

## Recognition Where It Is Due: Towards a Teaching Qualification for Student Teaching Assistants in Higher Education

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## INTRODUCTION AND BACKGROUND

Given the increasing numbers of students enrolled in tertiary education internationally, a notable trend expected to continue in the next years, the issue arises how to provide quality education to those students within the limited educational resources available in most countries (HEPI, 2018; OECD, 2019). One possible solution is partnering with students and increasing their roles within the teaching and learning process (Stigmar, 2016). In this view, students are not seen as replacement teachers but rather as complementary and active partners supporting university staff by facilitating peer learning and contributing to the quality of the overall learning process. Students bring with them a unique perspective that may differ from a staff member's and thus enrich the learning environment, for example student-mentors who act as 'bridges' between first year students and staff members (Phelan et.al, 2022). The cooperation can also lead to greater student engagement and a sentiment of shared responsibility (Cook-Sather & Luz, 2015).

At many universities it is common practice to employ students as assistants to staff teachers. Students are involved in many ways and with different rationales (Ten Cate & Durning, 2007a). Broadly speaking the formal involvement of students in university education falls into one of two categories (Healey & Healey, 2018a): (a) the core educational process, e.g., peer learning, assessment, grading, and undergraduate research and (b) quality enhancement, which can involve activities such as gathering other students' feedback and evaluations, but also co-creation and even consulting on curricular matters (Hamerski et al., 2021; Healey & Healey, 2018a; Smith et al., 2021).

Given the variety of student activities in higher education, it is not surprising that many different but related terms describing these students can be found in the literature, e.g., peer teaching, peer-assisted learning, students as teachers, teaching assistants, near-peer teaching, peer tutoring, etc. (Healey & Healey, 2018b; Jardine, 2020; Ten Cate & Durning, 2007a, 2007b). The present study focuses students participating in the core educational process. Therefore, we have chosen to adopt the term "teaching assistant" (TA) when referring to the students in this study. Several aspects of the TA practice can be categorized on the basis of three axes: (1) the educational distance between TAs and their peers (less than one year or one year or more), (2) group size for peer-to-peer teaching, and (3) formality of the teaching arrangement (Ten Cate & Durning, 2007b).

TAs have been demonstrated to be effective in the university educational process. For example, Bantounou & Kumar (2023) found that peers were as effective as university lecturers in teaching didactic sessions about research methodology to medical students. Peer tutoring in the sciences has been shown to lead to better student performance (Arco-Tirado et al., 2019; Meschitti, 2019), provided the TAs receive some sort of training by faculty staff. Students that received one-on-one tutoring by TAs were shown to perform significantly better, with moderate effect sizes, compared to a control group that did not receive tutoring (Arco-Tirado et al., 2019). TAs are also reported to be effective in leading learning groups consisting of peers. In the latter case, the TA is

typically a student that has successfully finished the course earlier (Bhattacharyya, 2011; Wilson & Varma-Nelson, 2016). A review of quantitative studies in medical education (Rees et al., 2016), comparing teaching by TAs and teaching by faculty staff even goes as far as to conclude that “student peers are as effective at teaching [. . .] certain topics as faculty.” (p. 834). Direct comparisons between peer and staff tutors have shown equivalent objective outcomes for tutees in most but not all cases of peer teaching, and suggest that TAs provide fellow students with a qualitatively different educational experience than staff, which may enhance meaningfulness, tutee motivation and the amount of individual feedback received (Ross & Cameron, 2007). In a survey at 43 medical schools in the United States, students were positive about the tutoring they received from student-tutors and indicated that this added to their study success (Soriano et al., 2010).

Peer teaching is, however, a reciprocal process with benefits for the TAs themselves as well. For example, when teaching others, TAs have to actively organize and present the content, which may enhance the TAs mastery of the subject matter. Indeed, direct and indirect evidence that teaching peers leads to deep learning has been found (Stigmar, 2016). Explaining course material to others appears to lead to long term learning (Koh et al., 2018). Furthermore, students who teach their peers develop a range of generic skills, such as teaching and tutoring skills, critical thinking, communication skills, skills in self-regulation and metacognition, and organizational skills such as time management (Hoiland et al., 2020; Ross & Cameron, 2007; Stigmar, 2016; Ten Cate & Durning, 2007a, Scott et al., 2019; Phelan et al., 2022; Meyer et al., 2022; Onorato et al. 2022). A study by Yeung et al. (2017) demonstrated that TAs who took part in a longitudinal program consisting of theoretical modules, practical teaching sessions, feedback, and reflective exercises reported improved teaching and communication skills, and even learning strategies. Moreover, following a students-as-teachers course and gaining experience as a teacher can contribute to the formation of a teacher identity (Yoon et al., 2017; Meyer et al., 2022).

