

Students' sense making of feedback

Dialogue, interaction and emotions

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Foreword

Background and choice of research topic

This thesis is about how students make sense of feedback. My journey into the field of feedback started when I was a master student in Educational Sciences at the University of Oslo, Norway, in 2003. At the same time, the Quality Reform (Det Kongelige Kirke- utdannings- og forskningsdepartementet, 2000-2001) was implemented in all educational institutions in Norway. The reform had several aims targeted at increasing the quality of higher education, such as more student-centered learning activities, more learning-oriented assessment methods and more feedback to students during the course of their studies. In the following years, these aims led to an increase in the use of new assessment methods in many higher education institutions in Norway, such as modular exams, projects and portfolios (Dysthe & Engelsen, 2004, 2011; Wittek, 2011). In my master program, portfolio was the main learning and assessment tool. Working with the portfolio was intensive, as it made me work on a regular basis throughout the semester. However, I found it useful to be able to improve assignments based on feedback from my professors and peers. Receiving feedback was a new experience to me in an educational context. For my master thesis, I chose to interview a sample of professors at the University of Oslo that used portfolio in their courses. The professors were particularly interested in portfolio as a learning and assessment tool, and designed the portfolios in their respective courses with emphasis on providing regular feedback to their students. The findings from the interviews indicated that portfolio supported student learning through the use of continuous feedback and that it made the students work on a more regular basis. Consequently, the professors emphasized the value of feedback as part of the portfolio, and advocated for a stronger and more widespread implementation of portfolio as a learning and assessment tool in higher education institutions.

After completing my master education, I worked at Oslo University College of Applied Sciences (now Oslo and Akershus University of Applied Sciences) as a lecturer in educational sciences at the department of Primary and Secondary Teacher Education. The teaching schedule was tight and the curriculum was comprehensive. Early into the first semester, I experienced a rush of students approaching me in teaching breaks and in my office, asking for feedback on their work. I spent much time in such feedback dialogues with students before realizing I had to integrate feedback activities in my classes. In the following lectures, I reorganized my classes to include more active learning activities. These included feedback activities such as response groups to student presentations, peer feedback in groups, self-

reflective activities and written feedback to the students' work. Working in this manner triggered my interest in feedback as an activity to support student learning. When a position as a PhD candidate at Østfold University College in a project named 'The Quality Reform and its' Assessment Practices' was announced, I submitted a project description that focused on students' engagement with feedback within a portfolio assessment design. The application resulted in this thesis.

My interests in this project have been both empirical and conceptual. I wanted to learn more about how students perceive feedback, including how they make sense of feedback in a higher education context. The empirical case was therefore a first year bachelor course that used portfolio as a learning and assessment tool, in which a central element was to provide feedback to the students. In discussions with the involved teachers about the design and content of the portfolio, they advocated for the feedback element in particular, because they believed it could support student learning.

The theoretical interest in this thesis has in its essentials been to learn more about feedback. Since the empirical case is a course that uses portfolio as a learning and assessment tool, I initially reviewed literature about portfolio and formative assessment to get an overview of existing research on that topic. This led me to the works of Sadler (1989, 2010) and Black and Wiliam (1998, 2009), among others. Sadler (1989, p. 119) defines feedback as a key element in formative assessment and that it is 'defined in a particular way to highlight its function in formative assessment'. However, while Sadler uses the term formative assessment, Black and Wiliam (1998, 2009) and Wiliam (2011) use assessment for learning. Some researchers argue that the concept of feedback has become synonymous with formative assessment (Biggs & Tang, 1999; Taras, 2013). There has also been discussions about whether to distinguish the term assessment for learning from the term formative assessment (Bennett, 2011; Black & Wiliam, 1998; Crossouard, 2011; Wiliam, 2011). Baird, Andrich, Hopfenbeck & Stobart (2017) argue that although there are some distinctive features within the two terms, they are often used interchangeably in the literature. However, both formative assessment and assessment for learning have a common function, which is to improve learning, typically through the use of feedback. On the basis of these discussions, I wanted to investigate the concept feedback in more detail to gain a better understanding of the conceptual term feedback and how it may support student learning.

Combining PhD work with a family life with three kids and full time work, has been challenging. When I returned to work in August 2015 after my youngest son was born, I began to work with the thesis on a regular basis. In addition to one (working) day each week, I spent evenings and nights writing and catching up on the latest developments in the field. It has been tough to balance this in my daily life and I have questioned at several times whether it was worth continuing working on the project. On two occasions, two months in 2017 and one month in 2018, I have taken a study absence from my work for the purpose of writing. Unquestionably, these months have been extremely valuable to me in the process of fulfilling this PhD.

Over the past few years, the feedback field has grown increasingly. In fact, the field is still developing, and new research about the topic is published frequently. Through the process of writing of this thesis, I have learned a lot about feedback in higher education which have broadened my perspective on feedback. I look forward to further developments in the field.

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The Articles

- Article 1: Steen-Utheim, A., & Wittek, A. L. (2017). Dialogic feedback and potentialities for student learning. *Learning, Culture and Social Interaction, 15*, 18-30. Doi: <https://doi.org/10.1016/j.lcsi.2017.06.002>
- Article 2: Steen-Utheim, A., & Hopfenbeck, T. N. (2018). To do or not to do with feedback. A study of undergraduate students' engagement and use of feedback within a portfolio assessment design. *Assessment & Evaluation in Higher Education, 44(1)*, 80-96. Doi: <https://doi.org/10.1080/02602938.2018.1476669>
- Article 3: Steen-Utheim, A. (submitted May 15^h, 2019): Students' emotional responses to feedback: frustration, confusion and (de)motivation. *Studies in Higher Education*

1.0 Introduction

Feedback can be a powerful way of enhancing students' learning (Black & Wiliam, 1998, 2009; Evans, 2013; Hattie, 2008; Hattie & Timperley, 2007; Kluger & DeNisi, 1996; Shute, 2008). Well-known literature reviews such as the ones from Black and Wiliam (1998) and Hattie and Timperely (2007) show that feedback can be one of the most influential elements in student learning and achievement. Additionally, Hattie (1999) claims that high quality feedback on students' work is a very powerful way of raising the standard of the work, and Boud and Molloy (2013a, p. 11) claim that feedback is an 'enormously powerful' concept. While Hattie and Timperley (2007) address feedback given to students on their work, Black and Wiliam (1998, 2009, 2018) focus on how feedback both can support student learning as well as provide information to the teacher about how the teaching is going. This perspective is also addressed by Ramsden (2003) when he argues that feedback to students is a key strategy in learning and teaching, and that effective comments on student work is one of the characteristics of quality teaching (Ramsden, 2003). Hounsell (2003, p. 67) furthermore states that:

'it has long been recognized, by researchers and practitioners alike, that feedback plays a decisive role in learning and development, within and beyond formal educational settings. We learn faster, and much more effectively, when we have a clear sense of how well we are doing and what we might need to do in order to improve'.

But what is feedback and how can it be conceptualized?

Since the origin of the concept feedback in the 1940s, several scholars in the field have provided work that has contributed to a development and understanding of the term (e.g. Boud & Molloy, 2013a; Carless, 2015; Nicol & Macfarlane-Dick, 2006; Price, Handley, O'Donovan, Rust, & Millar, 2013; Sadler, 1989). However, the most pronounced perspective on feedback from past decades is the 'information transmission' approach (Ajjawi & Boud, 2017; Beaumont, O'Doherty, & Shannon, 2011). This perspective builds on a narrow conception of feedback, where feedback is the telling, or information (input) typically delivered from an expert (a teacher) to a passive recipient (a student) (Evans, 2013). Such a position ignores the way feedback is understood, perceived and acted upon by the main actors in the feedback process; the students. A more recent approach and common consensus in current literature about feedback, is the dialogic approach, where the dimensions *dialogue*, *interaction* and *emotions* are central. In this approach, feedback is understood as a complex social-relational process in which students actively make sense of feedback through dialogue over time with

multiple sources of feedback such as peers, teachers and technologies (Ajjawi & Boud, 2017, 2018; Carless, 2012, 2015; Nicol, 2010; Steen-Utheim & Hopfenbeck, 2018; Steen-Utheim & Wittek, 2017; Yang & Carless, 2013). That way, the student plays an active and important role in making sense of feedback, from which they create understanding and (potentially) act upon the feedback in terms of enhancing their work. From a pedagogical view, the approach emphasizes the dynamic nature of learning, which is in line with socio-cultural learning approaches, meaning that feedback is considered an interactional and integral part of the learning process, in which dialogue is important to create understanding (Evans, 2013; Linell, 2009; Vygotsky, 1978). In the feedback literature, it is frequently argued that dialogue is a central part of feedback processes, and that the quality of such dialogic interaction is important for student learning (Beaumont et al., 2011; Merry, Price, Carless, & Taras, 2013; Nicol, 2010). However, few studies have investigated how the sense making through dialogue unfolds in feedback interactions from this approach. In light of the importance of dialogue in feedback processes, this warrants further research.

Making sense of feedback is a complex process (Higgins, Hartley, & Skelton, 2001; Pokorny & Pickford, 2010) where elements such as dialogue, power and emotion impact how feedback may be interpreted (Carless, 2006). According to Linell (2009) sense making is relational and emotional in nature, because emotions are the body's reactions to the environment and are aroused by others in their doings and displayed feelings. As such, emotions are embedded in students' interactions with feedback when they try to make sense of it. However, emotional dimensions of feedback have received little attention in the feedback field, both conceptually and empirically. This is surprising, as feedback, closely linked with learning, is considered a deeply emotional process that can involve a range of feelings in the students (Boud, 2000; Molloy, Borrell-Carrió, & Epstein, 2013) and influence how feedback is acted upon. Although researchers in the field have recognized emotional responses to feedback as part of the total feedback experiences for students (e.g. Carless, 2012; Carless & Boud, 2018; Molloy et al., 2013), there is little research about the actual emotional responses to feedback and how this affects the students' uptake of feedback (Evans, 2013; Rowe, 2017; Värlander, 2008). Examining the emotional dimension in feedback processes is therefore of high relevance.

Empirical studies show that students express dissatisfaction with feedback (e.g. Hounsell, McCune, Hounsell, & Litjens, 2008; Price, Handley, & Millar, 2011), and that dissatisfaction may restrict their use of feedback, and thus students do not engage with or make use of feedback (e.g. Price, Handley, Millar, & O'Donovan, 2010). Other empirical research show that students

can have a number of difficulties in learning from feedback (see Evans, 2013; Winstone, Nash, Parker, & Rowntree, 2017) and that they lack strategies to act upon received feedback (Jonsson, 2013). This is commonly referred to as the ‘feedback gap’ by scholars such as Sadler (1989, 2010) and Wiliam (2011). Additionally, results from international student surveys from for example the UK and Australia (Higher Education Founding Council for England, 2017; Krause, Hartley, James, & McInnis, 2005) show that feedback is the most problematic issue of the student experience. Similar results have been identified in the annual Norwegian national student survey, Studiebarometeret (Bakken, Pedersen, & Øygarden, 2017). Consequently, such evidence of students’ challenges with feedback raises concerns regarding the lack of influence feedback has on student learning within the higher education context. Making sense of feedback enables students to give meaning to all the information they receive, which happens in interaction with other people (peers and teachers), and other sources, such as technologies. Interestingly, how students make sense of feedback has been highlighted in research as pertinent to investigate, as understanding is conditional to student use of feedback (Boud, 2000; Pokorny & Pickford, 2010; Wiliam, 2011). However, Winstone, Nash, Parker and Rowntree (2017) claim studies investigating student engagement with feedback is underrepresented in the field, and support Jonssons (2013) claim that students lack feedback skills that enables them to act on feedback. How feedback is received and used by students needs to be considered from the student perspective.

What this brief introduction has outlined, is that current research positions feedback as a dialogic process, where the dimensions *dialogue*, *interaction* and *emotions* play an important role in feedback and in terms of how students make sense of feedback. It recognizes that feedback is important for students’ learning and development when it supports student understanding – and when they make sense of how feedback can be used to improve their work. In the literature, it is argued that this kind of conceptualization of feedback is more useful in higher education contexts, because learning at this stage is high-level and complex (Price, Handley, o'Donovan, Rust, & Millar, 2013). However, current research does not do justice to this conceptualization of dialogic feedback. Few studies have conceptually investigated feedback in higher education from a dialogical approach, including studies of real feedback interactions. At a conceptual level, the concepts emotions, interaction and dialogue warrants further investigation. At an empirical level, there is in particular a lack of research investigating the emotional and interactional aspects of the feedback phenomenon in higher education, especially how feedback dialogues unfold. Moreover, current research does not provide

analytical tools for examining feedback practices from a process perspective. It is important to acknowledge the perspective of the students, as they are the main actors in the feedback process. To improve practice, more empirical research about how students make sense of feedback is needed. Such research can generate knowledge that support the further development of feedback practices in higher education. This study intends to contribute to the feedback literature with conceptual, empirical and methodological improvements about how students make sense of feedback in higher education.

1.1 Aims and research question

The main research aim of this study is to contribute with new knowledge about dialogic feedback, understood as a complex social-relational process in which students actively make sense of feedback. Specifically, this is done both conceptually and empirically. Conceptually, the study considers dialogic feedback as a process where the dimensions dialogue, interaction and emotions play an important role in students' sense making. Empirically, it shows how students act upon feedback, including their emotions associated with feedback. Three in-depth small-scale studies have been conducted to further explore how students make sense of feedback. On these grounds, the study conceptualizes dialogic feedback and explores how actual feedback dialogues takes place. Next, it shows students' perceptions of feedback, their experiences and challenges with receiving feedback, and illustrates how students act upon feedback. Finally, the study investigates students' emotional responses to feedback, and addresses how these are displayed when the students reflect upon their experiences and use of feedback. The overarching research question guiding this study is:

How is feedback perceived by students in higher education, and how do students make sense of it?

I define sense making as 'meaning' (Linell, 2009), or how students understand and create meaning from feedback. It implies that sense making is the 'dynamic processes, actions and practices in which meanings are contextually constituted in the interactions of human beings with others and environments' (Linell, 2009, p. 30). A key element of feedback is that students' use feedback (Boud, 2000; Wiliam, 2011), and understanding is therefore crucial to accomplish this. Sense making is closely linked to interaction (Linell, 2009), so investigating how students make sense of feedback implies a conceptual shift from considering input or information, or having or acquiring information (Sfard, 1998), to focus more on meaning and mind (Linell,

2009). Consequently, this implies a shift from considering feedback per se (in, for example, the form of a feedback practice or design) to exploring feedback as a dialogical process focusing on what the learners do. This is consistent with the broader shift in higher education towards student-centered learning, in which learning is considered the main purpose of higher education, rather than teaching or instruction (Barr & Tagg, 1995; Biggs & Tang, 1999; Damşa et al., 2015). How students make sense of feedback, must therefore be investigated through the eyes of the students and through their interactions with feedback.

The theoretical framework informing this study is principal elements from feedback theory, with a particular emphasis on dialogic feedback (Ajjawi & Boud, 2017, 2018; Black & Wiliam, 1998, 2009; Boud, 2000; Boud & Molloy, 2013a; Carless, 2012, 2015; Nicol, 2010; Price, Handley, o'Donovan, et al., 2013; Sadler, 1989; Steen-Utheim & Hopfenbeck, 2018; Steen-Utheim & Wittek, 2017; Yang & Carless, 2013). In addition, elements from dialogical learning theory are drawn upon in combination with socio-cultural principles by focusing on the concepts dialogue, interaction and emotions (Bakhtin, 2010; Linell, 1998, 2009; Vygotsky, 1978).

1.2 Research design and methods

Conducted as a qualitative in-depth descriptive and exploratory study (Silverman, 2006), the purpose of this study is to gain insight and explore the richness of a complex phenomenon; feedback. For that purpose, I use several close-up methods of data collection; 1) audio taped feedback dialogues, 2) student reflections logs and 3) focus group interviews. These are the main data materials which are the foundations of study 1, 2 and 3, respectively. Data collection was done during the academic year of 2009/2010. The remaining material, audio recordings of classroom activity and teaching, classroom observations, field notes and various documents from meetings, are secondary data sources. In the method chapter (pp 25), I explain the methods and methodological choices in further detail.

1.3 Empirical context

The current study began as part of a larger project at Østfold University College. The project was supported by the Research Council of Norway (NFR) and placed under the department PULS (Program for Teaching, Learning and Study Quality) at the university college. The overall aim was to map the existing assessment practices at the University College after the implementation of the Quality Reform (Det Kongelige Kirke- utdannings- og

forskningsdepartementet, 2000-2001). The reform was comprehensive and implemented at all higher education institutions in Norway in 2003 based on the European Bologna process (Damşa et al., 2015). The reform had several aims targeted at increasing the quality of higher education. Some of the main aims and especially interesting for this study, were the calls for more student centered learning activities, more learning-oriented assessment methods and more feedback to students during the course of their studies. These aims led to an increase in the use of new assessment methods in many higher education institutions in Norway, such as modular exams and projects (Dysthe & Engelsen, 2004; Dysthe, Raaheim, Lima, & Bygstad, 2006) and portfolio assessment (Wittek, 2011). At Østfold University College, one consequence of the reform was an amendment of curriculum designs to include more student centered approaches to learning, new assessment methods and more feedback to students.

The empirical basis for this study is a first-year bachelor course in International Business Communication with 45 students and two teachers. Twelve of these students act as key informants. In the course, portfolio is the main learning and assessment tool, and the students hand in five written assignments and have two oral presentations. The students receive written feedback on the assignments and oral feedback on the oral presentation from their teachers.

1.4 The three studies

In the following, the three studies are briefly introduced for the purpose of illustrating how they together contribute to shed light on the overarching research question.

Study one investigates dialogic feedback with particular emphasis on the conceptual term dialogue, both theoretically and empirically. Four dimensions are derived from dialogic theory, then used as an analytical framework to study actual feedback dialogues between one teacher and his students. The empirical findings from the investigation of the feedback dialogues are merged with the four theoretically derived dimensions, and a model for dialogic feedback is proposed. The model is named ‘Dialogic feedback. Four potentialities for student learning’.

Study two investigates students’ experiences with feedback, their challenges with feedback, including how they act upon the feedback they receive within their context. In-depth analysis of student reflection logs show that the students are positive to the assessment design, including the possibility to receive feedback throughout the semester in the course. However, the analysis also establishes that the students experience challenges in understanding particularly the written feedback. Even so, the findings illustrate that the students are active in their attempt to

make sense of the feedback as they engage themselves in four specific actions to enhance their understanding.

