

DOI: [10.52950/TE.2021.9.1.002](https://doi.org/10.52950/TE.2021.9.1.002)

PEER LEARNING THROUGH PEDAGOGICAL OBSERVATION IN DRIVING TEACHER EDUCATION IN NORWAY

HILDE KJELSRUD, KITT MARGARET LYNGSNES

Abstract:

The purpose of this article is to examine what driving teacher students think they learn from the learning activity pedagogical observation and what factors concerning this activity they think are important for their learning outcome. At a driving school connected to a university, driving teacher students give driving lessons to student drivers with a peer driving teacher student—a pedagogical observer—in the back seat. Focus group interviews involving eight driving teacher students were conducted to explore what they think they learn through pedagogical observation, and the data was analysed using thematic analysis. The focus group interviews revealed that driving teacher students think they (1) strengthen their driving teacher role, (2) strengthen their peer guidance role, (3) increase their subject knowledge (4) and learn to interact with student drivers. For this learning outcome to occur, driving teacher students point to these factors: 1) the need for a focused plan; 2) establishing a definite agreement; 3) having a committed attitude; 4) providing constructive feedback; and 5) possessing appropriate knowledge. This study contributes to the sparse research on cooperation among driving teacher students in the practical field at the university level. It shows that the learning activity of pedagogical observation enables driving teacher students to learn from each other during driving lessons as a two-way reciprocal learning activity.

Keywords:

pedagogical observation; sociocultural perspective; peer learning; higher education; driving teacher education; Norway

JEL Classification: I21, I23

Authors:

HILDE KJELSRUD, Nord University, Norway, Email: hilde.kjelsrud@nord.no

KITT MARGARET LYNGSNES, Nord University, Norway, Email: kitt.m.lyngsnes@nord.no

Citation:

HILDE KJELSRUD, KITT MARGARET LYNGSNES (2021). Peer Learning through Pedagogical Observation in Driving Teacher Education in Norway. *International Journal of Teaching and Education*, Vol. IX(1), pp. 13-28., [10.52950/TE.2021.9.1.002](https://doi.org/10.52950/TE.2021.9.1.002)

1. Introduction

Vision Zero is a multi-national road traffic safety project (Norwegian Ministry of Transport and Communications, 2013), which forms the foundation for educating driving teachers in Norway. The aim of the project is to create a system with no fatalities or serious injuries involving road traffic. Strengthening driving teachers' competence will benefit society as traffic accidents are a major problem throughout the world, including in Norway.

Norwegian driving teacher education started in 1970 as a one-year vocational training programme, which in 2003 became a two-year programme at the university level. Nord University is one out of two universities educating driving teachers in Norway, and Norway is one of the few countries in Europe that educates driving teachers at a university level. Approximately 100 driving teacher students graduate from the programme at Nord University every year, and during the programme they help external student drivers acquire a driving license.

The university has its own driving school with 20 cars and approximately 300 student drivers, young men and women from outside the university who want a driving license. In their first semester, driving teacher students practice their own driving skills one day a week. In their second, third, and fourth semesters, they practice their teaching skills one-and-a-half days a week with student drivers in learner cars. In addition, they must conduct driving lessons in the evening. Throughout their training, the driving teacher students engage in the learning activity pedagogical observation—namely, they observe each other in practical teaching situations in learner cars, from the back seat, and give each other feedback to improve their teaching skills.

The aim of this article is to examine the following research question: What do driving teacher students think they learn from being/having peer student pedagogical observers in the learner car, and what factors do they think are important for their learning through this activity?

