

Final report

The pedagogical practice of riding; learning, interaction and communication on tacit knowledge

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Part 1: Detailed summary

Short description of objective, method, main results, importance for the horse sector, and recommendations. The summary should be written in Swedish or Norwegian.

Syftet var att utforska interaktionen mellan deltagare vid ridundervisning på svenska ridskolor och hur ridlärare kan göra ryttarkänsla möjlig att lära. Med hjälp av samtalsanalys bearbetades videospelningar av ridlektioner med grupper av elever och enskilda elever. Analyserna av gruppundervisningen visar att det finns ögonblick, begränsade i tid och rum, när ridläraren och de individuella eleverna tillsammans, genom ömsesidig orientering, etablerar så kallade "instruktionsutrymmen". Detta är sekvenser med instruktioner, instruerade handlingar och återkoppling på instruerade handlingar. Resultat från de enskilda lektionerna visar hur ridlärarna ständigt skiftar fokus mellan elevens sits och påverkan, hästens aktivitet, samt kommentarer om ryttarkänslan. Resultaten visar också att deltagarna i samverkan skiftar mellan aktivitet och reflektion, för att göra ryttarkänsla möjlig att lära. Sammanfattningsvis visar resultaten på vikten av en dialog mellan deltagarna under ridundervisning. Projektet ger även viktig information om ridundervisning på ridskolor och resultaten kan därmed bidra till vidareutveckling av ridskolors olika former av ridundervisning. Denna studie bidrar också till en utveckling av coaching inom ridsporten, genom att visa hur ridlärare och elever samarbetar för att göra ryttarkänsla möjlig att lära.

Part 2: Main report

Introduction

This project is about riding lessons at Swedish riding schools. The Swedish riding school's teaching is usually based on riding lessons in groups, usually with about ten students, while this is unusual in many other countries that Sweden usually compares with. The area of interest for this study is riding school activities with both group teaching and individual teaching.

In a licentiate thesis, partly financed by Stiftelsen Hästforskning, Lundesjö Kvar (2013) has studied riding lessons as an activity system. An activity system is influenced by its history and is shaped in dialog with its surroundings (Leontiev, 1978; Engeström, 1987). Traditions, rules and expectations often govern the riding lessons and the teaching methods used by the riding teachers. During one and the same riding lesson, it turned out that several focuses can occur. When the teaching has a *horse* focus, the horse's well-being is at the center; when it has a *student* focus, the teacher strives primarily to support the students' learning. In between, there are sometimes a *routine* focus that may be due to for example ignorance or incompetence. Most riding teachers want to communicate with the students about the equestrian feeling but it does not become reality. Only three of the eight who wanted to talk to the students about the feeling succeeded in their intentions during the observed riding lessons.

Riding lessons is a part of riding teachers' everyday tasks and it is an educational practice that is not well explored so far (Thorell, 2017). There are three parts involved in the teaching situation, it's the riding teacher, the student and the horse. For this reason, it is interesting to study how the interaction between the three parts is organized. The few studies of riding lessons that have been conducted shows that it is a very complex situation (Cumyn, 2000; Maw, 2012; Lundgren, 2017). Podhajsky's (1997) states that one of the factors that make riding lessons unique is that the horse's role on the one hand can be as a teacher, when the horse is well-educated and thus can act as a teacher. On the other hand, it can sometimes be that the rider while being the riding teacher's student at the same time is the one who is to teach the horse different moments (Podhajsky, 1997). There are studies from other teaching contexts that have looked at the collaboration and the interaction between teachers and students. For example, St John and Cromdal (2016) show how the teacher and the students work together when organizing instructional sequences during language lessons. An instructional sequence consists of instruction- instructed action - assessment of instructed action (Lindwall & Ekström, 2012). The participants in the study by John and Cromdal (2016) collaborated, through questions and answers on how to perform different tasks - but they had no horses to interact with. Something else that is important in riding lessons is that it is a mobile situation. According to Haddington, Mondada and Nevile (2013), mobility includes both body movements, and a body on the move in some direction. When for example two people are moving toward each other in an open place they sometimes enter an interactional space (Mondada 2009). Within the interactional space the two participants interact and have a shared attention towards the same thing.