Study three explores students' emotional responses to feedback including how the emotions are displayed when the students reflect upon their engagement and use with feedback. Through thematic analysis of focus group interviews, the empirical findings show that the students experience rich and varied emotional reactions to the feedback they receive. The findings also illustrate that the richness of the emotional responses varied accordingly, as they reflected upon different aspects of feedback.

In the following table (table 1) the distinctive features related to the three studies in this study are summarized:

Table 1:

How is feedback perceived by students in higher education, and how do students make sense of it?

Study one	Study two	Study three
<p><i>Theme:</i> Dialogic feedback</p> <p><i>Research question:</i> How can dialogic feedback be conceptualized? What potentialities for learning does a feedback dialogue enable?</p> <p><i>Data source:</i> taped oral feedback dialogues between one of the teachers and the key informants</p> <p><i>Analysis method:</i> literature review and interaction analysis</p> <p><i>Findings:</i> Four theoretically derived dimensions of dialogic theory that support student learning. These four dimensions were then merged with the empirical findings from the oral feedback</p>	<p><i>Theme:</i> Student experiences with feedback and how they act upon the feedback</p> <p><i>Research question:</i> What are students' experiences with oral and written feedback and how do they act upon the feedback they receive?</p> <p><i>Data source:</i> student self-reported reflection logs</p> <p><i>Analysis method:</i> content analysis</p> <p><i>Findings:</i> The students appreciate the possibilities to receive feedback, value the oral feedback but have problems making sense of the written feedback. They act upon the feedback in various</p>	<p><i>Theme:</i> Students' emotional responses to feedback</p> <p><i>Research question:</i> What are students' emotional responses to feedback they engage in during their first year of study, and how are these displayed when they reflect upon their engagement and use with feedback?</p> <p><i>Data source:</i> focus group interviews</p> <p><i>Analysis method:</i> thematic analysis</p> <p><i>Findings:</i> The emotional dimension of feedback is a strong dimension in these students' experiences with feedback, and are particularly rich when they talk about the</p>

dialogues. Based on this, a model of dialogic feedback which holds four potentialities for learning is proposed.	ways. They engage in four specific actions with the feedback to create meaning from it.	quality of feedback, type of feedback, student-teacher relationship and feedback and self-esteem.
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1.5 Major findings

The complexity and nuances of the individual findings from the three studies will be discussed in relation to the research question and research field in more detail in the Discussion chapter (pp 46). In that section the findings are also discussed in relation to the theoretical perspectives used in this study, and to methodological concerns and scientific issues. The main findings from the study illustrate that:

- 1) Student perceptions of feedback are varied
- 2) Students engage in different ways of sense making through dialogue and interaction
- 3) Emotions underpin the students' sense making processes

These findings will be further described and discussed on the grounds of the further structure detailed below.

1.6 Further structure

The study is organized into two parts and seven chapters. The first part is the extended abstract, while the second part consists of the three articles produced during this study. In part one, the following chapter (chapter two) presents and summarizes the results from the literature review. Chapter three presents the theoretical framework that informs this study. In chapter four, the methodological choices and arguments are presented and discussed, including ethical considerations and aspects of the work. Following this, a summary of the three studies is presented, including a presentation of the key findings related to these studies. The complexity and nuances of the individual results from the three articles are discussed in relation to the study's overarching research question in chapter six. Finally, chapter seven presents the overall contributions with reference to how the findings add to existing literature about feedback, limitations of the work and implications for further research. Then the reference list and appendices follow. In the final part of this study, part 2, the three articles are presented in full length.

2.0 Literature review

2.1 Procedure and reflections for selections

The searches for literature were completed in the databases ERIC and Google Scholar, and only peer reviewed articles were considered. Literature cited in already included articles was also examined and included when relevant. The literature search was complemented with recommendations about articles and books from experts in the field, such as my supervisors and colleagues, including other relevant researchers' recommendations through social media.

Although working with this study has provided me with an overview of relevant research about feedback in higher education, there are some limitations regarding the search for literature that must be noted. For example, to identify relevant key words may be challenging, and making choices always includes limitations. With this in mind, there is a risk that some relevant empirical studies have not been included in this study. Also, in some cases, the identified key words may only have given limited access to relevant published articles because titles and abstracts may not necessary include the identified key words. Therefore, in order to be sure of reviewing the field thoroughly, I supplemented the electronic methods for identifying relevant research with searching peer reviewed and reputable journals on a regularly basis, as many relevant scholars in the field publish their research in these journals. My main choices were the following: *Studies in Higher Education*; *Assessment and Evaluation in Higher Education*; *Assessment in Education: Principles, Policy and Practice*; *Active Learning in Higher Education*; and *Teaching in Higher Education*. The results from the literature review indicate what characterizes the research in the field. Additionally, my own engagement in the field over many years, particularly following the development in the research area over the past years closely, has given me an overview and insight into the field which contributes to inform the review chapter.

Research about feedback in higher education is complex and comprehensive and has grown increasingly over the past decades. Many researchers investigate feedback from different epistemological perspectives, which implies that several understandings of feedback exist in the literature. Such different understandings lead to various feedback practices and various ways of studying these practices for researchers. This also means that there is considerable and varied research literature available in the field. For the purpose of the study, the following review explains principal feedback elements including central developments that have influenced and informed the feedback field. To begin with, a brief introduction to the origins,

definition and purpose of the concept feedback is presented. This is important to understand, as the original meaning of feedback have been, and still is, influential in today's understanding and use of the concept feedback. Next, research addressing effective feedback is presented, before different approaches to feedback are introduced. Finally, challenges with feedback are raised including a critique of previous feedback approaches.

2.2 Feedback – definition and purpose

The concept feedback was not founded in the field of education. According to Wiliam (2011) we can trace the origins of the concept back to Bloom's work in the 1960 on one-to-one tutoring. However, Wiener (1948) had already in the 1940s developed a feedback system related to range-finders for anti-aircraft guns. In this work, Wiener (1948) concluded that feedback is useless unless it is provided within a system where the feedback can be used to influence future performance. Based on Wiener's work, Ramaprasad (1983, p. 4) later proposed that feedback is related to the a) 'identification of a gap between the actual level and the reference level of a system parameter' and b), 'utilization of information which is used to alter the gap in some way'. In his theory of formative assessment, Sadler (1989), building on the work of Ramaprasad, argues that feedback is information that is used to reduce the gap between the actual level of performance and the desired learning goal. Sadler (1989) identified three elements that he argues are crucial to the effectiveness of feedback; 1) helping students to recognize clearly the desired goal, 2) providing students with evidence about how well their work matches that goal, and 3) explain ways to close the gap between the goal and their current performance. The only way we can know if students learn from feedback, is if students make responses to complete a feedback loop, e.g. by fulfilling a second step in a feedback process, he argues. Central to this is the learner's ability to self-monitor their own work. For Sadler (1989, p. 121), this means that the learner has to '(a) possess a concept of the standard (or goal, or reference level) being aimed for, (b) compare the actual (or current) level of performance with the standard, and (c) engage in appropriate action which leads to some closure of the gap'. Wiliam, elaborating on Sadler's (ibid) theory about formative assessment, adds that feedback must also provide information 'on what kind of instructional activities that are likely to result in improving performance' (Wiliam, 2011, p. 12). However, such conditions are not developed in a vacuum, rather, they are conditioned by that 'the student comes to hold' the same quality standards in the discipline as the teacher. Consequently, the main purpose of feedback is to guide and develop student learning by identifying a gap between actual level of performance and expected standards, Sadler (1989) explains. This enables the students to 'monitor

continuously the quality of what is being produced during the act of production itself, and has a repertoire of alternative moves or strategies from which to draw at any given point' (Sadler, 1989, p. 121). However, this implies that students know how to do so, and that they employ strategies that enables them to achieve this. To develop such evaluative expertise, Sadler argues, students must be exposed to evaluative experiences embedded in the instructional design, such as peer appraisal (peer feedback). Through peer appraisal, students learn to evaluate, refine and revise their own work, which ultimately develops the students' pool of learning strategies. Other evaluative experiences the students should be exposed to, may be working with exemplars. From doing this activity, students learn to distinguish between high and low quality work, and as such exemplars function as indicators of quality in the discipline, Sadler argues (Sadler, 1989).

The focus on feedback as information is important to Weiner, Ramaprasad and Sadler, however, it is even more important that feedback has to be provided within a system and for a particular purpose. The purpose of a feedback practice (e.g. an 'instructional design') is that the information generated from feedback can have an impact on future performance of the system. This implies that feedback has to be domain-specific and not general, for example in terms of 'good work' or 'you have to improve this'. Black and Wiliam (2005) support this view, but add another condition as well, which is that feedback should actually improve *learning*. It is more likely that feedback supports student learning if it points out what kind of errors that are made and what students need to do to improve their learning, Wiliam argues (2011). If feedback contains this kind of information, it is assumed that students will engage in actions to improve their learning. Wiliam (2011, p. 12) even argues that 'the best designed feedback is useless if it is not acted upon'. The importance of the learners being active in the feedback process, is also raised by Boud (2000) and Nicol and Macfarlane-Dick (2006). Boud (2000, p. 158) argues that if assessment should be formative, it has to be used: 'Unless students are able to use feedback to produce improved work, through for example redoing the same assignment, neither they nor those giving feedback will know that it has been effective'. Similarly, Nicol and Macfarlane-Dick (2006) argue that the purpose of feedback is to help the students become self-regulated learners; i.e. students that are proactive and able to take control over their own learning.

The definition and purpose of feedback provide meaning to the term and are very commonly referred to in the research field. However, some of the main reviews that are frequently cited in the feedback field concern the effectiveness of feedback. These reviews are contextualized

within a wide variety of sectors such as a kindergarten context, school-based level and university level (Black & Wiliam, 1998; Hattie, 2008; Hattie & Timperley, 2007). While these reviews have had great influence in teaching practices internationally (Black, Harrison, & Lee, 2003) including Norway, they have had less influence on higher education. Sadler (2010), however, argues that similar findings as the ones from the school sector can be found in the higher education context. Merry (2013, p. 1) claims that it is recognized that ‘effective feedback is an integral component of successful teaching, learning and assessment processes’ within higher education, and in Evans’ (2013) review about assessment feedback in higher education, she also acknowledges its importance in student learning. Indeed, Evans (2013) argues that the value of feedback to support student learning is well established in the literature within this context. In the following chapter, particularly influential reviews that deal with the effectiveness of feedback are presented.

2.3 Effective feedback

In the feedback literature, the term ‘effective’ is often used to describe feedback that increases understanding. The use of the term ‘effective’ does not only imply ‘what kind of feedback works’, rather effective feedback is referred to when feedback raises the students’ awareness of how they can improve in relation to their current level of understanding and the learning intentions (Black & Wiliam, 1998; Hattie, 2008; Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006; Sadler, 1989). For example, in their meta-review of 250 studies of feedback, Black and Wiliam (1998) found evidence that feedback from teachers in addition to self- and peer assessments, improved learning and achievement in terms of increased learning gains for the learners. Hattie (2008) reviewed over 800 meta-analyses about ‘what works’ in relation to improve learning outcomes, and measured by effect size, he found that feedback had a positive influence on learning with an effect size of 0.73, while the average of all effects were 0.40. One of the single most influential effects that had a positive impact on learning was when students self-assessed their work. In Hattie and Timperely’s (2007) study, they provide both a conceptual analysis of feedback and review empirical studies about the impact feedback may have. They argue that the type of feedback and the way in which it is given, may influence the overall effectiveness of feedback. In their review, they found that feedback at the self-regulation level followed by feedback about process was the most effective, while feedback at the self-level is the least effective (Hattie & Timperley, 2007). They argue that effective feedback seeks to answer three main questions 1) where am I going? (feed-back), 2) How am I going? (feed-up) and 3) where to next? (feed-forward). On what level these questions serve

to reduce the gap between current and desired level of understanding is important for the feedback's effectiveness. Feedback works, Hattie and Timperley (2007) discuss, when ensuring that feedback is targeted at students at the appropriate level. The four levels, feedback about the task (FT), feedback about processing the task (FP), feedback about self-regulation (FR), and feedback about self as person (FP), help identify different dimensions of feedback. Together with the three questions mentioned above, these are essential in understanding how feedback works and what conditions support the positive effects of feedback, e.g. enhance learning (Hattie & Timperley, 2007).

Evans (2013) holds forth a different argument concerning the effectiveness of feedback, when she argues that effective feedback designs are holistic and iterative, with emphasis on assessments and feedback as integral parts of the learning process. Evans (2013) claims that this seems to be the general consensus about what constitutes effective feedback in higher education. Effective feedback include explicit guidance about requirements of the assessment and communication about what quality is, and exemplars are typically used in the process of understanding such criteria (Carless & Chan, 2017; Carless, Salter, Yang, & Lam, 2011; Gibbs & Simpson, 2005; Price, Rust, O'Donovan, Handley, & Bryant, 2012). In effective feedback, feed-forward activities are important, and as such, effective feedback draws on socio-cultural principles because it engages learners in continuous actions with feedback, Evans (2013) argues. A second common consensus among several scholars about the effectiveness of feedback, is the importance of student *use* of feedback (e.g. Boud, 2000; Nicol, 2010; Wiliam, 2011). Use presupposes understanding in terms of students applying the feedback for improving their work (Gibbs & Simpson, 2005; Price et al., 2010). Unless learners engage with the feedback, how can we know about its effects, Wiliam (2011) asks rhetorically.

In the feedback literature, we find different conceptual approaches to feedback. These different understandings often distinguish between *feedback as information transmission* and *feedback as a process*. Evans (2013) argues that one should not consider the different conceptions of feedback as mutually exclusive. Feedback is complex, and considering it on opposite ends in a continuum serves no good, she argues. Rather, one should acknowledge the different perspectives and consider them as reinforcing each other, and as developments over time (Evans, 2013). In the following, I discuss these conceptual understandings of feedback as stages of development in changing views of feedback.

2.4 Different approaches to feedback

Until recently, understanding feedback as information transmission has dominated the field (Ajjawi & Boud, 2017). This approach builds on rather narrow conceptions of feedback (Beaumont et al., 2011; Clark, 2011; Nicol & Macfarlane-Dick, 2006). Understanding feedback in this way, means that knowledge is considered a one-way delivery of content, transferred as a feedback message from an expert to a passive recipient (Evans, 2013). Nicol (2010) argues that the discourse about feedback as information transmission assumes that effective feedback is more detailed, more explicit and given more quickly. Implicit in this discourse is the view that feedback is a delivered message, which will be understood by the receiver (student) in the manner that the giver (teacher) intended it to (Price, Handley, o'Donovan, et al., 2013). Conceptualizing feedback in this way, the perspective takes little interest in students' responses to feedback. Hence, students' use of and engagement with feedback, Price, Handley, Millar & O'Donovan (2010) explain, is passive and at its best a behavioral response, not a cognitive one. Approaching feedback as information transmission is associated with traditional teacher-student roles, where the teacher, as an expert, is the most important in the feedback process and the provider of feedback to the recipient (the student). This 'paradigm of telling' (Boud & Molloy, 2013b, p. 703), builds on Ramaprasad's (1983) definition of the concept feedback in terms of feedback as information, and is therefore also related to Sadler's (1989) theory of formative assessment, as explained above.

The *feedback as a process* approach considers feedback as a two-way process, where students are active constructors of their own understanding (Boud & Molloy, 2013b; Carless, 2013, 2016; Merry et al., 2013; Nicol, 2010; Price, Handley, o'Donovan, et al., 2013). This approach is associated with the socio-cultural perspective to learning, in which feedback is seen as more facilitative than in the feedback as transmission perspective (Evans, 2013). In the process view, learning is an interactional and dialogical meaning making process, where students co-construct understanding with others through the use of various mediational means and cultural tools, such as language (Lave & Wenger, 1991; Linell, 1998; Säljö, 2004; Vygotsky, 1978). Feedback is considered a social practice influenced by relationships between teachers and students (Price et al., 2010) in which both teachers and students may learn from each other through dialogue and participation in learning activities (Carless, Salter, Yang, & Lam, 2010).

A key element of feedback in this approach is the students' active participation and engagement in the feedback process through self-regulation (Carless, 2006; Merry et al., 2013; Nicol &

Macfarlane-Dick, 2006; Sadler, 2010). The idea of self-regulation is that it empowers students as core participants in the feedback processes, that actively contribute to develop their own knowledge and skills (Nicol & Macfarlane-Dick, 2006). In this perspective, the student role is enhanced to generate and use feedback, and is often related to the notion of sustainable feedback, as theorized by Carless, Salter, Yang and Lam (2011) and Hounsell (2007), building on the work of Boud (2000, 2009). Boud argues that assessment practices in higher education should be developed towards more sustainability in terms of considering students' lifelong learning. Hounsell (2007) supports this view and emphasizes the student's role in sustainable feedback in terms of repositioning it to feedback continued over time. With reference to Boud and Hounsell, Carless and colleagues (2011, p. 397) propose the following definition of sustainable feedback: 'dialogic processes and activities which can support and inform the student on the current task, whilst also developing the ability to self-regulate performance on future tasks'.

More recent developments that focus on the active engagement of students in feedback processes, are feedback literacy (Carless & Boud, 2018) and assessment literacy (Price et al. 2012). Assessment literacy describes assessment in terms of a holistic approach to learning, an assessment in which students develop understanding of assessment criteria, assessment competence (for both teachers and students), and skills in giving feedback. These are important aspects in the students' process to become self-regulated learners; individuals who are capable of using, interpreting and giving feedback, with a main target to learn and develop. Feedback literate students are students that appreciate feedback, make sound judgments and manage affect in productive ways. Students that possess such qualities, have good potential to take action on the feedback and consequently, increase their learning (Carless & Boud, 2018).

Developing this further, the importance of dialogue in the feedback as process approach has been emphasized by researchers in the field from the past several years (e.g. Beaumont et al., 2011; Black & William, 1998; Gibbs & Simpson, 2005; Nicol, 2010; Nicol & Macfarlane-Dick, 2006). For example, Nicol and Macfarlane-Dick (2006, p. 205) listed feedback that 'encourages teacher and peer dialogue around learning' as one of the seven principles in their model of good feedback practice. Besides this, Beaumont, O'Doherty and Shannon (2011, p. 684), argue that feedback should be re-conceptualized as a process of dialogue rather than a one-way transmission of knowledge. That dialogue should take a central position in feedback processes is also a key element in the book edited by Merry, Price, Carless and Taras (2013).

