

## MASTER

### Students' and teachers' perceptions of teachers' professional identity

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# Students' and teachers' perceptions of teachers' professional identity

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## Abstract

The purpose of this research was to compare students' perceptions of a (trainee) teacher's professional identity with the teacher's self-perceptions. A questionnaire was used to assess the degree to which students perceive the teacher to be fulfilling four possible teacher roles. These roles were defined as subject matter expert, didactical expert, pedagogical expert and interpersonal expert. The students' perceptions were found to be relatively consistent with those of the teacher and suggested that the teacher is more comfortable with the communication of knowledge than with classroom dynamics or relationships. It is argued that the questionnaire could be a useful tool for teachers' professional development.

*Keywords:* Professional identity; professional development; students' perceptions; teachers' perceptions

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## Introduction

Amidst the myriad of experiences, knowledge and skills that trainee teachers encounter on the way to becoming a teacher they are faced with the task of creating a professional identity (cf. Beijaard, Meijer & Verloop 2004). This process incorporates for most a conscious element in the form of personal goals, a subtler element due to biographical, social and workplace influences and, one would hope, support in the context of teacher education. Furthermore trainee teachers' evolving perceptions of their professional competence, and indeed professional identity, in turn are likely to play an important role. Professional identity may therefore be considered to be a complex and dynamic concept requiring, as a minimum, an ongoing creative process involving frequent examination and formulation on the part of all teachers in the context of professional development. Simple research methods or instruments that help (novice) teachers to reflect on professional identity are therefore likely to be beneficial for professional development.

This study is the graduation project of a (mature) trainee teacher and as such contributes to the author's personal process of 'becoming a teacher'. In common with many trainee teachers (Pillen, Brok & Beijaard 2010) the author experiences discomfort in the classroom, in this particular case due to a perceived incongruence between personal identity and professional roles. When considering studies on teachers' professional identity as being related to either teachers' self image or teachers' roles Lamote & Engels (2010) note that "In an occupation where who one is as a person is so much interwoven with how one acts as a professional, both sides cannot be separated". As a first step in seeking a solution to the above mentioned discord the author decided to examine not only the teachers' perceptions of professional identity through self-reflection but also to consider the perceptions of individuals with whom the teacher interacts. This resulted in the following research questions:

What are the similarities and differences between students' perceptions of teachers' professional identity and the teacher's self-perceptions?

What might be the practical implications of the results for the professional development of the author?

These research questions led to an examination of perceptions of teachers' professional identity using a questionnaire. The outcomes, and the implications of the resulting analysis for the professional development of the author, are discussed in the conclusion and discussion section. Furthermore the author discusses both the limitations and potential of the questionnaire as an instrument to help (novice) teachers reflect on their professional identity.

### **Teacher's professional identity: a theoretical framework**

Not surprisingly, the existing literature relating to professional identity extends beyond the context of *teachers'* professional development. Nyström (2010), for instance, explores the development of professional identity in the context of psychologists and political scientists as they (prepare to) enter the workplace. In this case, professional identity is considered to be a "dynamic and changeable relationship expanding over their whole life situation, including the negotiation among three spheres of personally and socially derived imperatives". This is just one example of the many perspectives with which the concept of professional identity is examined. A comprehensive review of professional identity studies (Beijaard, Meijer & Verloop 2004) reports even an absence of consensus on a definition of professional identity. Since the present study is intended to support primarily the author's own professional development it is important to choose a theoretical framework that can provide insights into this process.

One aspect that impacts on the chosen definition of professional identity in this particular study is the author's status as a mature student. The author's previous work experience outside of education has resulted in the possession of a number of general, but relevant, skills. Contributing to a series of articles on teachers' professional identity, Boutellier (2010) considers the essential elements of what working as a professional means and how this relates to teaching. For instance, professionalism can be considered to be the ability to function autonomously and responsibly within the vision of an organisation and to practice a specialism with creativity and innovation. Lamote & Engels (2010) also refer to creativity and innovation and further to the "team player who contributes to school development". It is of course a matter of discussion as to what extent, and under which conditions, teachers are able to function autonomously for longer periods of time. In this case, as a consequence of being already comfortable in interactions with colleagues, parents and members of the wider school community, the author's emphasis for investigation falls specifically on classroom interactions with students. This means that competencies relating to, for example, organisational skills and teamwork, as suggested by the SBL (Stichting beroepskwaliteit Leraren en ander onderwijspersoneel: an institute concerned with occupational quality issues in teaching<sup>1</sup>), are less relevant for this study. So how should professional identity be defined in the context of classroom interactions?

