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Development of students’ knowledge about didactics during their first year of the master’s programme in didactics

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ABSTRACT

In this study, I reflect critically on my own experiences as a university teacher of students’ expressed knowledge about the academic subject of didactics at the beginning and end of their first semester as students in the Master’s Programme in Didactics. My reflections are made using a phenomenographic approach to learning, which regards learning as a qualitatively deeper and different way of understanding content. The results of the study are expected to deepen my understanding of knowledge expressed about didactics in two different student groups, and give insight on what is critical for knowledge development in higher education. The first course design consisted of 12 lectures in total by 12 different teachers representing different fields of didactics, such as general didactics and subject-based didactics in different specializations. The second course design consisted of eight seminars where course literature about didactics was discussed, together with three seminars in smaller groups wherein the students in each specialization of didactics met. A comparison between the groups is made, based on a qualitative analysis of the responses on an open question before and after the first semester forms the basis of my own reflections. The analysis aims to establish in what way the students’ explanations of didactics might have changed during the courses, and if there are differences in this development which could be explained by differences in course design. In the first student group, 10 students (in-service teachers) answered both questionnaires, and 11 students in the second group answered both questionnaires.

Article history

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KEYWORDS

Critical reflection; didactics; higher education; master’s level; course design

Introduction

This study focused on my reflections of students’ expressed knowledge about their own learning during the first semester of a Master’s programme in two different student groups following different course designs. The aim is to deepen my own understanding about learning in higher education by identifying what is critical for knowledge development and in what way this might be due to differences in design. In total, 21 adult students, in two different groups enrolled in the first course of a Master’s Programme in Didactics at a Swedish university, were asked to reflect on their knowledge of didactics in response to an open-ended question about what didactics is before and after their first semester. The Master’s Programme in Didactics runs part-time over four years and is open to in-service teachers or
similar professionals. The aim of this group is to create a community of practice (Lave & Wenger, 1991) for in-service teachers during their education and to follow their professional development during their studies. A community of practice refers to the community’s shared knowledge of what participants are doing and of what their practice means to them, to each other and for society:

It is possible to delineate the community that is the site of a learning process by analyzing the reproduction cycles of the communities that seem to be involved and their relations. (Lave & Wenger, 1991, p. 98)

The participants in this study share two different communities of practice: they are all teachers who work at (different) schools and they have established a joint community of practice based on the activities they take part in during their education. In this study, the activity is a course and the aim is to observe students’ learning about didactics. It is hypothesized that these communities of practice will be different due to differences in course designs. This study is based on a phenomenographic and variation theory approach, which defines learning as a qualitatively more developed way to experience the object to be learnt (Holmqvist, 2011; Marton & Booth, 1997; Marton, 2015). Instead of focusing on students’ learning outcomes at their formal examinations, my reflection on their changed knowledge is the object of interest. The students were supposed to reflect about their own learning process during the courses, and they were offered an opportunity to analyse this process in an attempt to develop a higher-order learning process (Biggs, 1999). Moon (2004) has found that reflective learning enhances the effect of short courses on workplace development and used reflective writing to study student learning. Trigwell, Prosser, and Waterhouse (1999) have also found a relationship between teachers’ teaching styles and students’ learning styles: teachers who describe their teaching as information transmission seem to have students who report a surface-learning approach without an orientation for deeper understanding. My reflections upon the students’ expressed understanding of the teaching content aim to analyse what kind of learning the students developed; surface or deep knowledge of the content, and secondly, if this could be due to the course design and the different communities of practice developed in the groups.

Master’s level teaching aims to prepare the students to conduct research in the subject area they are studying; therefore, the content studied orients them within the research field and also addresses the nature of science and research. In this study, the participants were students who also worked as teachers while completing their Master’s programme. Deem and Lucas (2006) have studied Master’s Degree in Education students learning about research in the social sciences at a research-intensive university in England. Their case studies showed that the journey to become a researcher is a challenging experience, and the students showed uncertainty in their own ability. Deem and Lucas (2006) claimed that teaching about research methods narrows the gap between research and school practices and helps to build a research-knowledgeable profession. The study reported here contributes to this research field by reflecting on how teachers develop their scientific knowledge within a field close to their own professional role, and whether the course design develops different types of knowledge (surface or deep learning).