Other researchers, such as Higgins, Hartley & Skelton (2001), support this view and argue that feedback must be understood as a complex form of communication, while Carless (2006) refers to feedback as conversation and collaboration, proposing that ‘assessment dialogues’ between student and teacher may reduce gaps in perceptions of feedback.

The above-mentioned research is valuable for understanding challenges with how feedback is delivered, but offers limited insight into the learners’ role in feedback processes, how they perceive feedback and how they make sense of feedback. This identified gap in the research is pertinent, considering the general agreement among scholars that a central point in effective feedback is the learners’ active engagement with and use of feedback. However, it is no wonder research has arrived at this conclusion, because much previous research, conceptualized within an information transmission feedback approach, has focused on what the teacher does to provide effective feedback, and how that feedback ideally may be delivered, rather than focusing on what the student does with the feedback. In the following, research demonstrating some challenges with feedback is addressed.

2.5 Challenges with feedback and a critique of previous approaches

A first problem associated with feedback, when considering its effects, is that feedback does not always lead to (better) learning. For example, the reviews of Hattie & Timperley (2007) and Kluger and DeNisi (1996), both provide evidence of cases where feedback from teachers had little or no influence at all on learning. Specifically, Kluger and DeNisi (1996) found that feedback directed at the self or personal level, such as praise, was not effective, in the sense that it did not enhance learning, a finding echoed in Hattie and Timperley’s (2007) review. Dweck’s (2013) research about mindset and motivation also illustrates similar findings; feedback that praises ability (e.g. ‘you are smart’) does not stimulate further learning. As such, this research demonstrates that feedback *alone* is not enough to improve learning outcomes (Lew, Alwis, & Schmidt, 2010). Pursuing this further, Boud and Molloy (2013a) argue that how feedback is received and used by the students, needs to be considered in terms of feedback effectiveness. A second problem is that students may have varied, and diverse, difficulties in learning from feedback (e.g. Price et al., 2010). For instance, the students may not actually read the feedback (Hounsell, 1987), they may not understand the feedback (Gibbs & Simpson, 2004), or the students may lack specific advice on how to improve and therefore the feedback is difficult to act upon (Higgins, Harley & Skelton 2001; Poulus & Mahony, 2008). In a review

of student use of feedback by Jonsson (2013), contextualized within higher education, five main reasons why students may not act upon feedback was identified. These were; a) the feedback may not be useful, b) the feedback may be insufficiently detailed, individualized or specified, c) the feedback may be too authoritative in tone, d) the students may lack strategies for how to use the feedback and finally, e) the academic language used by the instructors may not be understandable for the student. The review shows that difficulties still remain in enabling students' use of feedback for enhancing their work.

A major critique of the previous literature about feedback, is that the different approaches does not take into account the complexity of feedback; such as the interactional, the processual and the relational dimensions of feedback, and that the giving and receiving of feedback is a communicative event in which dialogue is central (Beaumont et al., 2011; Higgins et al., 2001). In the feedback process, students are main actors in making sense of feedback. The information transmission approach has for example been criticized for being monologic (Ajjawi & Boud, 2017; Nicol, 2010), because feedback in this view in essentials is about what the teacher does. Boud and Molly (2013b) argue that this approach implies a limited learning perspective, because the student is a passive receiver of information provided by the teacher and as such, the student may seek to meet the needs of a teacher instead of actively constructing their own knowledge. Nicol (2012) has also criticized this approach for holding on to a narrow conception of learning, as it ignores that students have the abilities to think, reason and reflect, assuming that they instead simply reproduce knowledge provided by the teacher. The main limitations in this approach is therefore the assumptions about the learners and how learning happens. Because the focus in this approach basically is on feedback as information, typically from the teacher, the learner's role in the process is more or less ignored.

The missing considerations of the interactional and social-relational dimensions of feedback can also be identified in effective feedback designs. They often focus on what the teacher should do to create engaging feedback activities, for example, how to provide effective written or oral feedback (Nicol & Macfarlane - Dick, 2006), or how feedback ideally should be delivered (Carless et al., 2011) and less on the learners' responses to that feedback and how sense making from feedback is created interactionally.

As the most recent stage in the development of a conceptualization of feedback, and as a response to previous challenges in the field, the dialogic feedback approach has emerged. Carless (2015) argues that the notion of dialogic feedback is a ‘new paradigm’ of the study of feedback, because it re-conceptualizes feedback from being an information transmissive view to a view considering feedback as a process. In the following chapter, I explain the current understanding of dialogic feedback.

3.0 Theoretical framework

3.1 Dialogic feedback

Building on previous understandings of feedback, and in particular the feedback as process perspective, the dialogic feedback approach represents a different way of thinking about feedback, as it emphasizes feedback as a complex social-relational process in which dialogue, interaction and emotion are central dimensions. It considers students as active sense makers of feedback through dialogue over time, and with multiple sources of feedback, such as peers, teachers and technologies (Ajjawi & Boud, 2017; Carless, 2012, 2015; Nicol, 2010; Steen-Utheim & Hopfenbeck, 2018; Steen-Utheim & Wittek, 2017).

Of particular relevance to this approach, is the emphasis it puts on the active role of the learner. Creating meaning from feedback is always done in interaction with other people, sources or materials, Linell argues (2009). Consequently, this means that students’ sense making of feedback is an interactional process that takes place over time. This notion has led to increased focus on dialogue as a means for sense making in feedback processes (Ajjawi & Boud, 2017, 2018; Boud & Molloy, 2013a; Carless, 2015; Carless & Boud, 2018; Price et al., 2011; Price, Handley, O’Donovan, et al., 2013). The idea is that, through dialogue, students are given opportunities to engage with quality and standards in the discipline, which increases the students’ sense making of feedback. Dialogue in self- and peer assessment has been highlighted as important in this respect, as it presupposes the active student in the learning process and empowers them to take control over their own learning (see Boud, 1995; Boud, Lawson, & Thompson, 2013; Liu & Carless, 2006; Nicol, 2009; Nicol & Macfarlane-Dick, 2006).

The dialogic feedback approach recognizes the importance of the emotional dimension in feedback (Ajjawi & Boud, 2017, 2018; Carless, 2012; Steen-Utheim & Hopfenbeck, 2018; Steen-Utheim & Wittek, 2017), including the role of trust, as it may influence the way in which students attend to and use feedback (Carless, 2012, 2015; Carless & Boud, 2018; Molloy et al.,

2013; Yang & Carless, 2013). Acknowledging the role emotions have in feedback is significant because, from a pedagogical perspective, emotions influence learning and development. It controls students' attention, it influences their motivation to learn and affect their self-regulation strategies (Pekrun, 2014). Interestingly, research shows that emotions can have either a positive or a negative impact on learning (Falchikov & Boud, 2007). However, there is agreement in the literature that emotional reactions, and specifically negative emotional reactions, may inhibit learning because it may limit student use of feedback (e.g. Carless, 2006; DeNisi & Kluger, 2000; Robinson, Pope, & Holyoak, 2013). To be able to use feedback, students have to manage their emotional reactions in a positive way, Carless and Boud (2018) argue.

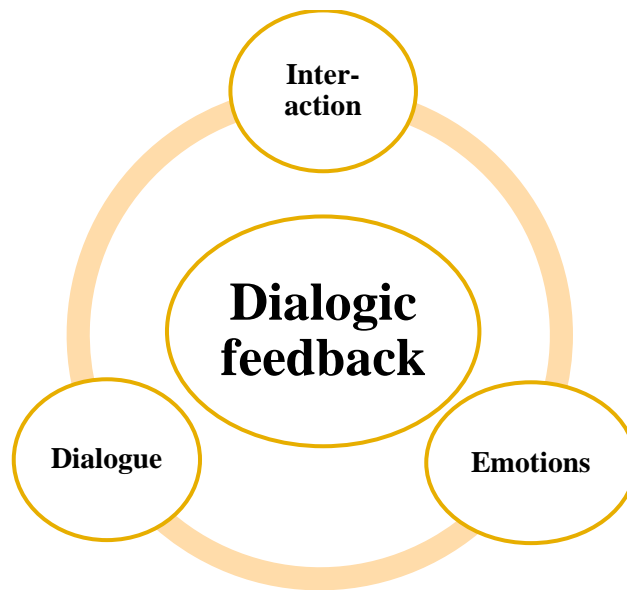
Despite the centrality of interaction, dialogue and emotions in previous definitions of dialogic feedback, these key concepts have not been sufficiently explored and accounted for conceptually. Additionally, dialogic feedback approaches are often, but not always, rooted in socio-cultural perspectives on learning in the literature (Bakhtin, 2010; Linell, 2009; Vygotsky, 1978; Wertsch, 1998). However, when such connections are made, references to these theories are only in limited ways accounted for, and sometimes only very briefly mentioned. Furthermore, in what ways these learning perspectives inform and contribute to develop the understanding of the concept feedback are not always clear.

In the following, I re-conceptualize the current view of dialogic feedback by drawing upon elements from dialogic learning theory in combination with socio-cultural principles by focusing on the concepts dialogue, interaction and emotions (Bakhtin, 2010; Linell, 1998, 2009; Vygotskiĭ, 2012). By elaborating these concepts as dimensions of dialogic feedback, I enhance and develop a deeper understanding of dialogic feedback as a whole, which may help understand the complex phenomenon feedback better, including how students make sense of it.

3.2 Framework for dialogic feedback

The following framework includes the dimensions dialogue, interaction and emotion. These are interrelated, and interdependently influence the way in which students make sense of feedback.

Figure 1. Framework for dialogic feedback



3.2.1 Dialogue

Although the concept dialogue is commonly referred to as central in the development of students' learning from feedback in dialogic feedback approaches, most studies do not define the term dialogue in particular. In a definition of dialogic feedback, Askew and Logde argue that: 'dialogic feedback is all dialogue to support student learning in both formal and informal situations (2000, p. 1)'. Defining dialogic feedback like this provides a rather limited and naïve view on feedback, because it assumes that all dialogue support student learning. For instance, it does not take into account the complex social phenomenon feedback is, that dialogue can take various forms, and that the way in which dialogue is interpreted and understood by the learner, although entered into with the best intentions, may actually inhibit learning. More recent definitions of dialogic feedback nuance and elaborate this definition further. For example, Carless (2012, p. 90) defines dialogic feedback as 'interactive exchanges in which interpretations are shared, meanings negotiated and expectations clarified ... dialogic feedback is facilitated when teachers and students enter into trusting relationships in which there are ample opportunities for interaction about learning and the notions of quality'. In a more recent definition, Carless (2015, p. 196) proposes the following definition of feedback: 'Dialogic feedback involves iterative processes in which interpretations are shared, meanings negotiated and expectations clarified in order to promote student uptake of feedback'. In these definitions the concept dialogue is implicitly addressed but not explicitly utilized or explained.

Linell (2009) defines the concept dialogue in a broad sense; when individuals engage in dialogue, in thinking out loud, reasoning and talking to oneself, others or artifacts; they are performing cognitive acts in interaction with others – and with the contribution of others (Ibid: 2009). Dialogue is not limited to direct face-to-face conversations, or verbal interaction, but also occurs in interaction with the self, artifacts and contexts (Linell, 1998, 2009). This means that dialogue can take place between a learner and a text, for example, or in terms of inner dialogue. Sense making can occur like this, as an active, responsive understanding to a previous utterance (e.g. a text or a verbal utterance). Such interactions, Linell argues, ‘give rise to deeper understandings’. (2009 p.16). Dialogue is significant to a learner’s sense making because knowledge is distributed in dialogue through interaction. Following this, language is considered a principal tool in how individuals make sense of the world, and as a tool that mediates thinking and reasoning (Vygotsky, 1978). Language is socially derived knowledge over time which is shared in dialogue, and it is through interactions, with the use of language, that individuals try to interpret and make sense of situations and actions, such as feedback from a teacher or peer. From a Vygotskian perspective, language is a resource used in thinking and communication, and in the development of higher mental functions (or deeper learning). In line with this, Vygotsky (1978) argues that language and thinking are closely related; we cannot think without language. Thinking is therefore always related to social experiences and other persons.

3.2.2 Interaction

In a dialogic perspective, self and others are profoundly interdependent; it is a dialogical interaction. Even when we are alone, we think with the help of others’ ideas, thoughts and language, or with knowledge acquired from others (Linell, 2009). Wertsch (1998) views this as using other people’s language, texts, or ideas as ‘thinking devices’; using other people’s thoughts to challenge and elaborate on our own concepts. This means that when people are involved in thinking and talking to others, or even reading texts, working with artifacts, or trying to understand their environments (such as a feedback text), they are performing communicative and cognitive actions as an interaction and with the contribution of others (Linell, 1998, 2009). This means that individuals, such as the students in this study, are never completely autonomous sense makers, since individuals are social beings who function interdependently with others. Creating meaning from feedback is done in situated interactions, such as a classroom setting where students receive feedback, in a feedback dialogue or in interaction with peers. Since sense making is interdependent with others, it is a process of joint

sense making of knowledge, because when a teacher or peer produces an utterance (verbal or in writing), she provides material for sense making for the other. However, the utterance is responded to by the other, and as such, this response is also a contribution to sense making. The response is of course an interpretation of the first utterance, and it is the following utterance that counts in the interaction as the communicated meaning. Bakhtin (2010) argues that understanding in situ is closely related to responding and anticipation. This means that an individual understands an utterance (for example in dialogue or in a text) partly by anticipating what the others' responses might be. The same applies in the reverse; when a speaker is planning or already saying something, she anticipates the listeners' upcoming utterances; hence the listeners' understanding of the utterance. In this way, sense making (of feedback) are interactional and dialogical processes in which development of meanings is 'a never-ending process', according to Linell (2009). Wegerif (2007) also emphasizes how sense making involves a future dimension, because utterances, as a response to prior utterances, anticipate future utterances which will be responded to. Bringing this further, sense making, created in interaction with others, involves being able to cope with situations, carrying out tasks and being able to explain various subject matters (Linell, 2009). This means that sense making is related to knowing which indicates action, such as a student's action upon received feedback in various ways to enhance and develop learning. In this study's article two (Steen-Utheim & Hopfenbeck, 2018), students' sense making of feedback is related to how the students act upon the feedback they receive, hence; how the students' understanding from feedback is actualized through interactions in their environment.

3.2.3 Emotions

Despite the acknowledgment emotions have gained as an important dimension in feedback, including its advocated influence on students' uptake of feedback (e.g. Ajjawi & Boud, 2017; Carless, 2012), this dimension has not been sufficiently considered in feedback research (Evans, 2013; Värlander, 2008), and specifically in research informed by a dialogic feedback approach. A consequence of re-conceptualizing feedback from an information transmissive view to a dialogic approach with an emphasis on dialogue as a means for development, is that it makes visible the emotional-relational aspects of students' sense making in feedback processes. Sense making, Linell explains, is thoroughly relational in its nature, because something has a meaning or a value for somebody; 'it is seen and displayed as something, under a certain aspect, by somebody, often in front of others (Linell 2009, s 24). Emotions concern the perception of oneself in relation to others. Specifically, Linell (2009)

asserts, emotions are the body's reactions to the environment, and are often aroused by others in their doings and displayed feelings. In other words, when students engage with feedback, when they attend to and respond to feedback and try to make sense of feedback, emotions are embedded in these interactions and consequently, also influence further actions with the feedback.

Even though dialogue not always imply direct face-to-face interaction, expressing (inner) thoughts, reflections and opinions, for example as a response to a feedback text, means exposing oneself to others. In a disciplinary context, this may feel particularly vulnerable, as differences in power and authority between a learner and teacher increases the possibility of emotional responses to arise within the students, Higgins, Hartley and Skelton (2001) argue. To increase students' uptake of feedback, developing trusting relationships between teachers and students where trust in communication and competency is established and sustained over time, is valuable (Carless, 2012). Communicating trust is to show empathy and willingness to listen, Carless (2012) explains. However, Shields (2002) argues that although strong emotions can occur in for example disciplinary dialogues, actual emotional language – in spoken words – form a very small portion of the language.

3.3 Summing up

The framework of dialogic feedback as presented above, brings together mechanisms of sense making by elaborating and nuancing the concepts of dialogue, interaction and emotion. It is proposed that students' sense making from feedback takes place through interaction and dialogue, in which emotions are embedded. Therefore, feedback is not fixed beforehand, rather; it is a process in which the individual's sense-making from feedback and potentialities for development can be actualized through interaction. From a pedagogical view, this means that how students make sense of feedback over time needs further study, because learning develops as a process over time. In this study, how the students make sense from feedback is studied by means of a portfolio assessment, an assessment design that supports students learning, interaction and dialogue over time and through active use of feedback (Smith & Tillema, 2003).

These reflections concerning the scientific position underpinning this study are important to make clear, as different scientific positions contain different reasonings for theoretical and methodological choices. Any theoretical framework carries with it a number of assumptions about knowledge, methodology and ontology (Baird, Hopfenbeck, Newton, Stobart, & Steen-Utheim, 2014), and consequently, this has implications for how the researcher designs a study

and what theoretical 'lens' she brings with her in the research process. Hence, a researcher cannot free herself from the theoretical and methodological assumptions, including the influence this has on the different data analysis conducted in a research project (Braun & Clarke, 2006). In the following chapter, the methodological choices for this study are presented.

4.0 Methods

4.1 Research design

This chapter presents and discusses the methodological choices that inform this study. First, the research design is introduced, then the empirical case is described including an overview of the participants in the study. Next, a presentation of the data sources is provided, followed by a presentation of analytical framing and procedures. Finally, some methodological and ethical considerations related to the work undertaken in this study are raised.

This is a qualitative exploratory study, informed by a dialogical feedback perspective (Ajjawi & Boud, 2017, 2018; Boud & Molloy, 2013a; Carless, 2012, 2015; Price, Handley, O'Donovan, et al., 2013; Yang & Carless, 2013) including principal elements from feedback theory (Black & Wiliam, 1998, 2009; Boud, 2000; Sadler, 1989; Wiliam, 2011). Dialogic feedback, as presented in chapter three, is a complex social-relational process, where the concepts dialogue, interaction and emotion are central dimensions. Feedback processes take place over time, during which students make sense of feedback through dialogue and with multiple sources of feedback (such as peers, teachers and/or technologies). The overarching research question in this study explores how feedback is perceived by students in higher education, and how they make sense of it. The following sub-questions are addressed in the three studies in this study:

Study one (research objectives in the article, rephrased into questions here):

- a) How can dialogic feedback be conceptualized?
- b) What potentialities for learning does a feedback dialogue enable?