Peer teaching thus provides a space where students cultivate meaningful connections in their interactions with the material and with each other (Storey et al., 2021). Given the potential benefits of peer teaching for TAs and their students alike, peer teaching should thus be promoted (Rees et al., 2016), provided that the aim is not to “use” TAs as a mere method to save resources, but to truly implement a mutually beneficial educational activity for both students and TAs (Burgess et al., 2014). Involvement of TAs as teachers should also be properly supported by faculty staff. In the literature some practical advice on the design and implementation of a training and support program can be found (Freret et al. 2017; Ross & Cameron, 2007; Cohen et al., 2022; Meyer et al., 2022): it should include topics like small-group teaching, giving and receiving feedback and leading discussions, learning theory, preconceptions, etc.

The above discussion raises an important question: how can TAs receive recognition for their work as teachers in higher education? For many students, working as a TA is just that: a paid job (e.g., Acai et al., 2018; Pasquinelli &

Greenberg, 2008), but apart from monetary compensation, recognition has been reported in the form of close faculty mentorship, letters of recommendation, recognition of teaching service within the Dean's letter, vacation time, book vouchers, academic credit, or a certificate of participation (Pasquinelli & Greenberg, 2008; Ross & Cameron, 2007). Several countries have founded high-profile educational communities in support of educational professionals. For example, in the UK achieving fellowship of the Higher Education Academy, professionals gain access to significant benefits for their career as these fellowships are widely recognized by national and international employers (Shaw, 2018). The 3M Teaching Fellowship in Canada offers similar benefits for its fellows (Acai et al., 2018). However, these communities, although valuable for their members, are primarily aimed at faculty staff members or other professionals. Even though the UK program features associate fellowships for PhD students or other people who are new to teaching, these programs have not been primarily set up with students or TAs in mind.

In addition, there is some controversy about providing recognition in the form of different types of rewards for student-teachers. Concerns have been raised about external incentives undermining the autonomous motivation (e.g. having a positive and enjoyable experience, satisfaction at being able to help other students, gaining new insights and understanding, or developing skills) for participating in a TA support program (Freret et al., 2017; Hardy & Smith, 2006; van der Sluis, 2021). If participation in a TA support program is voluntary, the intrinsic and extrinsic rewards may have considerable bearing on recruitment and retention of TAs (Ross & Cameron, 2007).

### **The knowledge gap**

Formally recognizing the TAs educational activities with an actual teaching qualification has received relatively little attention in the literature so far. Some local student teaching qualification programs have been reported (*Faculty LA Resources | Learning Assistant Program | University of Colorado Boulder*, n.d.; Ten Cate & Durning, 2007a; ten Dam & van Geel, 2020; Verbeek et al., 2011). In these cases the qualification program usually includes formal and informal training, peer coaching, feedback, and assessment.

A *student teaching qualification* (STQ) program could mirror programs for formal teaching qualifications for faculty staff that have been implemented at several universities (Acai et al., 2018; Lucas, 2004; Lucky & Yusoff, 2015; Shaw, 2018; van Keulen et al., 2006; Verbeek et al., 2011). These faculty staff qualification processes usually involve creating a portfolio of relevant activities, reflections, and assessments. Formal higher education qualifications have been widely implemented at universities in the Netherlands (e.g., *University Teaching Qualification*, 2022). Mirroring the earlier comments on rewards, some criticism of these qualifications has been voiced as well, pointing out that an emphasis on qualifications may lead to a superficial engagement with the qualification process as the main objective becomes the qualification, not the actual process of becoming a better teacher (Hardy & Smith, 2006; van der Sluis, 2021).

The present study aims to investigate what TAs at two big, urban universities in the Netherlands report on the training and support they need for their teaching activities and on the desirability of obtaining a STQ for their activities.

We thus aim to answer the following research question:

*What do teaching assistants within higher education in the Netherlands report on their training needs and on the possibility to obtain a student teaching qualification?*

## METHODS

Given the relative dearth of research on an STQ, and the fact that the research question requires in-depth information on the issue at hand, with mechanisms being more relevant than quantitative information, qualitative description was chosen as the research method (Almeida et al., 2017; Morgan, 1996; Sandelovski, 2000; Smith, 2015; Smith, 2011). Data were collected during two semi-structured focus group interviews, which allowed for interaction between the TAs and enriched the information (Morgan, 1996; Smith, 2015). “Focus groups can usefully be viewed as the qualitative counterpart to the quantitative survey, in that they are typically used in qualitative research to obtain a broad range of information about events.” (Sandelovski, 2000, p. 338).