Theoretical background

This section presents the theories that frame the study in the three fields of critical reflection, communities of practice and didactics.
Critical reflection

Being reflective and considering students’ perspectives when teaching is an important aspect of teachers’ work. However, students’ reflective ability is also crucial for the development of deeper learning. Heikkilä, Lonka, Nieminen, and Niemivirta (2012, p. 466) explored teacher students’ approaches to learning and found that non-reflective students (22% of their sample) expressed the lowest levels of ‘deep understanding critical evaluation’. This is in accordance with findings by Franzoni-Velázquez and Cervantes-Pérez (2012), who reported that reflective learners are those who have a global (or holistic) learning approach. Park (2014) studied reflective learning as a pedagogical method to improve students’ critical thinking. Park’s aim was to study self-reflection as well as collaboration in an online course. They found the most important aspect of encouraging students to be active is the teacher’s intervention to help students engage in peripheral participation. Reflection is an important aspect of teaching and learning. Towler, Woolner, and Wall (2011) showed the importance of ‘time to think’ for staff as well as students for enhancing the quality of learning in further education. Furthermore, they found that students seldom referred to learning outside the college and they felt that the college staff were responsible for their learning. However, time to think is not necessarily the same as reflection, and ‘time to think’ might have given the students the impression that they were supposed to think about their coursework as they strongly refer to the college staff. Moon (2004) found that reflection was used to enhance the outcomes of short courses and workshops. Written reflections that are made available to peers for comment or assessment were found to enhance the outcomes. Another research approach in this field is based on transformative learning theory. Critical reflection and dialogue are important components of this perspective, which refers to:

> the process during which the adult transforms his dysfunctional frames of reference and realizes the nature, the source and the consequence of the assumptions that have been internalized by others, aiming to make the frame of reference once again functional and reliable to produce reasoned interpretations. (Liodaki & Karalis, 2013, p. 76)

This process starts with a disorientation dilemma, an examination of the students’ feelings and a critical evaluation of the students’ assumptions. This is followed by a process culminating in the students being able to see the situation from new perspectives. To promote learning, as defined in this framework, is to design courses in higher education which ‘take into account individual differences among students, and the influences on each of them from their point of view’ (Liodaki & Karalis, 2013, p. 79). This accords with the assumptions underlying variation theory, the approaches used in my reflection in this study, which conceptualizes learning as a changed view of the same phenomenon based on a qualitatively more developed understanding (Marton & Booth, 1997). Hence, to reflect on one’s own teaching through the lens of students’ expressed knowledge (Fook & Gardner, 2007), trying to understand the impact of the courses on deep learning offers an opportunity to define crucial incidents that explain what determines the development of deep learning.

Communities of practice in a cultural–historical perspective

To develop learning, aspects such as the social contexts, lectures and literature are essential. This study takes into consideration Vygotski’s (2001) theories about learning as a collective process, in which the communication between learners is considered crucial for learning,
and Lave and Wenger’s (1991) definition of communities of practice. Tedder and Lawy (2013) studied student teachers’ learning journeys of professional formation and describe the student teachers’ recognition of their membership in a community of practice. Although the four students they followed were participating in the same course, their orientation differed as a result of their prior experiences, the relationships they developed and how they experienced the course requirements. This experience is individual, even if it is socially constructed. Pre- and in-service training for teachers aims to develop teaching skills to enhance student learning in different school subject areas. However, there is no clear relationship between teachers’ training and students’ increased learning outcomes. Stes, De Maeyer, Gijbels, and Van Petegem (2012) studied instructional development for teachers in higher education and found that instructional development does not automatically provide a better learning outcome for students. The lack of a clear relation between these variables is difficult to explain. However, it may be that focusing on only one part of the learning situation, the instruction, might be a simplistic way of understanding learning. Without the learners’ perspective, the use of different ways to instruct becomes a trial-and-error situation.