The rider is both performing embodied movements and needs to control his own body in relation to the horse's body. The rider's movements and communication with the horse constitutes of multimodal resources. Examples of multimodal resources may, in addition to body movements (posture and position), also be gestures, how different objects are handled (how the rider holds the rein), as well as objects in the surrounding environment that the participants are oriented towards (Goodwin, 2000). The multimodal resources are essential for riding lessons (Lundgren, 2017). The rider communicates with the horse through signals, for example with seat, legs and hands. The riding teacher also uses the body to show, for example, how the student should do in different situations. Instructions can be given for many different purposes, it can be information before an exercise or to correct students performed instructed actions (Lindwall, Lymer & Greiffenhagen, 2015). Instructions can also be given in the form

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of demonstrations, for example bodily movements or positions (Keevallik, 2010). Other research on instruction in teaching an embodied knowledge has been made by Lindwall and Ekström (2012) who found a sequential pattern for the instructions when the students learned a manual skill, in this case crocheting. The teacher comes close to the student and shows with embodied movements how to hold the thread, and gives instructions at the same time as the student performs the instructed actions.

Wolframm (2014) emphasizes the importance of the riding teacher being able to time their instructions and their feedback to the students during riding lessons. This is to ensure that the student, in direct connection to the instructed action, get to know if it was a correctly performed action or if it needs to be corrected. Timing is also considered to be of importance when the rider communicates with the horse in order for the signals to be given at the right time and thereby enable the horse to perform the movements the rider wants it to do (Zetterqvist Blokhuis & Lundgren, 2017). This means that riding requires a certain form of feeling from the rider's side, so-called equestrian feel, in order to be exercised at a more advanced level (Dashper, 2016; Zetterqvist 2019). In order to help the student to find the feeling, it is important that the riding teacher can make the equestrian feeling accessible to learn for the student. How this is done can so far be regarded as a tacit knowledge (Ponalyi, 1966; Schön, 1983).

Researchers have begun to be interested in how riders develop this equestrian feel for communicating with the horse, but more research is needed on how riding teachers can make the feeling accessible to learn to students during riding lessons (Dashper, 2016). One way to study how feeling is taught is to start from the participants perspective and how they work to make this form of knowledge learnable (Zemel & Kochman, 2014). According to the authors, a common understanding is required to make a knowledge learnable. Creating something as a learnable can be understood as a sequentially organized activity in line with an ethnomethodological and conversational analytic perspective. Zemel and Koschmann's (2014) analysis show that the instructional sequences are worked out in collaboration between the teacher and the students to make a knowledge learnable. The teacher leaves to the students to show what they are taking the learnable to be (Zemel & Koschmann, 2014). A knowledge is created and demonstrated by the participants as learnable within the framework of their embodied interaction. The learnable can be different things for different students during the same lesson (Zemel & Kochman, 2014). From a socio-cultural perspective, learning is considered to be situated, that is, people understand and appropriates knowledge in interaction with other participants and the surrounding environment. Ethnomethodological and conversational analysis (Goodwin, 2000; Schegloff, 1996) is a perspective that can be used to analyze the situated practice during riding lessons, for example how instructions are given or how the participants interact.

The overall object of the project is to explore, through collected video material, the situated pedagogical practice during riding lessons at riding schools. One specific purpose is to study the collaboration and explore the interaction between the participants during riding lessons in groups as well as individual lessons, and how they make the equestrian feeling learnable, or in other words, accessible to learning.

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Material and method

Data collection

Video observations have been made at five different riding schools. It was of interest to study in detail both lessons in groups and to study individual lessons but in the environment of a riding school to see if there existed interaction regarding the equestrian feeling. Two of the participating riding teachers selected one riding group in each and four riding teachers selected two riding groups in each. A total of ten lessons were video observed, each riding group was observed one time. Each lesson lasted for 45-60 minutes. There were five to six students at each riding lesson. The problem with too many participating students riding is that it is difficult to capture the whole picture as the participants easily obscure the camera and get in the way of each other on the film because of the mobile situation.

Three riding teachers participated in the study in connection with the individual lessons with a single student. One of the teachers participated with two students who rode separately. These four couples were filmed during ten lessons in each. The riding students usually had the same horse (owned by the riding school), but sometimes they rode another horse for various reasons.

Overview of video observed riding lessons.

