

TOWARDS CERTIFIED LEARNING ASSISTANTS FOR IMPROVING EDUCATIONAL QUALITY

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ABSTRACT

Undergraduate students can be appointed as 'student assistant' and as such they can fulfil many different tasks, related to education, research and organisation. These tasks vary from entering data or making schedules to guiding tutorials or assisting in lab settings. In the year 2018/2019 at the University of Twente, an estimated 51.000 to 84.000 student assistant working hours were spent on learning-related tasks. In order to enhance the quality of education at the university, it is proposed to extend the didactical training for student assistants with tasks in which they are formally involved in other students' learning processes (Learning Assistants, LAs).

The Learning Assistants Project at the University of Boulder, Colorado [1] has been an inspiration. By incorporating elements of other LA trajectories, the 'Colorado LA Model' has been adapted to the local situation and demands. The main goals of the intervention are that Certified LAs show a reflective, professional attitude aimed at improving their practice as LA and that LAs can determine pedagogical strategies for assisting, when provided the goals, teaching strategies and assessment of the unit they are asked to assist in.

Following a rapid prototyping approach [5] an LA-training trajectory is designed and implemented at small scale. Simultaneously, an inventory is being made of the current roles and tasks of LAs, and more in-depth needs analysis for the design of this training. This article present the first results of both the training needs assessment and the pilot LA-training.

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1. INTRODUCTION

In The Netherlands, undergraduate students can be appointed as so-called 'student assistant', and as such they can fulfil many different tasks, related to education, research and organisation. These tasks vary from entering data and making schedules, to guiding tutorials or assisting in lab settings. In the year 2018/2019, at the University of Twente, an estimated 51.000 to 84.000 student assistant working hours were spent on tasks in which the students were formally involved in other students' learning processes – from now on called 'Learning Assistants' (LAs). The LAs are prepared on the content of their work by the lecturer who hires them. Part of the LAs also get a pedagogical preparation, which is provided by the University's Centre of Expertise in Learning and Teaching (CELT), consisting of a half-day session at the start and a follow-up lunch meeting during the quartile.

In general, in evaluations, students are satisfied about the content expertise of the LAs, however, the opinion about the didactical skills vary from good to unsatisfactory. Student representatives in departmental and university bodies have asked for more extensive didactical training for LAs. The Learning Assistance Model of the University of Colorado [1] was mentioned as a good example of what they would like to see at the UT.

The Centre for Engineering Education (CEE) has taken up this idea and has worked on implementation of the plan in cooperation with the Department for Teacher development (ELAN) and CELT. This has led to three main questions:

1. What should be the content of the more extensive didactical training; what skills are most relevant?
2. What is the best format, considering the busy schedules the LAs already have? And should the pedagogical training be offered at university level or per department or program?
3. How can this more extended training be implemented, who will train, is extra staff needed, etc.?

To answer the first two questions it was decided to do a training needs assessment (TNA, see section 2.1) and at the same time, after study of several existing LA-training trajectories (section 2.2), to do a pilot of a possible LA trajectory to gain experience with the content, format and study load (section 2.3). Based on the outcomes of the TNA and the pilot, the third question can be answered later.

2. METHODOLOGY

2.1 Training needs Analysis

Information has been collected on the:

- current situation: number of LAs and LA hours per program, LA recruitment, LA tasks, current LA training
- training needs: How do LAs perform? What goes well, what needs improvement? What additional training is needed?
- conditions for a pedagogical training for LAs: How to 'pay' for the time investment? Maximum study load? Will trajectory be compulsory? Will certified LAs be paid extra?

The information has been identified by means of interviews with management and teaching staff from various faculties and programs, students who have fulfilled LA tasks (with various preparation), and students from the 'consumer' perspective.

2.2 Relevant examples

2.2.1 University of Colorado – Learning Assistance community

The 'Colorado LA model' is taken as starting point. This university has ample experience with the use of learning assistants. These assistants, undergraduate students, are used to optimize student guidance as well as transformation of courses into more interactive and engaging learning environments.

Learning Assistants engage in three main weekly activities as part of the LA Model: Content preparation meeting (Plan with faculty), Pedagogy course (learn and reflect on effective pedagogy), and Practice (work with and support students in the classroom). Whereas the weekly content preparation meetings are organised per course, the pedagogy course provides a community for new and experienced LAs from different courses and departments.

Research on the effects of the model [2] has shown that the quality of education improves. Results indicate improved student performance and a clear decrease in failure rates in the classes that included LAs. The model of learning assistants has been copied by many other institutes for higher education, and has led to a worldwide LA Alliance.