Based on a cultural–historical perspective, activity theory is an approach that focuses on activity as the unit of analysis (Pacheco, 2012). In this study, the unit of analysis is the students’ expressed knowledge that is reflected upon. The culturally developed tools consist of the theories, assumptions and conjectures of didactics, that have been developed since the sixteenth century, and the content in the course. The course offers students the opportunity to develop their knowledge and abilities to use the mediated tools of this field. During the course, community formation takes place and defines the way the participants will shape and develop the course. To bridge the gap between educational research and education in schools, the knowledge developed in one community of practice (the course) has to be transferred to another community of practice (the workplace). Although the course introduces the in-service teacher students to new research methodologies, their intention to develop knowledge and improve the quality of their own teaching has to be expressed. Kuchinke (2013) reviewed vocational training and vocational expertise and claimed that a greater connection between work and education is required to develop expertise, and that this expertise has to be content-oriented. The study of the ways in which teachers experience their own developed content knowledge, both as individuals at different points in their careers as well as at a group level, reveals each teacher’s development. It also captures whether their experiences gradually become more unified in the course’s community of practice.

**Didactics**

The focus of the course content is general didactics, situated in the field of educational sciences and described as ‘the art of teaching’. Didactics has a long tradition originating with the sixteenth-century author John Amos Comenius, who was also the first to focus on learning as a life-long process (Meyer, 2012). Zierer and Seel (2012) noted that the aim of general didactics is to plan and organize powerful learning processes for students’ learning. One prominent assumption of didactics is the didactic triangle. This has been criticized for its narrow focus and its simplification of learning resulting from an ignorance of time, space and interactions (Zierer & Seel, 2012). The didactic triangle has its roots in Comenius’ work, focusing on the relationships between the learner, the teacher and the content (Meyer, 2012).
Built into the didactic triangle is an assumption that the teacher is a necessary requirement for learning. It can be argued that the teacher is a necessary, but insufficient, component for learning, as learning also takes place outside schools and without teachers’ instruction. Meyer has summarized chairs and other staff positions in general, and domain-specific didactics in Europe, and has found that most positions in didactics are in Russia, followed by Germany, France and Denmark. However, the predictability of the effect of didactic models on student learning has been weak. Occasionally, didactics as an approach has almost been neglected in the educational research field. Didactics can be divided into two different subfields: systematic and comparative (Meyer, 2012). Systematic didactics is planned and the order of which parts come first is defined, as well as how each part fits into a bigger whole comprising the content. Comparative didactics concerns the diversity of educational practices. As pointed out by Zierer and Seel (2012), a challenge for future didactics is to bridge the gap between theory and practice by combining a broad understanding of theoretical didactic models with a broad empirical foundation. Some didactic areas have also moved closer to instructional design; Bergström (2010) used an iterative didactic design model to study the student–teacher relationship in a distance-learning course for professional nurses. Didactics is a broad field, and this can be confusing for students. In research, didactics describes the connections between the content, student and teacher in a learning activity, which relationships are of interest to teachers. However, studying at the advanced Master’s level also requires that students learn about didactics as a research field and develop the abilities required to conduct research projects on teaching and learning on their own.

**Aim and research questions**

The aim of this study was to reflect critically (Hickson, 2011) on my own experiences as a university teacher of two different student groups, with different course designs, and to examine their expressed knowledge about the academic subject of didactics at the beginning and end of their first semester of the Master’s Programme in Didactics. The research questions are: (1) How do the students explain what didactics is at the beginning of the semester? (2) How do the students explain what didactics is at the end of the semester? (3) What differences can be found within and between the students’ responses in the different groups (A and B) to the questionnaire before and after the semester in relation to the differences in course design?

**Methodologies and implementation**

**Participants**

Both questionnaires were completed by 10 students (in-service teachers) in the first student group (A) and 11 students in the second group (B) (see Table 1).