Riding teacher	A	B	C	D	E	F	G
Group lesson	2 *	2	2 *	2	1*	1	
Individual lesson				1*	1*		2

**=excerpts from these lessons are part of the two articles*

All participating riding teachers had some kind of riding teacher education, from vocational training to Equine studies at university, and all riding teachers had a long experience of the riding teaching profession. The riding students were all older than 18 years and they had been riding for several years. Consent from the riding teachers and from all participating students has been obtained. The horses that participated were owned by the riding schools and were experienced riding school horses. The lessons that were observed were all dressage lessons with a traditional arrangement. That is, they started with warm-up in walk and trot before the main exercises were carried out. At the end of the lesson the riding teachers often gave individual feedback to all students. All lessons held in groups were conducted in riding arenas as well as most of individual lessons with one exception, riding teacher D and her student who were in an outdoor arena at a few occasions. At each recording session, a small "go-pro" camera was placed on the riding teacher's head to document her voice and what she was aware of from her point of view. In the riding lessons in groups, the riding teacher also got a wireless microphone so that her voice was recorded on a second camera. The second camera was used for the purpose of video observing the whole arena, i.e. both riding teacher and riding students. The second camera was placed in one corner of the track and the lesson was filmed from there. In the individual riding lessons, the student had the wireless microphone so that the student's voice was captured on the camera that was used to film the whole. The riding teacher's voice was then only recorded via the "go-pro" camera. On each recording occasion, field notes also were taken regarding any special events that arose in connection with the riding lesson.

Analysis

The difficulties with video observations of riding lessons so that the quality of the recordings becomes good enough to analyze are obvious. It is small subtle movements of both rider and horse that is of interest to capture on the recordings. Another problem is that the horses move over large areas around the riding arena and that makes it difficult. Before the analysis could

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begin, the films first were synchronized so that the two camera perspectives could be examined in parallel. For the lessons with individual teaching, the synchronizing enabled the voice of the riding teacher and the eventual speech from the riding student could be heard simultaneously. The analysis then started with a review of all the films, while a simpler video log was taken to create an overview of the entire material. The video material from the ten lessons of group lesson were intended for the first article and the observations from the individual lessons were intended for the second article.

The analytical approach is qualitative, inductive and strictly empirical (Haddington et al., 2013). Within ethnomethodology and conversation analysis, the analysis focuses on exploring situational actions and how the sequential organization of actions is systematically built up (Haddington et al., 2013). The analysis is anchored in the participants' actions and how the participants show common understanding of the practices in which they participate (Goodwin, 2000; Schegloff, 1996). A particular interest has been to analyze how the participants orient themselves towards the mobile situation and what different multimodal resources, such as embodied actions but also technical functions, different objects, time and space, that the participants use and orient themselves towards (Haddington et al., 2013).

Results

Results from the analysis of the video observations from group lessons respectively the individual lessons are presented separately, followed by a joint discussion. What characterizes the pedagogical practice of riding lessons is that it is mobile and it is a tacit knowledge that the students should learn. The analysis made on the video material from the group lessons explore how instructional sequences, as part of this pedagogical practice, are designed by teachers and students. In other words, attention is drawn to a detailed level regarding how instructions are designed and timed in a mobile situation such as riding lessons. The aim is to find out how instructions are designed for individuals within a group during a mobile situation. The analysis focuses on *instructional sequences* in the form of instruction - instructed action - assessment of instructed action. In the riding lessons, the analysis shows that the participants have a common attention to the overall activity and thus create so-called *interactional spaces*. As can be seen from the analysis, there are also sequences limited in time and space, when the riding teacher and the individual students together establish what is here called "*instructional spaces*".

The analysis shows a variety of examples of how the participants collaboratively create instructional spaces. In the excerpt below, the riding teacher interrupts an ongoing instruction to the group and designs an individual instruction to a student who comes riding towards and near the riding teacher. The student immediately produces an instructed action. Timing and the participants' interaction in the mobile situation turn out to be important when the participants in collaboration create an instructional space.