2.2.2 Other LA-training programs

For adaptation of the model to our local situation and demands, several other examples of LA-training have been studied. The way the Norwegian University of Science and Technology (NTNU) [3] (and other Nordic universities, collaborating in the 'Experts in Teamwork' network [4]) uses LAs to teach teamwork skills is interesting for us to prepare our LAs for possible tasks as supervisor of lab groups or tutor of project groups.

Two methods used in LA-training at the University of Utrecht seem to be useful for out training as well: the 'action plan' shows LAs how they can develop their skills further and the 'constructive alignment exercise' makes the LAs aware of the set-up of a whole course, how their component fits in and how the course could be optimized. It makes LAs more equal discussion partners for the lecturers.

At our own institution, two examples for preparation of LAs are studied. First, the current course as offered by CELT: a half-day session with basic information and some practical exercises, and an intervision meeting halfway the quartile. Another example is the approach by the Technical Medicine program. LAs are hired for a whole academic year as student-tutor of project groups for several courses in a row, while guidance is given by two-weekly intervision meetings at lunch time.

2.3 Intervention design

Conform the Colorado LA model, a pedagogical component is added to the already existing regular content preparation meetings with the lecturer and the work as LA. Following a rapid prototyping approach[4] an LA-pedagogical training trajectory was designed and is currently being implemented at small scale. The major goals for the intervention are to prepare LAs in such a way that (1) LAs make the shift from learner to teacher perspective and role, (2) LAs can determine strategies for assisting, when provided the goals, teaching strategies and assessment of the unit they are asked to assist in, the course, module and program as a whole, and (3) LAs show a reflective, professional attitude aimed at improving their practice as LA.

The design was discussed with a group of experienced LAs and 'consuming' students to get feedback. This has resulted in reduction of the study load from 2 EC

(56 hours) to 1 EC (28 hours). Both LAs and students said that a 2 EC-trajectory would not be feasible next to their own studies and work as LA.

The designed LA trajectory consists of a three-hour kick-off meeting before the first quartile in which the LAs assist, followed by eight one-hour lunch meetings spread over two quartiles, six in the first quartile and two in the second one. The two quartiles are not necessarily adjacent; the second quartile is the next quartile in which the LA assist again. The second part is relatively short and focusses on the transfer from what was learnt in the first part to the new LA tasks.

Each lunch meeting consists of a combination of intervision (discussion based on LAs experiences), new input (theory and application of this theory) and homework. LAs reflect on their practice, develop a plan for improvement, and evaluate this plan. At the end of the intervention the LAs are asked to reflect on their learning and on the process of the intervention.

The program of the meetings is described in the following scheme.

Scheme 1: Program of pilot LA-training

Meeting	Program	Homework
part 1 in Q1:		
Kick-off meeting	What is learning?	Discuss your role and tasks with lecturer
	Role LA	
	Building relationships	
	Questioning and answering	
	Prepare first session with students	
Lunch meeting 1	Intervision	Read article SPA Make SPA for student tasks and for your LA work
	Systematic problem approach/SPA	
Lunch meeting 2	Intervision	Read article groups processes and interventions
	Group processes and interventions	
Lunch meeting 3	Intervision	Make action plan
	Feedback and formative assessment	
	Start action plan	
Lunch meeting 4	Intervision	Redesign component of course in which you assist
	Constructive alignment	
Lunch meeting 5	Intervision	Write reflection report (reflect on your development as LA, make action plan for next time that you assist and evaluate part 1 of the LA course)
	Presentation of action plan	
	Presentation of redesign	
Lunch meeting 6	Intervision	
	Discussion of reflection reports	
	Looking forward to part 2 of LA course	
part 2 in Q2:		
Lunch meeting 1	Link Reflection report to your new LA tasks	Transfer what you have learnt in part 1 to didactical strategies for new LA tasks Make action plan
	Define new research question for action plan	
Lunch meeting 2	Discussion of results	
	Intervision	
	Rounding off and award of certificates	

2.3 Participants

Six students participate in the pilot intervention. They all were hired in the first quartile for tutor-tasks: guiding group processes in small groups of students.

Furthermore, one LA was also involved in guiding students during lab sessions. All but one did not have prior experience in supervising or guiding group work. All

students have followed the course they assisted in as a student themselves (1-3 years ago). In the second quartile they will get other LA tasks.