In a previous study Beijaard, Verloop & Vermunt (2000), building on the work of Bromme (1991), chose to describe teachers' professional identity in terms of the perceptions that teachers have about themselves in the roles of subject matter expert, didactical expert and pedagogical expert. Beijaard et al note, however, that in some cultures there is considerable overlap between pedagogy and didactics. Furthermore, when considering the classroom from a sociological perspective, as the site of the challenges and opportunities associated

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<sup>1</sup> The SBL competencies are drawn from criteria set out in the Dutch BIO Law (Beroepen in het Onderwijs: Occupations in Education) that became active in 2006.

with the interplay of individual versus community interests, it is necessary to specifically address the issue of group dynamics in the classroom. In this study, didactical expertise will be defined as the ability to optimise instruction and guidance, pedagogic expertise as the ability to create a climate conducive to learning where respect and understanding play a significant role and subject matter expertise will be described as the possession of a broad and deep knowledge of the subject material. New in this study is the addition of a fourth teaching role, described as the interpersonal expert and defined as the teacher's ability to interact with classes of students in such a way as to form constructive teacher-student relationships. It could be argued that in this new fourth role the '*personal* identity' of the teacher, or the "who one is as a person" referred to by Lamote & Engels (2010), has the most impact. As a result it now becomes possible to distribute teachers' perceived professional identity in the classroom over a quadrant of expertise relating to four teaching roles. So while professional identity can be considered to be an ongoing process of integrating teachers' knowledge, experience and practices within the concept of self, in this study it assumes a more specific definition relating to teachers' roles in the context of the classroom.

In his teaching handbook Petty (2004) invites the trainee teacher to consider the question "What kind of teacher are you?" using a questionnaire loosely based on an analysis of management styles (McGregor 1985). He considers teachers as being divided roughly into two groups: those who believe that learners are passive and/or uninterested ("Theory X") and those who believe that under favourable conditions learners are inherently motivated ("Theory Y"). Petty goes on to divide students into those who believe that teachers are "only in it for the money" ("Theory A") and students who believe that teachers are "interested in students, in their efforts to learn and in their subject" ("Theory B"). This leads to the observation that "If a Theory Y teacher meets a Theory A class, it can take some time to turn the situation into one where learning is productive". This observation could be considered to support the inclusion of the interpersonal expert in the author's proposed framework for examining professional identity. Furthermore, on the basis of Petty's approach, it becomes interesting to consider not only teachers' perceptions of teachers' professional identity but also students' perceptions of teachers' professional identity. It could be argued that teacher-student interactions, and the resulting teacher-student relationships, will significantly affect teachers' perceptions of their professional competency and consequently play a role in teachers' perceptions of professional identity.

## **Method**

### *Participants*

The participants were students drawn from three classes, each of around 20 students (n=64), which the author teaches. At the time of participation (April/May 2010) these students were in their second year of attendance at a Dutch secondary school (age 12-15 years). The students share 2 lessons a week with the author for the subject of Physics. The students belong to a bilingual stream offered by the school and as such receive much of their teaching, including that of the author, in English (as a foreign language). Students are screened for this bilingual programme on the basis of Dutch national primary school tests and as such are considered to be destined for an academic career.

### *Instrument*

An existing questionnaire (Beijaard, Verloop & Vermunt 2000), in which teachers' perceptions of their professional identity were studied, has been adapted. The original questionnaire consisted of general questions about the background of the participants (experienced teachers), a distribution of professional identity over teacher roles representing aspects of teaching expertise, the teachers' clarifications of their chosen distribution and a number of control items. In contrast to the above-mentioned study, the participants for the new adapted questionnaire are students and the background questions relate to age, gender and school class. The descriptions of teacher roles, as used in the original questionnaire, have been re-written as questions, posed to the students about the functioning of their teacher in the classroom. In this way it is hoped to make such definitions more recognisable to students of 12-15 years of age. Ideally the four teaching roles of subject expert, didactical expert, pedagogical expert and interpersonal expert, should be instantly and uniquely recognisable to students. In the research project "The X-factor – research into what students value in their teachers", Cramer & Penz (2010) investigated student-generated concepts of what makes a good teacher. Although a similar approach could have been used to allow students to formulate the aspects of teaching that they perceive to be relevant to a teacher's professional identity, this was beyond the scope of this study. After filling in the background questions, the students are asked to consider their teacher in relation to the four teacher roles. They represent their perceptions of the teachers' professional identity by distributing a total of 100 points over these roles. The students also fill in an open question asking them to clarify the reasons for this distribution. The next section of the questionnaire asks the students to give an example of teacher behaviour in relation to each of the four teacher roles. In this way it is hoped to obtain a better idea of how students interpret and classify teachers' behaviour. The questionnaire ends with the opportunity to add comments, suggestions or other relevant information. In order to keep the questionnaire short it was decided not to include control items. In the hope of maximising the quality of the pupils' answers to the open questions, it was decided that the instrument should be written in the pupils' native language (Dutch). An English translation of the entire questionnaire can be found in Appendix 1.

The four roles, or areas of teacher expertise, were presented to the students by posing the following questions about their teacher:

- How good do you think am I with **subject content**? (Consider how good you think my subject knowledge is)
- How good do you think my **teaching ability** is? (Consider the way that I explain things, give assignments, supervise work during the lesson and discuss problems and answers)
- How well do I create a pleasant and productive **learning environment**? (Consider whether I create a positive atmosphere in the class, encourage mutual respect and understanding and create an environment where it is possible to get on with your work)
- How good do you think my **teacher-student relationship** is? (Consider what kind of impression I make in the class and how I interact with students)

### *Data collection*

The data was collected anonymously over the Internet using a collective educational research facility (CORF). Participants received a link via e-mail, directing them to a digital on-line questionnaire. The participants were given a week to complete individually the questionnaire. Prior to this data collection the questionnaire had first been tested in a pilot run with a class of 15-16 year olds. In the pilot, seven pairs of students both completed and assessed the questionnaire in a classroom situation via laptops. These students were asked to look critically at the questionnaire's format, scope and formulation and suggest possible improvements or adjustments.