Study two (article two):

- a) What are students' experiences with feedback in a portfolio assessment design?
- b) How do they act upon the feedback they receive?

Study three (article three):

- a) What are students' emotional responses to the feedback they receive from their teachers?
- b) How are these emotions displayed when the students reflect upon their engagement and use with the feedback?

The research questions are both exploratory and descriptive. This includes a conceptualization of dialogic feedback, how the students make sense of feedback, their actions and emotional responses to feedback; how they act upon feedback, and how emotions are displayed. I explored these questions through the perspective of the people being studied, the students, in their natural settings. To develop an in-depth understanding of the phenomena under study, I spent prolonged time in the field and used multiple data sources collected over time during the participating students' first year of study. The purpose of this was to explore this complex social phenomenon over time, and in the actual contexts the different feedback activities were set. Sense making processes are always interdependent with contexts (Linell, 2009) and by adopting this research design, preservation of the integrity and complexity of the studied phenomenon (how students make sense from feedback) in which the activity was displayed, was sustained.

The study took place over one academic year and was flexibly designed (Silverman, 2006). A flexible research design, or what Creswell (2013) names an emergent design, refers to a design which increases the possibilities of coming across and adopting unexpected issues during the research processes which often add to the richness of data. Using this design allowed me to revise and adjust the initial plan as needed. For example, I initially planned to do one-to-one interviews with the informants in addition to focus group interviews. However, some months into the data collection, I realized the amount of collected data was quite comprehensive and covered the needs in that area. Since I was interested in studying how the students made sense of feedback, I adopted a participant observation method (Creswell, 2013), a method that allowed me to follow and be part of the empirical context, as opposed to observing at a distance. For this reason, I attended every classroom teaching of their first semester in the course.

4.2 The empirical case

The empirical basis for this study is a first-year course in International Business Communication located at a middle-sized Norwegian University College. The course was structured in two modules; Module 1 focused on written English skills and Module 2 focused on oral English skills. The two modules were taught separately by two teachers. The academic goal for the first module was that the students learn and develop their skills in written English grammar including specific business concepts. The academic goal for Module 2 was that the students develop their proficiency in oral English, including their presentation skills. The language of instruction was English, and the students were encouraged to speak English at all times during the course. During one week the students participated in six teaching classes, each

class lasting 45 minutes; three of those in written English and three in oral English. In each module, three classes were set up in a row, so the students attended three classes (45 min x 3) two days a week. At the beginning of the course, both teachers informed the students about the overall learning objectives for the course, including the specific assessment criteria related to the written assignments and oral presentations. The criteria were also made available on Blackboard, the learning management system used in the course. Besides this, the assessment criteria were not discussed with the students or drawn upon at later times.

The main learning and assessment tool in the course was portfolio assessment, and the students received oral and written feedback from their teachers. There was no systematic peer feedback involved in the portfolio assessment design in terms of students giving feedback to each other. Over the course of the semester, the students handed in five written assignments for the written English module. They received written feedback on each assignment. Early in the semester, the students wrote their first short assignment and received their first feedback from the teacher. It was anticipated that the students would use the feedback to improve their assignment before the final hand in of the portfolio, but this was up to the students. The teacher usually provided feedback on assignments the week following a hand in, but this varied. Sometimes she provided the feedback within a few days of the hand in, and other times she provided the feedback more than a week after their submission. For the oral English module, the students held two oral presentations at different times during the semester. The students were expected to select a topic to talk about in their oral presentation, and the presentation should have a maximum length of ten minutes. Carrying out the presentations were mandatory, and the students were expected to use the feedback from the teacher to improve their second oral presentation. During the oral presentations, the teacher took notes on a predefined assessment criteria template. The students were acquainted with this assessment template at the start of the semester. The assessment template was structured in eleven rubrics, each rubric representing one criteria. These were: overall, communication with the audience, ability to speak freely, structure, pace, English proficiency, articulation/audibility, visual aids, use of visual aids, content and other. Immediately after their oral presentations, the student and teacher relocated to a nearby room and engaged in a face-to-face feedback dialogue. During the feedback dialogue, the teacher referred to the assessment template, and used a blackboard in the room to exemplify, elaborate and explain in writing. The students received the assessment template after the feedback dialogue. The teacher gave the student a tentative grade on the presentation. The length of the feedback dialogues varied, and lasted between four and fourteen minutes. While the feedback

dialogues took place, the remaining students in the class worked on an assignment in the classroom. For the final portfolio, the students were free to choose which three of the five assignments to include. The final assessment consisted of the written portfolio including an oral presentation.

4.3 The participants

To get an in-depth understanding of the studied phenomenon, I spent considerable time in the field where the participants' experiences with feedback took place. To begin with, I joined the students' natural setting, which was the classroom and adjoining study rooms. For example, I attended every teaching class, and stayed in the room during the breaks. I considered it likely that my presence in the classroom would influence my relation with the students, in the sense that it created a safe relationship that would make it easier for me to recruit participants. At the first teaching class, the teachers introduced me, and I presented myself and my research project. This made it easy for me to small talk with the students during the breaks, which I believe made recruiting informants easier. The participants in this study are the 45 students in the course, where 15 of the informants are international exchange students who stayed in Norway for one year only.

A main purpose of this study is to seek in-depth understanding of a complex and rich phenomenon such as how students make sense of the feedback they receive. In order to shed light on this, I was interested in recruiting a smaller sample of key informants. These students were recruited using purposive sampling (Oliver & Jupp, 2006), which meant that they volunteered to participate based on their time and interest. Initially, 13 students agreed to participate as key informants, however, after just a few weeks one of the students quit the course. Of the 12 remaining key informants, six were Norwegians, and six were students with international backgrounds. Eight of the key informants were women, and four were men. The students were given fictive names. I explained to the students what it meant for them to be key informants and that they could at any time during the project withdraw without any explanation. None of the students withdrew during the research project. The students received an information letter with basic information about the research project and my contact details. All key participants in the study signed an informed consent (information letter and informed consent is included in appendix seven).

4.4 Data sources and collection

I used several data sources collected over time to get insight into and understand how these students make sense of the varied feedback practices they are involved in within their assessment context. The primary data sources are: a) audio-taped feedback dialogues between one of the implied teachers and the students, b) key informants' self-reported reflection logs and third; c) focus group interviews with the key informants. I also make use of secondary data; d) taped classroom activity and teaching, e) field notes and f) relevant documents and meeting notes. The data were collected over a one-year period from fall 2009 to summer 2010. Some supplementing data collecting was done during spring 2011. In the following tables, lists are provided to get an overview of the total amount of data from primary (table 2) and secondary (table 3) sources:

Table 2. Primary data (recordings of feedback dialogues with key informants, student reflection logs, recordings of focus group interviews):

Type of data	Informants	Amount of data	Duration
Audio recordings of oral feedback dialogues	11 key informants	18 dialogues Word count: 19.840 Pages: 42	2:01:40 (two hours, one minute and 40 seconds)
Reflection logs	12 key informants	Word count: 7645 Pages:44 (73 answers)	
Audio recordings of focus group interviews*	12 key informants	Word count: 32.713 Pages: 80	4:46:50 (four hours, 46 minutes and 50 seconds)

* During the second interview with group 1, the memory stick in the Smartpen was full. This happened after 16 minutes and 54 seconds. During the remaining time of the interview, I took hand written notes. Consequently, the time 4:46:50 is actual recording time, all in all.

Table 3. Secondary data (classroom activity recordings, field notes, meeting notes and other relevant documents and resources*):

Type of data	Amount of data/duration
Classroom audio recordings	20:51:04 (twenty hours, 51 minutes and four seconds)
Observations of classroom activity and teaching	56 observation sheets (56 pages)
Field notes	17 pages
Meeting notes	5 meetings; 5 pages
Other relevant documents and resources*	Course design plan, curriculum design, White paper no. 27 (Det Kongelige Kirke- utdannings- og forskningsdepartementet, 2000-2001), various assignments and other relevant papers related to the course

**I also had access to the specific course site on the learning management system, Blackboard.*

All audio recordings of the feedback dialogues and the focus group interviews were done using a Smartpen. A Smartpen allows the researcher to make notes that are synchronized with the recordings of the same event. It is also possible to access the data at a later time by tapping the pen anywhere in the notes and the Smartpen will automatically play the current text. In other words, the Smartpen made it easy to maneuver back and forth in the data material. In the following, I explain the data sources in more detail.

4.4.1 Primary data source 1: feedback dialogues

The feedback dialogues represent naturally occurring talk, which are data that exist independently of the researcher's intervention (Silverman, 2006). To assist the audio-recordings of the feedback dialogues, I also took notes during the feedback dialogues. The purpose was to include relevant elements from the feedback dialogue that are left out in the audio-recordings. I noted actions such as body language, facial expressions, and if the teacher or student used relevant resources in the room during the dialogue. For example, the teacher typically wrote on the blackboard in the room to elaborate or explain. Advantages with this kind of data is that recordings can be replayed and subsequent transcripts improved. Additionally, recordings preserve sequences of talk, which makes the actual language (the 'in vivo' terms) of the participant visible (Creswell, 2013; Silverman, 2006). The total amount of recorded time, including word count of the transcribed feedback dialogues, is listed in table 2.

4.4.2. Primary data source 2: reflection logs

The reflection logs are qualitative text data (Creswell, 2013). Advantages of this type of data source is that it enables the researcher to obtain the language and words of the participants. It also allows the researcher to control the line of questioning (Creswell, 2013). In total, seven questions were proposed to the students by e-mail during their semester (appendix 1). I named these texts 'reflection logs' and stored them in an electronic file on my computer as allowed for in the ethical clearance the ethics committee (see appendix eight for informed consent). The first e-mail asked: 'what are your expectations to the feedback you are going to receive this semester?' The second e-mail asked: 'you have now received feedback on your first oral presentation. What are your immediate thoughts about it? What were your experiences with receiving this kind of feedback?', and the third e-mail asked the similar questions but exchanged 'oral' for 'written'. Based on the answers to the third e-mail, which showed that the students experienced the written feedback as challenging to understand, I added a sub-question to the fourth e-mail, which was: 'What do you do when you do not understand the written feedback?'. I aligned the timing of each e-mail to when the students had received feedback on either their written assignments or their oral presentations. The responses the students gave in the reflection logs was conducive to making small revisions to the focus group interview guide.

4.4.3 Primary data source 3: focus group interviews

Focus group interviews usually consist of groups of 3-6 people (Marková, Linell, Grossen, & Salazar Orvig, 2007). Focus group interviews are socially situated interactions where the discussion in the group is related to themes defined by the researcher (Marková et al., 2007). Advantages with focus group interviews are the potential richness in the language and the social interaction that can emerge, according to Marková et al. (2007). A strength with doing focus group interviews is that encouraging rich responses from the participants may enhance the quality of the data, and it is therefore useful for eliciting the student perspective (Barbour, 2008).

The key informants were interviewed in the focus groups twice during the semester. For the purpose of this study, I developed open-ended and flexible interview guides (Silverman, 2006), with the purpose of stimulating the dialogue between the participants (Barbour, 2008). Consequently, the questions in the interview guide did not lead to typical 'yes' or 'no' answers. In the first interview guide, I defined five themes with nine sub-questions (see appendix two for English version, see appendix three for Norwegian version). In the second interview guide,

there were five themes and seven sub-questions (ibid). I wanted the participants to discuss, and I was prepared to facilitate a discussion so that the group dynamics could develop. I expected the discussions among the students to trigger different views and that this would stimulate the students to ask each other questions as well. On the basis of this, I was hoping the discussion would develop and that insights would emerge. However, as I will demonstrate below, in the chapter ‘methodological rigor’ (chapter 4.7), challenges emerged during the focus groups which I had not anticipated. For example, in one group, one particular student dominated the discussion and interrupted the other students. In that particular case, I prompted questions directly towards the other students, giving them the opportunity to reflect and elaborate on their thoughts.

The 12 key participants were set up in three groups: group one (5 students), group two (4 students) and group three (3 students). The interviews with one of the groups was conducted in the English language, the other two groups were done in the Norwegian language. Each interview was audio recorded and lasted between 45 and 60 minutes; the total amount of recordings are 4 hours and 46 minutes (see table 2 for details). All group interviews were transcribed by a paid research assistant.

4.4.4 Secondary data sources

The secondary data sources are audio recordings and observations of classroom teaching, field notes, meeting notes and relevant public documents or resources, such as the White paper (Det Kongelige Kirke- utdannings- og forskningsdepartementet, 2000-2001), course descriptions for the course studied, and information posted and uploaded to the learning management system, Blackboard. The secondary data were used as supplementary data to assist the primary data when relevant.

The observations were done during classroom teaching, and the aim was to capture additional information about the feedback practices the students were involved in. For example, I noted when the teacher(s) provided information in class about the assignments the students would get feedback on. I audio taped every teaching class and I left the recorder on during breaks. The purpose of this was to capture the dynamics in the classroom and get an overall overview of the teaching and assessment practices the students were involved in. I used resources at Blackboard to keep me informed and updated on the course content, including accessing the assignments the teachers posted there for the students.

4.5 Analytical framing

To conceptualize feedback as a social-relational process, in which dialogue, interaction and emotions are central dimensions to students' sense making of feedback, the unit of analysis has to be related to the situated interaction because '...the mind is realized largely in and through its situated interactions' (Linell, 2009, p. 30). Based on this, I identified the unit of analysis as the situated interactions where the students create meaning from feedback, which means the linguistic situations where the students' sense making occurs. The unit of observation was therefore comprised of the in situ feedback dialogues, the reflection logs where the students' perceptions and actions with feedback was displayed, and the focus group interviews where the students' emotional responses to feedback unfolded.

4.6 Analytical procedure

In the following, I explain and elaborate the analytical procedures applied to the data collected in this study. In general, the analysis phase proceeded hand in hand with other parts of developing the study, for example the write-up of preliminary findings. I started the analysis process with organizing and preparing the data for analysis. I listened to the 80 feedback dialogues, sorted and arranged the reflection logs, and prepared the field notes systematically according to dates. The focus group interviews were transcribed by a research assistant and when these were handed over to me, I read through the material. In the following I present an overview of the analytical procedures.

4.6.1 Level of analysis

The analysis of the data material was completed at three levels. The purpose of the first level was to gain an overview of the material and emergent themes. At the second level, in-depth analysis of the primary data material was done, with an aim to assemble meaning to the data. At the third level, interrelated themes were extracted across the data set, for the purpose of getting an overview of the patterns in the total amount of data.

As the different levels of analysis will show, I alternated between a theory driven and data driven approach (Alvesson & Sköldbberg, 2009). Theory from the feedback field has informed the analysis, as the following descriptions of analytical levels will illustrate. However, the main purpose of adopting an abductive approach, was to let the data speak so that the participants' voices were heard, and to avoid that my theoretical understandings and theoretical framework dominated the analysis. I explain how the inclusion of the participants in the process of

interpreting the data strengthened the validation of the (preliminary) findings in a subsequent chapter (4.7).

Level 1: Overview and emergent themes

At the first level, I had an open approach to the material. I spent considerable time in the early phase going back and forth in the material, trying to establish some kind of initial meaning to the material. Through this first process, basically through listening, reading and re-reading the material, I got a first overview of the data material, and based on this overall impression, some emergent themes displayed from the material. For example, as I read through the students' reflection logs, many of the participating students emphasized the oral feedback dialogue as particularly valuable to them, and explained how they used feedback to support their learning. This interested me, and I returned to the 80 taped feedback dialogues and listened to them once more. At this stage, I did not have any pre-defined categories for coding the data, because I wanted to be open to let the data speak for itself. I noted some themes that recurred in the feedback dialogues. These were a) the teacher was very engaged and motivational, b) the teacher exemplified when he explained the feedback to the students, and c) the teacher was specific in his feedback. When I returned to the reflection logs, the students commented much on similar themes. In the transcripts of the focus groups, I discovered an emotional dimension in the students' discussions. This interested me, and I realized I had to analyze the material in more depth to understand what was going on in the discussions. The second level of analysis included the following analytical methods applied to the data: in article one I applied interaction analysis (Jordan & Henderson, 1995); in article two I applied content analysis (Silverman, 2006), and in article three I used thematic analysis (Braun & Clarke, 2006). The analytical procedures for the three studies are described in more detail in the three articles, but are briefly explained in the following.

Level 2: In-depth analysis

At the second level of analysis, I proceeded to analyze the various primary data sources in more depth to assemble meaning to the data. The purpose was to investigate how sense making occurred in the unit of observation (the feedback dialogues, the reflection logs and the focus groups).

To analyze the key informants' feedback dialogues, I used interaction analysis. This method allows for in depth analysis of nuances related to interactional and relational characters of speech (Jordan & Henderson, 1995). The purpose of interaction analysis is to identify regularities in individuals' interactions, nonverbal and verbal, both with others and with objects in the individual's environment (Jordan & Henderson, 1995). Interaction analysis builds on a basic premise that knowledge and action are fundamentally social in origin, and are rooted in social and material settings. Being close-up in a social context, such as the feedback dialogues represent, was a unique opportunity for me to study how meanings were realized in situ (Linell, 2009). Based on a review of dialogical theory, I derived four dimensions which were operationalized for the purpose of determining empirical identifications in the transcripts of the feedback dialogues (see appendix four for details on the operationalization). The dimensions were: emotional and relational support, maintenance of the dialogue, expressing them self and the other's contribution to individual growth. The empirical findings from the analysis of the feedback dialogues where then merged with the theoretical derived dimensions.