In the first course (A), the students met 12 different lecturers who presented their own specialization in the field of didactics (one lecture every second week). They worked in groups

**Table 1. Number of years as a teacher.**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Total</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>10</td>
<td>158</td>
<td>15.80</td>
<td>8.92</td>
</tr>
<tr>
<td>B</td>
<td>11</td>
<td>132.5</td>
<td>12.05</td>
<td>6.36</td>
</tr>
</tbody>
</table>
and engaged in an active discussion in an Internet-based forum (Facebook). In the second course (B), the students had eight seminars with only two teachers, who discussed the field of didactics from historical, national and international perspectives. In addition, they had three seminars with another teacher who specialized in the students’ chosen specialization of didactics: General Didactics, Didactics in Mathematics, Language, Social Science, Science, Art, Physical Education and Health. Both student groups engaged with the same texts because they mostly used the same course literature.

**Course designs**

The two courses were designed differently. Course A was revised into Course B based on the findings from student evaluations of their experiences in Course A. The students found the structure of Course A difficult to grasp and the progression between the lectures was weak because each teacher presented a different perspective on didactics without relating it to the other perspectives. The design of Course A is presented in Figure 1. Every session was held at 4:15–6:45 p.m. on Tuesdays.

As shown in Figure 1, Group A students only met each teacher once, because there were 12 teachers involved in presenting the course content and each teacher focused on the course material from only one of the lectures in the course. My reflections on this layout in relation to the evaluations from the students prompted me to redesign a course that considered these aspects. The progression of learning was an important issue, particularly because students did not receive enough lectures relating to their own specialization. The fragmented information about didactics made it difficult for students to understand its core and how its parts interrelate.

The design of Course B is presented in Figure 2. In this course, students met every second Tuesday evening at 5–8 p.m. The evening was divided into two sessions: (1) 5–6:15 p.m. and (2) 6:45–8 p.m. In the first session, all students attended the same seminar/lecture and then met their teachers in their specializations (general or different subject didactics) in smaller groups in the following session.

Students mainly met three teachers, two in the general session for all students and one teacher in the specialist didactics subject. The students also read five course books individually, which were discussed during the lectures and seminars.

**Data**

The first data collection in Student Group A took place on 2 September 2014 when the students started their studies. The second collection was at the end of the first term, on 27 January 2015. The first data collection in Student Group B was on 15 September 2015 and the second after the first term ended on 8 December 2015. All students were given an open-ended question on both occasions: ‘What is didactics?’ The students were informed that their answers would be used for research purposes and were anonymous. They were given 15 minutes to write down their thoughts. Each student was given an envelope. They put their notes in this envelope, sealed it, and drew a symbol on it. They had to remember the symbol because they would get the envelope back to answer this question again at the end of the semester. This process was repeated four times in Group A and twice in Group B. The data used in this article is that collected before and after the first term for Groups A and B.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture content</th>
<th>Course material</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Didactics – an overview</td>
<td>Course book A</td>
<td>A (didactics)</td>
</tr>
<tr>
<td>2</td>
<td>Didactical questions</td>
<td>Course book B</td>
<td>B (general didactics)</td>
</tr>
<tr>
<td>3</td>
<td>Subject didactics – Art</td>
<td>Journal article</td>
<td>C (subject didactics)</td>
</tr>
<tr>
<td>5</td>
<td>Subject didactics – Swedish</td>
<td>Doctoral dissertation</td>
<td>D (subject didactics)</td>
</tr>
<tr>
<td>7</td>
<td>Subject didactics – Science</td>
<td>Journal articles</td>
<td>E (subject didactics)</td>
</tr>
<tr>
<td>9</td>
<td>Subject didactics – Social Sciences</td>
<td>Course book C</td>
<td>F (subject didactics)</td>
</tr>
<tr>
<td>10</td>
<td>Subject didactics – Physical Education</td>
<td>Journal articles</td>
<td>G (subject didactics)</td>
</tr>
<tr>
<td>11</td>
<td>Subject didactics – Mathematics</td>
<td>Official publications from Research Council and The National Agency</td>
<td>H (subject didactics)</td>
</tr>
<tr>
<td>12</td>
<td>Subject didactics – Modern Languages</td>
<td>Publication from OECD and a chapter from a scholar book</td>
<td>I (subject didactics)</td>
</tr>
<tr>
<td>13</td>
<td>General didactics – Teaching traditions</td>
<td>Journal articles</td>
<td>J (general didactics)</td>
</tr>
<tr>
<td>15</td>
<td>General didactics – Research-based knowledge and teachers practice</td>
<td>Journal articles</td>
<td>K (general didactics)</td>
</tr>
<tr>
<td>16</td>
<td>General didactics – experience-based knowledge</td>
<td>Journal articles</td>
<td>L (general didactics)</td>
</tr>
<tr>
<td>19</td>
<td>Examination (written and oral)</td>
<td></td>
<td>A (didactics)</td>
</tr>
</tbody>
</table>