### *Analysis*

The data was analysed quantitatively and qualitatively. The quantitative data, the relative points distribution over each of the four teacher roles, was sorted in relation to the class, age and gender of the respondents. A summary is given in the results section in the form of upper and lower limits, average values and standard deviations. The qualitative data, in which students clarify their perceptions and give examples of teacher behaviour relating to each of the four teacher roles, was analysed for patterns by the author. In the case of the questions relating to examples of teacher behaviour, the author grouped student responses into 'clusters' per teacher role and defined for each cluster a label and in some cases dimensions (sub-groups within a cluster). Although the aim was to classify each student response with a single label/dimension, in a small number of cases (n=12) the student response was considered to be described equally well by two different labels/dimensions (denoted in the results tables with the term 'multiple labels'). For example, the following student description of the author in the role of subject expert was classified by the author with two labels / dimensions:

You are always cheerful and you can explain things REALLY well.

Label 1: Teacher mood or behaviour. The student refers to the mood or behaviour of the teacher using words such as happy, enthusiastic or interested.

Label 2 / Dimension 1: Teacher Explanations. The student responds positively about teacher explanations with words such as good, clear or easy to follow.

In the results section, the labels and dimensions generated by the author are reported and illustrated by representative quotes from the students' responses.

### *Reliability*

The reliability of the labels and dimensions was investigated by allowing the student responses to be classified by a second researcher using the labels and dimensions generated by the author. The degree of agreement between the classification of the author, and that of the second researcher, is given in table 1. The best agreement was found for the teacher role of subject expert (98.1%), followed by interpersonal expert (96.1%), didactical expert (92.3%), and lastly pedagogical expert (78.4%). All student responses that resulted in a disagreement in the classification were examined and discussed by the two researchers. Some cases of apparent disagreement turned out to be typos or mistaken classifications but, none-the-less, some real disagreement about the classification remained.

**Table 1**

The degree of agreement between the classification of the author and that of a second researcher using the author's labels / dimensions.

<b>Teacher Role</b>	<b>Agreement (%)</b>	<b>Disagreement (%)</b>
Subject expert	98.1	1.9
Didactical expert	92.3	7.7
Pedagogical expert	78.4	21.6
Interpersonal expert	96.1	3.9

In a little more than half of the cases of disagreement the two researchers gave the same label/dimension to a student response, but one of the researchers considered an additional second label/dimension to be necessary and the other did not (n=10). The remaining disagreement (n=7) stemmed predominantly from a discrepancy between the emphases that each researcher attributed to the labels/dimensions. The following student response, relating to the teacher as pedagogical expert, illustrates how interpretation can play a role in the assignment of labels:

You are nice in the class, only sometimes you make the lessons a bit boring. If you made it more fun with a game related to the subject, maybe it would be more fun.

The author assigned the label "Learning environment" (Label 3) and, more specifically, Dimension 3 "other factors": the student refers to factors that contribute to the learning environment such as teacher or student behaviour. "The lessons are a bit boring" could be considered to refer to the learning environment and the author interpreted the teacher behaviour ("you are nice") as having an indirect effect on the learning environment. The second researcher assigned the label "Order and discipline" (Label 1) and, more specifically, Dimension 2: "positive teacher behaviour": the student refers to teacher behaviour that contributes to order in the classroom. The second researcher focussed on the fact that the description of Label 1 (Order and discipline) referred specifically to teacher behaviour whereas Label 3 referred to the learning environment and only at the dimension level to teacher behaviour. They therefore chose a label that referred to teacher behaviour above one that referred to the learning environment.

## **Results**

### *Quantitative data*

Although there was a 100% response to the questionnaire (n=64) not all responses were complete. In some cases parts of the questionnaire were left blank and in other cases the pupils had mistakenly awarded more than 100 points to the four teacher roles. In total there were 48 responses suitable for the quantitative analysis and 51-52 for the qualitative analysis. Table 2 shows the distribution of the background characteristics of the participants with complete questionnaires.

**Table 2**

Background characteristics of the respondents with complete questionnaires (n=48)

Gender		Age				School class		
Female	Male	12	13	14	15	1	2	3
24	24	2	22	22	2	14	17	17

Table 3 shows the overall distribution of the points over the four teaching roles.