2. Pedagogical observation

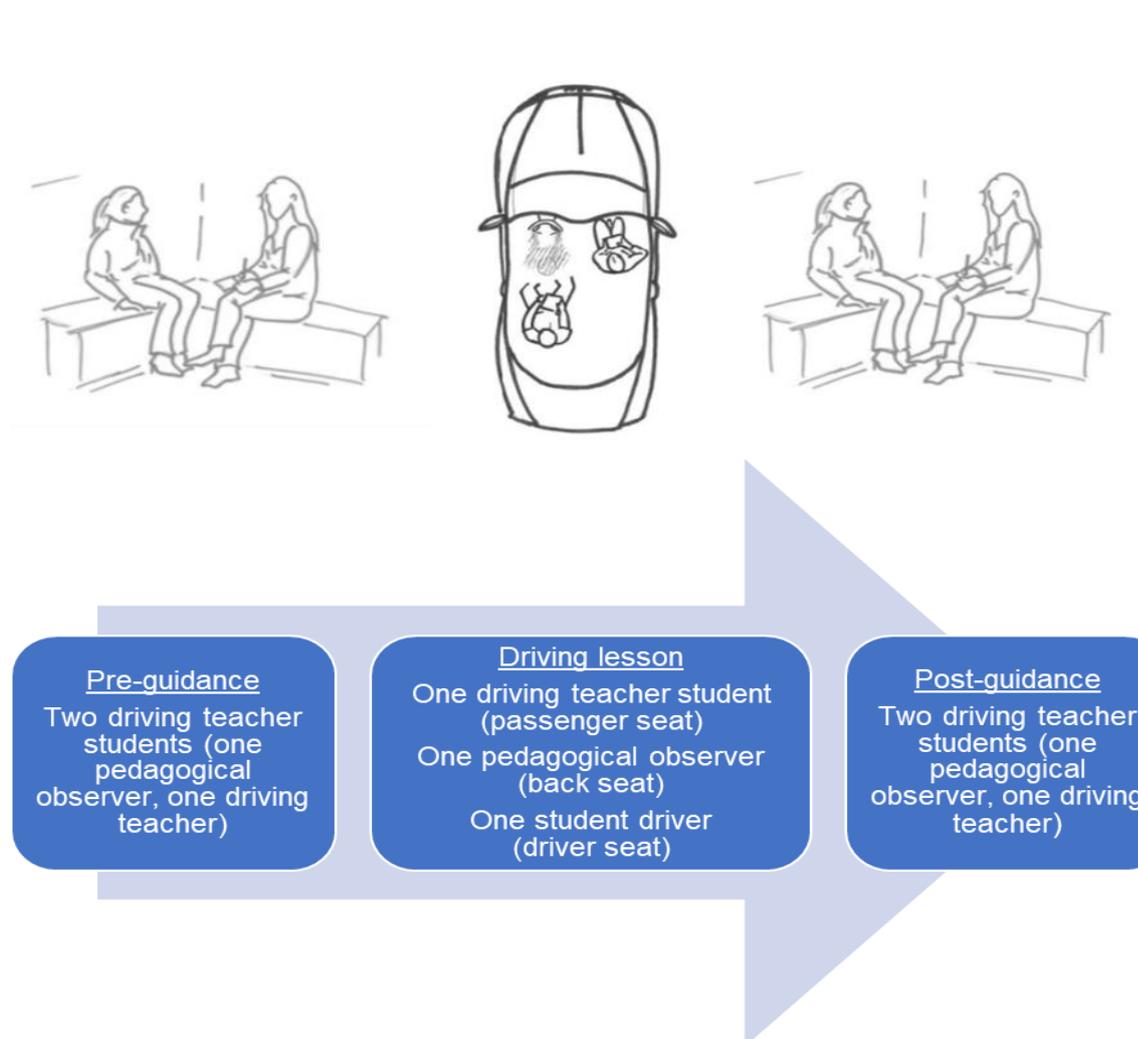
The Norwegian full-time two-year driving teacher education programme includes a course on guided teaching practice, which includes practicing driving and teaching skills. According to the curriculum for driving teacher education, the primary learning outcomes from this practical course are as follows:

Teaching skills shall lay the foundation for and develop the student's skills as a teacher. Teaching skills include the ability to create conditions for learning and facilitate good learning situations with the intention to acquire knowledge, skills and attitudes in practical and theoretical contexts. Students will be able to plan, implement, evaluate and improve the theoretical and practical training of drivers on the basis of research-based pedagogical and vocational didactic principles...Students will adapt the teaching to the pupils' prerequisites to ensure the training is as meaningful and targeted as possible (Nord universitet, 2016)

Students are supposed to use the theoretical knowledge they acquire in other courses in the programme—such as pedagogy, psychology, physics, law, car technology, road traffic transport, and technology and society—in their role as pedagogical observers in driving lessons (Nord universitet, 2016). During a driving lesson there are two driving teacher students and one student driver in the car. The focus is on the in-car activity and cooperation between peer driving teacher students. Figure 1 Illustrates the organisation of pedagogical observation in driving teacher

education; there is a pre-guidance and a post-guidance stage in addition to the main driving lesson:

Figure 1. The learning activity pedagogical observation



In the pre-guidance stage, the student driving teacher and pedagogical observer determine what the observer should look for from the back seat during pedagogical observation. This is connected to the driving teacher student's written plan, which is based on the didactical relation model (Bjørndal & Lieberg, 1978; Lyngsnes & Rismark, 2020). The didactical relation model is intended to be a tool for planning and reflection; it helps driving teacher students and pedagogical observers analyse the planning, teaching, and evaluation involved in driving lessons. In the driving lesson, the pedagogical observer monitors the teacher and takes notes. In the post-guidance stage, the two students speak about the driving lesson and their experiences in order to increase both students' skills. The pedagogical observer does not usually interfere in the driving lesson unless something is dangerous or the observed student asks for assistance. The main focus of this article is *analysing focus group discussions* about the learning activity pedagogical observation.

3. Theoretical framework

While there is sparse research on driving teacher students' education at the university level and the ways they work together in the field, there is considerable amount of research on driving instruction, in-car interaction and peer learning. Three strands of participation are at stake during a driving lesson: intra-unit participation (within the car), inter-unit participation (between traffic participants) and cross-unit participation (between drivers of different cars) (De Stefani & Gazin, 2018). This article is about intra-unit participation. Previous research on driving instruction and in-car-interaction has included fully trained driving teachers in interaction with student drivers. The focus has been on how to interact in traffic and with other road users, communication in the car and giving instructions (Boccaro, Vidal-Gomel, Rogalski, & Delhomme, 2015; Broth, Cromdal, & Levin, 2018, 2019; De Stefani, 2018; De Stefani, Broth, & Deppermann, 2019; De Stefani & Gazin, 2018; Rismark & Sølvsberg, 2007; Scott-Parker, 2017). These articles highlight the importance of intersubjectivity, shared reality and communication.

