Joint supervision – a way to improve student learning during Bachelor and Master thesis supervision

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Abstract

All over the world, calls for more effective education and supervision of university students are increasing. Resources, however, are scarce, and faculties simultaneously face growing pressures to obtain funding, conduct research and publish results. How can one ensure effective supervision in pedagogical terms, i.e. supervision meeting students’ needs during the process of writing a thesis, and at the same time improve students learning, their skills and employability as well as strengthening links between teaching and research? This paper is a review of existing literature and data from actual practices. It deals with different models of supervising students in small groups and contributes with a typology and a more systematic overview of the strengths and weaknesses of using a model of joint thesis supervision. Research indicates that students learn more from joint supervision than from individual supervision. Challenges concern both students’ and supervisors’ competences and time. An interesting perspective is the existence of possible synergies between joint supervision and the supervisor’s research.

Key words: joint supervision, thesis supervision, learning in groups
Introduction

Group supervision is not a new phenomenon in academia; however, there are various forms, and according to Samara, group supervision occurs most often with Ph.D. students meeting in peer groups and discussing their research (Samara 2006). This form is more widespread within the natural sciences than social science and humanities. Students also form writing groups where they meet and give feedback on their writing. However, research on models of group supervision including both students and a supervisor is not common (Samara 2006; Wichmann-Hansen et al. 2015). In this paper, I highlight joint supervision models where both students and supervisor(s) participate in a feedback process. I concentrate on the supervision of bachelor and master thesis writers for two reasons. First, joint supervision at this level seems to be less widespread compared to the PhD level (Wichmann-Hansen et al. 2015). Second, undergraduate supervision is under pressure due to increasing numbers of students and unchanged or decreasing resources (Akister et al. 2009; Baker et al. 2014).

The joint supervision of students writing their bachelor or master thesis seems to be progressing for different reasons. It might be a way of changing a neoliberal pressure on universities and of avoiding individualization (Ginn 2013), or of countering increasing dropout rates caused by feelings of isolation and loneliness among students (Nordentoft et al. 2013) as well as increasing the rate of completions on time (Akister et al. 2009; Thorsson and Holmer 2015). A need for making savings on resources may also be a contributory factor, since individual supervision demands considerable resources (Akister et al. 2009). Another reason is to try out alternative models of supervision in order to enhance students’ learning (Dysthe et al. 2006) and improve students’ collaborative skills (Baker et al. 2014; Kangasniemi et al. 2011). Alternatively it might contribute to a minimization of the distance between knowledge creation within research and supervision (Ottosen et al. 2014).

Whatever the underlying reason was for implementing the above-mentioned joint supervision initiatives, then the lack of research into joint supervision at bachelor and master level calls for a review of existing literature and data from actual practices dealing with different models of supervising students in small groups. In addition to a description of the various models, I focus on students’ learning as well
as strengths and weaknesses of models of joint supervision reflecting both benefits and challenges for students, supervisors and institutions. The aim is to demonstrate the importance of understanding the context of joint supervision and the interplay between all parties involved. This is often neglected in studies focusing either on students or supervisors (Wichmann-Hansen et al. 2015). Therefore I examine the status of joint supervision in order to use existing knowledge and experiences to improve, qualify and further develop the use of joint supervision, and as an add on, empower the interaction between research and supervision (teaching).

With inspiration from the Norwegian professor in public administration Kjell Arne Røvik, I see joint supervision (small group supervision), as ‘an organizational idea’ that can be translated from one discipline to another (Røvik 2009). I identify the phenomenon in the texts read, despite the fact that the case studies cover different disciplines, and I decontextualize the idea in order to describe the idea generically, i.e. I do not discuss or include possible differences between disciplines, for example education, public administration, mathematics, medicine, law and humanities.

The procedure I adopt is as follows: first, I define supervision and present a typology of different ways of supervising exemplified by various models. Next, I introduce the findings from nine case studies describing the supervision models in use, student learning, and strengths and weaknesses of the models in relation to students, supervisors and institutions. Finally, I discuss the results before including the possible use of joint supervision to enhance the relation between research and teaching. The cases studied indicate that joint supervision improves student learning, although a number of challenges need to be confronted.