**Table 3**

Distribution of 100 points over the four teacher roles for the entire sample (n=48)

Teacher Role	Lowest score	Highest score	Range	Average score	Std. deviation
Subject expert	15	50	35	30.0	7.9
Didactical expert	10	60	50	28.5	8.7
Pedagogical expert	5	35	25	21.5	7.0
Interpersonal expert	5	40	35	19.6	6.8

In Table 4 the distribution of points has been sorted according to the gender, age and school class of the participants. There were only 2 students of age 12 years and 2 of age 15 years. Their results were combined with those of the 13 and 14 year olds, resulting in two age range groups of 12-13 years and 14-15 years. With one exception (class 2 gave the subject expert 27.5 points and didactic expert 27.9 points), all the sub-groups (gender, age, class) showed the highest average scores for the subject expert followed by the didactical, pedagogical and as lowest score interpersonal expert. The range of points given to a particular teacher role varied from 20 to as much as 50 points and the scores have standard deviations between 5.7 and 10.0. The largest ranges (more than 35 points between highest and lowest score) are to be found for the teacher as didactical expert and the largest ranges within that role for the sub-groups 12-13 years and female (both having a range of 50 points). The lowest overall ranges are for the teacher as pedagogical expert. The lowest individual score was 5 points, awarded to both the pedagogical and the interpersonal expert, and the highest individual score of 60 points was awarded to the didactical expert.



**Table 4**

Distribution of 100 points over the four teacher roles for the age ranges 12-13 years (n=24) and 14-15 years (n=24), the genders female (n=24) and male (n=24) and per school class.

<b>Teacher Role</b>	<b>Participant characteristic</b>	<b>Lowest score</b>	<b>Highest score</b>	<b>Range</b>	<b>Average score</b>	<b>Std. deviation</b>
Subject expert	12-13 yr	20	50	30	30.9	7.9
	14-15 yr	15	50	35	29.2	8.0
	Female	20	40	20	30.0	7.2
	Male	15	50	35	29.9	8.6
	Class 1	20	40	20	29.3	7.3
	Class 2	15	40	25	27.5	6.4
	Class 3	20	50	30	32.9	9.0
Didactical expert	12-13 yr	10	60	50	29.5	8.9
	14-15 yr	15	40	25	26.1	6.9
	Female	10	60	50	29.8	10.2
	Male	15	40	25	27.3	6.8
	Class 1	15	40	25	28.1	6.6
	Class 2	10	50	40	27.9	9.2
	Class 3	20	60	40	29.4	10.0
Pedagogical expert	12-13	10	30	20	21.6	7.2
	14-15	10	30	20	22.7	6.2
	Female	5	30	25	21.1	7.6
	Male	10	35	25	21.9	7.6
	Class 1	10	30	20	21.5	6.3
	Class 2	5	35	30	23.3	7.9
	Class 3	10	30	20	19.7	6.7
Interpersonal expert	12-13	5	30	25	16.7	6.7
	14-15	15	40	25	22.4	5.8
	Female	5	30	25	18.3	6.5
	Male	10	40	30	20.9	6.9
	Class 1	10	30	20	19.6	5.7
	Class 2	10	40	30	21.2	7.4
	Class 3	5	30	25	17.9	6.9

#### *Qualitative data*

The students' motivation for the distribution of the points over the four teacher roles was not always clear from the student responses to the motivation question (n=50). A significant number (n=9) responded with a general comment such as "A good teacher" or "I wish I could give more points" and four students described simply all four roles as being equally good. The majority of the student responses did highlight why they had chosen to give the highest number of points to a particular teacher role but often not how they had made decisions over the division of the remaining points. The following quotes illustrate typical student responses:

I think the teacher has a lot of subject knowledge and can answer lots of questions about physics. The way she teaches, the learning environment and the relationship with the students are all okay.

*(Subject expert 50 points, didactical expert 20 points, pedagogical expert 20 points and interpersonal expert 10 points)*

I divided the points this way because I think that the teaching ability is very good, the subject knowledge is also good, and the learning environment and the relationship with the students is also good.

*(Subject expert 30 points, didactical expert 35 points, pedagogical expert 25 points and interpersonal expert 10 points)*

However some responses did give a better insight into the students' perceptions of the teacher as illustrated by the following quotes:

I think that you know a lot about your subject and you tell a lot about it, that's why I gave a lot of points to subject expert. The teaching is usually clear, but sometimes a bit difficult. I think the other two are generally good, that's why I give the learning environment and the relationship with the students an equal number of points.

*(Subject expert 35 points, didactical expert 25 points, pedagogical expert 20 points and interpersonal expert 20 points)*

The first two are just normal and not better than other teachers, but you are very good at relationships and the atmosphere in the class is always safe, informal and pleasant.

*(Subject expert 15 points, didactical expert 15 points, pedagogical expert 30 points and interpersonal expert 40 points)*

It is clear from the above examples that, not surprisingly, students have quite different opinions about the same teacher.

The resulting classification of the student responses is presented in tables 5-8, followed by a number of illustrative quotes from students. A small number of student responses did not fit within the chosen classification and this is also indicated in the tables. The most unclassified responses belonged to student comments about the teacher as pedagogical expert (n=9). These included responses such as "The classroom is a nice room to work in" and "There's always something else to do". The most multiple labels were given in the classification of the teacher in the role of didactical expert where, for example, four student responses combined equal references to explanations (Label 1) and classroom activities (Label 2). In the very few cases that the student made conflicting comments in the same response, the dominant comment was used to classify the response.

