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Research paper

The role of teaching courses and teacher communities in strengthening the identity and agency of teachers at university medical centres



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H I G H L I G H T S

- Teaching courses and teacher communities strengthen medical teachers' identity.
- Teaching courses strengthen identification with the teaching profession.
- Teacher communities strengthen identification with the teaching community.
- Identity and agency are interrelated and seem to develop simultaneously.

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Many teachers at university medical centres struggle with the poor reputation of teaching compared to research and patient care. Although professional development activities have been shown to strengthen teachers' identification with teaching, the processes underlying this transformation remain unclear. This study uses a concurrent nested mixed-methods design with an emphasis on qualitative methods to investigate the ways in which teacher communities and teaching courses strengthen teachers' identities. The results show that both activities strengthen teachers' sense of competence. Additionally, while teaching courses strengthen teachers' identification with the profession, teacher communities strengthen their sense of connectedness with other teachers.

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1. Introduction

1.1. The teaching role at university medical centres

This paper is concerned with teachers who work at university medical centres. University medical centres have three responsibilities: providing high-level patient care, conducting

scientific research, and educating future generations of physicians. Over the last few decades, these medical centres have faced increasing pressure to meet clinical productivity standards, increasing competition for research grants, and increasing administrative requirements regarding education (Smith & Bunton, 2012). Studies have revealed widespread disillusionment and a high turnover rate among medical centre faculty members, as well as a decline in interest in academic medical careers among graduating medical students and residents (Dornan, 2009; Pololi, Krupat, Civian, Ash, & Brennan, 2012; Smith & Bunton, 2012).

It is the teaching task in particular, that risks becoming less attractive to faculty members, since, at many medical centres,

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teaching is recognised not as a criterion for advancement, but as an implicitly expected service to the profession (Paslawski, Kearney, & White, 2013; Steinert & Macdonald, 2015). Although many medical teachers enjoy the energising interactions with their students and the opportunities teaching provides for their own continuous professional development, they also struggle with the poor reputation of teaching in relation to research and patient care. This leads to a lack of self-esteem and a reluctance to identify as a medical teacher (Hu et al., 2015; Sabel & Archer, 2014; Steinert & Macdonald, 2015; Van Lankveld, Schoonenboom, Kusurkar, et al., 2017). It is, thus, important to reinforce the motivating factors inherent in teaching in order to increase the continuity of medical teaching staff, produce a better quality of medical education and, ultimately, improve the future quality of patient care.

1.2. An identity perspective

It is useful to approach this problem from an identity perspective, since teacher identity has been shown to be related to motivation, job satisfaction, self-efficacy, and commitment (Flores & Day, 2006). Drawing on a socio-cultural perspective, we define identity as “a self-understanding to which one is emotionally attached and that informs one’s behaviour and interpretations” (Holland & Lachicotte, 2007, p. 104). Medical teachers who strongly see themselves as teachers and who feel emotionally attached to their teaching role construct their ideas of ‘how to be’ and ‘how to act’ in light of this teacher identity. The category of ‘teacher’, then, becomes a structural part of their thinking and reasoning (Akkerman & Meijer, 2011; Beauchamp & Thomas, 2009; Holland & Lachicotte, 2007).

Developing a teacher identity can be characterised as a dynamic and difficult process (Beijaard, Meijer, & Verloop, 2004). In our earlier review of studies concerning the identities of university teachers, we identified four psychological processes involved in developing a teacher identity (Van Lankveld, Schoonenboom, Volman, Croiset, & Beishuizen, 2017). First, teacher identity is strengthened when university teachers feel a sense of *appreciation* for their work (i.e. appreciation of the teaching task in general, not necessarily personal merits). Second, teacher identity is strengthened when teachers experience a sense of *connectedness* to other teachers, which implies a sense of mutual trust and shared enterprise. Third, teacher identity is strengthened when teachers experience a sense of *competence* in the teaching role and when others recognise this competence. Finally, teacher identity is strengthened when teachers are able to *imagine their future career trajectories* as teachers: that is, when they can envision themselves advancing their careers based on their educational merits.

1.3. The role of professional development activities

Professional development activities can play an important role in strengthening teacher identity, since they can bring like-minded teachers together and create opportunities for them to build collegial relationships with other teachers. Through these relationships, teachers can develop a sense of connectedness, engagement and appreciation. Furthermore, in professional development activities, teachers can build their sense of competence and meet role models who might stimulate their imagining of future career trajectories as teachers.

Marsick and Watkins (2001) distinguished between formal and informal approaches to professional development. Formal approaches involve planned and structured programmes, such as workshops, seminars, and longitudinal certificate programmes, which are typically institutionally sponsored, classroom-based, and structured by a course leader. In informal approaches, control over

learning rests primarily in the hands of the learners. While informal approaches are intentional, they are not usually highly structured and do not follow a predefined curriculum (Marsick & Watkins, 2001). Informal approaches include, for example, teacher communities: groups of teachers who gather voluntarily on a regular basis in order to develop and share knowledge by exchanging experiences in a self-organised way (Gercama, Van Lankveld, Kleinveld, Croiset, & Kusurkar, 2014).