**Joint supervision – a definition and a typology**

A short introduction to different types of group supervision is useful here. I aim to provide a definition of joint supervision, a typology of various models of supervision and examples of the implementation of joint supervision.

The principal focus in this paper is that of students writing a thesis either individually or in groups composed of two or three students. This excludes project-based group work where students in a group write a project assignment together
(joint project). Dealing with the supervision of students’ thesis writing, I find it useful to differentiate between various types of group constellations and contexts in order to clarify strengths and weaknesses of the models. Based on the respective number of students and supervisors who meet, six models of supervision can be identified (table 1).

The most widespread model, concerning supervision of a student writing a long paper is *individual* supervision, i.e. one student meets one supervisor. Commonly, thesis supervision in academia is defined as a one-on-one form of teaching, for example face-to-face, by email or other forms of interaction between a supervisor and a student in the process of writing a Masters or PhD thesis (Black 1998; Cargill 2000; Dysthe et al. 2006; Handal and Lauvås 2006; Samara 2006).

In this paper the model of *joint supervision* does not change this definition of supervision; it is the setting in which one-on-one feedback is played out that alters. Students do get individual feedback in a joint supervision group; however, others are listening to and contributing with feedback while each individual student receives feedback. Furthermore, the supervisor defines the rules of feedback and participates actively in the group (Jensen 2015). Joint supervision is then a supervisor gathering all of her or his students in a group.

Another model is that of a group of supervisors who may supervise one student, which I term *team supervision*. This could be a master student who has a main and a secondary supervisor or more often a Ph.D. student supervised by a team.

*Collective supervision* takes place when two or more supervisors gather their supervisees and discuss students’ papers across formal supervisor-relationships.

When students or supervisors meet with peers only, two other kinds of groups emerge. Students can choose to meet on their own and exchange feedback on papers, and then they form a *writing group*. Writing groups or peer-to-peer groups may also be an official part of a course. Similarly, supervisors meeting peers may also engage in one another’s supervision practice and give feedback, and then they offer *collegial supervision*. 
In the nine cases included, joint supervision as I define it is labelled in different ways, such as “supervision group” ([Dysthe et al. 2006; Samara 2006], “collective academic supervision” (Nordentoft et al. 2013; Wichmann-Hansen et al. 2015), or the most widespread “group supervision”. I use the term ‘joint supervision’ when a supervisor meets with more than one student at a time.

Examples of joint supervision models

In relation to education, it is relevant to contextualize the models, i.e. to investigate to what extent supervision and feedback activities are part of a curriculum. To illustrate the models and their context I present some, primarily Nordic, examples from different disciplines. The writing groups might result from a student initiative and even take place outside the university. Moreover, writing centres often support this kind of group with an introduction to the form and sometimes through facilitating the start-up of a group. The idea is to clarify expectations and set up “rules” concerning use of time, number of pages presented, how to give and receive feedback, and so on (PCS, 2010). In some cases, writing group activities form part of a course, in combination with other kinds of feedback. For instance, anthropology students in Copenhagen cannot hand in their bachelor thesis without participating in a seminar that combines seven lessons including different mandatory exercises, five joint supervision sessions and meeting in a writing group¹.

Joint supervision may be an arrangement exclusively decided by a supervisor and his / her supervisees and in that sense it is “private”, i.e. not part of a curriculum Ginn (2013). On a master programme for public managers, for example, a supervisor with six to eight students offers joint master thesis supervision instead of individual supervision. The supervisor’s plan initiates writing from day one and the theme for

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group meetings and papers is related to specific steps (milestones) in a writing (research) process which includes skills such as formulating a research question, coming up with a research design, planning and carrying out interviews, analysing data and so on. At each meeting, the supervisor begins with general comments, and then gives a short lecture on a relevant topic, such as data analysis, followed by individual feedback. The students, who are busy managers, choose to stay when their fellow students get individual feedback. They argue that they learn a lot from listening to others’ feedback, since the supervisor generalizes individual comments.