This project is based on a sociocultural perspective of learning. The learning activity pedagogical observation is a form of peer learning, and peer learning builds on a sociocultural perspective of learning that assumes knowledge is acquired through interaction in a given context. Learning is constructed socially through the use of language and participation in social practice (Greeno, Collins, & Resnick, 1996). The term "peer" can be used in a variety of relationships and settings, from senior students tutoring junior students to students in the same year assisting each other with course content and/or personal concerns (Boud, Cohen, & Sampson, 2013; Gosling, 2002). The latter is closest to this article's use of the term peer insofar as it concerns same-year students. In peer learning, students work together in groups of two or more, and those involved need access to physical resources, participants' expressed knowledge, and new knowledge (Rusk & Rønning, 2019). The advantage of learning from peers is that they are or have been in the same position as the learner (Boud et al., 2013). They may also have the same challenges and generally use the same language as their peers. Students are learning in teams and work on their social competence (Tat, Zeitel-Bank, & Saurwein, 2016).

Peer learning focuses on the "acquisition of knowledge and skill through active helping and supporting among status equals or matched companions" (Topping, 2005, p. 631). Peer learning can be defined as "students learning from and with each other in both formal and informal ways" (Boud et al., 2013, p. 4). Thus, peer learning is a two-way reciprocal learning activity (Boud et al., 2013), which means that the activity is mutually beneficial. In the case of driving teaching, for example, both the *observed* driving teacher student and the *observing* driving teacher student learn from the activity. Part of peers' work together involves developing trust and support. As Martin and Double explain, "A peer-reflection approach assumes that each party may make an equal contribution and that the process does not lead to a judgmental report" (1998, p. 162). Overall, peer learning is about students helping each other learn, actively participate, be innovative, and take responsibility for their own learning (Williamson & Paulsen, 2018).

Students are often coloured by their experiences of working together with others. The students who are positive often describe the value of peer learning practices as challenging, creative, exciting, and supportive (Boud et al., 2013). They learn about themselves and their beliefs and attitudes in addition to the subject content. As for students who are not so happy with peer learning, their negativity may be the result of prior negative experiences and/or the current activity they are engaged in (Boud et al., 2013).

Boud et. al. (2013) claims that peer learning promotes certain learning outcomes that are difficult to achieve through other teaching and learning strategies. When successfully organised and carried out, peer learning can result in five commonly shared outcomes: (1) working with others; (2) engaging in critical enquiry and reflection; (3) communicating and articulating knowledge, understanding, and skills; (4) managing learning and how to learn; and (5) conducting self- and peer assessments (Boud et al., 2013).

Through peer learning, students become accustomed to discussing their own and others' teaching methods and results for future application. Peer learning also helps students develop the skill to learn from each other, which is an important skill to have in future work (Boud et al., 2013), but it also depends on students motivation to learn (Safranková & Sikyr, 2016). Discussing their own and others' teaching methods might also be beneficial for driving teacher students so that they are prepared to have discussions with established driving teachers as they enter the driving education profession (Kjelsrud, 2019).

4. Method

4.1 Design

This article is based on a study conducted by the first author. Therefore, the pronoun "I" is used in the method, findings, and discussion sections of the article.

To find students for this study, I asked practice supervisors at the university to give me the names of students in their first year of driving teacher education who were talkative and willing to speak about their experiences. The supervisors provided 24 names out of 96 possible students in their first year. Of the 24 students, 10 signed up to contribute after getting an email and text message from me as a researcher. There were three female and seven male students between 22 and 36 years old. Eight out of 10 students met for focus group interviews. Data in this project comes from driving teacher student's statements in focus groups, and the topic is pedagogical observation.

Morgan (1996, p. 130) defines focus groups as "a research technique that gathers data through group interaction focusing on a topic determined by the researcher". Focus groups are social spaces in which participants construct their view by sharing, contesting, and acquiring knowledge (Lehoux, Poland, & Daudelin, 2006). All types of data from focus groups are expressions of social actions in different contexts (Halkier, 2012). Focus groups usually involve quite small groups of people, generally between four and 12 people (Hollander, 2004). The special feature of focus groups is the unique social interaction that arises between participants and between the researcher and participants.

The focus group interviews were conducted in the students' fourth semester. For this project, there were two focus groups: the first group included one female and two males, and the second group included two females and three males. The students in each group were not close friends. Nevertheless, they knew each other because they were in the same driving teacher education programme and because this study was a follow-up from an earlier project on students' perceptions of pedagogical observation in which these students participated (Kjelsrud, 2019). I was the sole moderator for both focus groups. Before the focus group sessions, the driving teacher students received an email about the topics that would be addressed during the interview. They then spent the first five minutes of the focus group interview completing two incomplete sentences and doing one writing task:

Table 1. Two open-ended sentences and one writing task for the focus group sessions

1	By being a pedagogical observer in the car, I learn...
2	By having a pedagogical observer in the car, I learn...
3	Write three criteria important for pedagogical observation to work.

I facilitated two focus group discussions using a discussion guide based on the sentences/writing task in Table 1. Each focus group discussion lasted 40 minutes and was conducted in a meeting room at the university. All students actively engaged in the discussion, sitting in a circle, so my role as a moderator was to keep the time and focus on tasks connected to Table 1. I recorded and transcribed these interviews and wrote memos for each interview.

4.2 Ethical issues

The project is approved by NSD - Norwegian Centre for Research Data. The driving teacher students provided written consent by signing a confirmation letter. Confidentiality is about privacy protection, and I have referred to student statements by using "pedagogical observer" and a number instead of their name.