### **Participants**

Participants in the focus groups were contacted by sending out e-mails to students who were, at the time, working as TAs at two large, urban universities in the center of the Netherlands. No further selection criteria were added, and no rewards were offered. The TAs who voluntarily agreed to participate were given rudimentary information as to the subject of the focus groups. In the event, last-minute cancellations by the TAs, mainly related to the COVID-19 pandemic, reduced the size of the focus groups to three and four participants, respectively. Possible consequences for data saturation of these relatively low numbers is reflected on in the discussion section. Because of restrictions on campus activities at the time, both focus group interviews were conducted using a video conferencing platform. The two (55 and 65 minute) interviews took place within two weeks and were each led by one of the authors, based on the same protocol. Both interviews were conducted in Dutch. All TAs were either graduate and undergraduate students in the science, medical, or social science faculties of the two universities and were employed by the university for their work as a TA at the time of the interview. Their work as a TA was thus a paid activity on top of their regular studies.

### **Focus group protocol**

Formal informed consent was obtained before the focus group interview, stating that the data would be disseminated only in pseudonymized form, kept on secure servers in the Netherlands accessible only to the researchers, and that the TAs were free to end the interview at any time. All students gave their consent. The semi-structured interviews were guided by the following questions:

What kind of educational activities are you currently involved in as a TA?

What do you need in order to adequately perform these educational activities?

How did you obtain the necessary skills for your work?

Which support did you receive in this respect?

What have you missed in this support and what worked well?

Would the possibility to obtain a student teaching qualification have added value for you?

Would you be willing to invest time and effort in order to obtain such a qualification?

Do you see any disadvantages of such a qualification?

Do you have any ideas as to the form this qualification should take?

Are there any other things you would like to share at this time?

Some of these guiding questions may seem closed questions, but each question was followed up by probing questions such as: “Why?”, “Please explain?”, or “Could you give an example?”, rather than by questions such as “How often?” or “How much?”. In order to maintain an open discussion, the moderators of the discussions (i.e., the researchers) did not offer any suggestions or directions during the discussion (Morgan, 1993; Sandelovski, 2000). They did, however, make sure that all participants could share their experiences and opinions. Data saturation was safeguarded by asking “Does anyone want to say anything else about this subject?”, before moving on to the next question.

### **Data analysis**

The interviews were recorded within the videoconferencing platform and they were transcribed verbatim. A transcription tool (Amberscript) was used to generate a transcript, which was checked and edited by a research assistant. Given the lack of a theoretical framework and in order to do justice to the openness of the focus group interview, qualitative content analysis was used, with themes emerging during the process (Byers & Wilcox, 1991; Smith, 2011; Morgan, 1993; Lambert & Lambert, 2012). Each researcher preliminarily coded the interview they had themselves conducted. The emerging categories were discussed between the researchers and agreement was reached on nine final categories, on the basis of which a code book was created (see Table 1). Using this code book the coding process was repeated separately by the two researchers. Finally, second coding was performed by each researcher coding the interview performed by the other. The researchers reached full agreement on the coding and the categories. It was decided to combine the quotes into a total for both interviews, rather than report on them separately. The categories

are interrelated and a global overview of these relations was consequently established (Figure 2).

### Code book

The code book as developed by the researchers is shown in Table 1.

Table 1 The categories emerging from the open coding of the two semi-structured focus group interviews on an STQ, with a description and a typical quote. Quotes have been translated from Dutch.

CATEGORY	CATEGORY DESCRIPTION	TYPICAL QUOTE
Educational activities	TAs describe the educational activities they are asked to perform at their university.	"As a [TA] I was responsible for the working group meetings and for the grading of assignments and exams of the students [and] we facilitated student feedback and feed-forward during the course, the student evaluations [and] we were the liaison with the different educational committees."
Subject knowledge	TAs describe the importance of subject knowledge needed to perform the educational activities and they describe ways in which this knowledge is acquired if it is not present.	"You just revisit the literature, you read through it, you take a look at the most recent lecture slides of the faculty teacher. You basically update knowledge that you are supposed to have anyway."
Current training and supervision	TAs describe the type and level of preparation, guidance, and training they received for the educational activities performed by them or they reflected on the lack of preparation, guidance, and training.	"In my experience [as a TA], in case of the more theoretical subjects you are somewhat thrown into the deep end and you are supposed to figure out for yourself how to approach it. And, yeah, sometimes the answers to the problems are not available either [and] I think that is not a good thing, because I do [the TA] work alongside my study and that is actually hard enough to combine as it is. I really notice that now."
(Subject) pedagogy	TAs describe the role of both general pedagogy and subject pedagogy in both the educational activities they are asked to perform and the corresponding training they received.	"[I do miss] some didactical training, like: hey, how do you explain this subject well? I believe there have been one or two didactical lessons, but that was just an email saying: "Hey, by the way, there is a lesson and it's nice if you can be there if you can make it." But yeah, if you're then just following a medical internship, than that is often not convenient."
Expectations	TAs describe their expectations of the educational work prior to starting and they compare these expectations to their actual experiences as a TA.	"Actually, we had applied to become a mentor . . . but we were appointed to teach classes, just because that was what they needed due to Corona circumstances. But there were quite a lot of students who did not really want that. They were a kind of thrown into the deep, without getting