In some cases, joint supervision takes the form of a feedback model within a course. At the University of Copenhagen, Political Science students writing their bachelor theses participate in a bachelor course focusing on the process, i.e. how to design a project, formulate research questions, complete an investigation, analyse data and so on as well as how to plan the process and write. Students participate in different classes. In each class there are short introductions to research design, methodology, planning of the process, how to write a theory chapter and so on, which relate to whatever challenges students face during the process. However, joint supervision is the major activity. Students are divided into small groups (typically 4 to 7 students) who are in the process of writing an individual (or maybe a group project including two or three persons) thesis. In the group, they give and receive feedback from peers and a teacher. The teacher, who also is each student’s supervisor, is responsible for “setting the scene”, i.e. defining the rules of feedback and so on. Nevertheless, while planning, the teacher should make sure that most of the students’ writing processes correspond with the themes presented on the course otherwise, some students’ might become frustrated.

Team supervision is for some Ph.D. students mandatory according to the universities’ rules and regulations. In reality, team supervision varies. In some cases, a Ph.D. student meets one supervisor at the time, whereas in other cases all supervisors and the Ph.D. student get together. With lab-based research projects, participants often meet on a daily basis in the lab where the student may ask for help

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2 Based on an e-mail to participants from supervisor associate professor G. Gjelstrup (November 2014).
to solve concrete problems. However, a clear division of responsibilities among the supervisors is important. Otherwise, the student might not get any processual supervision, and might be overwhelmed with different views or experience cross-pressures (Handal and Lauvås 2006).

Collective supervision is to my knowledge mostly used in combination with other models of supervision. A rather ambitious Norwegian “multistrategy supervision model” (Lillejord and Dysthe 2008) consists of three elements: individual supervision, student colloquia (students only, like writing groups) and collective supervision, where a number of supervisors (two to three) and their students meet (Dysthe et al. 2006). The collective group constitutes a “multivoiced” setting, i.e. a forum where students listen to not only different experienced academic voices, but also disagreeing voices.

Another example of a combined model with elements of collective supervision is “project-families”, practiced at the Technical University of Denmark. In a cross-disciplinary research group dealing with the redesign of construction materials leading towards a zero waste society, they changed the supervision model from individual supervision to project families. Students participating in the project have to follow the same timetable. In the first phase, they conduct standard tests, compare the results with current accepted knowledge, and present their findings in a poster session. This presentation includes considerations of the next step in their project. The students receive feedback from other groups of students as well as from other supervisors. In the second phase, they re-design materials with new properties. During the whole process, bi-weekly supervision meetings in “project-families” are scheduled (Ottosen et al. 2014).

In the following section, I describe my methodological approach.

**Method**

As indicated above there are numerous ways of combining different ways of supervising students writing a thesis. I have chosen to map strengths and weaknesses within the different group constellations practising feedback in case studies found via a literature review. Searching in databases such as ERIC, Google Scholar and
Scopus, I used the following keywords in order to trace down relevant literature: graduate supervision, collective, academic, feedback, peer feedback, collaborative, higher education, group supervision, learning, participation and looking for citations. I found fourteen articles of relevance, covering nine different case studies. Furthermore, other types of material are included such as presentations and webpages.

In my reading of the case studies, I concentrated on eight categories: (a) kind of supervision model, such as number of supervisors and students participating and a description of the process planned. (b) Aim of the project/ model (described in the introduction). (c) Results of the supervision in use primarily related to student learning. (d) Theoretical background of the text, (e) methods in use (included in the Reflection section), (f) strengths and (g) weaknesses/ critical factors of the model in relation to student, supervisor and institution and finally (h) other comments. My findings and a discussion based on the cases studied follows.