3. RESULTS

3.1 Training Needs

The TNA has not yet been finished. Preliminary results show that the chosen focus on three LA tasks in the pilot seems to be well chosen: assisting in working groups, assisting in lab sessions, and facilitating the development of individual skills and teamwork skills in project groups. The topics mentioned by the interviewees are in line with the topics of the pilot, only summative assessment is mentioned by several interviewees but is not included in the pilot.

The current preparation of LAs for their tasks varies enormously, not only between faculties but also between programs within faculties. Perspectives on the relevance of this preparation (within programs) differ between teachers and LAs. In general, all stakeholders see the relevance of LA preparation. However, especially based on current LA perspectives, the preparation of faculty staff for making good use of LAs could also be an important element of such an intervention.

3.2 Intervention Evaluation

The first part of the trajectory has just been finished, the (shorter) second part is still to be given. In general, LAs are very positive about part 1 of the intervention. They value all topics that were offered and have not missed topics. Especially the topic about group processes and interventions, and the combination of intervision and a new topic are highly valued. They see the action plan methodology as a good way to improve their way of assisting further and the constructive alignment assignment has helped them to see the larger picture of the quartile and how the component they assist in fits in the picture.

The duration of the trajectory, 1 EC, is good. However, sessions lasted only 60 minutes, which was perceived as short or sometimes rushed. LAs indicate they would have valued more extensive discussions and opportunities to ask more questions. They advise to offer different time slots for the course, at lunch time but also at the end of the day and on regular afternoons (when several LA trajectories will run in parallel in the future, this will be feasible). During this pilot all LAs assisted in the same program and performed the same type of tasks. Three LAs explicitly mentioned they would have preferred a more varied group of LAs in the trajectory.

In general, LAs indicate that they have reached the goals of the programme. They all say they have made the shift from learner to teacher perspective, they have gained confidence in their role as LA and they expect that they are able to prepare themselves for the pedagogical approach of new LA tasks. They have gained in-depth knowledge and insights into their role with regard to the *learning* of the students they guide or supervise. For example with regard to learning objectives, one of the LAs writes: *“Before these sessions I always assumed that if I passed the courses I would end up with enough skills to get to work. I thought the goal of the classes was to gain more knowledge. Now I think more actively what the goal is of a certain class. (...) It made me realize that a good process is important to get a good result and that a good process is a goal itself.”*

The lecturers and project coordinator could not yet say much about the results of the trajectory and the performance of the LAs. They wait for the outcome of exams, the project reports, and the formal course evaluation by the students.

3.3 Lessons learnt

Although we have not finished the TNA and the pilot we can already draw some preliminary conclusions.

There seems to be sufficient support from all stakeholders at the UT for more extended training of LAs.

We seem to be on the right track with the format and study load of the TA-training. The Colorado model, that offers the content preparation by the lecturer and the pedagogical training in mixed groups in parallel to working as LA, works well. Spreading the course over a longer period is useful, LAs need intervision and new input to gradually grow and become confident. A study load of 1 EC seems to be feasible and sufficient to reach the objectives of the pedagogical training.

Also the objectives and content of the LA-training seem to be well chosen. Objectives and topics are in line with the preliminary findings of the TNA. It might be necessary to add a topic on intercultural aspects. Since we had two international LAs in the pilot it got sufficient attention in the pilot; in purely Dutch groups this might be different. We might also decide to add summative assessment as a topic (although we are of the opinion that students should not be involved in summative assessment of other students), since many LAs are involved in it. Further finetuning and development of all topics is needed. A good article per topic that provides concise and easily accessible extra info needs to be selected.

More communication between trainers and teaching staff is advisable. The use of LAs in courses can be optimized and some finetuning about the role and tasks of LAs in the courses, especially on the tutor role, is needed. Differences in opinion among teaching staff and between teaching staff and trainers were observed. We expect that certified LAs will start these discussions in the future but for now we will have to do this.

The Colorado LA model has more objectives than just improvement of the guidance given to students: one is the transformation of courses into more interactive and engaging learning environments and another is to motivate students to become K-12 teachers. Although course transformation is not a goal at the UT, we expect that, based on the competences the LAs have gained in the pilot, LAs can indeed play a role in re-design of courses and quality improvement. Also motivating LAs for a career in teaching can become a welcomed outcome of the LA model at the UT, there is a shortage of science teachers in the Netherlands.

An important element of the Colorado model is the community of LAs. Although the UT is still far away of a community, we see that this could become feasible in the future, when many more LAs are trained: A community for and run by certified LAs that meets once or twice per quartile and offers exchange of experiences and new or advanced topics.

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