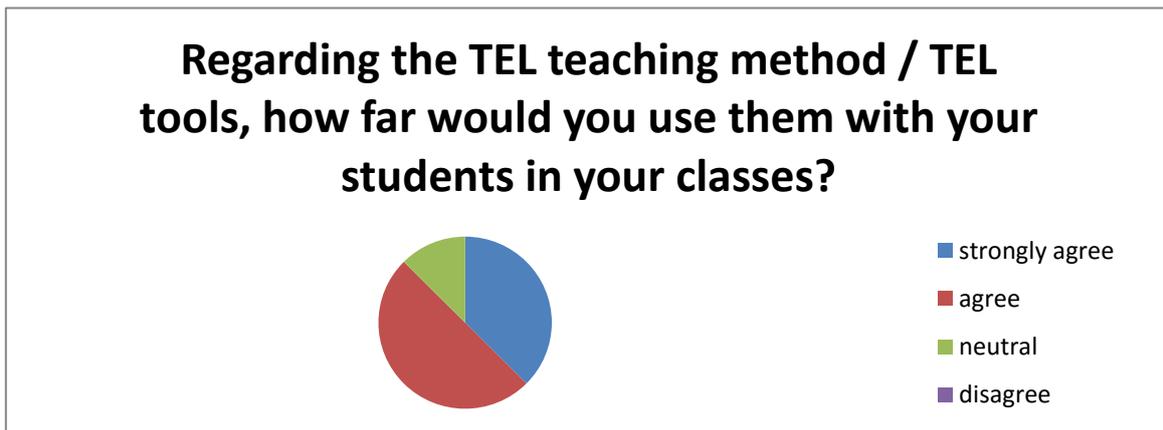


Figure 4: The responses for the 3rd question of the evaluation questionnaire at the national meeting

The 4th point of the questionnaire was for other comments and suggestions, which are the followings:

It seems to be a very useful & great project! :)
I am very glad to participate in the course.

As the answers or responses given by the participants show, both templates are found to be useful tools for them. They are motivated to get over their barriers regarding using technologies and technology based methods in their instructional practice.

5 Conclusion of AduLeT Project Output No 1 and 2 in Hungary

The lecturers optimized the templates to their institutions' needs and developed teaching methods and descriptions of the TEL tools for the first collections of teaching methods and TEL tools. Furthermore the lecturers discussed their experiences and problems relating to the use of technologies in their teaching so far and they also assessed the best ways to help solving these problems.

The goal of the next output is to understand the barriers adopting TEL in different countries. For this purpose the AduLeT-project now is ready to identify the current barriers at each participating university based on a study. The leader of O4, the Open University (OUNL), has created a framework for performing the study that was presented at the second translational meeting in Heerlen in May 2017. OU identified "Group Concept Mapping" as the appropriate research method in order to collect the barriers at each partner's university. The study will be performed online in September 2017 with a specific tool (concept global system), since OUNL has an existing licence for this tool, that allows all partners to use it. Five lecturers of each partner will participate in the study. During the transnational meeting in Braganca, Portugal (October 2017) the current status was presented and discussed.

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