Preliminary findings

The models in the cases are a result of a single supervisor’s initiative, an institutional initiative combined with demands from students, and institutional experiments where at least two ways of combining supervisor/student ratios are in use. The individual supervisor describes how he gathers his supervisees in three workshops and offers joint supervision (Ginn 2013). A Japanese case turns out to be a Master Class where the supervisor does the talking and gives feedback since Japanese students are reluctant to speak up in groups (Yamada 2013). Seven other models are experiments at an institutional level, and in four cases, it is mandatory for students to participate. In one case joint supervision takes place in a tutor-led group, the tutor being a senior lecture (Akister et al. 2009). In another example, collective group supervision sessions are combined with the option of individual supervision (Baker et al. 2014). In four instances, a combination of writing groups and joint or collective supervision are in use (Kangasniemi et al. 2011; Nordentoft et al. 2013; Utriainen et al. 2011)
(table 2) and in two cases individual supervision is included (Dysthe et al. 2006; Hård av Segerstad et al. 2008; Lillejord and Dysthe 2008; Setterud 2013).^4^  

**Student learning** can, among other things, be conceptualized in terms of having either a deep or surface approach to learning (Biggs and Tang 2007), or as a matter of acquiring knowledge and understanding, skills and competences as defined in the qualification framework (Bologna). My study demonstrates a common thread, which is that what students’ gain most from giving and receiving feedback in small groups is the ability to work and think academically. This skill ranges from academic core competences and skills (Kangasniemi et al. 2011; Nordenfelt et al. 2013; Utriainen et al. 2011) to enculturation into academia (Dysthe et al. 2006). Three other learning aspects are worth mentioning: Firstly, students begin writing earlier in the process than is usually the case (Nordenfelt et al. 2013) and tend to hand in on time (Thorsson and Holmer 2015), secondly, students experience a communality that encourages progress (Baker et al. 2014) and contributes to a feeling of “being like a researcher” (Ginn 2013) and lastly, students prepare for practical working life through interaction in groups (Baker et al. 2014; Utriainen et al. 2011).  

I find it relevant to deal with **strengths and weaknesses** of the models in relation to three parties: students, supervisors and institutions. The articles I refer to tend to focus on student learning, strengths, and weaknesses in relation to students, whereas benefits and challenges in relation to supervisors come second and institutional perspectives are third or omitted entirely.  

Initially, the **strengths** are highlighted. The supervisor who gathers his supervisees in three workshops underlines the fact that both students and himself are fighting individualization by joining a supervision group (Ginn 2013). In the remaining examples students’ learning is emphasized, since the students not only benefit from being in “an environment for collective learning” (Baker et al. 2014), but also find it time-saving since they write more effectively, and they appreciate the feeling of community (Dysthe et al. 2006; Kangasniemi et al. 2011; Nordenfelt et al. 2013;  

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^4^Lillejord & Dysthe. Lillejord, S., and Dysthe, O. (2008). "Productive learning practice – a theoretical discussion based on two cases." *Journal of Education and Work, 21*(1), (pp. 75-89). also refers to a web-based version of the "multistrategy supervision model", but it is not described in details and therefore it included explicitly in this review.
Utriainen et al. 2011). Some studies report that students write better theses (Hård av Segerstad et al. 2008; Setterud 2013; Thorsson and Holmer 2015)

The kind of supervision group models where supervisors get to meet one another are given particular attention as they provide an opportunity to discuss challenges concerning supervision with fellow supervisors (Dysthe et al. 2006; Nordentoft et al. 2013; Wichmann-Hansen et al. 2015). In three studies supervisors also stress that the use of joint supervision both reduces the amount of individual supervision and if they supervise students individually, the supervision becomes more in-depth, since the papers handed in are of a higher quality (Baker et al. 2014; Dysthe et al. 2006; Thorsson and Holmer 2015). This is similar to experiences in some of the examples mentioned above such as the project families (Ottosen et al. 2014).

At the institutional level, different strengths are mentioned. One project sees group supervision as a solution to students’ feelings of loneliness which can lead to a decline in costly dropout rates (Nordentoft et al. 2013). Three studies found that group supervision supports students finishing their theses on time (Akister et al. 2009; Thorsson and Holmer 2015; Yamada 2013). There are no effects on marks in an English case where they compare marks from group supervised students with individual supervised students (Akister et al. 2009). However, in a Swedish study joint supervised students improved their marks remarkably (Thorsson and Holmer 2015). In a Finnish project the aim “is to develop group supervision as a method and practice in higher health education… in order to develop students’ academic skills … and … practice working life skills…” (Utriainen et al. 2011). This goes for an English case as well (Baker et al. 2014). Both studies conclude that group supervision does fulfil the stated goals. The English project estimates a 45 % reduction in staff time with no significant impact on the students’ marks and even more students go on to the graduate programme (Baker et al. 2014).