		support [from the university] like: how do you feel in front of a group.“
Value of a STQ	TAs describe the added value of an STQ as they perceive it.	“. . . I think that having been a [TA] really says something about what you are able to do and that it has advantages inside and outside of academia, in your personal life and in your professional life. And that this merits a qualification, a certificate or something like that, that it really has that value.”
Qualification process	TAs describe their preferences for the demands and activities required to obtain a STQ.	“Someone [I know] has [a teaching qualification] in education . . . as a faculty member, in that case you . . . really have a number of pillars that are being evaluated [and] you may expect something similar here. One of them indeed is subject knowledge. [But also:] can you be a professional in front of a classroom? [And] can you develop course material independently? . . . I think you can find some inspiration there and that it is possible to test this in principle.”
Form of a STQ	TAs describe the form the STQ should preferably take.	“I would not use extra study credits, because I think that, yeah, if you want to do something like that in your study, you should just do an educational study. . . . credits are for your actual subjects . . . . But . . . something on your diploma of a certificate or something, that sounds good to me.”
Disadvantages of an STQ	TAs describe perceived disadvantages of a STQ.	“For students there are no disadvantages if it is just, like, optional and things are just reasonably well organized.”

## RESULTS

A total of 130 self-contained quotes were gathered during coding of the two focus group interviews. In order to get an overview of the subjects addressed by the participants and the number of quotes dedicated to each subject, Figure 1 presents the number of quotes per category. It is notable that relatively few quotes concern form and disadvantages of the STQ. Students were most elaborate about their current training/supervision and the qualification process. The categories will now be discussed in more detail.



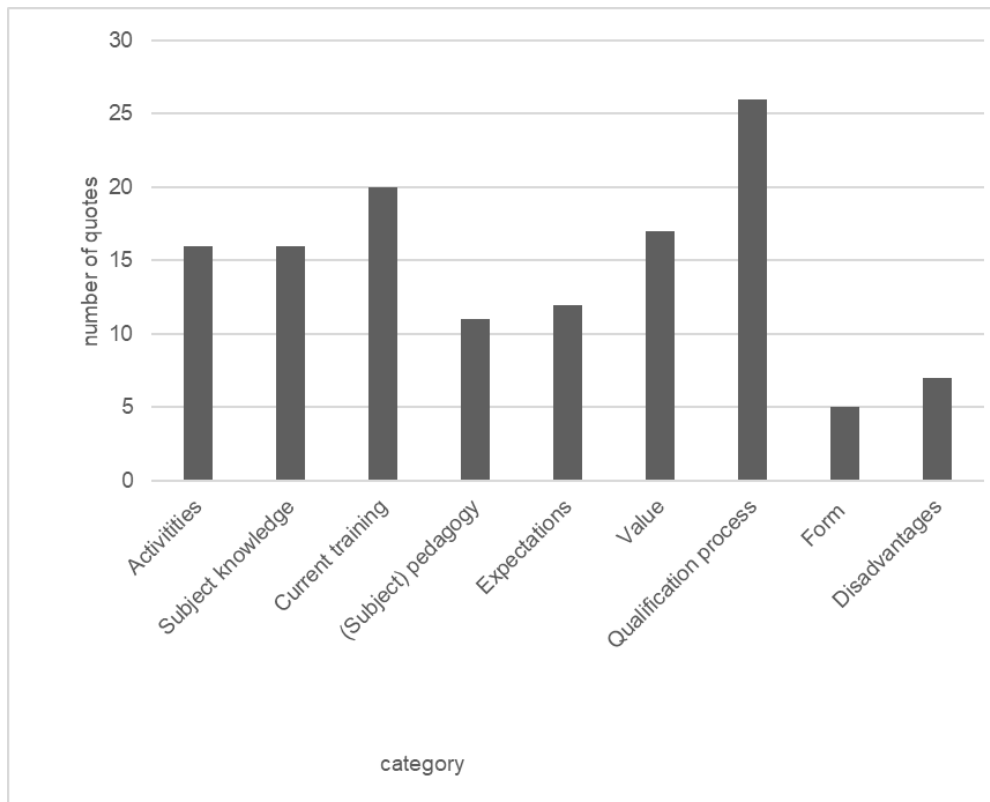


Figure 1 Focus group quotes. The distribution of the 130 self-contained quotes from the two focus group interviews over the categories.

### **Educational activities performed (16 quotes)**

We asked the TAs to describe the tasks they perform. All reported to teach formal classes, mostly they are facilitating and leading small group meetings, guiding practicals, and tutorials, but larger group teaching and lecturing were also mentioned. Typically, they teach students enrolled in the same study program but more junior than themselves which means that TAs had previously completed the course they were now teaching. In terms of the typology of Ten Cate & Durning (2007b), they were all involved in *near-peer teaching*, in formal educational settings and in group encounters. One participant, who teaches anatomy practicals in the dissection room, reported to teach also students from other study programs, more senior students as well as professionals like nurses.