### *Subject expert*

The student examples of teacher behaviour relating to the teacher in the role of subject expert were classified using the labels 'Teacher mood or behaviour', 'Teacher explanations' and 'Teacher knowledge'. Two of these labels were further specified with the use of dimensions (table 5).

**Table 5**

Labels and dimensions for the student responses to the teacher in the role of **subject expert** (n=52).

<b>Label 1: Teacher mood or behaviour</b> The student refers to the mood or behaviour of the teacher using words such as happy, enthusiastic or interested (n=6).	
<b>Label 2: Teacher explanations</b> The student refers explicitly to teacher explanations (n=19)	<b>Dimension 1: Positive comments</b> The student responds positively about teacher explanations with words such as good, clear or easy to follow (n=13).
	<b>Dimension 2: Negative comments</b> The student responds negatively about teacher explanations using words such as insufficient or difficult (n=6).
<b>Label 3: Teacher knowledge</b> The student refers to extended knowledge that the teacher demonstrates (n=23).	<b>Dimension 1: Answering questions</b> The student comments on the teacher's ability to answer questions (n=9).
	<b>Dimension 2: Alternatives to answering questions</b> The student refers to the demonstration of knowledge through such aspects as self-confidence, the provision of extra information or the use of examples (n=14).
Student responses not classified: n= 6	Student responses with multiple labels: n=2

Not surprisingly many students refer directly to the knowledge of the teacher (Label 3) as an indication of the teacher in the role of subject expert. Teacher knowledge is often seen to be demonstrated by the teacher's ability to answer student questions (Dimension 1) but there are also other ways of doing so such as being convincing or giving extra information or examples (Dimension 2). For example, students wrote:

You tell good things, like the time that I asked why water is a good conductor of electricity, I got a very good answer that showed that you understood it completely (Dimension 1: answering questions).

You know a lot about the topics that are discussed. You give very good examples (Dimension 2: alternatives to answering questions).

About sound, you told us a lot of extra things that are not in the book, but that are still interesting (Dimension 2: alternatives to answering questions).

The students also see the ability to explain things as being strongly related to the teachers' subject expert role (Label 2). Naturally comments are both positive (Dimension 1) and negative (Dimension 2). Two students wrote:

Explanations are almost always clear, and things are explained well in an easy way (Dimension 1: positive comments).

You know a lot about your subject, but sometimes the explanation is too difficult and we don't understand (Dimension 2: negative comments).

Interestingly a small number of students associated the role of subject expert with certain aspects of teacher mood or behaviour. It would seem that teachers who are enthusiastic and display interest in, or enjoyment of, their subject are seen by students to be subject experts. For example:

A good way of giving lessons. Getting really involved in the topic.

*Didactical expert*

The student examples of teacher behaviour relating to the teacher in the role of didactical expert were classified using the labels 'Teacher explanations', 'Didactical variations', 'Humour and enthusiasm' and 'Good lessons'. The label 'Teacher explanations' was further specified with the use of dimensions (table 6).

**Table 6**

Labels and dimensions for the student responses to the teacher in the role of **didactical expert** (n=52).

<b>Label 1: Teacher explanations</b> The student explicitly refers to teacher explanations (n=34).	<b>Dimension 1: Negative comments</b> The student responds negatively about teacher explanations with words such as insufficient or too quick (n=6).
	<b>Dimension 2: 'Clear' explanations</b> The student refers specifically to 'clear' explanations (n=6).
	<b>Dimension 3: 'Good' explanations</b> The student refers explicitly to 'good' explanations (n=14).
	<b>Dimension 4: Other comments</b> The student refers in a positive or neutral manner to explanations with words other than 'good' or 'clear' (n=8)
<b>Label 2: Didactical variations</b> The student refers to activities in the class such as demonstrations, practical's or assignments (n=11)	
<b>Label 3: Humour and enthusiasm</b> The student refers to the use of humour or the enjoyment or enthusiasm of the teacher (n=6).	
<b>Label 4: 'Good' lessons</b> The student responds with a positive comment about the lessons but does not specifically refer to explanations, activities or humour (n=5)	
Student responses not classified: n=2	Student responses with multiple labels: n=6

The majority of student responses, related to the teacher as didactical expert, centre on teacher explanations (Label 1). This label can be divided up into the following four dimensions: negative comments (Dimension 1), reference to 'clear' explanations (Dimension 2), 'good' explanations (Dimension 3) and other comments related to explanations (Dimension 4). Examples of responses referring to explanations are:

I think the lessons go well, but in some cases you feel a bit like 'what is she talking about?!' (Dimension 1: negative comments).

I think the lessons are very clearly and well explained. If I don't understand something it is always explained and then I understand it immediately (Dimension 2: 'clear' explanations).

You always let us do the questions first so that we try to understand it for ourselves and then you explain it. I think this is good because we have to think for ourselves (Dimension 4: other comments).

Students also refer to activities in the lesson such as practical's, demonstrations and assignments (Label 2: Didactical variations):

I like that you sometimes give us assignments to do in pairs or groups. But it is also nice to work individually or with the whole class. I especially like the fact that there is so much variation in the lessons. That way you can continue to concentrate.