My integrity as a researcher is crucial for the quality of this project. Transparency is sought to ensure a good basis for the conclusions. As a researcher and moderator in the focus groups, I had to be aware that there could be tension in this situation as I am employed at the university and the informants are students. I was not their supervisor, and the power in the relationship was asymmetric (Kvale, Brinkmann, Anderssen, & Rygge, 2015). As a moderator of the focus groups I needed to be open minded, allow the students' voices to be heard, and avoid looking for confirmations of my own ideas or wishes during the project. No one comes empty-handed into a research process; everyone brings an idea (Alvesson & Sköldberg, 2008). Openness and integrity are fundamental in this context, together with accountability and verifiability (Vinther, Enebakk, & Hølen, 2016), with a basic respect for human dignity (NESH, 2016).

4.3 Analysis

I used thematic analysis to analyse the data from the focus group interviews. Thematic analysis is a flexible method for identifying, analysing, and reporting patterns/themes within data. According to Braun and Clarke (2006), thematic analysis involves six stages. The first stage is (1) getting to know the data. Thus, I read all the transcribed material thoroughly to become better acquainted with it, and I divided the students' statements into three groups. The first group included what the students think they learn from being an observer, while the second group included what the students think that they learn from being observed themselves. The third group included the different criteria the students highlighted as important for making pedagogical observation work. I analysed these three groups separately.

After becoming familiar with the data, I started to (2) generate initial codes. I made a table with four columns, containing these headings: name, utterances, codes and comments. Next, I

performed coding of relevant findings in a systematic way over the entire dataset; that is, for each statement, I made one or more codes describing the meaning of a statement. The 262 codes were either a short sentence or a word. Of the 262 codes, 192 concerned what students think they learn from the process of *being* or *having* a pedagogical observer and 70 codes regarded criteria for pedagogical observation to work. 105 codes involved what driving teacher students think they learn from being a pedagogical observer and 87 codes represented what driving teacher students think that they learn from having a pedagogical observer. I generated sub-themes by clustering codes with similar meaning together (Table 2,3 and 4).

The third stage is about (3) searching for themes and patterns in the data material. I noted ideas for different themes while coding. There were many possible themes in the data material about being or having an observer, such as: communication, learning atmosphere, theoretical knowledge, and others (Table 2). There were 6+5+8 themes (Table 2+3 and 4), which were named sub-themes.

In stage four (4) I reviewed the 19 sub-themes by reading codes and data material once more. I went back to the dataset to see if the preliminary sub-themes represented the data. Six sub-themes lead to four themes about what driving teacher students think they learn from being a pedagogical observer (Table 2), and five sub-themes lead to three main themes concerning what driving teacher students think they learn from having a pedagogical observer (Table 3). Eight sub-themes lead to five main themes about the criteria needed for pedagogical observation to work (Table 4).

Stage five is about (5) defining and naming themes, and I was checking whether names were understandable, too general or too narrow. As an example, I found themes like “relations” or “interaction” to be too general. The relation or interaction driving teacher students were discussing was between the student driving teacher and student driver, thus the relations theme was changed into “relating to student drivers”.

The last step was to (6) produce a readable a report. Using this method, I looked for themes and patterns in the data material. It was not a linear approach where I finished one stage before I started another. Instead, I had to go back and forth between the stages. In fact, I had to return to the transcribed material quite often to make sure I had captured everything. Further, the themes did not emerge by themselves. Rather, I actively generated themes based on my choices as a researcher. Below are the sub-themes and themes:

Table 2. What do you learn from *being* a pedagogical observer?

Sub-Themes	Themes
Outsider perspective Agreement Aim of pedagogical observation	Strengthen one’s driving teacher role Strengthen one’s peer guidance role
Use of theoretical knowledge	Subject knowledge
Learning atmosphere	Relating to student drivers

Communication	
---------------	--

Table 3. What do you learn from *having* a pedagogical observer ?

Sub-Themes	Themes
Outsider perspective Who can be a pedagogical observer Purpose/aim of pedagogical observation	Strengthen one's driving teacher role Strengthen one's peer guidance role
Learning atmosphere Communication	Relating to student drivers

Table 4. Writing task: write three important criteria for pedagogical observation to work

Sub-Theme	Themes
Plan/preparations Pre- and post-conversation Specific tasks during the lesson	A focused plan A definite agreement
An open mind Serious, focused and present Positive / constructive feedback	Commitment Constructive feedback
Subject knowledge Professional standing	Knowledge

5. Findings

Findings from this project are presented under two headings, according to the research question: (1) *what do driving teacher students think they learn from being/having a pedagogical observer in the car* and (2) *what factors do driving teacher students think are important for how they learn through the learning activity pedagogical observation?* I am using student statements from the focus group interviews to exemplify findings.

5.1 *What do driving teacher students think they learn from being/having a pedagogical observer?*

5.1.1 Strengthen one's driving teacher role

Driving teacher students claim that they learn from observing others, both those giving a good driving lesson and those giving a bad one, without getting into what a good or bad driving lesson is. They think they are becoming more aware of different approaches depending on the student driver, that is, how their peer students approach different types of student drivers:

There are several ways to explain things, and for example if you are going to explain the risk when driving in a tunnel there are very many moments. Maybe one teacher emphasises fire in the tunnel, while someone else emphasises other things (Pedagogical Observer 3)

The pedagogical observer learns how the peer student is adapting his teaching to the student driver. Several driving teacher students express that they see different and new approaches from the backseat, and that they "copy" many of these approaches when conducting driving lessons themselves, for instance how to teach student drivers to drive in a roundabout. Some driving teacher students look at their peers as good role models and say that observing others performing driving lessons makes them aware of how they want to be as driving teachers themselves. However, some driving teacher students also point to things they see from the back seat that affect the student driver in a negative way and could have been done differently, for instance, providing a shorter and clearer explanation of the exercise. These learning outcomes are above all related to the purpose/aim of the learning activity.

