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SEARCHING FOR STORIES

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Aim of my project

Study the system of physics teacher education as an important place where new physics teachers begin to create their professional identity.
Teacher education in Sweden

- Three environments
  - Education department
  - Physics department
  - School
- Short and long program
- Higher education institutions
Teacher education as a system of discourses

“[Discourse] allows (and requires) people to be (for a time and place) socioculturally distinctive who's and to accomplish socioculturally distinctive what's. These who's and what's are always defined, partially, in opposition to other sorts of who's and what's, and are always related to models of what count as "valuable" (and "normal") people, activities, and things.”

(Gee 2005)
Professional identity as stories

Many different ways of using and defining professional identity (see overview in Beijaard, Meijer, & Verloop, 2004)

Definition in this project: **Professional identity as consisting of the set of narratives teachers tell about being a teacher.**

(Connelly & Clandinin, 1999)

These narratives are made of and need to be related to the discourse models of the education
Research questions

1. What is signalled as valued (and not valued) by members of the three environments physics teachers meet during their training (school, education department, physics department)?

2. What discourse models can be identified from these value statements?

3. What is the potential consequence of these discourse models on the narratives trainee physics teachers can tell about themselves as professionals?
Data collection

Semi structured interviews with 9 teachers
(3 from each environment)

- What is important for students to learn?
- What is special about being a physics teacher?
- What should your part of the education contribute?
Iterative coding of interview transcripts

– What is valued?
– What should the students learn?
– What is the goal in this environment?
Och har, inte. Att det andra aspekter än själva ämnet i sig som gör att man väljer att bli lärare. (Gustav, fysiker)

Men vilken sorts människor tänker du att det är som gör de här valen att läsa till till lärare i naturvetenskap eller fysik? (A)

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Discourse models

- **Curriculum implementer**
  - **Purpose/goal**
  - **Pedagogical core courses**
  - **Teacher education physics**

- **Subject expert**
  - **Purpose/goal**
  - **University physics**

- **School physics**
  - **Purpose/goal**
  - **Critically reflective teacher**
    - **Sees critically**
    - **University physics**

- **Practically well equipped teacher**
  - **School placement**
  - **Pedagogical core courses**
    - **Theoretical**

- **University physics**
  - **Purpose/goal**
  - **Fragmented**
  - **Practically well equipped teacher**

- **School placement**
  - **Pedagogical core courses**

- **Discourse models**

- **Practically well equipped teacher**
  - **School placement**
  - **Pedagogical core courses**
Physics expert

Subject expert

University physics

School physics

Purpose/goal

deep
focused
exciting
interest, excitement
unexciting
fragmented
broad

interest, excitement
purpose
“And last, but not least of course, [a physics teacher] have to feel that you have the vision to make at least 80% of your students to want to become a physicist after taking your class.”

(Lecturer in the physics department)
“What everyone really wants to, to work with is research. You want to do something that is new and creative. That’s got to be the goal for most people, right? To just repeat what others have done feels — that’s second order, it’s not the same thing. Then of course it can be important and useful but it’s still not like the teachers contribute to the country's GDP.”

Practical training supervisor
“A really good upper secondary teacher has an incredibly hard job to do to meet the learning goals and still be able to make the students feel that physics is really fun, something that they want to continue doing”

Lecturer at the physics department
“That you learn to keep your eyes open to catch what might be important or interesting. Because then you can take something new and fun to the classroom even if you’re talking about batteries (laughing) and bulbs you can still: — ‘I saw this really cool thing in (a technical journal) the day before yesterday.’ Because then you can generate some enthusiasm for the subject “

Lecturer at the physics department
Critically reflective teacher

- School physics
- University physics
- School placement
- Pedagogical core courses (theoretical)

Purpose/goal: critically sees
Critically reflective teacher

“The danger of teaching practical skills is that it is all too easy to reproduce subject traditions. [...] And then you don’t want to teach practical things at all for fear of becoming unscientific”

Lecturer at the education department
Practically well equipped teacher
Practically well equipped teacher

Purpose/goal

Practically well equipped teacher

practical

School placement

Pedagogical core courses
Practically well equipped teacher

“…how am I gonna plan my teaching? How do I know if I should do group-work or a small project? Or, how do you get kids to write decent lab-reports? To on an every-day basis discuss the choices a teacher need to make. We can never, we have way to few hours and it´s not our task anymore to teach the teacher students these things.”

Lecturer in the education department
The system: tensions

Purpose/goal

Curriculum implementer

Pedagogical core courses
Teacher education physics

Subject expert

University physics

School physics

Practically well equipped teacher

School placement

Pedagogical core courses

University physics

Critically reflective teacher

School placement

Pedagogical core courses

Theoretical

Practical
Stories about being a teacher
The fallen angel

“I never wanted to become a teacher. Because in contrast to other teachers I was a top student. I was one of the best in Sweden, in mathematics and physics.”

Practical training supervisor
The fallen angel

“In the beginning I made one of the other teachers angry with me when I said that I was the only physicist in the school, the others were physics teachers. Because it’s not until you’ve been the leader of a research group you can really call yourself a physicist.”

Practical training supervisor
The fallen angel

One of the things that surprised me when I started, because I was really the kind of person to do research, was that I really like the students. The social part of teaching. That part is hard to know about in beforehand.

Practical training supervisor
“...to become a researcher, something I think I might become in the future, you never know. Instead of teaching, I guess research is more about the mysteries of the universe, into physics. To move the frontier a bit further. That is not really what you do as a teacher, I don't move the frontier every day. I'm more in a teaching bubble, to teach the students so that they themselves can take that step someday.”

Practical training supervisor
Questions – further work

How can these models be connected to teacher students own stories about being/becoming a teacher?
Thank you!

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References