Research has shown that both formal and informal approaches to professional development contribute to a strengthened sense of identification with teaching. Explorative studies have found that participants involved in formal approaches (e.g. teaching courses and postgraduate programmes) increasingly come to see themselves as teachers (Lieff et al., 2012; Skelton, 2013; Starr, Ferguson, Haley, & Quirk, 2003; Warhurst, 2006). Similar results have been found for informal teacher communities (MacDonald, 2001; Van Lankveld et al., 2016). It remains unclear, however, how formal and informal approaches to professional development strengthen teachers’ identification with teaching and what processes are involved in this transformation. Several authors have argued that research on professional development activities should move away from a focus on effects and towards a focus on understanding the underlying processes and working mechanisms so as to capture the complexity of what occurs during and following professional development interventions (Sorinola, Thistlethwaite, Davies, & Peile, 2015; Steinert et al., 2006). In order to more effectively support medical teachers, it is necessary to understand these processes and to develop insight into the separate contribution(s) of both formal approaches (e.g. teaching courses) and informal approaches (e.g. teacher communities). Therefore, the research question that informed this study was: What processes in teacher communities and teaching courses strengthen teacher identity?

2. Context

In this study, we investigated four groups of medical teachers: two that participated in a teaching course and two that participated in teacher communities. All of the medical teachers worked at the same Dutch medical centre. This centre is the result of a recent merger between the university medical school and a large local academic hospital. Like other university medical centres in the Netherlands, it provides a high standard of patient care, scientific research, and education (including bachelor’s, master’s, and postgraduate degrees in medicine). Not all of the medical teachers were involved in all three tasks, many were often involved in only two: either (1) research and teaching or (2) patient care and teaching. Recently, a growing number of medical teachers have begun to focus on teaching only.

Teaching tasks can include, for example, small group teaching in the bachelor’s programme, developing course material, conducting bedside teaching at the hospital during the master’s programme, or educating residents in the hospital during the postgraduate programme. The educational work undertaken at the medical centre is characterised by a hierarchical culture and a strong division of labour, such that different people are often responsible for course design, assessment design, and actual interaction with students.

The teaching course investigated in this study was part of a teaching qualification programme for university teachers leading to a nationally recognised university teaching qualification (VSNU, 2008). The teacher communities in this study comprised teachers who met regularly and voluntarily to discuss their teaching experiences and develop and share knowledge together.

3. Methods

In order to understand the processes that took place in both approaches to professional development, we investigated two groups of medical teachers involved in a teaching course and two groups of medical teachers involved in teacher communities. Interview, observation, logbook, and questionnaire data were collected. The design of this mixed methods study was a *concurrent nested design*, characterised by the simultaneous collection of both qualitative and quantitative data with one of the methods as the predominant method: in our case, the interview data (Creswell, Plano Clark, Gutmann, & Hanson, 2003). Specifically, logbook and questionnaire data both informed the data collection during the interviews, the observation data provided input for the analysis and interpretation of the interviews, and the questionnaire data also provided input for the interpretation of the interviews. A visualisation of the design is provided in Fig. 1.

Ethical approval for the study was granted by the ethical review board of the Dutch Association for Medical Education [NVMO reference number 169]. The participants were informed about the aims, methods, and confidentiality of the study prior to participation, and all provided written informed consent. The names reported in this article are pseudonyms.

3.1. Teaching course

The teaching course investigated in this study aimed to support beginning medical teachers and addressed the complete educational process: learning situation design, classroom teaching, and assessment. Attending the course was voluntary for most of the teachers at the medical centre. Spread over a period of five months, the course consisted of eight meetings of 3 h each. Examples of meeting themes were: deep and surface learning, group dynamics,

constructive alignment, and formative assessment and feedback. The meetings were characterised by a variety of active collaborative learning assignments, role plays, reflections, and collegial feedback on participants' teaching materials and videos of participants' teaching performance. Short video clips of teaching situations were often used for observation and discussion assignments. The course leader played an active, leading role.

The study involved two successive groups that participated in the teaching course: one that attended the course from February to July 2012 and the other that attended from September 2012 to February 2013. The first group comprised 10 participants, and the second comprised 11. Both groups were taught by the same course leader. Most of the participants taught in undergraduate or graduate programmes (bachelor's and master's degree phases).

3.2. Teacher communities

The teacher communities involved in the study focused on the role of tutors in the bachelor's programme in medicine, whose task it was to support and guide students' joint learning processes in small groups of 12 students and assess both their professional behaviour in the groups and their presentation skills. Over a period of 20 weeks, five meetings of 1 h and 15 min each were organised for the tutors during lunchtime. In these meetings, the tutors discussed common problems, collaboratively explored solutions, and exchanged experiences. Examples of the issues discussed included: how to deal with difficult students, how to arrange the formative assessment of professional behaviour and how to fulfil the tutor role without content expertise. Participation in the teacher communities was voluntary.

Both of the teacher community groups that were followed in this study were active from September 2012 to February 2013. One group focused on the first year of the bachelor's programme and