For the reflection logs, I used content analysis. The purpose of content analysis is to analyze the content of texts (or visuals, sounds or other printed matter) (Kirppendorff, 1989; Silverman, 2006) to understand better the perspective of the producer of the text (Berg, Lune, & Lune, 2004). Since content analysis is an empirically grounded method where the researcher uses specific techniques for analyzing trends or patterns in a text (Kirppendorff, 1989), I found this method useful for the purposes of assembling meaning from the reflection logs. The analytical process was as follows: After the first level of analysis, as explained above, I established a code book which included the students' responses to each of the e-mails I had proposed to them during the semester. Based on the emergent themes derived from the first level of analysis, the student responses were then categorized in terms of words that had similar meaning or connotations to the emergent themes (Weber, 1990). By reviewing the material several times the students' typical answers were made salient, and noted in the codebook as a code. For example, one of the emergent themes at the first level of analysis was that the students used the feedback to support their learning, typically by self-reflection. Through the process of doing content analysis at this phase, the theme 'internal feedback' was developed. The analysis process led to six themes being identified: the value of oral feedback, challenges with written feedback, internal feedback, using oral feedback, imitating dialogue and finally, interacting with peers. Content analysis has a quantitative dimension, which is to count or measure the frequency or appearance of a particular element in studied text (Jupp, 2006). I used this

dimension of content analysis specifically for the purpose of investigating the students' experiences with the feedback they received. In the second article, results from this part of the analysis is provided in the findings section.

To analyze the transcribed focus group interviews, I used thematic analysis aligned to the recommendations of Braun and Clarke (2006). The purpose of thematic analysis, according Braun and Clarke (2006), is to identify and analyze patterns of meanings within the data, and the data are typically organized and described in rich detail. I proceeded to interpret the transcripts in an analyst-driven manner (Braun & Clarke, 2006), where my prior theoretical understanding and knowledge in the feedback field informed the analysis process, including the specific research question for the study. In other words, I coded the transcripts based upon terminology from existing feedback literature. These were key issues from the literature such as student engagement and use of feedback, students' challenges with feedback and emotional dimensions of feedback (Boud, 2000; Carless, 2015; Jonsson, 2013; Price et al., 2011; Wiliam, 2011; Yang & Carless, 2013). By doing so, I was able to identify patterns or themes in the coded extracts. I then sorted these in order to establish some general themes across the entire data set of the group interviews. This resulted in five themes. The themes are: oral feedback, quality of feedback, type of feedback, the student- teacher relationship and feedback and self-confidence. The themes are presented and discussed in the findings section in article three.

Level 3: Interrelated, common themes

The third level of analysis was conducted as a final analytical step when the findings from all three studies were assembled. The purpose of adding this level was to interpret and assemble meaning across the entire data set of the study. I organized the results from the three individual studies in a table (see appendix six) to get an overview of the overall findings from the entire study. In the table, I show which findings that are connected to which study. Following this, I extracted three interrelated themes across the findings from all three studies. These themes are presented as the major findings from this study and are discussed in chapter 6 (pp. 46).

4.7 Methodological rigor

The practice of doing social research is in itself a sense making activity, as it is a dialogically constituted activity (Linell, 2009). The dialogicality is present at two levels; both at the subject matter level and at the analytical level. The former level, the 'first order phenomena' (Schutz, 1970) constitutes the collected data, which are a representation of the

participants' voices; their reflections, utterances and understandings as they appear in the various data sources I have used in this study. The second level, the 'second order phenomena' (Schutz, 1970), refers to the activity done in the analysis process; I reconstructed the 'first order' sense making by the participants. This implies that the data must be considered as re-representations (Silverman, 2006), as they have been object to re-contextualization (Linell, 1998) and interpretations have been made by the researcher. The goal was of course to systematize the data, to explain and to assemble meanings to the data, so that the findings can be communicated to an audience.

The transcripts of the feedback dialogues are a kind of re-representation and translation, and it is a methodological choice of what is going to be represented and therefore also of the unit of analysis (Gibson & Brown, 2009). However, Jordan and Henderson (1995) argue that when the researcher does the transcriptions themselves, as I did with the recordings of the feedback dialogues, this can be an analytical advantage in terms of getting close to the data.

The feedback dialogues are what Silverman (2006) names 'naturally occurring talk'; data that exists independently of the researchers inference. The focus group interviews on the other hand, are data that have been influenced by the researcher because I asked the participants specific questions. However, the transcribed feedback dialogues represent something other than 'naturally occurring talk', as the original data have been subject to modifications. This is the reason why these kind of data always have to be treated with caution, and that researchers have to reflect upon the notion of 'natural' (Hammersley, 2008). However, the benefit of such data is the possibility it gives in analyzing feedback dialogues in situ and as a complex social phenomenon, including how students construe meaning from this kind of feedback. According to Hammersley (2010), one must note that the process of transcribing such data will be influenced by the researcher's cultural knowledge in terms of identification and representation of what happens in the dialogues. How does the researcher evaluate when a pause is a pause, for instance? Is it the length of the pause? Or is it where the pause takes place? And how is this noted in the transcripts? Because of our cultural knowledge and competence, we hear meanings when we transcribe, and transcripts therefore always to some extent rely on the researcher's ability to understand what the participants might mean, based on what they say. In the transcriptions of the feedback dialogues, I tried to be as faithful to the audio taped dialogues as possible, and transcribed in verbatim with much focus on being accurate and detailed.

The recordings of the feedback dialogues and the focus group interviews have several benefits. They can be played numerous times, and they preserve sequences of talk (Silverman, 2006). Nevertheless, the transcriptions and the choices made in transcription this naturally includes, have been done by one person. This can be problematic in terms of validity and reliability, because the chosen representation of the social phenomena that is the unit of analysis, the written version of the feedback dialogues, has been made by one individual. The verbatim transcriptions of the focus groups were done by a paid research assistant with previous experience in transcribing focus group interviews. Because the transcriptions are a form of re-representations, it is always possible that another researcher would have made other decisions and consequently, done a different type of transcription (Gibson & Brown, 2009). To strengthen the validity and reliability of the data, a sample of the feedback dialogues, both in audio format and the transcripts of these, has been subject to discussions in a research group. The combination of the transcribed feedback dialogues and the field notes taken during the dialogues is also a way to ensure further reliability and validity (Seale & Silverman, 1997).

In the interview guide for the focus groups, I had prepared questions about students' experiences and use of feedback. I did not specifically ask about emotions to feedback. The amount of negative emotional responses that were displayed in the focus groups therefore came as a surprise to me. When the researcher is surprised by their findings, this strengthens the validity of findings in the research, according to Silverman (2006). This, in combination with a critical view on my own research, making the choices transparent and discussing strengths and weaknesses about the research itself, strengthens the reliability (Braun & Clarke, 2006). The method of 'member checking' (Silverman, 2015) was also applied to the transcribed focus group interviews. These transcripts were also distributed to the participating students, so that they could read through the material and make comments or amendments if they had any. The students had no comments to the transcribed interviews, other than expressing gratitude that they were invited to read and comment upon the interviews.

The reflection logs represent permanent written texts. This could imply that the meaning of the text is in the text 'as is'. However, despite a written text's constancy and de-contextualism, Linell (2009) claims that this does not imply that the text has some kind of predetermined, objective meaning or interpretation. Meanings are created in interaction with context, people and situations, and since I was the one engaging with the texts, my knowledge in the field, and my perspectives on and understanding of the students' feedback situations, may have influenced the meaning I subsequently assembled the texts. Thus, previous knowledge will

influence how sense making of data occurs, however, as long as researchers obtain a reflective view, bias may be avoided (Kvale & Brinkmann, 2009). Texts contain traces of prior communication situations (Linell, 1998, 2009), and as such, it is likely that the participants' reflection logs were composed of references to various situations and different sources, such as previous experiences with the two teachers, other teachers, and other students.

After I collected the reflection logs, they were systematized in two ways. The purpose of arranging them was to prepare for analysis, but also make it easier for me to keep an overview of the total amount of pages from the reflection logs. First, I organized each key informant's reflection logs in one joint document and kept these in an electronic file on my computer. Second, I organized the reflection logs based on the order of the questions proposed to the students by e-mail. Hence, I kept one file with all the key informants' answers to question one, one file with the key informants' answers to question two and so on. Each student received his or her document with their combined reflection log, so that they could read through their assembled text. I asked them to adjust, make comments and/or alter their responses if they had any. One student responded to this. He wanted to ensure that I had understood the meaning of one paragraph in his reflection log, because he felt he had articulated himself poorly. This kind of 'member checking' (Silverman, 2015) strengthens the validity of the reflection logs as it ensures the accuracy of the written words in the data source.

In qualitative research, conducting interviews is quite common. Interviews give access to rich data, but are also comprehensive and may therefore be challenging to analyze. During the focus group interviews, I experienced some challenges I did not anticipate. First, that the students in all three groups were very talkative. And second, that they were more oriented towards me than each other. In a field note dated 10.11.09, the following reflection was noted:

'Intentionally, I wanted the focus group to function as a dialogue and discussion among the students. However, after three interviews, this has proven to be difficult. I always start the interview with an explanation of my role and the students' role, emphasizing that I am interested in their talk and discussions and that I will play a rather limited role during the interview. However, many students address me as they talk, turning their head towards me and searching for eye contact. Occasionally they ask me direct questions and expect me to answer. They did not direct their utterances to each other very much. So, I learned that I had to be more direct and pose questions to them, typically in the beginning of the interview, and after a while, the students spoke more freely to each other.'

The aim of writing field notes after the focus group interviews, was mainly to have a space for my own reflections (Creswell, 2013); where I could note thoughts, feelings and/or concerns subsequently to the data collection.

This is a small-scale in depth study with participants that have been selected by using purposive sampling (Oliver & Jupp, 2006). To generalize findings from this study is therefore difficult in terms of advocating that the findings may be applicable to the whole population of students in higher education in Norway. However, many higher education institutions in Norway and in other countries offer similar courses to bachelor students. As such, these findings are valuable in terms of naturalistic generalization. This means that other people in similar situations and contexts may find the results valuable and significant, because they are relevant for them in their context (Kvale & Brinkmann, 2009; Lincoln & Guba, 1985).

4.8 Ethical considerations

Research ethics deals primarily with the interactions between the researchers and the people they study. The Norwegian National Research Ethics Committee (NESH, 2011) provide ethical guidelines for researchers about recognized norms of research ethics. In Norway, researchers that will use personal data in their studies, must apply to and notify the Norwegian Centre for Research Data (NSD) of their research project. That is the case also for this study. Ethical approval for this project was granted from the Norwegian Centre for Research Data (appendix seven).

In this project, no ethical challenges have been raised. All the participating students have been anonymized and given fictive names, including the two teachers involved in the empirical case. The students have signed an informed consent, and were made aware that they could withdraw from the project at any time (appendix eight).

Engaging in a feedback dialogue can be experienced as a vulnerable situation for the students involved (Carless, 2012), and receiving feedback can elicit emotional responses (e.g. Robinson et al., 2013). Therefore, previous to the feedback dialogues, I asked each student whether they were okay with having me in the room recording the dialogue. None of the students disapproved and they all actively consented to my presence in the room during the feedback dialogue. Immediately after the feedback dialogues, I wrote my overall reflections from the dialogues in my field notes.

During the project, the participating students were informed about preliminary findings. For example, I referred to the results of the feedback dialogues from the initial analytical phase

when I met with the students for the first group interviews. This gave the students a chance to comment upon the initial findings, to supplement, elaborate or correct my interpretations. The students were interested in the preliminary findings, but had little or no further amendments. The initial findings from the feedback dialogues were positive, because they provided indications of an engaged teacher and a positive feedback situation. The students agreed with this. The students were also given the chance to read the transcripts from the focus group interviews and the reflection logs. The inclusion of the students in the research process, or 'member checking' (Silverman, 2006), is a method for empowering the students by giving them a chance to comment the interviews, and as such, validate the transcripts (Mero-Jaffe, 2011). Involving the students in the research process like this, empowers them in terms of including them to control and give insights into initial findings and preliminary writings (ibid: 2011).

However, conducting research means making choices, and these choices do not exist in some kind of epistemological vacuum (Braun & Clarke, 2006), rather, they are informed by the theoretical underpinnings that constitute the theoretical framework of a study. For example, in the analysis phase, the researcher plays an active role first in identifying patterns and meanings, then in selecting the ones that are of interest in terms of excerpts from the transcripts, and ultimately, in reporting these to the scientific community when the results are published in scientific, peer reviewed journals. In a study like the present one, it also implies that the researcher risks ignoring or failing to see something in the data that could have been of interest to the reader in terms of providing a rich enough description in the three studies.

Qualitative research is particularly valuable when one wants to study phenomena in depth. Qualitative methods, such as the methods used in this study, give the participating students a unique opportunity to articulate and in their own words shed light on the research questions, as opposed to the more fixed responses quantitative methods result in. However, critical views of qualitative research argue that qualitative research is often unclear, 'airy fairy' or not real research (Labuschagne, 2003). Another common criticism is that within qualitative methods, 'anything goes'. Qualitative research contains methods that should be applied with rigor and respect to the data, and transparency in the data collection phase, including the data analysis process, is important in that regard. By explaining and reflecting critically on the methods of data collection and analysis process employed in this study, this has been ensured.

5.0 Overview of the three articles

In the following chapter, I briefly introduce the three articles produced during this study, and present a summary of the key findings of each. The three articles address sub-questions of the overarching research question: *How is feedback perceived by students in higher education, and how do students make sense of it?*

5.1 Article one

Steen-Utheim, A., & Wittek, A. L. (2017). Dialogic feedback and potentialities for student learning. *Learning, Culture and Social Interaction*, 15, 18-30.

The topic of this article is dialogic feedback. The research objective is two-fold: it has both a conceptual and an empirical objective (in the methods chapter, the research objectives are rephrased into questions, see page 25). The first, conceptual objective was to derive some dialogic dimensions from dialogic theory which could be considered important to student learning. The second, empirical objective was to use these dimensions as an analytical framework to investigate feedback dialogues between a teacher and his students. With the use of interaction analysis, we analyzed in depth in situ oral feedback dialogues between the twelve key informants and one of the teachers. The data used in this article was transcribed audio tapes of feedback dialogues between one teacher and the key informants, supplemented with secondary data sources such as field notes, assessment templates and observations of classroom activity. The study is framed within dialogic feedback approach, including elements from dialogic and sociocultural theory (e.g. Bakhtin, 2010; Carless, 2012, 2013; Carless et al., 2011; Linell, 2009).

In reference to the first research objective, the literature review of dialogic theory resulted in four dimensions which are relevant to student learning. These are: a) emotional and relational support, b) maintenance of a dialogue, c) students' opportunities to express themselves and d) the others' contribution to individual growth. In reference to the second research objective, we operationalized the four dimensions for the purpose of investigating empirical indications of the four dimensions in the transcribed feedback dialogues. As a specific method for investigation, we used interaction analysis (Jordan & Henderson, 1995) to provide in-depth insights into the feedback dialogues by studying how meaning was created and constituted interactionally in the dialogues. The findings from the feedback dialogues were then merged

with the four previously derived theoretical dimensions. On these grounds, we suggested a model of dialogic feedback which holds four potentialities for student learning. The model is named 'Dialogic feedback. Four potentialities for learning' and provides rich descriptions of the potentialities for student learning from dialogic feedback. The study generates understanding for how the four dimensions can inform an analytical framework, including empirical evidence for the way these dimensions are present in practice.

5.2 Article two

Steen-Utheim, A., & Hopfenbeck, T. N. (2018). To do or not to do with feedback. A study of undergraduate students' engagement and use of feedback within a portfolio assessment design. *Assessment & Evaluation in Higher Education*, 1-17.

In article two, we address student perceptions of their experiences with oral and written feedback within portfolio assessment and explore how the students act upon the feedback they receive. The research questions are as follows: 'What are students' experiences with written and oral feedback within a portfolio assessment design, and how do students act upon the feedback? The data for the study are the key informants' self-reported reflection logs. This study is framed within key issues in relation to theory and practice from the feedback field in higher education, with a particular focus on a dialogic feedback approach (e.g.Ajjawi & Boud, 2017; Boud & Molloy, 2013a; Carless, 2012; Price et al., 2011; Sadler, 1989).

We analyzed the data using content analysis. This resulted in six themes that answer the research questions: 1) the value of oral feedback, 2) challenges with written feedback, 3) internal feedback, 4) using oral feedback, 5) initiating dialogue and 6) interacting with peers. In terms of answering the first research question, the overall findings show that 11 of 12 students value both the written and oral feedback that they receive from their teachers, and that within their assessment context, the regular use of feedback also supported their learning from feedback. Besides this, the results resonate with previous research that has demonstrated student challenges with understanding written feedback (e.g.Price et al., 2010) and give support to former studies that have identified effective feedback elements, such as specific and detailed feedback (e.g.Weaver, 2006). A major finding from this study is that the students act upon feedback in various ways, and the study demonstrates how these students engage in four

specific actions to create meaning from the feedback. These actions are: 1) internal feedback, 2) oral feedback, 3) initiating dialogue and 4) interacting with peers. The study takes the student experiences with feedback into account and generates understanding about how students interact with feedback in different ways to make sense of feedback. The study provides self-reported evidence in the form of reflection logs of how students act upon feedback.

5.3 Article three

Steen-Utheim, A.: Students' emotional responses to feedback: frustration, confusion and (de-) motivation. (Submitted to *Studies in Higher Education*, May 15th, 2019).

In article three, students' emotional responses to feedback is addressed through the following research questions: 'What are students' emotional responses to the feedback they receive from their teachers? How do these emotions display when the students reflect upon their engagement and use with the feedback?' The data for the study are focus group interviews with the 12 key informants, divided in three groups. The study is framed within previous literature about feedback and emotions (e.g. Boud & Falchikov, 2007; Carless, 2006; Crossman, 2007; Rowe, 2017) and the notion of dialogic feedback (e.g. Ajjawi & Boud, 2017; Carless, 2012, 2015; Nicol, 2010; Steen-Utheim & Hopfenbeck, 2018; Steen-Utheim & Wittek, 2017).

The data was analyzed using thematic analysis. This resulted in the following five themes: 1) oral feedback, 2) the student-teacher relationship, 3) type of feedback, 4) quality of written feedback and finally, 5) feedback and self-confidence. With reference to the first research question, the results indicate that emotional responses to feedback form a significant part of these students' experiences with the feedback that they receive. In addition, the results indicate that the emotional responses frustration, confusion and demotivation were particularly rich in the students' responses. However, emotions such as joy, comfort and motivation were also found. With reference to the second research question, the analysis revealed that the emotional responses were particularly rich when the students discussed the quality of feedback, type of feedback, the student-teacher relationship, and feedback and self-confidence. The findings suggest that the emotional aspects of feedback processes form a very strong dimension that underpin these students' sense making processes. As such, the article provides evidence of the emotional dimension in dialogic feedback processes, which is of high relevance as this aspect is an under-examined topic in the field.