Besides teaching classes, a remarkable variety of other educational activities were reported: grading papers and homework, developing their own rubrics for grading, creating educational material or individual mentoring of students. They also reported coordinating the work of other TAs within one course and even recruiting new TAs.

The quotes illustrate the myriad of responsibilities:

“In my working groups I am talking at least 45 minutes out of the one hour and 45 minutes duration, of course sometimes in an interactive way, but that is my role in transferring the knowledge.”

“[You had to] actually create a sort of assessment rubric for yourself, like well, if it has this you get half a point; a little better, one, almost complete one-and-a-half and then fully correct, . . . two [points].”

### **Experiences of the TAs**

We asked the TAs what they needed to perform their educational activities, how they obtained the necessary skills and how they were supported. From their answers emerged the themes: *subject knowledge, received training and supervision, (subject) pedagogy and expectations.*

#### ***Subject knowledge (16 quotes)***

There was consensus that sound subject knowledge is crucial for the work of a TA. Usually TAs had completed the course themselves previously, therefore they felt they knew the course content. Individual activities they undertook to prepare for their lessons included: rereading the course materials, preparing the problems the students would work on and studying the lecture notes by the faculty teacher.

“You cannot become a TA if you haven’t completed the course or a similar course. So you already have some subject knowledge before you start [the work].”

In some cases, the faculty held sessions with TAs, to prepare the classes together:

“Of course I also completed the courses myself, but it is still nice if during such a preparatory meeting you sort of really get to master the knowledge, so that, when you are in front of the group, if they ask questions, that you know exactly how it is in the prior knowledge.”

In sum, subject knowledge is reported to be a necessary part of the preparation for the work as an TA during a course. The TAs did not report lack of subject knowledge as a major problem, since they knew how to acquire it if it needed to be freshened up.

#### ***Current training and supervision (20 quotes)***

The TAs reported widely varying experiences regarding the extend of support as provided by faculty staff. In some cases they felt properly supported by faculty. Some TAs worked with faculty members that provided support regarding subject knowledge and in a few cases faculty offered practical advice on how to teach a particular class:

“However, in all courses . . . I received each time a PowerPoint before and a teacher guide that explained exactly, so many minutes I will spend on this and then it was elaborated what to I should discuss in that part and there was also background information for the teacher and a sort of tips like: you can prompt

student about this in order to stimulate discussion . . . that was really very nice.”

However, in other cases there was little or no training or supervision and the TAs felt thrown into the deep end. The TAs reported a difference between practicals and classes with a more theoretical focus:

“It strongly depends on the coordinator of the course. In the case of practicals it is usually well organized, since you have faculty members there, but with the theoretical subjects you just have ... the coordinator giving the lectures and, yes, maybe some of them do really prepare their TAs ... [but] I think that many coordinators just don't know that and maybe are not aware of it, that it may be difficult for TAs or [that they just] don't know how to prepare TAs.”

In the absence of support by faculty the degree to which the students felt prepared depended on the prior competencies of the students themselves:

“If you have a talent for being in front of a group, or you have prior experience, then it is easier to deal with that than when you have zero experience with that. And speaking for [my study], you sometimes are sort of thrown into the deep end.”

In some cases, there was training or support that paid attention to teaching skills, for example a course where TAs were subject to organized peer feedback during their work:

“And there are lesson observations, so in principle the [TAs] check on each other, or the course coordinator visits your class. . . . I just happen to have had my final lesson observation last week and then you get really valuable feedback and you have some sort of quality control.”

However, other TAs reported that they never received any feedback on their teaching, neither from faculty nor from peers or students.

“... because there was never an evaluation of my lessons (.). Actually, it would be very useful if I hear one time about how I am doing.”

Overall, the experiences in current training and supervision differed widely, ranging from elaborate, suitable, and well-organized to being complete absent.

### ***(Subject) pedagogy (11 quotes)***

Most of the participants did not report being trained in terms of general teaching skills or subject pedagogy, let alone detailed and evidence-informed strategies on how to actually convey the knowledge to their peer students:

“My experience is that, indeed, in terms of subject pedagogy and how to be in front of a group, I really didn't receive even a hint.”

In one case starting TAs had an opportunity to interact with more experienced TAs:

“During the time you are preparing a practical, then you are working together, you are looking at the anatomical specimen together. Then you discuss, you are working through the questions and usually those [TAs] who are already working for a longer period or who have taught this course before, they tell something about it, yeah I explain it usually in such-and-so manner, or they explain it again to you. But when you are teaching for the first time for example, these are the best moments and this is most useful.”