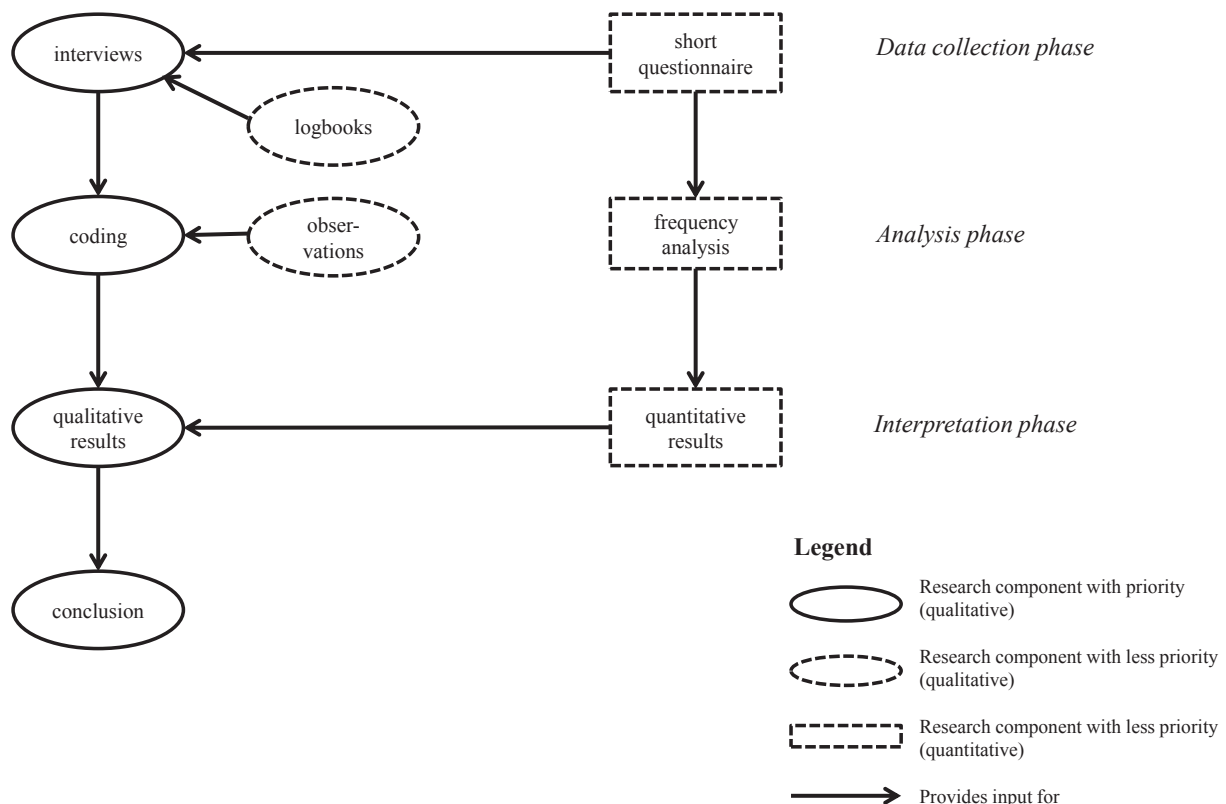


Fig. 1. Overview of the study design.

comprised six participants, while the other focused on the second year of the programme and comprised ten tutors. The two teacher communities were facilitated by two different experienced tutors. The exchanges in the first group were centred around themes and questions raised by the participants (e.g. 'difficult' groups or students and approaches to enacting the tutor role). In the second group, actual questions were sometimes lacking, which led to intense but rather superficial exchanges of views rather than explorations of question backgrounds or considerations of possible solutions. On two occasions, the facilitator of the second group asked the tutors for feedback regarding educational procedures to submit to the educational organisation for quality improvement.

3.3. Participants

Of the participants in the teaching courses and the teacher communities involved in this study, 23 agreed to voluntarily participate in the data collection (six participants each for the two teaching course groups and five and six participants each for the two teacher communities) (see Table 1). Most of the teachers, especially the participants in the teacher communities, had limited teaching experience. Of the 23 participants, 18 were tutors responsible for supporting and guiding the learning processes of groups of students in the vertically integrated bachelor's programme. Some of these teachers combined this task with other small group teaching activities in the bachelor's or master's programme (e.g. physical examination, communication, clinical reasoning, research methodology, prevention or oncology). Only one participant was a specialist medical practitioner who combined postgraduate teaching with patient care. All others either combined teaching with research or were primarily involved in teaching. The groups were comparable in terms of age, gender, and the proportion of time spent teaching (see Table 1).

3.4. Data collection

The data were collected using observations, interviews, logbooks and questionnaires. To study the activities and interactions

undertaken during the teaching course and in the teacher communities, the groups' meetings were observed, and three of the groups were video recorded. In one of the teaching course groups, one participant objected to being video recorded; therefore, the meetings of this group were audiotaped. Furthermore, two interviews were held with each of the teachers who agreed to participate in the study. The first interview was held after the first group meeting and investigated identity development, while the second was held two to four months after the final meeting and allowed the participants to reflect on the contribution of the professional development activity to their identity development (Fig. 2). Between the two interviews, the participants kept a logbook regarding their experiences as teachers, first on a weekly basis and later on a biweekly basis. The first interview focused on the participants' experiences of being teachers and their reasons for participating in their course or community. In the final interviews, the participants reflected on the development of their identities as teachers and the ways in which the course or community in which they had participated had contributed to this development. To help focus these interviews, we asked the participants to complete a short questionnaire (Table 2), developed for the purpose of this study, based on the four psychological processes involved in teacher identity development, as identified in our earlier literature review (Van Lankveld, Schoonenboom, Kusurkar, et al., 2017), and two general items about teacher identity. The aim of the questionnaire was to provide initial insight into the contribution(s) of the teaching course or teacher community to the medical teachers' identities and to elicit further explanations and elaborations on their identity development and the contributions of the course or community. We further asked the participants to elaborate on relevant instances from their logbooks, as selected by the first author. All interviews were conducted by the first author, an educationalist with experience with qualitative research methods, and were audio recorded and transcribed in full.