6.0 Discussion of the findings

In this chapter, I summarize and discuss the major findings from the study, based on the findings from the three articles. It provides discussions concerning both the complexity and nuances of the individual results from the three studies. The findings are discussed in relation to the overall research question:

How is feedback perceived by students in higher education, and how do students make sense of it?

Each of the three studies included in this study address the research question from different angles, and represent different attempts to better understand how students perceive feedback and how they make sense of feedback within their context.

Based on the third level of analysis, as described in ‘Analytical procedures’ in the method chapter (pp 33), three interrelated themes relevant to the three studies in this study were extracted. The themes represent patterns across the data set that shed light on the studied phenomenon; feedback as a complex social-relational process in which dialogue, interaction and emotion are central concepts. In the following, I present these interrelated themes and discuss the major findings from the study. The interrelated themes are:

- 1) Students’ perceptions of feedback
- 2) Ways of sense making through dialogue and interaction
- 3) The role of emotions in students’ sense making of feedback

It must be noted that the interrelated themes should not be interpreted as a reduction of the complexity of the findings from the three individual studies. Rather, the themes are meant to provide an overview of the findings and indicate overall findings from the entire study.

In the following, I structure the discussion into three subchapters based on the interrelated themes: ‘Students’ perceptions of feedback’ (6.1), ‘Ways of sense making through dialogue and interaction’ (6.2) and ‘The role of emotions in students’ sense making of feedback’ (6.3). Some aspects in the findings may partly overlap from one theme to another, as these students’ perceptions and specifically how they make sense of feedback, is varied and complex. This is particularly true for the role emotions play in the students’ sense making of feedback.

6.1 Students' perceptions of feedback

Findings from the study show students' perceptions of feedback are varied and underpinned by an emotional dimension. There are, however, nuances to these findings, which I will discuss in the following.

The study shows that the students perceive the possibilities for feedback in their course as overall positive. They appreciate possibilities of receiving both written and oral feedback, and to receive regular feedback within the portfolio design. Some students, as reported in study two, specifically highlight the assessment design, and argue that the regular feedback they receive supports their learning. This finding supports previous research about portfolios from a Norwegian context, which found that feedback is a core element of portfolio practices in Norway (Dysthe & Engelsen, 2011). Research from Norway also demonstrates that the implementation of portfolio after the introduction of the Quality reform, was done in various ways, and that this often had diverse and different purposes (Dysthe & Engelsen, 2011; Michelsen & Aamodt, 2007), which led to different practices in the institutions. The findings from the present study indicate that the design of the feedback activities in the course was process oriented because the assignments given in the course, including the subsequent feedback to these, were spread throughout the semester, which the students argue make them work on a more regular basis with disciplinary content.

Despite the students' general satisfaction with the portfolio and with the provision of feedback within the assessment design, findings demonstrate that the quality and type of feedback is conducive to how the students perceive the feedback received. Evidence from the study shows that the students are dissatisfied with particularly the written feedback and report challenges in understanding it. Many of these challenges concern the one-way manner in which it is delivered (Nicol, 2010). The findings from this study indicate that the students perceive the written feedback in a monologic way, similar to the information transmission approach (Ajjawi & Boud, 2018). Feedback is given in the form of a written text, delivered to the students, directed at the level of task (Hattie & Timperley, 2007) and without any possibilities to ask questions or clarify misunderstandings; in other words, to engage in a dialogue around the feedback. In studies two and three, the majority of the findings show that the written feedback is lacking in information about how to improve (feed forward) and that limited or no dialogue around the received feedback creates emotional reactions in the students, such as frustration and confusion. The findings demonstrate that providing feedback per se, is not enough to enhance

student understanding and consequently, the students struggle to make sense of the written feedback.

However, that feedback not always leads to more learning for the students, has previously been reported in several studies (Hattie & Timperley, 2007; Kluger & DeNisi, 1996). From the literature review chapter (pp 8), we know that similar challenges with written feedback has been reported in previous research (e.g. Ferguson, 2011; Higgins et al., 2001; Pokorny & Pickford, 2010; Price et al., 2010). There are, however, nuances to this perspective on feedback and learning, as some findings, specifically from study two, also serve to illustrate that some students appreciate the written feedback, arguing that it is detailed, specific and includes feed forward information. This prompts the students' self-regulatory skills (Hattie & Timperley, 2007). According to several researchers, feed forward information is conducive to student understanding, as it identifies what kind of activities the student should engage in to enhance her learning. Such elements have been emphasized in previous literature as particularly valuable in terms of effective feedback (Black & Wiliam, 1998, 2009; Hattie & Timperley, 2007; Nicol & Macfarlane-Dick, 2006; Sadler, 1989).

Other findings demonstrate that the students perceive oral feedback as particularly valuable and positive. The students argue that oral feedback gives them more information on what they should do to improve their assignment, i.e. feed forward information (Hattie & Timperley, 2007). The way the oral feedback was facilitated, including the results from the study, indicate that the oral feedback facilitated for elements that are generally perceived to foster effective feedback as demonstrated in previous studies (Carless, 2006; Gibbs & Simpson, 2005), and that are conducive to students' learning (Carless, 2006). The students appreciate this kind of feedback. Although study one did not report on the students' experiences with the feedback dialogues, but analyzed in situ feedback dialogues between the teacher and students, the findings from that study show that the oral feedback had certain features that support previous research about effective feedback conditions. These are; detailed and specific feedback (Price et al., 2010), personalized feedback, and feed forward information (Hattie & Timperley, 2007). In addition to those features, face-to-face (one-to-one) dialogue about feedback has been reported in studies as elements of feedback that students themselves appreciate and prefer (Blair & McGinty, 2013; Poulos & Mahony, 2008).

However, despite these students' various perceptions of feedback, including different emotional responses, some students interact with their environments to enhance understanding,

while some do not. In the next subchapter, I discuss ways in which the students' sense making through dialogue and interaction unfold and illustrate how this is underpinned by an emotional dimension.

6.2 Ways of sense making through dialogue and interaction

The second part of the research question that guides this study asks how the students in the study make sense from the feedback they receive in their course. The overall finding related to this part of the research question is that the students are active in their sense making of feedback typically through interactions in their environment. Further, the results illustrate the different ways the students act upon the feedback and that how the dialogic interactions unfold is relevant for the students' understanding. However, the findings suggest that student engagement in dialogic interactions does not always lead to enhanced understanding for the students. In the following, I discuss the different ways of sense making through dialogue and interaction as identified in the study.

Different dialogic actions

Findings show that the students act upon the feedback in different ways, such as making internal reflections about the feedback, using oral feedback, initiating dialogue and interacting with peers. Such dialogic interactions support understanding, according to Linell (2009), because sense making involves being able to cope with situations and carrying out tasks to enhance understanding. By engaging in such dialogic interactions, the students co-create understanding through the means of dialogue, and the findings show that they do so both internally and externally. Students report thinking and reflecting within oneself, as an internal strategy to make sense of the feedback, while engaging in verbal dialogue with teachers and peers is reported frequently as an external strategy to do the same. Although internal dialogue means that the student does not speak out loud to another person face to face, he or she engages in a dialogue with oneself. In a broader understanding of the concept dialogue, as explained in a previous chapter (3.2), internal dialogue may stimulate reflections and develop understanding. Informed by this perspective, these findings illustrate that internal dialogue with the self as well as external dialogue with others, is conducive to the development of sense making from feedback.

Active students

From the literature, we know that written feedback may be challenging for students to understand (Jonsson, 2013; Price et al., 2010). The same applies to the students in this study,

as described in a previous chapter (2.5). The findings indicate that the way in which the written feedback is provided, makes the feedback more transmissive and monologic than dialogic (Ajjawi & Boud, 2018). Since students' sense making of feedback is an interactional process, developed in and through dialogue (Price, Handley, O'Donovan, et al., 2013), and specified with the contributions of others (Linell, 2009; Vygotsky, 1978), the monologic delivery of written feedback is not conducive to student understanding. The study provides evidence of limited possibilities for dialogue about the feedback, which complicates the students' sense making from feedback and elicits emotional responses. However, despite the feedback's fixed form and that this can trigger negative emotional reactions in the students, evidence from the study also demonstrates that the students activate themselves to make sense of the feedback. For example, specific findings from study three show that despite emotions such as frustration and discouragement that arise from receiving feedback from their teachers, they do not limit the students' further engagement with the feedback. Rather, they continue their sense making by actively engaging in further dialogic interactions, such as initiating dialogue with the teacher and peer students. Such 'appropriate action' may help 'close the feedback gap', according to Sadler (1989). These findings suggest that the students respond in a dialogical way to a monological feedback, because they respond to an utterance (the feedback) and anticipate a response to it. Findings from study two also illustrate how students approach the teacher for support and guidance when they do not understand the written feedback. Considering that previous research has found that students lack strategies to enable themselves feedback (Jonsson, 2013), these are promising findings. These findings also suggest that the students are what Pitt and Norton (2017) call emotionally mature, because the students process and act on feedback even when negative emotional reactions arise. There are, however, variations within these results. Findings from study two and three show that some students, even if they struggle to understand the feedback and experience negative emotions to the feedback, remain passive after receiving feedback. These findings tell us that students are at different levels emotionally, and that they have different dispositions to act and make sense of feedback.

The quality of the dialogic interaction

Findings from the study show that feedback per se, as it is provided in the students' course, is not enough for these students to be able to create understanding. Consequently, they initiate dialogue to enhance their understanding. However, how the specific dialogic interaction unfolds, does not always support the students' further understanding. Empirical evidence from

the study indicates that the quality of the dialogic interactions between teachers and students is not always conducive to further understanding, as some feedback encounters actually lead to more frustration and confusion in the students. For example, findings from study two and three illustrate that students' responses to developing understanding through dialogue are not always followed up and supported by the teacher in interaction. The students' utterances are not always responded to in a supportive way, which may make emotional reactions arise in the students. While some dialogic interactions can create emotional reactions in the students such as frustration and demotivation, others reflect on the student's self-confidence and brings them into an emotional state. As pointed out in the literature chapter, this is likely to cause passive behavior in the students (e.g. Boud & Falchikov, 2007; Crossman, 2007), and as such, limit further sense making in terms of actions (Linell, 2009). Consequently, how the dialogic interactions unfold between student and teacher is not always conducive to students' sense making from feedback.

These findings do not relate well to the theorized value of dialogue in the reconceptualization of feedback towards dialogic feedback, where creating understanding from feedback through engagement in dialogue, is emphasized (Boud & Molloy, 2013a; Carless, 2015; Nicol & Macfarlane-Dick, 2006). They show that engaging in such dialogue alone is not sufficient to create and develop understanding, as it depends on how the dialogic interaction unfolds and what form the dialogues take. It also demonstrates that engaging in dialogue in this way is underpinned by emotions, which may not always be supportive of the students' development of understanding.

Supportive dialogic interactions

Other findings illustrate that also supportive dialogic interactions occur. These findings show that positive dialogic interactions between teacher and students include a trusting relationship (Carless, 2012), where the teacher shows interest in the students, and uses emotional language that shows in words that he/she cares for the students. Particularly in study one, these findings are echoed, showing that the teacher in the feedback dialogue displays emotional and relational support. In the study, the teacher provides support by showing empathy in terms of acknowledging the students' current emotional state, showing an interest in them which indicates that he cares for them, and using emotional language in the direct interactions. These findings suggest that emotional language in spoken words are a valuable dimension in feedback dialogues. Previous research (Shields 2002) has shown that emotional language in disciplinary dialogues form a small portion of actual words used. The findings

from study one indicate otherwise, as the evidence reveals that the teacher uses emotional language in interaction with the students.

The in-depth analysis of the feedback dialogues illustrate that this oral feedback creates spaces for emotional support, for dialogues to unfold, for misunderstandings to be solved and for potentialities for sense making to develop. These findings indicate that the feedback dialogues are fostered in a dialogic way which renders student understanding from feedback. Empirical evidence of emotional responses such as comfort, joy and motivation was also found in the analysis associated with this kind of feedback, which is reported by research (e.g. Rowe, Fitness, & Wood, 2014) as conducive to students' actions and consequently, their understanding from feedback (Boud, 2000). Such positive emotional responses motivates the students to act on the feedback (Pitt & Norton, 2017). Considering that previous research has demonstrated that learning and emotions are closely related (Crossman, 2007; Scouller, 1998), these results in combination add to and nuance previous research, such as the studies of Carless (2012), Rowe et al. (2014), and Värlander (2008) about feedback and emotions.

The use of others to support understanding

Findings from the study illustrate that the students use other people in their environment (students, partners, teachers) to enhance their understanding of the feedback. They interact particularly with their student peers to aid understanding. This implies that students engage with other feedback sources than their teachers to support and develop their understanding from feedback. The students seek feedback sources they can trust when there is limited possibilities for follow-up and dialogue about the written feedback. This may have motivated the students' actions to reach out to others in order to understand the feedback. As such, the students in this study use strategies to engage in meaningful interactions where they can co-construct understanding (Linell, 2009), as opposed to passively receiving feedback and accepting it per se. In study one, findings show that the feedback dialogue is teacher-centered in terms of the other, the teacher, being in charge of turn allocation. However, the students are not passive recipients of feedback, they contribute to the further dialogic interaction by using minimal responses and asking questions. They also express their own thoughts and reflections in the dialogues with the teacher. As such, the students are contributing for further sense making with material in the interaction, instead of passively receiving a message delivered by the teacher. The use of others to guide and aid understanding like this, is a central dimension in the

development of understanding, because others, simply by being a different person with other views and opinions, bring something different to the interaction and dialogue (Linell, 2009). This may enable the students to ‘close the feedback gap’ (Sadler, 1989), because the others’ perspective contrasted with one’s own can be conducive to bridging a current level of understanding to a desired level of understanding (Sadler, 1989).

From the literature review (chapter 2.0), we saw that making sense of feedback is a complex process, and that how students make sense of, or understand feedback, is important to how they are able to apply that feedback in improving their work (Higgins et al., 2001; Pokorny & Pickford, 2010). The results from this study support to these claims and further nuance them by providing evidence of the different ways in which students’ sense making from feedback occurs.

6.3 The role of emotions in sense making

A finding across all three studies is that emotions form a significant part of these students’ perceptions of feedback. They respond emotionally to feedback, and express a range of emotional responses. The study thereby provides empirical evidence of the emotional component in feedback processes, which is of high relevance as there is limited research on this topic in the field of feedback in higher education (Evans, 2013; Värlander, 2008).

From the studies, the findings demonstrate that students’ sense making of feedback is underpinned by an emotional component. These findings indicate that emotions play an important and pertinent role in students’ sense making processes of feedback. Study three in particular provides rich empirical evidence of the emotional dimension. A major finding from this study is the strong and rich emotional responses displayed by the students when they reflect upon their experiences with feedback. Indeed, the students experience a range of emotions, and typically the emotions frustration, confusion and demotivation are associated to feedback they do not understand, one-to-one verbal feedback between the teacher and students, and when the feedback reflects on their self-confidence. Although positive emotions are also found, those responses are less strong and rich. When compared to previous studies that have reported both negative and positive emotions related to student perceptions of feedback, the fewer responses on positive emotions is an interesting finding (Rowe, 2017; Rowe et al., 2014). Previous studies has demonstrated that negative emotional reactions may inhibit students’ sense making and consequently, their acting on feedback (e.g. Boud & Falchikov, 2007; Molloy et al., 2013).

However, findings from the present study also demonstrate that the students act differently based on their emotional responses to feedback, even when they report less positive emotional reactions. This may imply that emotional responses to feedback, regardless of the way in which emotions are perceived, does not always hinder further learning from feedback.

Other findings from the study show that positive emotions arise when engaging in positive teacher–student relationships and when the feedback was aimed at improvement. It is likely that such positive emotions motivate further action in the students.

6.3 Summary of the findings

The findings from this study show that emotions underpin the students' sense making from feedback, and that they have varied perceptions of feedback. The provision of feedback in the course is appreciated by the students. However, the written feedback is delivered in a monologic way, which complicates the students' understanding of it. The findings suggest that a major challenge with this kind of feedback is its' limited possibilities for interaction and engaging in dialogues around the feedback. Oral feedback, on the other hand, is more conducive to student understanding, as it creates possibilities for active sense making for the students. The findings show that how these students make sense of feedback is complex and varied, and that they actively engage in dialogic interactions with the contributions of others in their environment. These findings are refreshing, as they indicate that students are interested in their own learning and that they have the capability and resources to act upon and monitor their own learning. Such behavior is central to self-regulated learning (Nicol & Macfarlane-Dick, 2006), which may lead to a closure of the feedback gap (Sadler, 1989). However, how the dialogic interaction unfolds, including the emotions that arise from such interactions, may influence if and how the students engage in further actions.

7.0 Contributions, limitations and further research

In the following, I will discuss the main theoretical, empirical and methodological contributions from the study, including specific contributions from the individual studies, to the field of feedback in higher education. First, I will address the overall contributions, then go deeper into the specific contributions from the three studies. In the final discussions, I include limitations of the research and suggestions for further research.

7.1 Overall contributions

Within the Norwegian context, there is limited research on students and feedback in higher education. As such, the findings from this study are significant specifically to higher education institutions in Norway, but also internationally because it may help inform future feedback practices. Challenges with student engagement with and use of feedback have been reported across countries, including the findings from this study. Some of the present findings support previous international research on student engagement and use with feedback, such as studies from the UK, Australia and Hong Kong (e.g. Carless, 2006; Pitt & Norton, 2017; Price et al., 2011; Price et al., 2010; Ryan & Henderson, 2017; Weaver, 2006). Much of the existing research about students and feedback in higher education come from these countries. As such, the findings in the present study confirm results from other contexts and in other countries. The empirical case in this thesis focuses on a course in international business communication, a program that several other higher education institutions in Norway offer. The findings may therefore be relevant to and inform similar Norwegian study programs (Kuper, Lingard, & Levinson, 2008). The results presented in this thesis may in this way contribute to improve pedagogical practice in higher education.