The major weakness concerning students is time. Students’ time is limited. Some students study for a master besides having a full time job. Therefore, it can be difficult to find specific dates and hours where all group members can meet. Furthermore, the workload does increase when students are writing their own thesis at the same time as supposedly commenting on co-students’ papers (Dysthe et al. 2006; Nordentoft et al. 2013; Setterud 2013; Utriainen et al. 2011; Wichmann-
Hansen et al. 2015). Another weakness concerns the lack of clarification of expectations in the group. It might affect groups’ mutual obligations negatively if some group members do not show up, engage and take active part in group activities (Samara 2006). A third weakness is that some students are dissatisfied with co-students’ feedback, often combined with a desire for a more personal one-to-one relationship to a supervisor. These students miss a visible supervisor who supports their project directly (Baker et al. 2014; Nordentoft et al. 2013; Utriainen et al. 2011). One individual supervisor mentions how the neo liberal tendencies as such push students towards a customer role focusing on concrete skills rather than on academic competences (Ginn 2013).

In three studies, a common weakness found is supervisor’s lack of competences to structure and manage group supervision sessions. This could manifest itself by for example a lack of clear rules and feedback strategies that take into account that every participant is in the process of writing a thesis and that the group and every participant should progress even though the group as such is heterogeneous (Dysthe et al. 2006; Kangasniemi et al. 2011; Nordentoft et al. 2013). In some instances, the supervisors forget to address the simple fact that time management is important in ensuring that feedback time is equally distributed. Supervisors also tend to perceive that new initiatives, such as joint supervision, are more time consuming than individual supervision even though it save time in the long-term (Baker et al. 2014).

In the one study focusing exclusively on supervisors, it is emphasized that students need to learn how to participate in a joint supervised group and supervisors need to handle three main challenges: “(1) facilitating equal participation within heterogeneous student groups, (2) balancing between providing answers and involving students, (3) identifying and developing the students’ analytical skills.” (Wichmann-Hansen et al. 2015). These challenges call for didactical and pedagogical considerations as stated in a small Danish survey (Dahl et al. 2011). Atkister et.al. report on weaknesses at the institutional level in a conference paper. They describe the necessity of dealing with students who fall behind as a challenge, although it is manageable (Akister et al. 2006).
Reflections about learning, theories and methods concerning group supervision

The most widely used individual, one-to-one supervision model is not necessarily the most effective model for student learning, use of supervisor’s time or ensuring that students finish on time. I have found studies with group supervision experiments from different part of the (primarily western) world. Experiments with supervision in most cases seem to include a combination of individual supervision and one or two kinds of group supervision (maybe because both supervisors and institutions are not too comfortable with doing away with individual supervision altogether?). On the other hand, one model found in most cases is that of joint supervision, i.e. a group of students who write individual papers, give, and receive feedback in a group with a supervisor present at least at a number of meetings. A seminar or a writing workshop accompanies group supervision in two cases (table 2).

<table>
<thead>
<tr>
<th>Supervisor</th>
<th>Individual supervision</th>
<th>Joint supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Multistrategy model*</td>
<td>Thorsson</td>
</tr>
<tr>
<td></td>
<td>Baker</td>
<td>Segerstad</td>
</tr>
<tr>
<td></td>
<td>Thorsson</td>
<td>CAS**</td>
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<tr>
<td></td>
<td>Segerstad</td>
<td>GSIHHE***</td>
</tr>
<tr>
<td></td>
<td>Ginn</td>
<td>Akister</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supervisors (two or more)</th>
<th>Team supervision</th>
<th>Collective supervision</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Multistrategy model*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Baker</td>
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</tbody>
</table>


Table 2. Summary of the supervision models in use in different studies.