3.5. Data analysis

First, the questionnaire data were analysed into frequency

Table 1
Research participants' demographic information.

	Pseudonym	Gender	Age	Educational background	Position	Teaching experience (in yrs)	Proportion of time spent teaching (in %)
Participants in the teaching course							
Group 1	Lieke	F	34	biomedical sc	Postdoc	0.5	10
	Frances	F	32	psychology	Postdoc	1	30
	Ben	M	53	medicine	Teacher	20	100
	Will	F	41	medicine	Teacher	1.5	100
	Fransje	F	36	biology	Postdoc	5	50
	Mark	M	27	medicine	PhD student	0.5	15
Group 2	Miriam	F	29	health sc	PhD student	1.5	10
	Willy	F	46	medicine	Specialist medical practitioner	10	50
	Henk	M	27	medicine	PhD student	0.5	30
	Lucy	F	27	medicine	Teacher	1.5	100
	Suzanne	F	46	medicine	Teacher	3	100
	Vivian	F	31	medicine	Teacher	2	100
Participants in the teacher community							
Group 1	Bente	F	27	medicine	PhD student	0	10
	Irene	F	27	neuro sc	PhD student	0	10
	Annemie	F	66	medicine	Retired medical practitioner	1	100
	Margot	F	24	medicine	PhD student	0	10
	Esther	F	33	psychology	PhD student	0	10
Group 2	Margriet	F	35	medicine	Teacher	5	80
	Leon	M	27	medicine	Teacher	0.5	100
	Patricia	F	27	health sc	PhD student	0	10
	Leonie	F	26	movement sc	Teacher	2	100
	Lotte	F	25	medicine	Teacher	1	100
	Jos	M	62	biology	Researcher	8	90

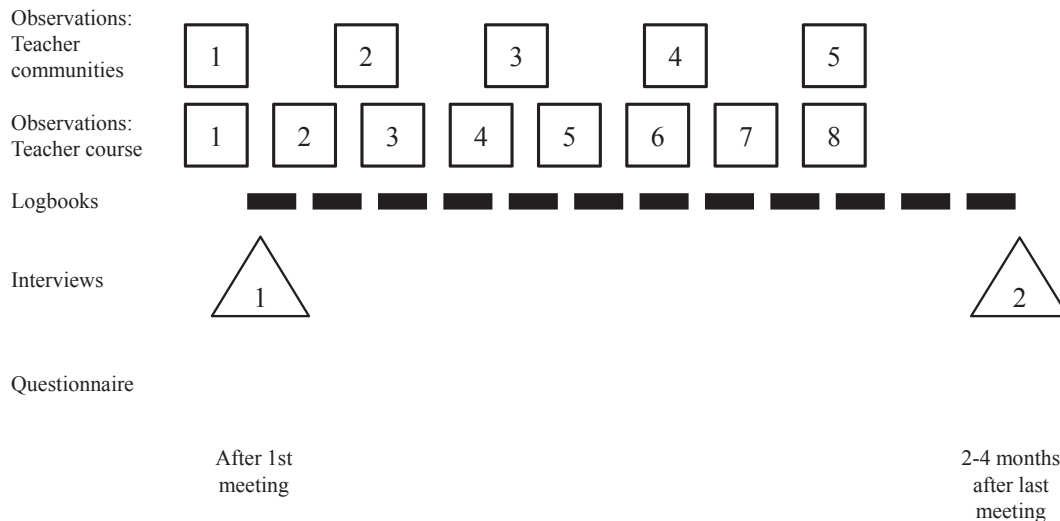


Fig. 2. Data collection timeline.

Table 2
Questionnaire.

	Questions in questionnaire
<i>Teacher identity (Self-concept)</i>	The [teaching course/teacher community] has made me view myself less/equally/more as a teacher.
<i>(Positive image of the profession)</i>	The [teaching course/teacher community] has made me think more negatively/the same/more positively about the teaching profession.
<i>Sense of appreciation</i>	The [teaching course/teacher community] has made me feel less/equally/more appreciated.
<i>Sense of connectedness (Local community)</i>	The [teaching course/teacher community] has made me feel less/equally/more connected to the local teaching community within the medical centre.
<i>(Professional community)</i>	The [teaching course/teacher community] has made me feel less/equally/more connected to the teaching community in general.
<i>Sense of competence</i>	The [teaching course/teacher community] has made me feel less/equally/more confident as a teacher.
<i>Imagining a future trajectory</i>	Now that I have participated in the [teaching course/teacher community], I see myself less/the same/more as a teacher in the future.

tables. This yielded a first impression of the contributions of the teaching course and teacher communities to teacher identity. The psychological processes for which eight (65%) or more participants recorded positive contributions then formed the basis for a qualitative analysis of the interview and observation data.

To investigate the processes in the teaching course or teacher communities involved in identity development, we relied primarily on the data from the final interviews, during which we asked the participants to reflect on the development of their identities as teachers and the ways in which their course or community had contributed to this development. The interview data were coded using Atlas.ti in two phases. During the first round of initial coding (Charmaz, 2014), we used the four psychological processes derived from our literature review as sensitising concepts (i.e., sense of appreciation, sense of connectedness, sense of competence, imagining a future trajectory). However, we also remained open to other contributions, as mentioned by the participants, and to adding new inductively generated codes. In addition to analysing the processes, we paid attention to changes from the first to the second interviews in terms of teacher identity. In cases where we identified a clear change from the first to the second interview, we developed a separate case description for the relevant participants.