Figure 1 Outline of course A.
<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture content</th>
<th>Course material</th>
<th>Teacher</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Course introduction</td>
<td>Steering documents</td>
<td>All involved teachers</td>
</tr>
<tr>
<td>2:1</td>
<td>Research on teaching and learning</td>
<td>Course book A</td>
<td>A (didactics)</td>
</tr>
<tr>
<td>2:2</td>
<td>Perspectives on learning</td>
<td>Course book B</td>
<td>B (didactics)</td>
</tr>
<tr>
<td>4:1</td>
<td>Perspectives on learning</td>
<td>Course book B</td>
<td>B (didactics)</td>
</tr>
<tr>
<td>4:2</td>
<td>Specializations</td>
<td>Differs depending on what specialization</td>
<td>Each sub-group met their teacher from their specialization every second time and had planned group-work in between</td>
</tr>
<tr>
<td>6:1</td>
<td>The historical perspective of didactics Specializations</td>
<td>Course book C</td>
<td>A (didactics)</td>
</tr>
<tr>
<td>8:1</td>
<td>Teaching – theory and practice</td>
<td>Course book D</td>
<td>B (didactics)</td>
</tr>
</tbody>
</table>

*Figure 2. Outline of course B.*
| 8:2 | Specializations | Differs depending on what specialization | Each sub-group met their teacher from their specialization every second time and had planned group-work in between |
| 10:1 | The historical perspective of didactics | Course book C | A (didactics) |
| 10:2 | Specializations | Differs depending on what specialization | Each sub-group met their teacher from their specialization every second time and had planned group-work in between |
| 12:1 | Academic writing | Course book E | B (didactics) |
| 12:2 | Specializations | Differs depending on what specialization | Each sub-group met their teacher from their specialization every second time and had planned group-work in between |
| 14:1 | Academic writing | Course book E | A (didactics) |
| 14:2 | Specializations | Differs depending on what specialization | Each sub-group met their teacher from their specialization every second time and had planned group-work in between |
| 15 | Examination (written) | | |
| 20 | Examination (oral) | | A (didactics) |

Figure 2. (continued)
Analysis

The students’ written responses were analysed qualitatively and quantitatively at an individual level to capture differences in the same students’ expressions on the two different dates they answered the question. The data were also analysed at a group level to examine the similarities of the students’ expressions about the lectures and literature they experienced during the course (Johnson & Onwuegbuzie, 2004). A mixed-methods approach was used (Creswell, 2013). A qualitative analysis was conducted to explore differences in student responses resulting from differences in course design. The students’ written responses were analysed to identify the main categories that expressed their understanding of the nature of didactics. The quantitative analysis consisted of descriptive statistics of the frequency with which specific words were used as well as the frequency of the most common topics. In this study, I used the Word Analysis Tool by TextFixer (2015).