A major finding is that group supervision where students give, receive and listen to others’ feedback does contribute positively and productively to student learning both in terms of concrete academic writing skills and, more abstractly, through enculturation into a discipline and into academia. The authors of the various case studies report that students learn from participating in-group supervision (joint or collective). An explanation of this is that feedback practiced in a group is a productive learning activity, since students do something (give and receive feedback) with the “focus on text as a mediational tool.” (Lillejord and Dysthe 2008). Lillejord
& Dysthe state that “students’ productiveness benefit[s] from involvement in fellow students’ texts.” (2008) and recommend that this involvement should “be structured and led by the teachers.” (Lillejord and Dysthe 2008). Segerstad et.al. report that students who do not hand in papers do not benefit in the same way as those who get text-based feedback (Hård av Segerstad et al. 2008). Students also improve their competences and skills in relation to collaborations in practical working life as well as experiencing research-like processes at first hand. In addition, more students finish on time, hand in better papers and as such become more comfortable with their role as students (table 3).

<table>
<thead>
<tr>
<th>Student</th>
<th>Supervisor</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Writing from day one</td>
<td>Systematic use of (supervision) time due to scheduling</td>
<td>More students finish on time</td>
</tr>
<tr>
<td>Learn more, improve writing skills, write better theses</td>
<td>More in-depth supervision</td>
<td>Possibility of initiating joint development of supervisors’ competences</td>
</tr>
<tr>
<td>Learn from listening and collective problem solving (multiple brains)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experience processes like research, co-producers of (new) knowledge</td>
<td>Positive spill-over between supervision and research</td>
<td>Possibility of quality enhancement of research and teaching</td>
</tr>
<tr>
<td>Enculturation into academia</td>
<td>Parallel to peer review</td>
<td>Possibility of initiating collegial supervision</td>
</tr>
<tr>
<td>Moral support – prevents solitariness</td>
<td>Learn from interaction with other supervisors</td>
<td>Decrease in drop-out rates</td>
</tr>
<tr>
<td>Improves collaboration skills</td>
<td>Improved competences and skills concerning supervision</td>
<td>Graduates collaboration skills improves</td>
</tr>
</tbody>
</table>

Table 3. Advantages of joint supervision.

Supervisors’ improve their competences as well. In two studies, supervisors’ interactions with other supervisors support their own learning about supervision and academic substance (Dysthe et al. 2006; Nordentoft et al. 2013; Wichmann-Hansen et al. 2015). Furthermore, time spent on individual supervision decreases (Baker et al. 2014) or becomes more in-depth supervision since the quality of students’ papers improves due to previous feedback from co-students (Dysthe et al. 2006). In some cases, the students’ contribution can be of use in research, as illustrated by the Project Family model. The supervisors get access to a comprehensive amount of
experimental results and win time as well as the students get in-depth supervision compared to individual supervision (Ottosen et al. 2014). Furthermore, supervisors’ use of time becomes more effective, due to a systematization of the supervision process (Akister et al. 2009; Baker et al. 2014).

Institutional benefits are mentioned such as more students finishing on time (Thorsson and Holmer 2015), decreasing dropout rates (Nordentoft et al. 2013), more students progressing to a graduate level and resource-savings (Baker et al. 2014). Besides, the use of the same model within an institution is an opportunity to evaluate, criticize and develop the form (Nordentoft et al. 2013). However, following the findings above, some suggestions for actions at the institutional level are obvious, but not mentioned. For example, institutions could allow experiments with joint supervision focusing on a more efficient use of supervisors’ time along with a substantial contribution to research. Institutions could introduce the joint supervision model along with collegial supervision and offer supervisors courses in joint supervision.

The overall weaknesses across all models studied are the lack of time and appropriate competences to engage in-group supervision that applies to both students and supervisors (table 4).

<table>
<thead>
<tr>
<th></th>
<th>Time</th>
<th>Competences</th>
</tr>
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<tbody>
<tr>
<td>Student</td>
<td>Lack of time to engage in co-students’ papers</td>
<td>Needs to learn how to give and receive feedback</td>
</tr>
<tr>
<td>Supervisor</td>
<td>Time consuming to develop and try out new ways of supervising</td>
<td>Needs to learn how to structure and manage feedback in groups</td>
</tr>
<tr>
<td>Institution</td>
<td>Accumulation of tasks at certain times</td>
<td>Hard to develop new administrative procedures</td>
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Table 4. Challenges in relation to joint supervision.