To obtain a lively picture of the activities and interactions involved in the teaching course and teacher communities, we then watched and listened to the video- and audiotapes of the meetings. Episodes that seemed relevant to the participants' identities (e.g. because they were mentioned by a participant during the interviews) were transcribed.

By rereading and constantly comparing the interview and transcribed observation data and visualising their relations in diagrams, we were able to interpret and distinguish four different processes across the two approaches to professional development. Of these, two processes were only involved in the teaching course, one was only involved in the teacher community, and one was involved in both. In a second round of focused coding (Charmaz, 2014), we returned to the interview data and checked the coded data.

Finally, an audit was performed in which someone from outside the research team checked the conclusions of the study against the accompanying interview data.

4. Findings

We found that both the teaching course and the teacher communities strengthened the participants' identities as teachers, albeit in different ways. First, both approaches to professional development contributed to a sense of competence. Second, the teaching course offered two contributions that the teacher communities did not: coming to think more positively about being a teacher and recognition of competence by others. In the teacher communities, on the other hand, we identified one additional contribution that was not encountered in the teaching course: developing a sense of connectedness. We found that participants' sense of appreciation and their imaginations of future career trajectories were only strengthened to a limited extent in both the teaching course and the teacher communities (Table 3).

Table 3
Frequencies of contributions of the teaching course and the teacher communities to teachers' identities (based on the questionnaires).

	Contribution of teaching course (n=12)			Contribution of teacher community (n=11)		
	-	0	+	-	0	+
<i>Teacher identity (Self-concept)</i>	1	2	9	0	6	5
<i>(Positive image of the profession)</i>	0	4	8	0	6	5
<i>Sense of appreciation</i>	0	10	2	0	5	6
<i>Sense of connectedness (Local community)</i>	0	6	5	0	1	10
<i>(Professional community)</i>	0	8	4	0	10	1
<i>Sense of competence</i>	0	1	11	0	3	8
<i>Imagining a future trajectory</i>	1	6	5	0	7	4

Note. - negative contribution; 0 no contribution; + positive contribution.

■ contribution mentioned by at least 65% of participants (i.e. eight or more).

We will now further describe those contributions for which 65% or more of the participants recorded a positive contribution, complemented with findings from the interviews and, to a lesser degree, the logbooks.

4.1. Contribution of both the teaching course and the teacher communities

We found that both the teaching course and the teacher communities strengthened teachers' sense of competence.

4.1.1. Strengthening sense of competence

The majority of participants (19 out of 23) indicated in the questionnaire that they felt more confident and competent after attending the teaching course or teacher community (Table 3). In the interviews, they mentioned several aspects as having contributed to this strengthened sense of competence, including new insights and suggestions for improvement and confirmations of earlier insights. In the case of the teaching course, reading the literature was also mentioned. The participants compared themselves to their fellow participants and to the standards explicated in the literature. This provided them with confirmations for their own choices and the things they had been doing well:

I had never been a tutor before and I didn't know how to go about it. I felt supported by others [in the teacher community] because you don't know whether [what you're experiencing] is normal. You actually want to hear from as many people as possible that your choices are correct. (...) Simply to feel that people are behind you. (Bente, 27, participant teacher community, final interview)

I always had this feeling that, at some point, people would notice I was making mistakes, but because of the teaching course, I now have all the basic skills necessary to be a competent teacher. That gives you more confidence and self-esteem. Now I know what I'm talking about. (Will, 41, participant teaching course, final interview)

As the teachers' sense of competence increased, their self-esteem as teachers also grew and they become more secure seeing themselves as teachers.

4.2. Specific contributions of the teaching course

We identified two contributions offered by the teaching course

that were not encountered so strongly in the teacher communities: coming to think more positively about being a teacher and the teaching profession and recognition of competence by others.

4.2.1. Coming to think more positively about being a teacher and the teaching profession

The majority of participants in the teaching course indicated in the questionnaire that the course had helped them see themselves more as teachers and think more positively about the teaching profession (Table 3). In the first interviews, several teachers, including, particularly, those who had stopped being involved in patient care or research and had made a career change to fulltime teaching, commented that they hesitated to introduce themselves to others as teachers. However, in the final interviews, these teachers claimed to feel proud about being teachers and dared to 'come out':

I remember that in the first interview you asked me how I would introduce myself at a party, and I said: 'I am a doctor, but I work as a teacher' ... an anti-climax. Now, I would just say: 'I work as a teacher for medical students'. I feel fine saying that now. It's funny: I'm just more proud of being a teacher. (Vivian, 31, participant teaching course, final interview)

It's a profession that I can be proud of. Not everybody can be a teacher. It's not a second-choice job. (Ben, 53, participant teaching course, final interview)

Many participants mentioned that, during the teaching course, they had come to realise that teaching is truly a profession. They recognised that teaching is more complex and broader in scope than they had expected. Furthermore, they realised that teaching is not simply a matter of telling an interesting story to a group of students, but, rather, implies a thorough consideration of the linkages between education and assessment, as well as of the place of one's course in relation to the overall curriculum. Prior to the course, the participants were only aware of their own roles within the medical centre; however, watching videos of colleagues and hearing their stories showed the participants that there are many different educational roles (e.g. tutoring, bedside teaching, teaching practicals, lecturing, small group teaching) and allowed them to explore what these different roles look like. As a consequence, the participants realised that teaching is more challenging and interesting than they had initially considered it to be:

I have a sense that a door has opened to a whole new world. In the beginning, I might have had the naïve idea that once I had a teaching qualification, I'd be qualified, and that was that [laughs]. Now, I realise that it's a real profession and that there's always much, much, much more to learn. I have more and more respect for good teachers. (Lieke, 34, participant teaching course, final interview)

The course leader also appeared to have been an important role model in this respect.