5.1.2 Relating to student drivers

The sub-themes communication and learning atmosphere will be the main focus of this theme. Communication between the student driver and driving teacher student seems to be of importance in this project. Pedagogical observers are picking up good questions when sitting in the back seat, as they hear good questions asked by peer students in learning situations. Another aspect is how the driving teacher student is perceived. The following quotation emphasises the communication between driving teacher student and student driver:

It is very nice to have a pedagogical observer making you think about how you are perceived when you communicate with the student driver. I have been told that I quite often use language slightly too academic for student drivers; academically heavy language is a little difficult, maybe, for the student driver. They may feel that I am lecturing them in a negative way. (Pedagogical Observer 4)

The learning atmosphere in the car depends on how the driving teacher student treats the student driver. Findings show that driving teacher students learn to when to stay silent and allow the student driver to concentrate on driving the car, although they say it is difficult to know when to be quiet. One student even says that she wants the student driver to tell her to be quiet if he needs silence to be able to concentrate.

5.1.3 Strengthen one's role of guiding peer students

Driving teacher students seem to think that they improve guiding peers on an equally professional level by using the learning activity, which is an important aim of pedagogical observation. Many driving teacher students say they have seldom had experience guiding peers, and their main focus seems to be on the post-guidance stage (Figure 1), that is, after the driving lesson:

You learn how to guide, especially afterwards, after the driving lesson. You learn a lot by talking about the lesson with a peer student, if you try to ask the right questions, because then you can practice guidance (Pedagogical Observer 8)

This pedagogical observer highlights the importance of questions, namely asking the “right” question in the post-guidance to practice the guidance skills. Several students express the importance of post-guidance and observation during the driving lesson and not focusing too much on the pre-guidance that occurs before the driving lesson (Figure 1). Driving teacher students seem to be more concerned about making an agreement before the driving lesson when acting as pedagogical observers than they do when in the driving teacher role.

Several driving teacher students also comment on the culture in the group when it comes to discussing and using subject knowledge. Some students say that they use a kind of “simple” language to guide each other and that it is the culture of the group. At the same time, they see a development in the group regarding how to communicate and are more aware of spending sufficient time on the learning activity. Driving teacher students also highlight the outsider perspective: to acquire a learning outcome from this “outsider”, students say they need the observer to say something more than just “that was a good driving lesson”. The former comment can also be connected to who the pedagogical observer is, such as a familiar or unfamiliar peer student, and what professional level to expect from this peer student.

5.1.4 Subject knowledge

This theme is related to theoretical subjects in the programme (Nord universitet, 2016). The following quotation summarises that all theoretical subjects in the driving teacher programme can be featured during pedagogical observation in the car: “It is about the method and practice others use, if it is on pedagogy or if it is on law, or if it is about using the clutch” (Pedagogical Observer 6). Teacher activities applied while the car is running are as follows: giving directions, cues to lead or help, comments on the execution of a task, or taking control of the vehicle. Driving teacher students think they improve their teaching activities by having an observer present when they teach a driving lesson. The teacher activity of “giving directions on where to drive” during a driving lesson is a practical skill, but it also requires knowledge about why, when and how to do the exact teacher activity. Driving teacher students also say that they learn about car technology, which is one of the subjects of the driving teacher programme. As an example they learn how to perform a technical check of the car. Students also highlight that by observing other driving teacher students they gain knowledge of how to use different areas for practice and where those areas are.

I have captured what students think they learn from pedagogical observation—namely, what they learn from being a pedagogical observer as well as having a pedagogical observer present. In the following section I will focus on the important factors needed to fulfil this learning outcome.

5.2 Factors that driving teacher students think are important for their learning through the learning activity pedagogical observation.

5.2.1 A focused plan and a definite agreement

Sub-themes like planning and preparations, as well as pre- and post-conversation, which lead to a specific task during the driving lesson, were highlighted by driving teacher students. Peer driving teacher students seem to find it important to make an agreement before a driving lesson, something generally done in the pre-guidance meeting (Figure 1). This builds on the driving

teacher student's written plan. The agreement is about the pedagogical observer being focused in the back seat and having a specific task to do while sitting there; they limit their task and relate to one or more fixed things, depending on the driving teacher student. Findings show that pedagogical observers find it difficult to sit for 90 minutes and examine *everything*; they need to have a definite agreement in advance regarding what to look for during the driving lesson.

Driving teacher students highlight the pre-guidance and post-guidance stages (Figure 1), and the extra set of eyes in the back seat. This outsider perspective helps students see things they are unable or unwilling to see themselves:

It is a pre-guidance and a post-guidance to being a pedagogical observer. In post-guidance, they give comments on something you have specifically asked for, where you may be strong or weak. You may be blind to your own teaching or do things you are not conscious of. You need an extra set of eyes. (Pedagogical Observer 6)

This extra set of "outsider" eyes sees things from another angle and with different knowledge, experience, and beliefs.

5.2.2 Commitment and constructive feedback

Findings show that driving teacher students think the pedagogical observer should be open minded, serious, focused, present and committed to giving positive and constructive feedback to their peers. The following quotation is about students receiving help to develop themselves as driving teachers:

I find that when I have a good pedagogical observer with me, my following driving lesson will become much better. I get help to develop myself and maybe even the student driver more effectively. (Pedagogical Observer 6)

Student driving teachers claim that they need engagement and commitment from the pedagogical observer, and they are aware of how important it is for them to be focused and engaged when pedagogical observing from the back seat. Findings show that students are aware that they are sometimes too unfocused to give constructive feedback.