Excerpt 1

1 RT OKAY PLEASE *WE TAKE- (.) a shorter rein here a little +Stina==+*
 2 student *--> approaches RT-----> +Looks at her
 3 hands and begins to shorten her reins +--> *
 4 RT =*AND RISING TROT AGAIN
 5 student *Pass RT -->>

In another situation, the riding teacher gives instructions to all students in the order they approach, while riding on a circle in front of her. This shows how the participants work together to create instructional spaces, which are limited in time and space. The riding teacher designs instructions addressed to each student who comes close - follows up with feedback on the often immediately made instructed action, then the riding teacher sees the next student approaching and produces a new instruction. Furthermore, the analysis also shows how the riding teacher

gives repeated instructions to one student about the same problem, each time the student chooses to ride nearby the riding teacher. The participants work together to make instructions and instructed actions possible and thereby create an instructional space in the mobile situation. In another example, the riding teacher stops a student and walks up close to the student before giving an instruction reinforced by an embodied action. The analysis shows how the participants, in this common space, collaboratively create an instructional space.

The important contribution from this study is knowledge about how riding teachers and students, through interaction, and by designing instructions and instructed actions collaboratively, create instructional spaces within which it becomes possible for the student to be instructed to learn the tacit knowledge to ride. The teacher and the individuals in the group all orient towards each other, working together, thereby enabling the students to benefit from both group and individual instructions. Factors that enable this are timing and a mutual orientation partly towards the mobility during riding lessons partly towards the goal of the riding lesson - that the student should learn how to ride.

The analysis of the material from the individual lessons focuses on how the equestrian feel can be made learnable. During individual lessons, the instructional space for the individual student becomes more extensive and reasonably more opportunities arise for interaction regarding the feeling. In the analysis of video sequences from the individual riding lessons, it was the interaction between the riding teacher and the student about how to make the sense of a feeling learnable that was central. Making something learnable can be understood as a sequentially organized activity in social life. Two different situations were examined and analyzed in detail. One situation shows how the riding teacher visualizes and, through extensive explanations, makes a sense of a feeling visible to the student. It is about the horse being lop-sided and that the student does not feel this initially. The riding teacher explains the feeling for the student and with embodied actions she shows directly on the horse what she means. These explanations with interjected reflections from the student are varied with active riding when the student tries to catch the feeling and performs instructed actions. Together, the participants work in interaction to capture the feeling and make it learnable. The sequence ends with the student saying: "Hh hthat is very difficult for now I actually even see myself that there is a hole in the right shoulder". The second situation shows how the riding teacher, through ongoing instructions during activity (online commentaries), helps the student to capture the feeling and influence on the horse in order to achieve the desired feeling. In this case, it is about the horse having to be quicker in his movements. The student rides actively and receives continuous instructions to get help capture the feeling. The active riding is interspersed with moments of rest and reflection. The participants work to make the feeling learnable and the student finally shows her understanding when she locates what she did to achieve the desired feeling by saying: "outside rein was the key".

The common thing for the two situations and the new knowledge this study entails is that the riding teachers constantly shift focus when they give their instructions or explanations. They change focus between the student's seat and impact, the *horse's movements and actions*, and finally giving **comments on the searched for feeling**. The latter is done, for example, by marking the pace with the voice, using metaphors or by well-timed feedback and instructions during ongoing activity. An example of this shifting focus is the following quote, where the riding teacher switches between all three focuses in one and the same instruction: "*don't let him be long from the beginning sit down yes upward think uphill look up in the roof canter yes good now and so outside rein squeeze squeeze squeeze and then release squeeze squeeze squeeze release and inside leg activate*". Another common resource used is the shifts between activity and discussion/reflection where the participants in interaction work to make the feeling learnable. Although the situations differ in intensity and implementation, the interaction between the participants is the same regarding the shifts between the riding teacher's

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instructions during the student's active riding with displayed instructed action, and the riding teacher's explanations during pauses as well as reflections from the student - that ends up with a shared understanding of the searched for feeling.

Discussion

In brief, the results show how instructional spaces are limited in time and space. By being quick and in time when addressing instructions and performing embodied instructed actions, the participants collaboratively manage to develop each individual student's riding skill. In addition, the results show how the participants by shifting focuses and by changes between activity and reflection collaboratively manage to end up with a shared understanding of an equestrian feel for specific moments.