I have come to see teaching more positively. The course leader is very inspiring, and she shows you that teaching is fun, so she is a good influence on me. (Frances, 32, participant teaching course, logbook after meeting 6)

One of the recurring themes we observed in the discussions during the teaching course was the participants' frustration at having limited control over, for example, assessment and educational materials. Many participants in the course had to follow protocols and lacked ownership of materials and assessment. In the discussions, the participants often mentioned feeling powerless. During the teaching course, however, the participants were invited to analyse the lack of congruence among teaching, learning, assessment, and educational materials, and this helped them recognise possible ways to change their situations. In the final interviews, the participants remarked that they felt empowered to take action to address this incongruence, even if that meant deviating from institutional protocols. Furthermore, they felt empowered to take the initiative to discuss poorly aligned aspects of the teaching process with the colleagues responsible for those aspects. This made the teaching role more interesting for them:

I'm starting to enjoy teaching more and more, since I'm increasingly seeing how I can make it my own. Before, I used to think that it was all about closely following the protocols and that I had to stick to that, like 'this is the literature list and it can't be changed'. But I can actually change that list. I mean, then I would need to change a lot of other things too, so I would have to think about how the practicals would need change and so on ... but I actually like that! Before, I thought I had to stay within those confines, but it's actually not like that. (Frances, 32, participant teaching course, final interview)

Notably, for teachers whose first interviews involved a note of frustration or complaint, the final interviews were more optimistic and constructive. An example of such a change in tone can be seen in the case of Lieke, described in [Box 1](#).

One participant in the teaching course, Willy, indicated in the questionnaire that the teaching course had actually negatively contributed to her self-concept as a teacher and to her imagining of a future career trajectory as a teacher. Willy was one of the few educators attending the course (and the only such participant in the study) who was a specialist at the academic hospital and responsible for the postgraduate training of residents on the ward. She explained her questionnaire answers as follows:

I felt a bit like an outsider.

In what way?

Well ... often, I had to tear myself away from my work with patients, rush to get my things together and then run over [to attend the course]. And then, suddenly, it was all about teaching, and I had to flick a sort of switch in my mind. I didn't notice that

Box 1

Case description of Lieke.

During her first interview, Lieke (34) was frustrated with the fact that there were no meetings concerning educational matters in her department. The only person with whom Lieke had contact in her role as a teacher was the administrative staff member responsible for the logistical organisation of the courses.

I have been leading this study group for three years now, and I have never had any contact with the course coordinator about the content and what the goals are supposed to be. No one from that course comes to tell us, 'This is the aim; these are the learning objectives'. I find it so strange that the course coordinator doesn't contact the people who actually teach the lessons because there can never be proper coordination between the lectures, the practicals and the study groups. Everybody simply does their own thing! (...) I feel as though teaching is not really appreciated. They just don't appear to understand the importance of good teaching ... it's as if the only goal is to get those hours filled up [in the timetable] ... It doesn't matter who does the job, how it's done or what gets done. (Lieke, 34, participant teaching course, first interview)

During the final interview after the course, Lieke indicated that she had started to create opportunities for informal discussions of educational matters herself:

I talk about education more often now (...) It's nice to tell others [what you're learning], and you do see that there's actually a lot of ignorance. So you try to share your knowledge and hope that you can improve the situation a little. So, I do have more discussions about it now.

How have you come to have more discussions?

Because I see that the priorities are actually out of balance in our department. There is so little focus on the quality of teaching, so I decided I would try to generate more awareness myself.

And has your new approach produced any results so far?

Well, not that much, I think [laughs]. I guess I can't expect to make progress that quickly. It's a slow process that people need to become aware of. (Lieke, 34, participant teaching course, final interview)

Here, Lieke attributed the lack of discussion regarding education to ignorance on the part of her colleagues, rather than to a lack of recognition of teaching, as she did in the first interview. This reason could be considered less blameworthy, as well as a matter that she could address herself. Furthermore, when Lieke's contributions to her colleagues' knowledge development failed to produce immediate results, she did not get frustrated (as she did in the first interview). Instead, she recognised that the transformation would be gradual.

with the others, who were simply involved in education much more [than I am]. (...) The teaching course is more like ... you learn a lot about education and course development and so on, which is a bit too in-depth and too detailed for us, in practice. Because you don't really want to be a teacher, really, but you do want to pass on your professional knowledge properly. (Willy, 46, participant teaching course, final interview)

Willy claimed to not really feel 'at home' in the teaching course; hence, she experienced a disconnect between herself and her colleague participants, who seemed to be much more involved in teaching than she was. In the first interview, Willy stated that she primarily saw herself as a doctor rather than a teacher. She considered teaching to be a minor part of her work as a specialist, even though she spent 50% of her working hours teaching. Though her work supporting and supervising residents on the ward could be considered teaching, she primarily experienced it as patient care. Apparently, the way in which the teaching course appealed to the professional practice of teachers did not fit with her own practice. This might indicate that the teaching course strengthens the identities of those who already identify with the teaching role, but not those who do not, at least to some extent.