5.2.3 Knowledge

Findings demonstrate the need to have subject knowledge and a certain professional standing to be able to help a peer student. *"I think that if pedagogical observers do not have prior knowledge, they cannot give decent feedback either (Pedagogical Observer 1)*. This quotation highlights that driving teacher students need to have knowledge when providing an opinion about the executed driving lesson. Another finding is that driving teacher students say they need repetition, thus many driving lessons as both an observer and teacher are needed to reach a deeper understanding. Sometimes the pedagogical observer reveals missing knowledge and asks the teacher in the front seat if he needs help. Findings also show that the driving teacher in the front seat will ask the pedagogical observer for help, for instance, about traffic signs. This requires that the pedagogical observer has the knowledge or is able to find the answer quickly. Driving teacher students also point to the importance of their peers' genuine desire to discuss subjects, thoroughly if necessary. This, they claim, leads to a natural discussion and good reflections. Last but not least, driving teacher students underline the need to pay attention to the feedback from the pedagogical observer and use this feedback to build on and develop their own knowledge.

6. Discussion

Overall, the findings from the current study indicate that the learning activity pedagogical observation is of significant importance for driving teacher students' learning. However, there are some conditions that are important for the learning outcome.

This part discusses the findings and connects them to the theoretical framework of this article, the research question, and the driving teacher education programme's expected learning outcomes (Nord universitet, 2016). The learning outcome from peer learning and pedagogical observation includes (1) working with others; (2) engaging in critical enquiry and reflection; (3) communicating and articulating knowledge, understanding, and skills; (4) managing learning and how to learn; and (5) conducting self- and peer assessments (Boud et al., 2013). The following discussion will be organised according to these five points.

One of Boud's (2013) learning outcomes, working with others, requires developing teamwork skills and can be connected to the theme relating to student drivers and strengthening one's guidance role (Table 2+3). The group of driving teacher students becomes a learning community (Boud et al., 2013), and the learning community of students uses the learning activity pedagogical observation. Pedagogical observation is connected to the learning outcome from the course on guided teaching practice as driving teacher students are working on their teaching skills (Nord universitet, 2016). The learning atmosphere in the car involves not only the relationship between the student driver and the student driving teacher but also the relationship between the peer student driving teachers. One of the driving teacher students called the driving lesson "an arena for practice." This practice is a two-way reciprocal learning activity (Boud et al., 2013) since both the pedagogical observer and student driving teacher learn from the activity. As presented above, driving teacher students think there are some important criteria required for the learning activity to work, such as having a focused plan before the driving lesson starts and making a definite agreement concerning what task the pedagogical observer should have sitting in the back seat (Table 4).

Some comments on working with others made in the focus groups concern how the student driving teacher relates to the student driver—that is, regarding the learning atmosphere (in the front seat between the student driver and driving teacher student). The driving teacher student quite often asks the pedagogical observer in the back seat to observe the atmosphere in the car during a driving lesson, that is, the interaction in the car (Rismark & Sølvsberg, 2007). This is the intra-unit participation that takes place within the car (De Stefani & Gazin, 2018). One student stated that he asked the pedagogical observer to observe if he is nice, strict, or angry and whether he speaks too loudly or too quickly.

Students engage in critical enquiry and reflection, which can be connected to strengthening one's driving teacher and peer guidance role (Table 2+3). How to formulate good questions and being aware that silence is an important factor for both peer students and student drivers is a result of this. Indeed, one of the students mentioned that she focuses on good questions when acting as a pedagogical observer. As she sits in the back seat, she waits for good questions to arise. She highlighted that good questions are critical questions that make one reflect. One student driving teacher pointed out the importance of bringing a pedagogical observer who can observe the communication with student drivers because he is aware that he sometimes uses language that is too technical. This driving teacher student has been criticised for using this technical language by his peers and is reflecting on how to change his use of words. In a sociocultural perspective, the

use of language and participation in social practice is crucial for learning to take place (Greeno et al., 1996).

A learning outcome from peer learning is how to communicate and articulate knowledge, understanding, and skills (Boud et al., 2013). I connect this learning outcome to subject knowledge (Table 2). Developing concepts or subject knowledge often occurs through testing ideas on others (Boud et al., 2013). One driving teacher student claimed that a pedagogical observer needs to know something about what happens in order to have an opinion and help others. Having subject knowledge helps put students on the same level, enabling them to communicate with each other as well as respect and understand each other more fully. Another student explained that experiencing many driving lessons and discussing them has helped him build his subject knowledge in several layers. This is interesting when it comes to how driving teacher students view the way individuals learn (i.e., in layers) and how the repetition and articulation of knowledge affect learning outcomes. Knowledge, in this article, is looked upon as socially constructed (Vygotsky, 1978), and I connect the social experience of the learning activity pedagogical observation to subject knowledge. This learning outcome, subject knowledge, is connected to the learning outcome from the course on teaching practice, as practice is supposed to lay the foundation for and develop the student's proficiency as a driving teacher (Nord universitet, 2016). Knowledge is one of the important criteria driving teacher students need (Table 4) to achieve the learning outcome, as desired in pedagogical observation.