Label 3 contains student references to the teacher's enthusiasm or their use of humour and Label 4 is a very general label for comments related to 'good' lessons without further reference to explanations, activities or humour:

Very good. Lots of jokes (Label 3: humour and enthusiasm).

Really good because it's a lot of information and so we learn a lot but it is sometimes difficult to revise it all for exams because it is such a lot (Label 4: 'good' lessons).

### *Pedagogical expert*

The student examples of teacher behaviour relating to the teacher in the role of pedagogical expert were classified using the labels 'Order and discipline', 'Respect and understanding' and 'Learning environment'. Two of these labels were further specified with the use of dimensions (table 7).

A large number of the student responses centred on descriptions of the learning environment (Label 3). These responses were classified into three dimensions relating to peace and quiet (Dimension 1), specifically to a 'good' atmosphere (Dimension 2) and to contributing factors such as teacher or student behaviour without necessarily referring to a 'good' atmosphere (Dimension 3). This is illustrated by the following quotes:

I don't really know a good example but there is a lot of peace and quiet in your class and usually a nice working atmosphere (Dimension 1: 'peace and quiet').

The learning environment is good, also during practical experiments (Dimension 2: ‘good’ atmosphere).

There are always good examples given, with help from the students, so that the lesson becomes more fun (Dimension 3: other factors).

The students also referred to order and discipline issues (Label 1) with emphasis on both negative (Dimension 1) and positive (Dimension 2) aspects.

There could be a bit more order in the lessons (Dimension 1: negative comments).

It is very good, if we get too noisy than you say something about it and then everything is okay again (Dimension 2: positive comments).

The remaining label for this teacher role has to do with respect and understanding, including listening to each other (Label 2).

When somebody got laughed at because they didn’t do something well, you stopped it and made the person feel better. Getting on with each other usually goes well only sometimes people start shouting, then you make sure that it is quickly quiet again.

Everybody listens to each other.

**Table 7**

Labels and dimensions for the student responses to the teacher in the role of **pedagogical expert** (n=51).

<b>Label 1: Order and discipline</b> The student refers to issues or teacher behaviour related to order (n= 11).	<b>Dimension 1: Negative comments</b> The student responds negatively about order in the lesson (n=4).
	<b>Dimension 2: Positive teacher behaviour</b> The student refers to teacher behaviour that contributes to order in the classroom (n=7).
<b>Label 2: Respect and understanding</b> The student refers to considerate behaviour such as listening to each other or the presence of mutual respect (n=11)	
<b>Label 3: Learning environment</b> The student refers to (aspects of) the learning environment (n=23).	<b>Dimension 1: Peace and quiet</b> The student refers specifically to peace and quiet in the lesson (n=10).
	<b>Dimension 2: ‘Good’ atmosphere</b> The student refers specifically to a ‘good’ atmosphere in the lesson (n=7).
	<b>Dimension 3: Other factors</b> The student refers to factors that contribute to the learning environment such as teacher or student behaviour (n=6).
Student responses not classified: n=9	Student responses with multiple labels: n=3

### *Interpersonal expert*

The student examples of teacher behaviour relating to the teacher in the role of interpersonal expert were classified using the labels ‘Humour’, ‘Teacher discipline’, ‘Teacher personality traits’, ‘Support for learning’ and ‘Good relationship’. The label ‘Teacher discipline’ was further specified with the use of dimensions (table 8).

**Table 8**

Labels and dimensions for the student responses to the teacher in the role of **interpersonal expert** (n=51).

<b>Label 1: Humour</b> The student refers to the use of humour in the lesson (n= 5).	
<b>Label 2: Teacher discipline</b> The student refers to teacher behaviour related to the enforcement of rules or the ‘strictness’ of the teacher (n=9)	<b>Dimension 1: Negative comments</b> The student responds negatively about how the teacher enforces rules (n=6).
	<b>Dimension 2: Positive comments</b> The student responds positively about the ‘strictness’ of the teacher (n=3).
<b>Label 3: Teacher personality traits</b> The student refers to personality traits of the teacher with words such as patient, friendly or nice (n=7).	
<b>Label 4: Support for learning</b> The student refers to supportive teacher behaviour such as giving extra help or willingness to answer questions (n=15).	
<b>Label 5: ‘Good’ relationship</b> The student responds with a general positive comment without referring to specific teacher behaviour (n=13).	
Student responses not classified: n=3	Student responses with multiple labels: n=1

A small number of students referred to the use of humour in the lessons (Label 1):

Most of the children do their best and we always laugh at your jokes.

Quite a number of students responded with a very general positive remark, but with little or no further clarification, about the teacher in the role of interpersonal expert (Label 5). A typical response was:

I don’t know how I should answer but the relationship is simply good.

Another cluster centred on teacher discipline (Label 2) with both negative (Dimension 1) and positive (Dimension 2) comments. Some students referred to rules about the completion of homework that they found rather strict while others found the teacher’s enforcement of rules perfectly reasonable.

In principle you are quite friendly but I think that giving detention immediately after forgetting your homework once damages this. I think this is a bit tit-for-tat. (Dimension 1: negative comments).