4.2.2. Recognition of competence by others

The second contribution of the teaching course was that, according to the participants, participation in the course increased their colleagues' perceptions of them as pedagogical experts.

This morning, for example, there was a colleague who has to give a lecture next week, and she asked, 'Could you have a look at it? Because you are more familiar with that teaching.' That's the kind of thing they say. It's so funny [laughs]. (Mark, 27, participant teaching course, final interview)

The teachers believed that participation in the course—and, in particular, the formal qualification that went with it—made their commitment to teaching visible to others, whether they be colleagues, management, or potential future employers. In their departments, gaining a university teaching qualification was one way for the participants to present themselves as having a teaching profile, since the qualification was recognised by colleagues and management as a sign of competence. Almost all of the participants mentioned this as one of the key reasons for completing the course.

4.3. Specific contributions of the teacher communities

We identified one contribution to be unique to the teacher communities: developing a sense of connectedness.

4.3.1. Developing a sense of connectedness

In the questionnaire, the majority of participants in the teacher communities (10 out of 11) indicated that they experienced a strengthened sense of connectedness to the local teacher community (Table 3). In the interviews, they discussed experiencing a sense of solidarity in the teacher communities and a feeling of belonging to the local community of teachers, particularly the local community of tutors. In the teacher communities, the participants experienced a shared responsibility for the undergraduate programme:

You are with a group of people who are all working on the same things at the medical centre. You are all working with first-year students, so in that sense, you feel a kind of togetherness. You

know exactly what the others are talking about. (Irene, 27, participant teacher community, final interview)

Many participants in the teacher communities were inexperienced as tutors. Since tutoring is a rather challenging task that must typically be faced alone, they often felt insecure. Exchanging experiences, asking questions, and discovering that they were not the only ones struggling gave the participants a sense of mutual support:

It was the first semester for me [as a tutor], so I did come across new things. Do I do it well? At first, you think you're doing things on your own, but then it turns out that they're very common and that many people are dealing with the same things. (Jos, 62, participant teacher community, final interview)

In the second group, the participants discussed their concerns about a new procedure that the educational organisation had introduced into the second year of the bachelor's programme. Many students, as well as the tutors, opposed the procedure. Within the teacher community, the majority of the tutors (about 75%) had decided not to follow the procedure with their student groups. Although a minority felt that they were not heard to due to their different points of view, the others felt reassured that their fellow tutors were facing the same problem and had resolved it in a similar fashion. During the discussion, the participants collectively decided on a useful solution, thereby defining a new common approach (albeit one that was not in line with institutional protocols).

I found it very helpful to be able to vent my frustrations in quite an impolite way about all the experimenting [the new procedure]: 'What are they dreaming up in that ivory tower and why don't they check and communicate with the teaching staff?' (...) It was good to hear that others had the same point of view, like, 'What am I supposed to do with this now?' I think we have found a good solution now, and at least we have made a consistent plan between the ten of us here. (Leon, 27, participant teacher community, final interview)

The collective development of a shared solution contributed to a collaborative decision making process and reinforced a sense of solidarity among the participants.

5. Discussion

This study showed that while both teaching courses and teacher communities contributed to medical teachers' identities as teachers, they did so in different ways. While teaching courses particularly strengthened teachers' identification with the teaching profession, teacher communities particularly strengthened their identification with the teaching community. Additionally, both approaches strengthened teachers' sense of competence.

In an earlier literature review (Van Lankveld, Schoonenboom, Kusrkar, et al., 2017), we found that teacher identity can be strengthened by enhancing teachers' senses of appreciation, connectedness, and competence, as well as by offering role models that stimulate teachers' imagining of their future career trajectories as teachers. In this study, we found that the professional development activities strengthened some of these aspects, but not others. We discuss all four aspects below.

First, in the current study, the interview data (but not the questionnaire data) showed that the teaching course strengthened the participants' sense of *appreciation*. Due to the teaching course,

the participants came to think more positively about the teaching profession and to recognise that it is broader and more complex than they had previously believed. Coldron and Smith (1999) argued that the craft tradition provides an influential model for teachers' identity construction. The example of the one participant who did not recognise herself in her fellow teaching course participants, however, indicates that this process only occurs when an individual already identifies, at least to some degree, as a teacher.

Second, we found that both the teaching course and the teacher communities enhanced the participants' sense of *competence*. Furthermore, we observed that the participants in the teaching course experienced an increased recognition of this competence. Bourdieu (1992) argued that specialist knowledge and formal qualifications provide an important form of what he calls *cultural capital*. According to Bourdieu (1992), in knowledge-based organisations, specialist knowledge is critical in defining an individual's prestige. Since much of the practical knowledge involved in teaching is tacit (Kelly, 2006), the recognition of teachers' pedagogical knowledge is problematic, creating a certain vulnerability on the part of teachers. In our study, the teaching course's qualification structure facilitated the recognition of teachers' professional expertise, which increased their visibility among colleagues, management, and potential future employers. In other words, a qualification may provide the participants with cultural capital.

Third, participants' sense of *connectedness* was found to be particularly strong in the teacher communities. This finding is in line with earlier research suggesting that teacher communities allow teachers to connect with colleagues from other departments and share their concerns (MacDonald, 2001). Wenger (1998) argued that participation in a community constitutes an individual's identity, since such participation allows teachers to compare themselves to others and thereby define their sense of competence. In our study, we identified additional relevant processes, such as the teachers' experiences of collegial support and a sense of connectedness and solidarity with like-minded colleagues. While previous research has shown that teaching courses can enable teachers to meet colleagues (Lief et al., 2012; Starr et al., 2003; Warhurst, 2006), we found little evidence of this aspect of connectedness among the participants in the teaching course.