Peers become skilled at managing learning and learning how to learn (Boud et al., 2013), and this can be connected to the learning outcome of strengthening one's driving teacher and peer guidance role (Table 2+3). As Boud et al. explain, "Peer learning activities require students to develop self-management with others" (2013, p. 9). Driving teacher students have an obligation to manage their own learning and help their peer students in the learning process. One of the focus group members stated that her learning outcome depends on herself as well—namely, how engaged and focused she is. This is quite obvious but still a reflection on self-management, learning and her own responsibility in the situation (Williamson & Paulsen, 2018).

The agreement concerning what to observe from the back seat is about finding a joint understanding of the task the observer should perform and an intersubjectivity between the participants. One student argued that it is important to have this agreement because it is difficult for him to watch "everything." Pedagogical observers need to limit or extend the observation task. Making this agreement before the driving lesson makes the observation task easier. This is part of managing learning and one of the important criteria needed for pedagogical observation to work (Table 4). The advantage of learning from peers is that they are or have been in the same position as the learner herself (Boud et al., 2013). Driving teacher students often have the same challenges and generally use the same language, in which puts them in a position to understand each other better, which promotes intersubjectivity between peers.

Peers learn how to conduct self- and peer assessments in peer learning (Boud et al., 2013). In this project this is connected to strengthening the driving teacher role, the role of peer guidance, and relating to student drivers (Table 2+3). The main focus of this learning outcome is peer assessment, as reflected in the students' statements about the importance of an outsider perspective from the pedagogical observer in the back seat. Being a pedagogical observer provides opportunities to give feedback to a peer student, which may strengthen feedback-giving skills in general. Conducting constructive feedback is an important criterion needed for

pedagogical observation to work (Table 4). One driving teacher student claimed that he “gets an overview without being a part of it”. The observer is not responsible for teaching the student driver, but he or she is responsible for helping and assessing the peer student driving teacher, without being judgmental (Cosh, 1998; Martin & Double, 1998).

Peer learning can be defined as students learning from and with each other in both formal and informal ways (Boud et al., 2013). Pedagogical observation among driving teacher students seems to be more formal than informal due to the structure of the learning activity (Figure 1). Students seldom have enough opportunities to receive feedback from staff/supervisors (Boud et al., 2013), and this may also be the case in driving teacher education. Pedagogical observation provides students with opportunities for additional peer assessments to help develop their teaching skills. One major statement from the students is that the pedagogical observer provides “an extra set of eyes,” which helps them become aware of things they do not see themselves or may not be conscious of.

7. Practical implications

This article shows that the learning activity pedagogical observation works well and has a good learning outcome as long as certain criteria are fulfilled. Nevertheless, there is still a need to develop a more joint understanding among driving teacher students concerning the learning activity pedagogical observation to strengthen the learning outcome. This entails a particular focus on the pre- guidance (Figure 1) to determine a specific task for the pedagogical observer. The learning activity of pedagogical observation is useful but should be implemented at an early stage of the education. Moreover, more effort should be put into acquiring theoretical knowledge about the learning activity and increasing awareness of its structure while in practice. By making this learning activity more effective and clear, driving teacher students may have a higher degree of learning outcome when practising their teaching skills, without the supervisor in the car.

8. Concluding remarks

The aim of this article is to examine the following research question: What do driving teacher students think they learn from being/having peer students as pedagogical observers in the learner car, and what factors do they think are important for their learning through this activity? Findings show that driving teacher students think they (1) strengthen their driving teacher role, (2) strengthen their peer guidance role, (3) increase their subject knowledge (4) and learn to interact with student drivers. For this learning outcome to occur, driving teacher students point to factors they think are important: 1) The need for a focused plan; 2) establishing a definite agreement; 3) having a committed attitude; 4) providing constructive feedback; and 5) possessing appropriate knowledge. Further research on this subject could go deeper into how driving teacher students conduct pedagogical observation to make it easier for the next generation of driving teachers to conduct the learning activity.

References

- Alvesson, M., & Skoldberg, K. (2008). *Tolkning och reflektion, vetenskapsfilosofi och kvalitativ metod [Interpretation and reflection, philosophy of science and qualitative method]*. Lund: Studentlitteratur AB.
- Bjørndal, B., & Lieberg, S. (1978). *Nye veier i didaktikken? : en innføring i didaktiske emner og begreper [New paths in didactics? : an introduction to didactic topics and concepts]*. Oslo: Aschehoug.