I think that you make a good impression as a teacher. You don't punish too quickly but you are also not too 'soft' so that people don't all shout at once (Dimension 2: positive comments).

Label 3 relates to observations about personality traits of the teacher, using words like friendly, patient or nice.

I think the mood in your lessons is good and that is because you have enough patience with us and not every teacher has that....

The remaining label (Label 4) relates to student comments about the teacher in a supportive role, with, for example, reference to the teacher's willingness to help the students or answer their questions. There was also one negative response.

You have a good relationship with the students because if someone needs extra help then you give it to them. Everybody is well supported.

You are not very interested in the students and that could be better. For instance if someone has low grades you could talk to them about how to improve. Instead of saying that they need to improve but not actually doing anything to help them.

## **Discussion and conclusion**

*Similarities and differences between students' perceptions of teachers' professional identity and the teacher's self-perceptions.*

In this project the wider concept of professional identity has been reduced to a rather specific definition relating to teachers' roles in the context of the classroom. The author's own distribution of 100 points over four possible teacher's roles resulted in a score of 25 points to subject expert, 35 points to didactical expert, 20 points to pedagogical expert and 20 points to interpersonal expert. Based on the large range of student point distributions, it seems reasonable to conclude that individual students experience, interpret and evaluate the author's behaviour in different ways. However, according to the overall distribution (n=48), on average the students perceive the author first as subject expert (30.0 points), closely followed by didactical expert (28.5 points), then pedagogical expert (21.5 points) and lastly interpersonal expert (19.6 points). So it would seem that both the author and her students consider the author to be primarily engaged in the communication of knowledge rather than being focussed on class dynamics and student-teacher relationships. The author readily recognises herself in student comments about teacher explanations, the variation of classroom activities and perceptions relating to teacher self-confidence, enthusiasm and the use of humour. The students perceive, on average, the author to be more of a subject expert while the author's self-perception is more that of a didactical expert. It should be noted, however, that the highest individual student scores were awarded to the role of didactical expert (60 points) and that this role had the largest range of scores (50 points). As a mature trainee teacher the author has had to re-immers herself in the subject matter and was initially surprised by the high average score assigned by students to the role of subject



expert. However, almost half of the student responses relating to subject expert were classified with the label 'Teacher explanations' (Label 2), a label that was also assigned to the majority of student comments relating to the teacher as didactical expert. It would seem that for the students these two roles, at least in part, overlap. Lastly, it is interesting to note how the author's enthusiasm and self-confidence also contribute to the students' perceptions of her in the role of subject expert.

*Possible implications of the results for the professional development of the author.*

The simple act of distributing 100 points over the four teacher's roles, as described in this project, produced a shift in the author's perceptions of her professional identity. Her career switch to teaching was partly based on an interest in didactics but also on a wish to contribute to the personal development of students. On considering her perceptions in terms of the four teacher roles it is clear to the author that student-teacher, and student-student, interactions are being overshadowed by the communication of knowledge through the subject and didactical expert roles. This stems, at least partly, from a feeling of responsibility for ensuring that the curriculum is fully covered and that students are not at a disadvantage in this respect when compared with students in other classes. A second possible reason is the familiarity of dealing with information and theory in contrast to the new experience of playing a key role in the dynamics of a fairly large group of teenagers in the context of their special community (the 'class'). Furthermore, the author experiences discomfort in the pedagogical role where she feels forced to exhibit behaviour in contradiction with her perceived 'personal identity', and she suffers from doubts about her competency in this role. Since it seems reasonable to assume that lower school students are more dependent on the teacher in the roles of pedagogical and interpersonal expert than their more mature counterparts in upper school, the author might be more suited to classes of upper school students than to the lower school students that she currently teaches. However, the author's wish to teach physics in English (the author's native language but a foreign language for her Dutch students), within the Dutch education system, limits her to teaching lower school students. These realisations present the author with insights into her professional identity and in addition with a possible dilemma over career choices. Lastly one could speculate that, as a novice teacher gains experience and the subject content and didactics become more routine, it will become possible to focus more on the development of the pedagogical and interpersonal roles. It would certainly seem advisable for the author to observe, and seek advice from, experienced colleagues in relation to the pedagogical expert role since it is important that the author explore ways to reduce the current discord between her personal identity and the pedagogical element of her professional identity.

*Wider implications in the context of (novice) teachers' professional development including limitations and possible future research questions regarding the instrument.*

According to Beijaard (2009) there are three essential aspects relevant to the development of a professional identity; the giving of meaning to experiences, showing agency and self-evaluation. In order to reconcile the personal and professional aspects of becoming, and being, a teacher it seems likely that examining perceptions in relation to the four expert roles would be a useful exercise for all (novice) teachers. Such perceptions can form the basis of discussions with peers and mentors and make a valuable contribution to a trainee teacher's portfolio or to the development plan of a more experienced teacher. In particular it is important for teachers to compare their own perceptions, and preferably also those of their students and mentors, not only with their perceptions of who they are as a person but also with their vision of what kind of teacher they would wish to become. In addition, it is possible that by using the instrument to observe and classify the behaviour of experienced

teachers whom they admire, novice teachers could further their insights into this future vision of themselves as a teacher. Arguably the results of the above processes could assist (novice) teachers in the definition of relevant learning goals and in doing so support agency.