Finally, we found that the participants' ability to *imagine a future career trajectory* was strengthened to only a limited extent. Some participants (e.g. Lieke and Frances) did mention that the teaching course affirmed their thoughts regarding a career in education; however, for the majority, this was not the case. It seems likely that envisioning a further career in education for oneself might be a comprehensive process, involving more factors than mere participation in a professional development activity.

5.1. Identity and agency

Overall, we found that both approaches to professional development nurtured the teachers' identities, except in the case of one participant. At the start of both activities, several teachers wrestled with a limited appreciation for teaching, particularly compared to research and patient care. After completing the activities, however, the participants had rediscovered their intrinsic motivation for teaching. They also seemed to have found new ways to relate to their professional activities. Several felt empowered to solve problems or felt more confident deviating from institutional protocols when necessary. These two examples are related to the notion of *agency*: taking responsibility for one's role in a situation, taking the initiative to enact that responsibility, and taking responsibility for one's interpretation of the situation (Edwards, 2015). After both the teaching course and the teacher communities, the teachers in our study felt more confident taking

responsibility for their teaching roles and taking the initiative to enact this responsibility, even if it implied breaking away from the given frame of action and initiating a transformation (Sannino, Engeström, & Lemos, 2016). Agency also concerns taking responsibility for one's interpretation of a situation and, therefore, the 'tone' of people's engagement with situations (Biesta & Tedder, 2007). In our study, the change in tone exhibited by some of the teachers after participating in the professional development activities was striking, with many shifting from a tone of frustration and complaint to one of constructive optimism following the completion of their activity.

In our study, we saw agency and identity develop simultaneously in our participants, which suggests that agency and identity are closely intertwined and mutually related. This is in line with the findings of Holland and Lachicotte (2007), who argued that the particular choices teachers make when interpreting and responding to a situation are related to their identity, since identity is a structural part of teachers' thinking. When teachers make choices based on what they think the category of 'teacher' would do, identity serves as a touchstone for action, producing a stronger sense of agency as a teacher. Conversely, through showing agency and enacting the teaching role in their own way, teachers shape and negotiate their identities as teachers.

The importance of strengthening teachers' agency and stimulating them to take responsibility for their work has increasingly been recognised (Eteläpelto, Vähäsantanen, Hökkä, & Paloniemi, 2013). Edwards (2015) argued that teacher agency is achieved through working relationally and, further, that professional development activities play a strong role in connecting teachers with the purposes of education. As professional development activities provide opportunities for educators to engage in sustained dialogue and interaction, they operate as structures that foster professional agency (Quinn & Mittenfelner Carl, 2015). Our study suggests that both teaching courses and teacher communities can increase medical teachers' sense of agency, albeit in different ways. Specifically, while the teaching course stimulated the teachers to think individually about ways to solve problems, the teacher communities encouraged them to do so collectively. It therefore appears that the teacher communities strengthened collective agency, whereas the teaching course strengthened individual agency.

5.2. Limitations

In terms of the limitations of our study, it is important to recognise that the groups we investigated comprised a relatively large number of teachers with little experience, who might still have been tentatively exploring their identities as teachers. In order to investigate the influence of formal and informal professional development approaches on experienced teachers' identities, further research is needed. Additionally, the participants in all four groups came from the same medical centre, requiring us to be cautious regarding generalisations. Further research is necessary to determine which identity processes will be found in other contexts.

Furthermore, it is important to note that the teacher communities included in our study consisted of teachers sharing the joint practice of being tutors in a student-centred curriculum. Such a joint enterprise is likely to be one of the constituting factors facilitating informal learning and, thus, the development of a common teacher identity (Wenger, 1998). Additional research is needed to determine whether different identity processes could be found in teacher communities with a more diverse composition.

5.3. Implications

The study suggests that medical teachers can be supported in

four ways: first, by stimulating them to develop and share knowledge and exchange experiences, since such activities contribute to increased confidence; second, by demonstrating the complexity of the profession and modelling professional enjoyment, since these contribute to a stronger sense of pride in the teaching profession; third, by institutionalising a formal qualification programme, since this supports external recognition of competence; and fourth, by encouraging collegial learning and support, since such community activities promote an increased sense of connectedness. Furthermore, the study indicates that the agency of medical teachers can be strengthened by creating spaces for sharing problems and identifying solutions.

6. Conclusions

This study suggests that formal and informal approaches to professional development can be used in complementary ways to empower medical teachers and strengthen their identification with teaching. Teaching courses can be used to strengthen teachers' identification with the teaching profession and their individual agency, while teacher communities can be used to strengthen teachers' identification with the teaching community and their collective agency, in particular. This is not to say that elements of formal learning cannot be present in informal situations or that elements of informality cannot be present in formal situations (Eraut, 2004; Malcolm, Hodkinson, & Colley, 2003). For example, teaching courses could create opportunities for informal discussion and relationship-building, and teacher communities could award certificates.

Professional development activities, including the complementary use of both formal and informal approaches, seem appropriate for nurturing medical teachers' intrinsic motivations for teaching and supporting their identity and agency as teachers. Hopefully, such professional development activities will prevent medical teaching staff from quitting their teaching posts and encourage them to continue enhancing the education of the next generation of physicians.

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