Results

Quantitative analysis of the data shows that the mean number of words used by Group A students was 56.5 words (in total 565 words) at the pre-test and 72.9 (in total 729 words) at the post-test. Group B students used a mean of 25.45 words (total amount 280 words) at the pre-test and a mean of 24.81 words (total 273 words) at the post-test. This indicates that the first design enhanced the students’ ability to express themselves in a more developed way; however, the correlation between the amount of words and the students’ developed understanding of what didactics is did not follow a linear pattern.

Qualitative analysis of the answers focused on whether, and in what way, the students’ expressions differed between pre- and post-tests. One prominent characteristic was the teacher’s perspective of the students’ initial expressions. Teachers focused on didactics as a tool that enabled them to become more skilled in classroom instruction. The first step in the analysis was to determine whether shifts in perspectives (from a teacher-centred approach to a theoretical approach) occurred. The results show that in Group A, two of 10 students showed such a shift (respondents 109 and 110); this is described in Table 2.

In Group B, the shift from a teacher-centred approach to a theoretical approach occurred in four of 11 respondents (see Table 3). However, five of the students in this group already had a theoretical perspective at the start of the first course.

The results show that there was a slightly better result in Group B regarding a deeper understanding of didactics as an academic field. This difference was not significant, only four out of 11 of the students expressed a deeper knowledge in their post-test evaluation. Instead, there was a clear shift in thematic focus in the post-test answers. Five Group A students mentioned the didactic triangle, which was not mentioned at all by Group B. The didactic questions what, when, why and where were mentioned by two Group A students and six Group B students at the post-test. There was a stronger focus on the didactic triangle in Group A and a stronger focus on the didactic questions in Group B. All Group B answers at the post-test referred to didactics as a doctrine about the theory or the study of teaching and learning. My reflection is that the students left the classroom and focused on didactics as a framework for understanding teaching and learning as a theoretical approach rather than as a tool to develop instruction. In their post-test answers, Group A students frequently defined didactics as ‘the art of teaching’ and referred to the didactic triangle, which can be
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seen as a teacher-centred approach rather than a theoretical approach. The students in Group A try to transfer their knowledge from the course to their activities in the classroom, while students in Group B express the theories more as frameworks for their thinking. My reflection is that in design B, the students use the framework as a theoretical tool to understand how to design instruction and assess learning, and not as methods to use in the classroom. The differences in course design offered the two groups different opportunities to discern what didactics is in accordance with the framework of variation theory (Marton, 2015). The assumptions of variation theory are that the learner must discern both the object of learning and various critical aspects necessary to the object of learning. Each aspect of the learning object should be varied against an invariant background (Holmqvist, 2011). In Design A, all aspects varied; the students met different teachers, were presented with different fields of didactics and encountered different texts. Design B was based on a contrast

Table 2. Excerpts from students 109 and 110 in group A.