This study is based on an instrument previously used to identify the perceptions of experienced teachers in relation to a number of teacher roles (Beijaard et al, 2000). In order to adapt the instrument for use with students between the ages of 12 and 15 it was necessary to re-write the descriptions of these teaching roles. Despite the use of student input from a limited pilot to test the instrument, there has been no real research done into the students' interpretations of the role descriptions and the impact thereof on their perceptions of the teacher. This could significantly affect the students' distribution of 100 points over the four teaching roles. It seems desirable then, to form new research questions around students' perceptions of teachers' professional identity and in particular the role descriptions used in this instrument. Although the classification of student comments by the author was tested for reliability, varying from 78.4 to 98.1 % agreement with a second researcher, it would seem unlikely that the resulting labels could universally be applied to results for other teachers or students. For instance, a label for the use of humour might not be relevant in other settings. Also it should though be bourn in mind that student descriptions of teacher behaviour frequently refer to a single incident or aspect of behaviour and so the representative value of such descriptions may be limited. Furthermore, the act of devising a classification system was found by the author to be an excellent way to become thoroughly familiar with the students' comments. It might be interesting then to consider a meta-study of results, including the classification of student comments, for a large group of (novice) teachers. Additionally, it seems possible, that the author's classification of the student responses, or that resulting from a meta-study, could be utilised to develop a new questionnaire in which the labels and dimensions form the basis of a Likert-type scale to quantify student responses about teacher behaviour. Lastly, in the light of professional development, it seems certain that linear research into changes in teachers' professional identity over time would provide interesting insights into the usefulness of the instrument.

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## Appendix 1: Student questionnaire

### *Foreword*

The information collected via this questionnaire is anonymous and intended to help me to understand how you see me in my work as a teacher. Your impressions, and those of your classmates, will be compared with my own. The results will be analysed as part of a graduation research project. This information may help me to better understand how I behave in the classroom and may even help me to become a better teacher. In order for me to get a realistic picture of my behaviour it is important that you answer the questions as fully and as honestly as possible. Don't be afraid to be critical, there are no right or wrong answers.

### *Information for completing the questionnaire.*

The questionnaire is divided into three sections containing different types of questions. In section 1 the questions are of the 'closed' type. This means that you simply put a cross in the box that applies to you. In section 2 you are asked to distribute 100 points over four aspects of my teaching. The remaining questions are of the 'open' type. This means that there is an open space in which you are asked to give information or an explanation.

It is expected that it will take about 15-20 minutes to complete the questionnaire.

If you have comments, suggestions or other relevant information then please add these. You can use the open question on the last screen of the questionnaire.

Thank-you for your contribution!

**SECTION 1: Background information about yourself**

Gender:	male	female		
Age:	12	13	14	15
School class:	Ta2a	Ta2b/Tg2b		Tg2a

## SECTION 2: Your impressions of my teaching abilities

You are asked to distribute 100 points over four aspects of my teaching.

The relevant aspects are concerned with:

1. How good do you think am I with **subject content**? (Consider how good you think my subject knowledge is.)
2. How good do you think my **teaching ability** is? (Consider the way that I explain things, give assignments, supervise work during the lesson and discuss problems and answers)
3. How well do I create a pleasant and productive **learning environment**? (Consider whether I create a positive atmosphere in the class, encourage mutual respect and understanding and create an environment where it is possible to get on with your work.)
4. How good do you think my **teacher-student relationship** is? (Consider what kind of impression I make in the class and how I interact with students).

The more points that you give to a certain aspect of my teaching, the more you think that this is what I am best in. The total must always be 100.

Example answer:

<b>Subject content</b>	25 points
<b>Teaching ability</b>	30 points
<b>Learning environment</b>	20 points
<b>Teacher-student relationships</b>	25 points

Before filling in your answer, take a little time to think about how I behave in the classroom. What do I say and do and how does this behaviour relate to the four aspects of teaching?

<b>Aspect of teaching</b>	<b>Distribution of the points</b>
<b>Subject content</b>	..... points
<b>Teaching ability</b>	..... points
<b>Learning environment</b>	..... points
<b>Teacher-student relationship</b>	..... points
<b>TOTAL</b>	<b>100 POINTS</b>

Will you please explain how you decided to distribute the points in this way?

In the following open questions you are asked to give an example of my behaviour in relation to the four aspects of teaching. You could, for example, describe something that happened, including what I said or did, and what your impression of me was. Try to be as specific as possible.

Please give an example of my behaviour in relation to **subject content**.

Please give an example of my behaviour in relation to my **teaching ability**.

Please give an example of my behaviour in relation to the creation of a **learning environment** in my lessons.

Please give an example of my behaviour in relation to my **teacher-student relationship**.

### **Section 3: Comments and suggestions**

Do you have any comments, suggestions or other relevant information about this research project?

*Thank-you for filling in the questionnaire. Your participation is very important for this graduation project and I am very grateful for your contribution.*