Informed by the dialogic feedback approach, this study focuses on what the learners do with feedback, rather than considering the technicalities of delivery, form or type of feedback. The generated knowledge about feedback processes, which is here seen from the student perspective, is valuable for institutions in order to utilize the potential in feedback. Results from this study can consequently be used to enhance the feedback processes in higher education. The provided insight is relevant to today's higher educational practices, as it resonates with a more student-centered approach to learning rather than considering feedback *per se*. Complemented with an in-depth analysis of how the students in this study make meaning from feedback, their actions and emotions associated with feedback. As such, the study provides empirical evidence on perceptions of feedback which goes beyond survey data.

The study examines the emotional dimension in the feedback process and provides evidence of how this dimension is present in a current practice. This is a significant contribution, as the emotional component of feedback is under-examined in previous feedback research.

By re-conceptualizing a model that brings together mechanisms of sense making, introduced in figure 1; framework for dialogic feedback (chapter 3.2), the study makes a conceptual contribution to the field of feedback in higher education. It contributes with an improved conceptual understanding of dialogic feedback, by introducing the key concepts dialogue, interaction and emotions, building on elements from dialogic theory (Bakhtin, 2010; Linell, 1998, 2009) and including elements from socio-cultural perspectives on assessment and learning (Vygotsky, 1978). This strengthens the epistemological reasoning for dialogic feedback. As the field has been criticized for lacking theoretical underpinning (Baird et al., 2014; Savin-Baden, 2010), this is a valuable contribution.

The study also provides a combined conceptual and analytical framework to depict and understand feedback as a process. Thus, the study generates understanding for how the central concepts dialogue, interaction and emotions can inform an analytical framework for feedback, including empirical evidence of the way in which these dimensions are present in practice.

7.2 Specific contributions from the three articles

Study one

The major contribution from the first study is the introduction of the analytical model 'Dialogic feedback. Four potentialities for learning'. The model merges findings from a conceptualization of distinctive features from dialogic theory with empirical findings from the study of actual feedback dialogues into four distinctive features, and arguably has a strong potential for supporting student learning from feedback. An additional theoretical contribution from this study is the four dimensions derived from dialogical theory with a particular focus on the conceptual term dialogue. From the literature review, we know that the use of dialogue is emphasized as means to support student learning from feedback. However, the literature only provides an implicit and/or narrow understanding of dialogue or does not necessarily make clear what the conceptual understanding of the dialogue is. The current study investigated and nuanced the concept dialogue by using a dialogic theory and argue for a broader conceptual understanding of the term dialogue in dialogic feedback.

The study also makes an empirical contribution. The results from the in-depth study of the feedback dialogues nuanced and elaborated on the four theoretically derived dimensions. Finally, merging of the empirical results with the four dimensions resulted in the model 'Dialogic feedback. Four potentialities for learning'. A particularly interesting empirical finding was the richness of the emotional and relational element in terms of the teacher using personal nouns and showing in words that he valued the students. This element has been largely overlooked in previous research and therefore constitutes a valuable addition to the field.

In terms of methodological contribution, the use of interaction analysis represents a new and innovative approach to the study of feedback practices that has rarely been done in previous research. To study a complex social phenomenon as the feedback dialogues, applying this form of analysis enabled us to study in depth how meaning was created interactionally. Using this method provided us with rich and nuanced insight about in situ feedback dialogues as naturally occurring social interactions, and as such the study provides broader insights into feedback as a relational and dialogical process.

The model of dialogic feedback may also constitute a practical contribution for researchers and teachers in terms of having a model for organizing dialogic feedback encounters. The model also offers an analytical approach to the study of feedback dialogues in higher education contexts. However, the model can be further developed by elaborating on how the dialogue can be sustained over time for better learning.

Study two

In the second study, the major contribution is empirical. The findings from this study both reiterate previous research as well as contribute with new knowledge about students' experiences with feedback and how they act upon feedback. The major empirical contribution from this study is the in-depth understanding about how and in which ways the students act upon feedback to make sense of it, seen from the student perspective. The students report positive experiences with the feedback they receive in their context, but that they have challenges in understanding the written feedback. The findings show that these challenges are associated with limited possibilities for dialogue and interaction about the feedback. However, evidence from the study demonstrates that the students are active in their attempt to understand feedback, by engaging in various actions to enhance their understanding from feedback. This is a valuable contribution, as much previous research has focused on demonstrating the several challenges students have in their engagement with and use of feedback (e.g. Hounsell, 1987;

Mulliner & Tucker, 2017; Price et al., 2011), and less on how students attend to and act upon feedback. Four specific actions were identified in the study that the students take to make sense of the feedback. These actions involve both internal actions inherent in the student, such as reflecting on their performance in relation to the feedback, and more external actions such as using peers. The use of peers to aid understanding as has been demonstrated in this study, is an interesting contribution as it shows how peers, without any formal training in giving feedback to feedback, can act as co-constructors of these students' understanding of teacher feedback.

Further, it contributes with knowledge about how and the different ways in which the students act upon feedback. The study identified four specific actions the students engaged in to create meaning from the feedback. This is valuable insight, as it is a common agreement among central scholars in the field that a major purpose of feedback is students' use of feedback. Two practical implications from this study are:

- i. That feedback from teachers, as practiced in the current study and within the particular feedback design adopted, is not enough to support these students' sense making from feedback.
- ii. Additionally, if feedback is provided to students in a portfolio assessment design, ample opportunities for the students to respond to, react to and act upon the feedback must be embedded in the portfolio design.

Study three

The third overall empirical contribution to the study is the detailed study of students' emotional responses to feedback as investigated in study three. A major finding from the third study, is that feedback can trigger varied emotional responses in the students, and that those emotions form a significant part of these students' experiences with the feedback. Additionally, the findings illustrate that the students' process and attend to emotional reactions in different ways. This is important, because research in the field investigating this from a dialogic feedback perspective is limited. As such, the study adds to the field with considerable new knowledge. Findings from the study illustrate the ways that emotional responses are present in practice. The emotional responses are varied and many, and were particularly rich when students reflected upon the quality of feedback, type of feedback, the student-teacher relationship and feedback and self-confidence. In this way, these findings contribute with deeper understanding of how emotions play a pertinent role in students' sense making processes with feedback.

7.3 Further research and implications for practice

The main results from this study give firm support to previous research that emphasize dialogue as valuable in terms of supporting student understanding from feedback (Boud & Molloy, 2013a; Carless, 2015, 2016; Merry et al., 2013). They also support the claim in the field that making sense of feedback is complex but important for students' use and learning from feedback. However, in this study, in-depth analyses show that students' sense making of feedback is a complex interplay between how the feedback dialogues unfold, the emotional underpinning in feedback processes, and the additional interactions undertaken by the students. This interaction between different social-relational aspects of feedback warrants further research. Specifically, how dialogue can enhance student learning from feedback, how interaction with feedback can be facilitated, and what role emotions have in student learning from feedback calls for further attention.

The focus in higher education has traditionally been about students' cognitive learning and on instruction of knowledge, typically monologically delivered from teachers to students. This approach to teaching and learning, including the inherent feedback designs, builds on the information transmission approach to learning, and less on the interactional and emotional dimensions of students' total learning experience. The results from this study show that emotions are a significant part of students' feedback experiences. Given that learning and emotions are closely related, the role emotions play in feedback situations needs to be further explored, especially with regard to the impact emotions can have upon the students' ability to process, comprehend and utilize feedback. More research about how emotions influence student uptake is useful for the purposes of generating further knowledge about what students do in times of both uncertainty and certainty.

A practical implication of these specific findings would be to embed opportunities for dialogue around feedback in the assessment design and to include feedback better as an integrated aspect of the course design. Student learning from feedback is likely to develop when there are thoughtfully designed courses, which include carefully planned pedagogical sequences of teaching and learning activities, including feedback activities, which are aligned with learning outcomes and summative assessment. Such constructive alignment (Biggs & Tang, 1999) focuses more on the learner in terms of what the learner does, rather than what the teacher does. Enabling a conceptual shift in the feedback field, requires assessment and feedback practices

that are embedded in the course design, and where the students learn how to handle, attend to and use the feedback they receive from the outset of their studies. This may be conducive to the development of feedback literate students that are able to engage in lifelong learning.

Interestingly, the concept of constructive alignment, which is fairly known in the higher education context, arose from an experiment with portfolio assessment in a bachelor of education program (Biggs & Tang, 1999). Although constructive alignment is a pedagogical tool intended for teaching, there is much emphasis on the term constructive, which implies that the learners are active in their construction of knowledge, thus emphasizing that what the learner does is more important in determining what is learned than what the teacher does. Based on the findings in this thesis, students have an interest in their own learning, and are willing to actively engage with feedback, and the findings show that many have the capabilities to do so. However, what this study also shows, is that understanding feedback and acting upon feedback, is done in interaction with others, and through the means of others. Future feedback practices should therefore provide students with opportunities to develop their sense making in interaction with others. In future feedback practices, opportunities to co-construct understanding with others through dialogue in the environment must be embedded in the course designs, including encounters that support dialogic interactions. However, integrating such opportunities in practices in today's higher education is demanding, time consuming and likely to increase the workload significantly for teachers. Many teachers face large classes with limited possibilities for one-to-one interaction between teachers and students, and struggle to facilitate dialogue and collaboration between students in class. Moving forward, relevant educational technologies that support peer feedback activities, which include activities such as providing feedback, receiving feedback and acting on the feedback, and investigate technologies that enable dialogue and interaction around course content, including feedback, with others (peers and/or teachers) will become increasingly in demand. Such technologies can also be used in combination, depending on the intentions of the course design, the specific feedback activities and how these align with the intended learning outcomes and assessments (Biggs & Tang, 1999). Such activities may stimulate active learners that not only depend on the teacher as a resource for feedback, but also others as support in their development as self-regulated and lifelong learners.

A limitation of this study is its' small-scale size and that the participants have been purposively chosen (Oliver & Jupp, 2006). Therefore, the results cannot be statistically generalized to other

students' experiences with feedback within a portfolio assessment design. However, the knowledge developed from this study may inform and inspire future discussions about how students make sense of feedback and how we can design similar feedback practices to support student learning from feedback. In future research, more close-up methods of investigation are needed to in-depth study how meaning in feedback processes interactionally develop and are sustained. This can be done with video or audio tapes, and investigated with appropriate analytical procedures, such as interaction analysis. Also, a longitudinal study that investigates what students do with feedback over time would be useful, in order to generate knowledge about how sense making unfolds over time, what sources the students use for feedback information and how their emotions emerge, develop and sustain over time.

A final implication for practice concerns the role students have in feedback. Many researchers have emphasized the student role in feedback processes as pertinent in a reconceptualization of feedback towards more dialogic oriented feedback practice. To acknowledge and shed light on that role, students' views about feedback should be taken seriously and be listened to carefully, in order to better understand how students make sense of feedback. As they are the one's actually doing the learning, it is valuable to involve the students in matters that concern them. Not only may this knowledge help teachers reflect upon existing feedback practices, which may inspire to change those practices, it also acknowledges students as active participants in the feedback processes in higher education.

7.4 Conclusions

The overall research aim with this thesis has been to contribute with knowledge about how feedback, as a complex social-relational phenomenon, is perceived by students and how they create meaning from it. The specific research question that has guided this thesis is 'how is feedback perceived by students in higher education and how do students make sense of it?'

The overall findings show that how students make sense of feedback is a complex interplay through the means of dialogue, interaction and emotions. The study provides empirical evidence of how feedback, seen as a process, is perceived by the students, complemented with how they make sense of it and their actions and emotions related to feedback. The study also provides evidence of how the dimensions' dialogue, interaction and emotions are present in practice.

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Appendices

Appendix 1: Reflection log questions

Reflection logs: questions

Question 1	What are your expectations to the feedback you will receive this semester?
Question 2	You have now received feedback on your first oral presentation. What are your immediate thoughts about it? What were your experiences with receiving this kind of feedback?
Question 3	You have now received feedback on your first written assignment. What are your immediate thoughts about it? What were your experiences with receiving this kind of feedback?
Question 4	What do you do with the feedback you receive (both the written and oral)? What do you do when you do not understand the written feedback?
Question 5	You have now had your second oral presentation. Did you use feedback from the first oral presentation to improve you second presentation?
Question 6	Are there any other situations you receive feedback on your work? From other teachers, peers, or other students? Please try to explain in your own words.
Question 7	All in all, what are your experiences with receiving feedback this semester within the portfolio assessment design? Have you learnt anything from it? Can you please try to explain what and how?

Appendix 2: Interview guide (1 + 2) – English

INTERVIEW GUIDE (1) - English

Introduction: Give some information about the project, the information letter and informed consent. It is voluntary to participate, and they can withdraw any time. Include information about the project, aims and research questions and ask if anyone wants to ask me anything before we proceed to the interview. Remember to tell them I appreciate their engagement and time investment in the project and this interview.

1.Experiences with feedback in the course

- Can you please tell me about the feedback you have this semester?
- What are your reflections about the feedback you will receive in this course? Which one do you prefer – and why? Which would you rather not have in your course – and why?

2.Learning from feedback

- Do you learn anything from receiving feedback? Why? Why not?
- How do you learn from the feedback? Can you please try to be specific?

3.Use of feedback

- Did you use the feedback you have received from the teachers, or do you plan to use it? Please tell me about that.
- How did you use it, can you be specific and try to provide some examples?
- Do you think you will use the feedback later this semester, that you will keep it/save it and use it later?

4.Challenges with feedback

- Have you experienced any challenges with the feedback you have received?
- What did you do when you experienced these challenges?

5. If you could decide what kind of feedback you should have in your course, what would that be and why?

INTERVIEW GUIDE (2) – English

Introduction: thank the students for participating again and explain this is the last activity they are involved in in this project. This is a follow up interview, and I am primarily interested in their experiences throughout their semester. If they think that some of the questions overlap with the previous interview, that is true. I will provide them with transcripts of the interviews in a couple of weeks, so that they can read through the material.

1.Experiences with feedback

- What are your reflections about the feedback you have received in the course?
- And what kind do you prefer – and why?

2. Use of feedback

- What have you done with the feedback you have received this semester?
- In what way, or how, did you use the feedback you have received this semester?
- Based on your experiences so far, if you could use the feedback in different ways, what would be different and why?

3. Type and amount of feedback

- What are your thoughts about the different types of feedback you have received?
- How do you feel about the number of feedback you have received this semester? Is the amount enough, it could have been more, or less?

4. Based on your experience so far, is there anything you miss or lack about the feedback you have received, that you see now?

5. Is there anything else you would like to add?

Appendix 3: Interview guide (1 + 2) – Norwegian

INTERVIEW GUIDE - Norsk

Introduksjon: begynne med å fortelle litt om prosjektet, formål med prosjektet og forskningsspørsmål. Minne dem på informasjonsskrivet som de har mottatt og samtykkeerklæringen som de har skrevet under på. Husk å si at det er frivillig å delta og at de kan trekke seg fra prosjektet når de vil, hvis de vil. Spør om noen vil stille meg noen spørsmål før vi går i gang med selve intervjuet, og husk å takke dem for tiden de bruker på dette samt at de er villige til å være nøkkelinformanter.

1. Erfaringer med tilbakemeldinger I kurset

- Kan dere fortelle meg litt om hvilke tilbakemeldinger dere har I kurset deres dette semesteret?
- Hva tenker du om de ulike tilbakemeldingstypene dere skal motta? Hvilke (n) foretrekker du – og hvorfor? Hvilke(n) ville du helst ikke hatt i kurset ditt – og hvorfor?

2. Lære av tilbakemeldinger

- Har du lært noe av å motta tilbakemeldinger? Hvorfor? Hvorfor ikke?
- Hvordan lærer du av disse? Prøv å være konkret.

3. Bruk av tilbakemeldinger

- Har du brukt tilbakemeldingene du har fått, eller har du planer om å bruke de? Fortell meg om det.
- Hvordan brukte du de? Kan du prøve å være konkret og gjerne komme med noen eksempler?
- Tror du at du vil bruke tilbakemeldingene senere dette semesteret, at du vil spare på tilbakemeldingene og bruke de senere?

4. utfordringer med tilbakemeldinger

- Har du opplevd noen utfordringer med tilbakemeldingene du har motta? Kan du fortelle meg om det?
- Hva gjorde du når du opplevde dette?

5. Hvis du kunne bestemme hvilken type tilbakemelding og hvor ofte du fikk tilbakemelding i kurset ditt, hvordan ville det sett ut?

Appendix 4: Analysis table feedback dialogues

Analysis of feedback dialogues

Emotional and relational support	If the teacher provided positive emotions, showed empathy; was willing to listen to the students; was encouraging; was supportive; acknowledging and showing in words he valued the students
Maintenance of the dialogue	Who introduced themes in the dialogue; who was in charge of turn allocation (verbal and non-verbal); what kind of initiatives and responses were displayed and how follow-ups and progress developed
Expressing themselves	Who took initiatives, such as beginnings and endings; who introduced new topics; the students' utterances such as explanations and analysis; the students' involvement in words; and general reflective activities done by the student
The other's contribution to individual growth	Characteristics of the teachers' utterances; whether his responses were developmental, supportive or argumentative; if he was listening or inviting. Also, we searched for artefacts that were in use during the feedback dialogues and linguistic phenomena such as written and verbal language.

Appendix 5: Extract of coding table reflection logs

Question: What are your experiences with the oral feedback you have received now, after giving one oral presentation?

Response	Similar meaning	Assembled meaning	Code
I found the oral feedback to be pretty good. And this was because it was clear and evident feedback. He [the teacher] gave reason for all the comments he had, and best of all was that he gave feedback on what was good and what was not so good. What is even more important is that he told me how I can do better on my weak points and what I should focus on in my next presentation	Pretty good Clear and evident feedback The teacher gave reason for the feedback Feedback on both positive and negative Information on how to improve	Positive to oral feedback, describe positive characteristic of the feedback.	Value oral feedback
The oral feedback was very informative. That helps me improve my second presentation; e.g. what I have to improve and what I can continue doing	Informative feedback Information on what works and information on how to improve	Positive to oral feedback Positive characteristics	Value oral feedback

Question: What are your experiences with the written feedback?