<table>
<thead>
<tr>
<th>Student</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>109</td>
<td>For me, didactics is synonymous with pedagogy. As educators, we should lead our students by the hand of their learning and to do it in the best way, we need to take into account what modern research says and become aware of how different we are as individuals when it comes to learning. Didactics may be general but also subject specific. It is all about perception, memory, experience, personality, motivation, self-esteem, confidence and communication.</td>
<td>Didactics is not the same as Pedagogy. Pedagogy is broader and includes didactics. Didactics is linked to the classroom. A tradition in didactics is phenomenology. I was initially skeptical towards it, and said it appeared fuzzy, but becomes more and more curious about it. I think it is very useful in that one of the focus is on everyone learns in different ways because we all have different experiences. I want to strive forward to trying to see the world and my students’ perspective and try to understand what they understand and do not. I would also like to try using the Socratic question in my teaching. With joy, I realize that psychology (one of my teaching subject) is related to didactics and especially phenomenology. It has been interesting and frustrating to realize that there is not a single method by which one can learn all pupils everything. It has also been exciting to learn about learning studies and the didactic development of rhetoric, methodology and catechism and the differences and similarities between the USA, Sweden, Germany, Japan and the Anglo-Saxon world. I also think that the stress fields (Ullens) helped me to understand perennialism, progressivism, constructivism and essentialism. What I find most interesting is that it is not about if one or the other pool is right, instead it is about the dynamic movement/process in these fields of tension.</td>
</tr>
<tr>
<td>110</td>
<td>For me, didactics is the ‘teacher variant’ of pedagogy. Theories and research about learning, education, school, teacher. Didactics can also answer why learning should be developed in a certain way. I think it is not enough to know how something should be done and why (policy documents/control) but also why in the didactic sense. Why do my students learn if I do like this and not like that? I also think that there are theories of learning in didactics, such as constructionist theories, progressivism, socio-cultural perspective, etc., and hope I will know them better in January. Didactics seems to have a connection to the scientific theory which I have not grasped yet.</td>
<td>I still think didactics is the teachers’ variant of pedagogy and it’s about learning in education, school, teachers, but also on the content of teaching – the ‘what’ question. Another aspect is its relation to education, something I have not thought much about earlier. I think at programme start, I was thinking more on teaching as a ‘methodology’ of the concrete practical work in the classroom and that I now have a somewhat different view. I think that the philosophical and historical aspects are also important. I also think that what we have read so far has made me look a bit different on the research that I read. But it is still a little difficult to identify what belongs to didactics and what instead is educational work/educational science/pedagogy. The subject didactics connection to the university subjects has become visible to me too.</td>
</tr>
</tbody>
</table>
between the field of general didactics and the students’ selected specialization within didactics. The taught content was interrelated and the course books offered a gradual progression from a local perspective of how didactics is understood in the context of the students’ own university to a global perspective of how didactics can differ in different countries (Meyer, 2012). It could be assumed that the students developed different communities of practice (Lave & Wenger, 1991), because they were kept together in all sessions in Group A, but followed different tracks in Group B regarding their chosen subject of didactic specialization.

### Discussion

My own reflection on the students’ expressions of their understanding of didactics is that there appeared to be a difference in focus between the groups, which can be tracked to differences in course design. The students developed two different communities of practice during their first term; this essentially answers the research question.

First, as the students in Group A had different teachers at each lecture, their developed knowledge had to be created by themselves, built on what they were offered during the lectures. As all the students are teachers, it seems clear that they related the knowledge they were given to their own practice as teachers. Second, the students in Group B were more oriented towards an understanding of the content as an academic subject and less in relation to their own role as teachers. Table 1 shows the differences in mean years of teaching for students in Groups A and B. However, the difference is small (15.80 in Group A and 12.05 in Group B) and cannot explain the group differences in results. The differences in course design (a stronger focus on didactics as a research field in Group B and a stronger focus on teaching

### Table 3. Excerpts from students 301, 303, 304 and 307 in Group B.

<table>
<thead>
<tr>
<th>Student</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>301</td>
<td>The ‘art of teaching’. To me, it’s about well-thought-out and informed choice of subject matter and method (how teaching is planned, organized, implemented, and evaluated). Underpinned by research and experience.</td>
<td>A wide area whose history goes over/through several other disciplines, such as psychology. The art of teaching/view of learning, how, where, when, through where it takes place/situ off. Also closely linked to the view of knowledge, what knowledge is. My view of didactics is now much wider than it was at the start of the course, more historically framed, I have more perspectives.</td>
</tr>
<tr>
<td>303</td>
<td>The science of learning. What is learning and how should teachers/the school/everyone who want someone to learn something, create the best possible learning situation for anyone to learn.</td>
<td>The science of learning, or the science of teaching. How does learning take place?</td>
</tr>
<tr>
<td>304</td>
<td>It depends on the culture how to interpret the word education. Education for me is the science of how to teach.</td>
<td>Didactics is the ‘art of teaching’. It is a part of pedagogy. Didactics can be divided into general and subject didactics. In general didactics, studies about the teaching concepts are made regardless of the topic. In subject didactics studies, the teaching based on its specific character is studied. Didactic issues are: What? How? Why?</td>
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<tr>
<td>307</td>
<td>Various factors that affect learning and teaching, e.g. if I teach English and the goal is to develop students’ oral ability I seek ways/methods to develop that ability. A decisive factor may be that I stimulate/encourage students to speak English using interesting, everyday topics.</td>
<td>The doctrine of teaching, i.e. what answers the questions of what, how, why, for whom, etc. I come quickly to think of didactics and how to teach specific subject contents. Then one needs to ask questions what should be taught, how it shall be taught, why it should be taught and should take into account who you are teaching.</td>
</tr>
</tbody>
</table>
and learning in Group A) might have had affected the students from the start of the course. The Group B students, who now are finishing their third course, have verbally expressed that they are more uncertain now about what didactics is than they were at the beginning of the Master’s programme.