Another TA attended training sessions on teaching skills and mentoring before starting as a TA, and found it very useful:

“So, I had to be trained on the personal, personal contact things as well, that we practiced in the group and we did all kind of exercises and that was very, very useful, because . . . if you have done this once with colleagues than you are able to implement it directly during a class.”

Most TAs however did not receive pedagogical training, but they explicitly indicated that they were interested in acquiring teaching skills, provided training was offered at the right time, preferably when they had already started teaching. This would ensure that they would have the knowledge and skills available when they actually needed them. Subject pedagogical training solely before the start of the course appeared to be less useful to them:

“If you lack any experience with teaching then you may not get a lot [out of a training]. [I] think it is basically useful, but then you are in front of the class and then you have forgotten all about it . . . now that I have some experience and know a little bit about how it works and how I teach I would quite like it to have one of these trainings again, or a training that goes a little deeper. I think it would make more sense to me now.”

“... usually at first (...) you are focused on learning the subject matter (...) and you want to get more background knowledge (...) And after you have did some classes, than you think more about how can I teach someone even better than I did up till now and that takes, say, a few practicals (...) before you have more self-confidence, like yes I know actually, but how do I transfer it in the best way?”

Concerning the training and supervision the TAs received prior to their work as a TA, there was a lot of variation. In some cases, TAs received pedagogical training, but in other cases, this was left to develop in peer-to-peer interaction or it was absent altogether.

### ***Expectations (12 quotes)***

In terms of what TAs expected before they started their teaching work and the actual experience, the results were mixed. Sometimes the selection process was a complete black box to them. In that case it remained unclear on the basis of which characteristics they had been selected or what they could expect:

“After I had filled out the form in indicating that they needed [TAs], just subsequently received an email and in it were a number of questions like: what is your experience with being in front of groups? What do think a good teacher

should have in terms of attitude? But apart from that I did not have a conversation, so really no idea what kind of person was behind that email. And then they just appointed me [TA].”

TAs reported that faculty staff sometimes underestimated the challenges that a TA was facing. They would welcome an interview before the course, detailing what the expectations were and how they would be supported during the process:

“And I think it would be good . . . if the course coordinator, would just have a quick interview with the people. Just tell the people: yes, this is what you are going to do [and] this is what I contribute. Also just the possibility for the [TA] to ask what the course entails and what the work entails and be able to think about that.”

### **Student Teaching Qualification**

We asked the TAs their opinion on a student teaching qualification (STQ). Currently such a qualification did not exist, so the TAs were not asked to evaluate a particular program, but we were interested in their views about an STQ in general.

#### ***Value of a STQ (17 quotes)***

All TAs in the interviews regarded an STQ as valuable; as something to put on your cv, for example, even though the simple fact that students did work as a TA during their study was worthy of mention in itself. Adding some courses and/or formal evaluation to the qualification process would enhance the value for the TAs:

“It’s also a form of recognition. Look, . . . , you get paid as well, you can indeed put it on your cv, but still, [in case it is] evaluated by an official authority, it will add some value to it.”

A Qualification should stimulate the personal development of TAs:

“. . . with such a qualification . . . I would be willing to do something extra and follow some training and yes, really get better in some sense and develop further.”

Some TAs noted that an STQ could be used to guarantee a basic skill level -or improve the skill level- of the TAs:

“Maybe [qualification] is also a good way to secure a minimum level for TAs, to guarantee some sort of quality. Because this is currently . . . not always guaranteed.”

#### ***Qualification process (26 quotes)***

Many quotes related to the qualification process for a STQ as envisaged by the TAs. These quotes conveyed three main points on which there was considerable consensus between the participants. First, an STQ program should not be too extensive and it should not become mandatory for TAs to

obtain an STQ; it should not add to the stress that TAs already experienced and it should not deter students from becoming a TA:

“But I do indeed agree with [student A], that in the ideal case it [should not] take up a lot of extra time [and] if it is optional, there will be people who want to free time for it and may be willing to devote just that little bit extra effort to it.”

Second, the qualification process ideally should include some sort of formal assessment, to ensure a certain level of quality. But again, the assessment should not be very elaborate; it could for instance take the form of an observation of an activity as carried out by the TA:

“But I also think it could be valuable already if . . . while you are working, that there is someone sitting in the back of the class who gives you an evaluation, that that weighs in obtaining such a qualification.”

Third, pedagogical training was considered to be important as part of the qualification process:

“If you do not include any courses [in the qualification process] then someone will just sit in the back of your class, so to speak, but then you actually . . . don’t know what you are being evaluated on. . . . In this case it is . . . better to devote one course . . . to it and give some sort of introduction . . . on pedagogy, and the way to be in front of a class, and which knowledge you, sort of, need, and that you are subsequently evaluated on this.”

As mentioned before, the timing of pedagogical training was seen as crucial: it should be delivered at the moment that it was needed by the TA, preferably when the TA had already had some practical teaching experience.