- Boccaro, V., Vidal-Gomel, C., Rogalski, J., & Delhomme, P. (2015). A longitudinal study of driving instructor guidance from an activity-oriented perspective. *Applied Ergonomics*, 46, 21-29. WOS:000347736900003. doi:10.1016/j.apergo.2014.06.001
- Boud, D., Cohen, R., & Sampson, J. (2013). *Peer Learning in Higher Education: Learning from & with Each Other*. New York: Routledge.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa
- Broth, M., Cromdal, J., & Levin, L. (2018). Showing where you're going. Instructing the accountable use of the indicator in live traffic. *International Journal of Applied Linguistics*, 28(2), 248-264. doi:10.1111/ijal.12194
- Broth, M., Cromdal, J., & Levin, L. (2019). Telling the Other's side: Formulating others' mental states in driver training. *Language & communication*, 65, 7-21. doi:10.1016/j.langcom.2018.04.007
- Cosh, J. (1998). Peer Observation in Higher Education - A Reflective Approach. *Innovations in Education and Training International*, 35(2), 171-176. Retrieved from <https://doi.org/10.1080/1355800980350211>
- De Stefani, E. (2018). Formulating direction: Navigational instructions in driving lessons. *International Journal of Applied Linguistics*, 28(2), 283-303. doi:10.1111/ijal.12197
- De Stefani, E., Broth, M., & Deppermann, A. (2019). On the road: Communicating traffic. *Language & communication*, 65, 1-6. doi:10.1016/j.langcom.2018.04.009
- De Stefani, E., & Gazin, A.-D. (2018). Learning to communicate: Managing multiple strands of participation in driving lessons. *Language & communication*, 65, 41-57. doi:10.1016/j.langcom.2018.04.008
- Gosling, D. (2002). Models of Peer Observation of Teaching. Retrieved from https://www.researchgate.net/profile/David_Gosling/publication/267687499_Models_of_Peer_Observation_of_Teaching/links/545b64810cf249070a7955d3.pdf
- Greeno, J. G., Collins, A. M., & Resnick, L. B. (1996). Cognition and Learning. In R. C. Calfee & D. C. Berliner (Eds.), *Handbook of educational psychology*. New York: Macmillan Library Reference.
- Halkier, B. (2012). Fokusgrupper [Focusgroups]. In S. Brinkmann & L. Tanggaard (Eds.), *Kvalitative metoder, Empiri og teoriutvikling [Qualitative methods, Empirics and theory development]*. Oslo: Gyldendal akademisk.
- Hollander, J. A. (2004). The Social Contexts of Focus Groups. *Journal of Contemporary Ethnography*, 33(5), 602-637. doi:10.1177/0891241604266988
- Kjelsrud, H. (2019). How Student Driving Teachers perceive Pedagogical Observation in Driving Lessons. *International Journal of learning, Teaching and Educational Research*, 18(No. 8), 108-127. doi:<https://doi.org/10.26803/ijlter.18.8.7>
- Kvale, S., Brinkmann, S., Anderssen, T. M., & Rygge, J. (2015). *Det kvalitative forskningsintervju [The qualitative research interview]* (3. utg., 2. oppl. ed.). Oslo: Gyldendal akademisk.
- Lehoux, P., Poland, B., & Daudelin, G. (2006). Focus group research and "the patient's view". *Social Science & Medicine*, 63(8), 2091-2104. doi:10.1016/j.socscimed.2006.05.016
- Lyngsnes, K. M., & Rismark, M. (2020). *Didaktisk arbeid [Didactical work]* (4. utgave. ed.). Oslo: Gyldendal.
- Martin, G. A., & Double, J. M. (1998). Developing Higher Education Teaching Skills Through Peer Observation and Collaborative Reflection. *Innovations in Education and Training International*, 35(2), 161-170. Retrieved from <https://doi.org/10.1080/1355800980350210>
- Morgan, D. L. (1996). Focus groups. *Annu. Rev. Sociol.*, 22, 129-152. <https://doi.org/10.1146/annurev.soc.22.1.129>

- NESH. (2016). *Forskningsetiske retningslinjer for samfunnsvitenskap, humaniora, juss og teologi [Research ethics guidelines for the social sciences, humanities, law and theology]* (4. utg. ed.). Oslo: De nasjonale forskningsetiske komiteene.
- Nord universitet. (2016). Studieplan, Trafikklærer [Curriculum, Driving Teacher]. *Nord.no*. Retrieved from <https://www.nord.no/no/Student/studieplaner/2016h/pdf%20dokumenter/TLBTA.pdf>
- Norwegian Ministry of Transport and Communications. (2013). *National Transport Plan 2014-2023*. (Meld. St. 26 (2012 – 2013)). Retrieved from https://www.regjeringen.no/contentassets/3fff99ead75f4f5e8bd751161006bffa/pdfs/stm201220130026000en_pdfs.pdf
- Rismark, M., & Sølvsberg, A. M. (2007). Effective dialogues in driver education. *Accid Anal Prev*, 39(3), 600-605. doi:10.1016/j.aap.2006.10.008
- Rusk, F., & Rønning, W. (2019). Group work as an area for learning in STEM education: negotiations of epistemic relationships. *Education Inquiry*. doi:10.1080/20004508.2019.1638194
- Safranková, J. M., & Sikyr, M. (2016). The Study of University Students' Motivation. *International Journal of Teaching & Education*, IV(4). doi:10.20472/TE.2016.4.4.004
- Scott-Parker, B. (2017). Nonverbal communication during the learner lesson with a professional driving instructor: A novel investigation. *Transportation Research Part F-Traffic Psychology and Behaviour*, 47, 1-12 WOS:000404197300001. doi:10.1016/j.trf.2017.03.004
- Tat, U., Zeitel-Bank, N., & Saurwein, L. (2016). The Triangle of Social Competence Development. *International Journal of Teaching & Education*, IV(3). doi:10.20472/TE.2016.4.3.003
- Topping, K. J. (2005). Trends in Peer Learning. *Educational Psychology*, 25(6), 631-645. doi:<https://doi.org/10.1080/01443410500345172>
- Vinther, T., Enebakk, V., & Hølen, J. C. (2016). *Vitenskapelig (u)redelighet [Scientific (un)honesty]*. Oslo: Cappelen Damm akademisk. <https://doi.org/10.17585/noasp.8.20>
- Vygotsky, L. S. (1978). *Mind in Society, The Development of Higher Psychological Processes*. London, England: Harvard University Press.
- Williamson, S., & Paulsen, L. (2018). The Impact of Peer Learning within a Group of International Post-graduate Students - A Pilot Study. *Athens Journal of Education*, 5(1), 7-28. doi:<https://doi.org/10.30958/aje.5-1-1>