My reflection is not intended to judge which course is most beneficial for the learning outcome. Instead, the reflection aims to identify those aspects that are crucial for the students’ learning based on how they expressed and reflected upon the subject taught. Group A students felt that they had developed deeper knowledge about what didactics is and were able to correct their understanding, for example, student 309 (see Table 2). The differences in focus (teaching or research) might have different applications for how students can transform their gained knowledge and apply it to their own teaching style, thus developing their teaching. My assumption is that the students developed a theoretical understanding of didactics as a research field; their responses might be useful to teachers in developing their instruction to enhance students’ deeper learning. However, I also recognize my bias as a university teacher and researcher in the field of learning, which makes me value more the research perspective at Master’s level than a perspective focusing solely on teaching, and thus develop the course in such direction. For the teacher, the teaching perspective might be more valuable to bridge the gap between research and teaching, even if the theoretical assumptions underpinning it are not used. In that case, Course A will be preferred.

My reflections show how the course contexts had different impacts on the communities of practice in Groups A and B, and how differences in course design encourage students to focus differently as a consequence. The programme aims to foster students’ academic skills in didactics; therefore, I must also consider a normative approach in my reflections as a teacher. The design in Group B accords more with what the students are supposed to achieve during the course. On the other hand, this might not be what the students prefer. I have chosen not to base my reflections upon the students’ evaluations of the course, as I was curious about their differences in expressed knowledge and not about how they value the course. In other words, did the changes result in a different focus expressed by the students’ evaluations? The reflection of the evaluation forms resulted in a revised course design and the outcome of it is described in this article. Group A expressed an issue with the scattered design and weekly progression between the parts, which resulted in the revision of Course A into Course B; Course B was introduced to Group B in the following year.

**Conclusion**

The relationship between what is offered during lectures and literature in the courses and what the students attend to and express in their evaluations are found in this study. The differences are shown in how students in the two groups expressed what didactics is. These findings are in line with differences in course design and learning opportunities offered. However, there were few respondents and the data are not sufficient to determine which design was most effective, as I have not searched for highest but changed learning outcomes during the courses. My own reflection is that the design of Course A, with lectures involving 12 different teachers discussing their own specialization in the field of didactics, might hinder the development of anything other than a surface understanding of didactics because the students start from the beginning in every session. On the other hand, the teachers seem to connect what they are offered to their own teaching to a higher degree in this group. In
Group B, the teachers followed two different tracks – general and specialized didactics – which gave the students the opportunity to reflect upon the offered literature at an increasingly deeper level with teachers who could follow their discussion along a continuum instead of meeting the group just once. On the other hand, their development of a community of research practice in the course group becomes weaker as they meet different learning situations. In Group B, the students were given the possibility of forming a community of practice because they shared their discussions with the same teachers over time, both in the general and specialized tracks. This might have closed the gap between the groups as their expressed knowledge was in the same direction. Group A formed another community of practice that focused on what they had in common; namely, teaching. An important aspect of the development of deep knowledge is the possibility to reflect upon what is being taught. This was made possible for Group B by the design of the seminars and the shared literature. This might explain why the expressions of Group B students illustrate a minor higher theoretical perspective in their understanding of didactics in their first term. A main conclusion is that no matter what design used, to develop deep knowledge takes time and this seems to be difficult to achieve during the first course of the programme. The following evaluations in the next courses will unveil if there are differences in long-term outcomes between groups.

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References