#### ***Form of a STQ (5 quotes)***

The TAs were unanimous in their preference for the form the qualification should take: it should not take the form of study credits, but there should be a certificate of some sort:

“That you could just receive a certificate [for your work as a TA]. Something like: this person has indeed successfully completed this course, and with that we as a university . . . confirm that this person just has [these] skills.”

#### ***Disadvantages of a STQ (7 quotes)***

No disadvantages associated with an STQ were reported by any of the TAs – at least not for themselves. Some TAs noted that a formal qualification could lead to other students taking on a job as a TA for the wrong reasons:

“It could also be a pitfall, right . . . , when it becomes something of a cv booster . . . you may get people with [high grades] who are incredibly striving but who actually lack, well, social skills, educational skills . . . and they are [still] often singled out during an application process [for later jobs].”

One TA brought up the point that the qualification process could put extra pressure on the already overburdened faculty.

## DISCUSSION

We now revisit the research question:

What do teaching assistants within higher education in the Netherlands report on their training needs and on the possibility to obtain a student teaching qualification?

The results suggest relations between the different concepts as outlined in Figure 2 and this figure summarizes our answer to the research question.

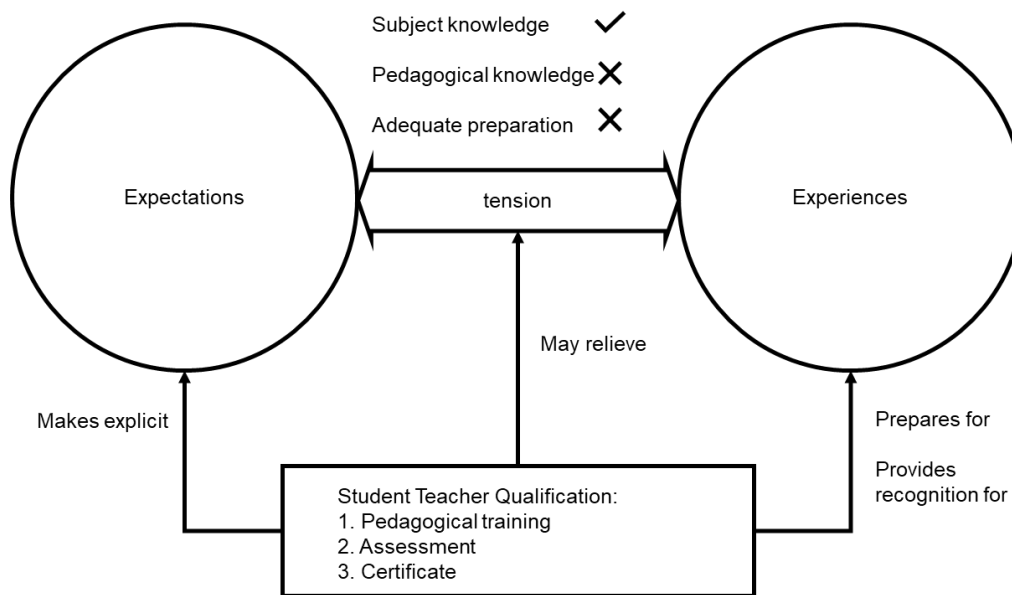


Figure 2. Relational visual representing the outcomes of the present study.

TAs in our sample generally expressed a discrepancy between their prior expectations and the actual work as a TA. They were often not adequately informed about the challenges that await them once they started teaching. Selection criteria were vague, sometimes absent, and usually there was no interview before they were assigned a course they were supposed to teach. To exacerbate this tension between expectations and experiences, TAs were assigned a far-ranging scope of activities, from assisting in working groups to teaching full classes, developing instructional materials and even creating assessment rubrics. Many TAs felt unprepared for the variety of tasks that awaited them and they were unsure about the scope of their responsibilities. The TAs expressed their doubts on whether staff members were even aware of this complexity. The situation was worse because most TAs did not receive appropriate pedagogical training and some were not adequately supervised by faculty staff.

Within the general picture of experienced tension and unpreparedness, an STQ as a formal recognition for the work performed was generally looked upon favorably.

However, the TAs stressed that a STQ should be voluntary and not a prerequisite for becoming a TA, because a TA job was seen as already stressful in itself and an obligation to obtain a STQ might deter students from taking on a TA position. TAs saw an STQ as an extra possibility with the aim to support them in their personal growth and as a means to demonstrate what they had learned.

TAs felt it was fair that a qualification required some form of formal assessment, e.g. lesson observation by a staff member. Peer feedback and student feedback on lessons was most welcome but not considered sufficient for getting a qualification.

The qualification process for an STQ did not need to focus on subject knowledge. Subject knowledge was recognized as important, but it was the least of the TAs problems; firstly because typically TAs were senior students having successfully completed the course they were now teaching previously and secondly because in those cases that faculty staff offered them support or supervision -which was not always the case- faculty tended to focus on the subject matter.