Teachers and students' collaboration have been investigated in previous research (e.g. St John & Cromdal, 2016) but what is special in this result is that the collaboration concerns, first, creating an instructional space, and second, further collaboration regarding the instructional sequence within the instructional space. The instructional spaces are often initiated by an instruction that the student replies to with an instructed action. This could occur due to the exercise in relation to the riding teacher's placement, but sometimes the riding teacher also instructs students to come close or the riding teacher herself walks up close to horse and student. Another result is that the analysis shows how the student often performs embodied instructed actions (cf. De Stefani & Gazin, 2014; Mondada, 2014), and that this was done quickly (cf. Lindvall & Ekström, 2012; Levin et al., 2017). But furthermore, the instructed actions were done to fit within a current instructional space or could be addressed to the teacher and thereby used to initiate an instructional space, as when the student rode near the riding teacher and showed an embodied instructed action. In other words, students also initiate instructional spaces.

One of Lundgren's (2017) conclusions in a previous study of riding lessons in dressage is that the teachers used a lot of multimodal resources during riding lessons. For example, the setting of the exercise, teachers' placement with regard to the horses' movements and teachers' bodily orientation. In the present study the analyses show in addition how these resources can be used in the work of collaboratively created instructional spaces. A key phenomenon in this is the addressivity work done by the participants. The teacher's gaze was for example shown to do addressivity work and made the students pay attention to instructions and perform instructed actions.

The timing of instructions became manifest in the different situations that were analyzed. Instructions were designed in relation to students' movements and actions, bearing in mind that all participants were on the move all the time (cf. Haddington et al., 2013). The instructional sequences examined were often limited in time. This has previously been described in studies of mobile instructions (e.g. De Stefani & Gazin, 2014; Levin et al., 2017). But another interesting finding here is that the riding teacher also timed the instructions in relation to the horses' continuous reactions and movements. To be able to do so, the riding teacher reads the horse's body language to determine how the horse responds to different signals from the rider (cf. Wolfram, 2014). This is similar to the car-driving teacher's listening to the car's engine sound when giving instruction about how to shift gears (Broth et al., 2017). The big difference is that horses are living animals that can exhibit different responses each time they get a signal.

One condition for interaction between humans is that we co-construct interactional space (McIlvenny et al., 2009; Mondada 2009). During the riding lessons analyzed the participants worked together in several ways to establish and sustain what are here called instructional spaces. What is characteristic of these spaces is that the instructional sequences between the riding teacher and the individual student occurred within these spaces. Creating these instructional spaces was shown to be essential for the teachers and students to interact on a

dyadic level during the group lessons. The importance of interaction on a dyadic level is supported by previous research that shows how individual help and instructions facilitates learning and developing of embodied movements (cf. Lindwall & Ekström, 2012; Martin & Sahlström, 2010). Within these instructional spaces, the two participants (riding teacher and student) oriented their actions towards each other while the other students were riding around them.

During the individual lessons the participants didn't have to work that hard to establish instructional spaces as the situation as a whole were oriented towards instructional sequences performed in collaboration. A result from the analysis of the individual lessons is the riding teachers' use of many different resources to help their students capture the feeling. In previous research regarding teaching an embodied knowledge, different resources used during lessons have been explored. Lindwall and Ekström (2012) could show how the teacher came close to the student and by embodied instructions helped the student to find the right way to hold the thread. The teacher could even touch the student's hand and the thread and by that it became a shared embodied experience. The shared experience of a feeling was also explored by Melander and Sahlström (2009) during lessons in flying air plane. The big challenge for riding teachers is that they don't have this possibility to share experience with their students.

The analysis revealed how the teachers through a professional vision (Goodwin, 1994) interpret what can be seen from the ground and in their own bodies transfer this into embodied instructions and online commentaries. By looking at the horse, they can feel in their own bodies what needs to be done and then translate this into verbal instructions. This is similar to what Bäckström (2014) describe that the teachers do in her studie about skateboard teachers. When they instruct a skateboard student, they move their own body unconsciously to remember in the body how to do the actual movement.

The verbal instructions were found to direct attention to three different focuses, the rider, the horse and the sense of a feeling. An even more demanding level of complexity found in this way of directing instructions is that the teacher also continuously shift between the three focuses during almost the same instruction. The analysis show that this pattern of changing focuses is used to bring attention to the different pieces that together shape the equestrian feeling and therefor these shifting focuses can help make the feeling learnable. Previous research (Lundesjö Kwart, 2013) has found that riding teachers have different focuses during riding lessons. The riding teachers can have a *horse* focus, a *student* focus, or a *routine* focus. Now this new study shows that in addition to these overall focuses during riding lessons even each instruction can have different focuses.