Lacking are competences to give and receive feedback, to structure and manage group supervision sessions and so on. Maybe also writing process competences, since writing is a process and an excellent paper is a product of writing, rewriting and thorough revisions as indicated in Hård av Segerstad et.al. (2008). Students are complaining about time-consuming activities and co-students who do not contribute sufficiently to group discussions (Samara 2006). Some supervisors also mention time
as a critical factor together with a number of pedagogical challenges such as
handling heterogeneous groups of students and avoiding teaching too much (Dahl et
al. 2011), balancing between process and product as well as between a personal and
professional practice (Nordontoft et al. 2013). From an institutional point of view,
there might be situations, where certain kinds of tasks accumulate, for example
examinations. Furthermore, it takes time and effort to develop new administrative
procedures.

The examined articles are theoretical based on a sociocultural or social
constructivism understanding of learning, i.e. that learning takes place within
practices such as Lave & Wenger understand learning (Lave and Wenger 1991) or
that “group supervision enables collaborative learning, which is considered to be an
effective method of learning” (Utriainen et al. 2011, refering to Cohen). Other
theoretical considerations are also included. For example, the concept of dialogism
developed by Bakhtin combined with co-construction of meaning as Dysthe et.al.
write about in relation to students’ enculturation into academia through group
supervision (Dysthe et al. 2006). These approaches are in line with my theoretical
understanding and point to that one learns due to one’s experiences and by doing.
Furthermore, learning always takes place in a community setting (Elmgren and
Henriksson 2010; Lillejord and Dysthe 2008) in which joint supervision should
contribute to developing independently acting and actively learning students, while
at the same time one has to take institutional demands and limitations into
consideration. However, learning can both be reproductive, unproductive,
counterproductive and productive as Lillejord and Dysthe mention. They point to
similarities between productive learning and research activities and underline the
importance of paying “attention to the connection between processes and product
[and] the transformation and reorganisation of knowledge” (Lillejord and Dysthe
2008) to ensure productive learning.

It is a methodological challenge to use and extract knowledge from a literature
review including studies designed for different purposes. However, in my study
“joint supervision” is the keyword connecting all cases. The cases are also an
illustration of different ways of practising group supervision and demonstrate
variations in outcome for those involved. Even though a limited number of subcases
are included in the studies, the qualitative approach allows for in-depth analysis.
Mostly, a mix of data is in use, such as interviews, questionnaires, statistical data and observations and in some cases written material as well. What are the limitations in relation to my purpose? Student or supervisor’s self-perception is the prime documentation of learning improvements, but is this a valid measurement of learning? Furthermore, in some of the cases, the authors of the articles are also those driving the supervision experiments. Do they report weaknesses and are they able to detect all problems? Again, their use of mixed data seems to counter this critique.
One experiment compares the outcome of individual supervised students with those supervised jointly. Of the latter 94% of the students hand in on time, whereas 52% of individual supervised students hand in on time. There are no differences in their marks (Akister et al. 2009). Except from two studies, there are no before and after results reported in the case studies. However, those studying the cases base their conclusions on long-standing experiences that indicate improvements in students’ learning. Lastly, in three of the nine models involving joint and collective supervision, the students participating are “grownups” taking a master degree. However, the studies covering “ordinary” students do not address significantly different outcomes. Of course, more studies could contribute with more details.

**Pedagogical considerations**

Overall, joint supervision includes a supervisor and a number of students writing (process) a thesis (product) while they get feedback in a group with the purpose of fulfilling certain learning targets during the process. A major challenge for the supervisor is to support progression in accordance with academic standards (professional approach) with contributions from all group members and without taking the floor completely (teach only) or treats some unfairly. Moreover, the supervisor should be sure that every student (personal aspect) finds most of what is taking place of relevance. Handling these challenges is not an easy task, since students’ supervision needs varies from student to student and from meeting to meeting. In addition, the relational “and” between the students’ and a supervisor is uncertain an unpredictable and calls for improvisation according to Barbara Grant (2005). It can be difficult to balance between acting as an expert (teacher) or a
facilitator and between addressing a problem to one student only instead of engaging the group. Again, many situations call for improvisation.