According to the TAs, pedagogical training and (peer) feedback on classes should be part of an STQ program. Interestingly, TAs questioned the use of pedagogical training prior to their start as a teacher. They reported that initially the experience of being a TA could be overwhelming and that pedagogical training at that time was less useful. However, after they had gained some experience and felt more comfortable in their role, they wholeheartedly welcomed pedagogical training as a way to improve their skills and to reflect on classroom experiences.

All TAs in our sample agreed that the STQ should not take the form of study credits, but it should be an extra-curricular activity that should take the form of a certificate. However, this may depend upon the discipline. Especially within the medical domain the need was expressed to incorporate teaching skills within the curriculum of medical school (Ten Cate & Durning 2007a, Cohen et al., 2022) and there is some evidence that medical students subscribe to this view (Onorato, 2022).

### **Limitations**

Some limitations in terms of generalizability have to be mentioned here. Mainly due to COVID-19-related causes, a number of TAs who had indicated they would participate did not show up during the actual online focus group interviews, limiting the size of the groups to three and four participants, respectively. These relatively low numbers raise an issue around data saturation (Morgan, 1996). However, focus groups of a small size have been known to give valuable and rich results (e.g., Meulenbroeks & van Joolingen, 2022). Furthermore, with the interviews being held at two different



universities, the similarity of remarks in both groups was striking to the researchers. This is one of the reasons it was relatively easy to agree on the set of nine categories – and, indeed, to reach full agreement on the coding. The fact that students were working in different faculties did not alter this. If data saturation had not been reached, more salient differences between the two groups would be expected.

The interviews were conducted online, using a video conferencing platform. Even though it is known that students demonstrate less direct interaction in online situations (Meulenbroeks, 2020; Shu & Gu, 2018; Tang et al., 2021), discussions in both interviews were lively and yielded a relatively large number of self-contained quotes. The online nature of the interview was therefore not considered a serious drawback.

On the basis of the above we are confident that these interviews give an accurate picture of the way TAs in the Netherlands view the possibility of an STQ.

## CONCLUSION

The finding that many TAs lack training in teaching skills is consistent with the literature (Cohen et al, 2022, Onorato 2022). We adhere to the call for adequate training for TAs. On top of that, our research vividly highlights the need for clarity about expectations (in terms of time, responsibilities, support that a TA may expect from faculty member). A well-designed STQ program should include a careful process for recruitment and appointment of TAs and help them to reduce the tension of being a TA.

This study shows that TAs would welcome the possibility to obtain a formal recognition for their work in university education in the form of a qualification (STQ). Universities aiming to introduce an STQ program should make sure that training during the qualification process is proportional, i.e., not too large in relation to the actual teaching load for the TA, is timely, and includes some formal assessment. Even though some attention to subject knowledge might be valuable, the program should focus on soft skills such as pedagogy, classroom management, motivation, coaching, giving feedback, and supporting peers. Furthermore, an STQ should include an assessment but it should not be complicated or elaborate: a simple evaluation on the basis of one or more lesson observations would suffice. A qualification is seen as a way to guarantee a certain quality, a certain standard of the TAs teaching skills and of the actual teaching. However, the TAs think it is important to keep the qualification process optional, not make it mandatory.

Based on the present study we recommend that an STQ program contains the following components:

1. formal training in pedagogy and subject pedagogy;
2. peer feedback based on lesson observations;

3. feedback by faculty staff based on lesson observations;
4. some form of formal assessment, e.g., by having a staff member observe and evaluate a lesson.

The one possible disadvantage the TAs mentioned was that an STQ could prompt ambitious students to join the program for the wrong reasons, i.e., purely as a cv booster. Note that this point closely mirrors the criticism of existing teaching qualifications for faculty staff, as expressed in literature (Hardy & Smith, 2006).

The above recommendations are broadly in line with results from earlier studies (Freret et al., 2017; Verbeek et al., 2011; Cohen et al., 2022, Meyer et al., 2022). The contribution of the present qualitative study is that it presents the experiences of TAs in much detail, resulting in a set of specific recommendations that can be easily implemented by universities during the design of a qualification program.

### **Future research**

In cooperation with a teacher training institute an STQ program could be designed and implemented on a small scale in order to evaluate the results.

On the basis of the categories identified during this study, a more formal questionnaire could be designed in order to quantitatively measure the attitude of greater numbers of TAs towards obtaining an STQ. Furthermore, it would be interesting to investigate whether TAs in other countries experience similar issues as their colleagues in the Netherlands.

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### **ETHICAL STATEMENT**

*The authors declare no conflict of interest whatsoever. The research has been carried out following the guidelines of the Ethical Commission Geo and Science of Utrecht University and has been approved under case number S-22798.*

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