The special circumstance during riding lessons is that it includes the horse and that the goal is for the rider and the horse to "become one". It is almost as if the teacher is molding a feeling by explaining or by intense and variating instructions. Certainly, the language always is very important and riding teachers often use different vocal resources during riding lessons (cf. Lundgren, 2017). What distinguish the results in this studie from previous is how the teacher also uses different vocal resources to make the feeling visible, and thereby makes it learnable.

When collaborating in the search for the equestrian feel, the co-constructed instructional spaces (Lundesjö Kwart, in press) and the importance of timing becomes visibly important. The timing of instructions and feedback is not only important for the student to capture the feeling but also important for the horse to make it feel safe and comfortable with the rider (Maw, 2012). The collaboration between teacher and student make it possible for the student to capture the feeling. There was a constant shift between activity and reflection, the teacher giving instructions or explanations and student displaying understanding by instructed action or verbal reflection. By combining different ways of interaction and teaching techniques, the teachers help their students to catch the feeling.

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Conclusion

In conclusion, the teacher and the individual students co-create instructional spaces. The educational implication of this result is that, during mobile group lessons, the participants work collaboratively to make individual instructions and instructed actions possible. The results also reveal the importance of collaboration between the three participants, teacher - rider - horse, in the work to capture the equestrian feel. The teacher direct attention in the instructions towards three different focuses, the rider, the horse and the sense of a feeling and it is a constant shift between activity and reflection during the riding lessons.

Relevance for the practical horse sector incl. recommendations

Horseback riding, riding school activities and riding lessons are an important part of the Swedish horse industry and its future development. The project provides important information about riding lessons in groups at riding schools and the results can thus contribute to further development of riding lessons at riding schools. There is a discussion in the Swedish Equestrian Federation (SvRf) about the future of Swedish riding schools and how they can be adapted to today's requirements. This studie contributes to this discussion with more knowledge about what riding lessons include and how riding teachers teach riding. In recent years, coaching in riding have become increasingly prevalent on an international level (Maw, 2012). Coaching means, among other things, an increased scope for the student to take the initiative and discuss their riding skills. In Sweden there is an increased demand from students on individualized teaching, with more individual riding lessons and also more coaching forms of teaching (Thorell et al., 2016). One reason why the students want more individualized riding lessons can be a desire to get more individual instructions, in the search for the equestrian feel. This studie contributes with both knowledge about how to give individual instructions, and the collaboration process that helps the rider to develop an equestrian feel.

It would be interesting to look more closely into how the interaction unfolds over time between the riding teacher, the rider, and the horse in further studies. Another interesting phenomenon to explore further would be to analyze how the students interact with each other during the mobile group lesson, in line with the study by Broth and Keevallik (2014).

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Part 3: Result dissemination

Scientific publications, published	Lundesjö Kwart, S. Instructions in horseback riding – The collaborative achievement of an instructional space. Learning, Culture and Social Interaction (2018) https://doi.org/10.1016/j.lcsi.2018.10.002
Scientific publications, submitted	<i>Author(s), title</i>
Scientific publications, manuscript	Lundesjö Kwart, S. Capturing the feeling – Making the sense of feeling learnable during horseback riding lessons
Conference publications/ presentations	Lundesjö Kwart, S. 2017, <i>Utformning av instruktioner vid ridundervisning</i> , OFTI (Områdesgruppen för forskning om tal och interaktion), Karlstad 20170921-22
	Lundesjö Kwart, S. 2018, <i>Designing individual instructions during group lessons in horseback riding</i> , Equine Cultures in Transition, Leeds 20180619-21
Other publications, media etc.	<i>Title, year/date, place of publication (link if applicable)</i>
	Lundesjö Kwart is cowriting a book about riding didactics together with Gabriella Thorell, teacher at Strömsholm and Sue Halden-Brown, coach Australia. Preliminary plan for publishing – during 2020.
Oral communication, to horse sector, students etc.	Didaktikföreläsningar, 2016-2018, studenter vid Hippologprogrammet årskurs 2 och 3 (Strömsholm och Wången)
Student theses	
Other	