At a general level, pedagogical considerations in relation to planning, clarification of expectations and creation of a productive learning environment could be useful. Some examples: bearing the learning targets in mind a supervisor could draw up a schedule for the whole process that includes milestones and makes feedback rules explicit. Moreover, the supervisor should clarify expectations and adjust rules and schedule if necessary (Dysthe et al. 2006). This implies metacommunication about those specific elements and a continuous evaluation in the group (Baltzersen 2013; Wichmann-Hansen et al. 2015). Furthermore, as a supervisor you should also make sure that everybody play by the rules such as having a paper as a starting point for feedback (Dysthe et al. 2006). It is also important to create a productive learning environment, that is a place where all participants feel comfortable, confident and demonstrate mutual respect (Dahl et al. 2011). This is also a way of initiating dialogism that support productive learning according to Lillejord & Dysthe (2008).

**Future perspectives about joint supervision and Research Based Teaching**

The use of joint supervision improves students’ learning as shown above. Joint supervision may also contribute to research by strengthening the relation between research and teaching. In this case, I see joint supervision as a pedagogical tool that contributes to effective supervision so that supervision improves students’ learning (Brown and Atkins 1988; Lillejord and Dysthe 2008). At the same time joint supervision supports students’ learning about the research process since students pose questions, explore, analyse and co-produces (new) knowledge they may publish. As Nordentoft et.al. write; “…students learn science by practicing science in CAS” [a joint supervised group] (2013).

Despite ambitious goals, one should be aware of that students need guidelines for the purpose of learning and becoming participants in research-based teaching (Lillejord and Dysthe 2008). As a first step, course design could encourage students to take (an even more) active part in activities like or similar to research. Here, joint supervision might be useful as a way of activating students, while at the same time aiming at
improving students’ learning and facilitates an exchange between research and teaching. Including students in a research project and supervise them jointly within the project is another way of engaging students. Since, I consider joint supervision as a generic model, one’s discipline does not matter, but the way of using joint supervision and the ways of combining research and teaching/supervision might vary according to the character of the discipline in question.

**Concluding remarks**

The paper is a review of existing literature with the aim of extracting strengths and weaknesses of different models of group supervision. In addition, it contributes with a typology based on the numbers of students and supervisors who meet. The typology consists of five kinds of group supervision: writing groups, joint supervision groups, team supervision groups, collective group supervision and collegial supervision groups. The typology helps clarifying what kind of group supervision we are discussing and highlight the possible combinations of models in use, in the cases studied. Individual supervision is still part of some practices, but the ways of combining different forms of supervision vary and demonstrate a great inventiveness.

The empirical examples illustrate the potentials (strengths) for using joint supervision to enrich students’ learning and to support the interactional aspect of teaching and research. Theoretical, the situated learning approach that is the fundament of the case studies supports these potentials. The presence of “multiple brains” in a joint supervised group supports progress and the option of addressing each participant’s specific needs within the group. The joint supervision model also supports that more students finish on time, dropout rates decrease and more students’ progress to a graduate programme. Meanwhile, supervisors use their time more systematically and reduce time spent on repeating the same things as in individual supervision.

Two major weaknesses are students and supervisors’ lack of competences to participate in a joint supervision group as well as lack of time. Lack of time might be more severe if students participating have a full time job, whereas “ordinary”
students are expected to be more flexible with regard to time management. Overall, pedagogical initiatives, and eventually pedagogical training, including planning, clarification of expectations, awareness of establishing a safe learning environment and a careful implementation of all these elements are ways of handling these challenges.

In a situation where the Danish government has announced deep cutbacks in the public spending on the universities and in the public research funding, it is even more urgent to think of and implement ways of maximizing the interplay between the resource-intensive task of supervision and research. Joint supervision is just an example of a pedagogical tool that is manageable within existing curricula and at the same time improves students’ learning, systematize the supervisor’s use of time and make connections to a supervisor’s research more obvious.

References
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