Response	Similar meaning	Assembled meaning	Code
I have not really learnt anything from the written feedback, since I have no concrete explanation about what I can do to improve my written work	Not learnt anything No concrete advice on how to improve	Lack of learning opportunities Lack of advice	Challenges with written feedback
I found the feedback I got on my written assignment difficult to understand. There were some comments on errors in the text, but I really did not understand them.	Do not understand Received comments but did not understand	Lack of meaning Difficult to understand comments	Challenges with written feedback

Appendix 6: List of interrelated themes

<i>Column 1</i>	<i>Column 2</i>	<i>Column 3</i>
Finding	Study	Interrelating theme
The students are satisfied with the feedback they receive within the specific assessment design	Two Three	(1) Students appreciate the feedback they receive within the assessment design in which it is provided
The students value and appreciate the feedback they receive, and in particular the oral feedback	Two Three	(1) Students appreciate the feedback they receive within the assessment design in which it is provided
The students experience strong emotional responses to the feedback they receive	Two Three	(3) Emotions form a significant part of these students' experiences with feedback
The emotional dimension of feedback is important in students' sense-making processes with feedback	One Two Three	(5) Emotions play an important role in how these students make sense of the feedback they receive.
Emotions form a significant part of students experiences with feedback	Three	(3) Emotions, and in particular negative emotions, form a significant part of these students' experiences with feedback
Students sense making of feedback is supported in a feedback dialogue framed within the following features: emotional and relations support, maintenance of a dialogue, opportunities for students to express themselves and the others contribution to individual growth	One	(4) Students take an active role in the feedback process by engaging in dialogic interactions to support their sense making from feedback
The students struggle to make sense of the written feedback	Two Three	(2) Students experience the written feedback as particularly challenging to understand
Problems in making sense of feedback elicit strong emotional reactions in the students	Three Two	(2) Students experience the written feedback as particularly challenging to understand + (5) Emotions play an important role in how these students make sense of the feedback they receive.

The oral feedback is particular valuable in terms of supporting the students learning	One Two Three	(4) Students take an active role in the feedback process by engaging in dialogic interactions to support their sense making from feedback
Engaging in dialogic interactions with peers and teachers supports these students sense making of the feedback	One Two Three	(4) Students take an active role in the feedback process by engaging in dialogic interactions to support their sense making from feedback
The students use specifically their peers to aid understanding from feedback	Two Three	(4) Students take an active role in the feedback process by engaging in dialogic interactions to support their sense making from feedback
The students act upon the feedback in various ways, and use different actions to create meaning from feedback	One Two Three	(4) Students take an active role in the feedback process by engaging in dialogic interactions to support their sense making from feedback

Appendix 7: Approval from NSD (the Norwegian Centre for Research Data)

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagres gate 29
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Roar Charles Pettersen
Høgskolen i Østfold
Remmen
1757 HALDEN

Vår dato: 25.08.2009

Vår ref: 22391 / 2 / LMR

Deres dato:

Deres ref:

KVITTERING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 10.08.2009. Meldingen gjelder prosjektet:

22391
Behandlingsansvarlig
Daglig ansvarlig

Tilbakemeldinger på skriftlige og muntlige arbeidskrav
Høgskolen i Østfold, ved institusjonens øverste leder
Roar Charles Pettersen

Personvernombudet har vurdert prosjektet og finner at behandlingen av personopplysninger er meldepliktig i henhold til personopplysningsloven § 31. Behandlingen tilfredsstiller kravene i personopplysningsloven.

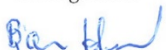
Personvernombudets vurdering forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, vedlagte prosjektvurdering - kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/forsk_stud/skjema.html. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/prosjektoversikt.jsp>.

Personvernombudet vil ved prosjektets avslutning, 31.12.2011, rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen


Bjørn Henrichsen


Linn-Merethe Rød

Kontaktperson: Linn-Merethe Rød tlf: 55 58 89 11
Vedlegg: Prosjektvurdering

Avdelingskontorer / District Offices:

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Appendix 8: Informed consent

Forespørsel om deltakelse i forskningsprosjektet

”Tilbakemeldinger på skriftlige og muntlige arbeidskrav”

Bakgrunn og hensikt

Jeg er doktorgradsstipendiat i pedagogikk knyttet til Program for undervisning, læring og studiekvalitet (PULS) på Høgskolen i Østfold. Dette prosjektet er knyttet til et hovedprosjekt som heter 'Kvalitetsreformens vurderingsordninger i høgskolen', leder av prosjektleder Roar Pettersen. Dette informasjonsskrivet er en forespørsel til deg om å delta i en forskningsstudie for å se på tilbakemeldinger på muntlige og skriftlige arbeidskrav. Formålet er å undersøke hvilken betydning ulike tilbakemeldinger har for studentenes læring.

Hva innebærer studien?

Studien innebærer at jeg som forsker er tilstede i deler av undervisningen din i høstsemesteret. Her vil jeg observere og ta opp på lyd det som skjer i klassen i undervisningssituasjonene. I tillegg ønsker jeg å intervju grupper med studenter, fortrinnsvis 3-4 grupper med 4-5 studenter i hver gruppe. Jeg ønsker også at de samme studentene skriver en kortfattet loggbok 6-8 ganger i løpet av semesteret. Loggbøkene skal besvares elektronisk, og det er forsker som utarbeider spørsmål som skal besvares.

Mulige fordeler

Fordelene ved å delta i denne studien er at du som student får muligheten til å påvirke hvilke vurderingsformer fremtidige studenter vil bruke. Informasjonen du gir gjennom intervju og loggbok kan gi verdifull informasjon om vurderingssystemet til bruk for lærere og institusjonen som helhet (Høgskolen i Østfold).

Hva skjer med informasjonen om deg?

Det du sier blir avidentifisert og kun forskerne i prosjektet vil kjenne informantenes identitet, og kun i den utstrekning som er nødvendig for datainnsamling og analyse. Alle opplysningene om deg vil bli behandlet anonymt. Alle personopplysninger vil bli slettet/makulert ved prosjektets slutt (estimert til 10.2012). Fag er likevel planlagt oppgitt i publikasjoner, og det kan ikke utelukkes at en som leser utdragene kanskje vil kunne gjenkjenne en informant. I løpet av prosjektet blir lydopptakene oppbevart i digital form på passordbeskyttet område som kun brukes av de som gjennomfører og analyserer intervjuene. I transkripsjonen av intervjuene blir faktisk navn erstattet med fiktivt navn.

Frivillig deltakelse

Det er frivillig å delta i studien. Du kan når som helst og uten å oppgi noen grunn trekke ditt samtykke til å delta i studien. Dette vil ikke få konsekvenser for din videre behandling, og dine bidrag vil bli slettet om ikke annet er avtalt. Dersom du ønsker å delta, undertegner du den vedlagte samtykkeerklæringen.

Forsker er underlagt taushetsplikt og alle data behandles konfidensielt. For mer informasjon kan du kontakte forsker på epost eller telefon.

Prosjektet er meldt til og godkjent av Personvernombudet for forskning, Norsk samfunnsvitenskapelig datatjeneste AS.

På forhånd takk,

Vennlig hilsen

Anna Th. Utheim

Stipendiat i pedagogikk 'PULS', Høgskolen i Østfold

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tlf: 408 72 665

Samtykke til deltakelse i studien

Jeg er villig til å delta i studien 'Tilbakemeldinger på muntlige og skriftlige arbeidskrav'

(Prosjektdeltaker, dato)

PART TWO: THE ARTICLES



Contents lists available at ScienceDirect

Learning, Culture and Social Interaction

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Full length article

Dialogic feedback and potentialities for student learning

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ARTICLE INFO

Keywords:

Dialogical theory
Dialogic feedback
Student learning
Higher education

ABSTRACT

Dialogic approaches to feedback have been highlighted as important in re-conceptualizing the notion of feedback in higher education. However, this kind of claims has rarely been explored conceptually, and we know little about how dialogic feedback takes place when learners engage in feedback practices. The object of this study is two-fold; first we derive four dialogic dimensions from dialogic theory, and second we use these dimensions as an analytical framework to investigate feedback dialogues between a teacher and his students. For the purpose of in-depth investigation of the learning potential in dialogic feedback, we use interaction analysis. Based on the four theoretical dimensions merged with findings from our empirical case, we suggest an analytical model for the purpose of conceptualizing the distinctive features of dialogic feedback. The model holds four potentialities for student learning from dialogic feedback, which are; (a) emotional and relational support, (b) maintenance of the feedback dialogue, (c) opportunities for students to express themselves, and (d) the other's contribution to individual growth. We propose this model as an analytical tool for researchers in further investigation of learning potential in dialogic feedback in higher education contexts.

1. Introduction

Educational research from recent decades clearly demonstrates that formative assessment and feedback act as important guiding forces in student learning (Black, 2015; Black & William, 1998, 2009; Hattie & Timperley, 2007; Kluger & DeNisi, 1996). Current research on assessment feedback demonstrates that feedback is a complex and multi-layered concept, and there seems to be no common, agreed understanding of the notion of feedback. Researchers use different approaches to study feedback in higher education; however, in her meta-review, Evans (2013) claims that the principles of effective feedback are clear within the higher education literature. Based on a growing body of evidence of what researchers see as valuable, she emphasizes the importance of holistic and iterative assessment feedback design drawing on socio-constructivist principles. Other researchers in the field support this view (Boud, 2000; Juwah et al., 2004; Yorke, 2003). In holistic and iterative assessment feedback designs, feedback is considered as an ongoing process and an integral part of assessment and learning. In these feedback designs, students play a participatory role in the feedback process, and the feedback focuses on performance (Gibbs & Simpson, 2004; Hattie & Timperley, 2007), such as strategies to improve student performance (e.g., Boud, 2000; DeNisi & Kluger, 2000; Hattie & Timperley, 2007). In holistic and iterative feedback designs, the interaction between teacher and student plays an important role because this is where student and teachers can share meanings and clear up misunderstandings through dialogue. Increasingly, the literature focuses on dialogue as means to enhance students' understanding from feedback (e.g., Black & McCormick, 2010; Carless, Salter, Yang & Lam, 2011; Nicol & Macfarlane-Dick, 2006). In the past few years, the notion of *dialogic approaches* to feedback has emerged and been highlighted

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as important for re-conceptualizing the study of feedback in the field of higher education (Beaumont, O'Doherty, & Shannon, 2011; Carless, 2006; Carless, 2013b; Nicol, 2010; Nicol & MacFarlane-Dick, 2006; Yang & Carless, 2013). The re-conceptualizing of feedback to the concept *dialogic feedback* arises mainly from limitations identified from studies of feedback practices in higher education. For example, these identified limitations are that feedback often comes too late for the students to use it formatively (Higgins, Hartley, & Skelton, 2001), that students do not understand the feedback (e.g., Falchikov, 1995; Weaver, 2006), and that they find it difficult to act upon (Gibbs, 2006; Poulos & Mahony, 2008). To overcome these limitations, dialogic feedback approaches emphasize the importance of engaging learners in dialogue around learning. Doing so gives learners the opportunity to interact with notions of quality and standards in the discipline. This in turn makes it possible for students to make sense of and understand feedback. Understanding feedback is important for students to apply feedback. Our understanding of dialogic feedback is based on Carless's (2013a) definition:

dialogic feedback [is defined] as interactive exchanges in which interpretations are shared, meanings negotiated and expectations clarified ... dialogic feedback is facilitated when teachers and students enter into trusting relationships in which there are ample opportunities for interaction about learning and the notions of quality. (p. 90)

Summing up, dialogic feedback is learning about and from feedback that takes place through dialogue, and involves students in interpretational meaning making about the feedback.

In this paper we conducted in-depth analysis of oral feedback dialogues between 11 students ($N = 11$) and their teacher. We used interaction analysis, an approach that allows us to in-depth explore nuances related to the interactional and relational character of feedback dialogues. Interaction analysis is a powerful methodological tool when the aim is to gather insight about feedback dialogues displayed in a naturalistic setting (Jordan & Henderson, 1995), which also preserve its contextual factors. We approach our phenomena from a dialogical perspective, a theoretical framework that rarely has been used in previous research on feedback in higher education. That said, we acknowledge the body of empirical research on *talk and learning* from the school context, which has been informed by a sociocultural perspective. This research supports the views that talk between teachers and students can be powerful in the development of reasoning and academic performance (Mercer & Howe, 2012). For example, the article by Mercer and Howe (2012) focuses on the study of educational functions of talk and the role of talk in classrooms using sociocultural theory. We also find studies that use dialogic approaches to investigating learning and teaching in an educational context; for example, Wegerif (2007) uses the concept “dialogic spaces” to explain dialogic interactions between teachers and students. Dialogic interactions are, according to Alexander (2006), interactions that support thinking and advance learning. We found few publications applying a dialogical approach to *feedback* in higher education. In a theoretical article by Sutton (2009) he argue that “feedback must assume a central position within a dialogic approach to learning and teaching” (p. 1), and that dialogic feedback is central to the process of enabling students to become more reflective and autonomous learners. However, in one recent published article by Ajjawi and Boud (2017), the authors examine sequences of written feedback dialogues in an online course using interaction analysis. The authors argue that interaction analysis offers a valuable approach to analyse feedback dialogues in situ, because it provides a broader insight into feedback as a relational and dialogical phenomenon. They encourage further research using this approach, claiming a major strength using this approach would be with the use of audio or video data (Ajjawi & Boud, 2017). They also advocate for more research on real feedback interactions, because of the limited research that document this in the literature (Ajjawi & Boud, 2017). With our current study using interaction analysis of audio data of face-to-face feedback interactions, we contribute with new insight to this gap as identified by Ajjawi and Boud (2017).

Our analytical approach is based on the assumption that individual growth and learning cannot be treated as isolated from the social and cultural contexts in which the students engage. Individual cognition is socially constructed through participation in different contexts, with the contribution of tools and signs, artefacts, and other actors. A second element in our analytical approach is the idea that the dialogic “other” (Linell, 2009, p. 13) is an important contribution to individual growth and development. In dialogism, persons are social beings that are interdependent with others. According to Linell (2009), the concept *other* has three meanings; specifically, it can refer to one's partner in direct interaction, a generalized other in means of who we relate to in thinking and acting, or more peripheral others, such as third parties. For analysing the role of the “dialogical other,” we use Vygotsky's (1978) ZPD notion as an analytical lens.

The object of this paper is two-fold as we approach our phenomenon of dialogic feedback both theoretically and empirically. We begin our paper by reviewing literature on dialogical theory. Based on the review, we suggest four quality dialogic dimensions which are important in supporting students' learning. We use these four dimensions as our point of departure for the analysis and discussions. Second, we present the results from our empirical study where we investigate oral feedback dialogues. We then use the findings from our study to discuss the four quality dimensions and how our findings add and elaborate to the four theoretically derived dimensions. Finally, we sum up our paper by proposing a model for dialogic feedback which holds four potentialities for student learning.

2. Literature review

2.1. Feedback in higher education

In the literature on feedback in higher education, authors frequently argue that students should be active participants in feedback activities and that the communication should be dialogically organized (e.g., Hounsell, McCune, Hounsell, & Litjens, 2008). Nicol (2010) claims that students require a more participatory role in feedback, allowing them to expand on their ideas, ask questions, and seek clarification. Others argue that we need to pay more attention to feedback as a process of communication (Higgins et al., 2001)

and dialogic interaction (Carless et al., 2011), involving students in dialogues about learning which raise their awareness of quality performance. Moreover, researchers argue that dialogic feedback should emphasize engagement in collaborative processes to support dialogue in learning processes (Nicol & Macfarlane-Dick, 2006), and that feedback can help students understand and interpret feedback (Williams & Kane, 2009). Gravett and Petersen (2002) claim that dialogic feedback involves relationships in which participants think and reason together, and that shared understandings encourage opportunities for further development (Blair & McGinty, 2012). While most studies do not define the term *dialogue* in particular, Carless (2013a) defines dialogic feedback as “interactive exchanges in which interpretations are shared, meanings negotiated and expectations clarified” (p. 90). The literature in the field typically states that dialogue supports learning; however, there are different views on how dialogue can do so. Maclellan (2001) claims that engaging in dialogue can be problematic due to the use of academic terminology and students’ lack of understanding of such language. O’Donovan, Price, and Rust (2004) argue that meaningful understanding of assessment standards requires both tacit and explicit knowledge. Having tacit understanding of assessment criteria and standards means that students may know what the assessment criteria are, but they find it difficult to articulate this knowledge in words (Rust, Price, & O’Donovan, 2003). However, tacit and implicit knowledge is transferred from expert to novice through joint participation in learning activities (Sadler, 1989; Wertsch, 2007). Price, Rust, O’Donovan, Handley, and Bryant (2012) point out that explicit knowledge standards are easily made available to students by teachers in dialogue and are important for students’ understanding of quality performance. Nonaka (1991) claims tacit knowledge often is experience-based and shared through social processes, such as dialogue and interaction. Involving students in learning activities where explicit and implicit assessment standards are used and applied can enable students to create their own meaning and develop their higher cognitive functions (Vygotsky, 1978). Along these lines, Price, Handley, and Millar (2011) argue that the process of feedback is a relational one, where students and teachers are influenced by the interaction taking place, for example in feedback dialogues. Telio, Ajjawi & Regehr (2015) claim the relational aspects of feedback are under-explored, and Boud (1995) argue that assessment and feedback are deeply emotional practices, where students invest time and effort in preparing assignments and therefore generate emotional expectations as to the feedback they will receive (Higgins et al., 2001). Positive and negative emotions are likely to affect students’ active participation with feedback as well as engagement in feedback dialogues. Positive emotions can encourage deep learning approaches such as self-regulation and flexible strategies, while negative emotions can trigger external regulation including over-reliance on teacher guidance and limited strategies; causing the students to practice surface approaches to learning (Pekrun, Goetz, Titz, & Perry, 2002). A central argument for formative assessment in higher education is that formative assessment and feedback should be used to empower students as self-regulated learners (Nicol & Macfarlane-Dick, 2006). Self-regulation refers to proactive learners who can set goals, monitor their work, and adapt their strategies depending upon the task (Nicol & MacFarlane-Dick, 2006).

Students often perceive that assessment relates to their personal identity. This can reinforce feelings of disappointment, anxiety, and failure (Crossmann, 2007). Boud and Falchikov (2007) argue that emotions in assessment are a function of both judgements and how these are made. They claim that emotional responses in feedback are a function of relationships between students and their teacher. They further maintain that the unequal power relationship between teacher and students affects the relational dimensions of feedback, and that the teacher’s dual role of both supporting and passing judgement is bound up with the issue of power and authority. Hence, Carless (2006) argues that teachers should show awareness and/or sensitivity to students’ emotional responses with feedback because negative feedback can be threatening to students’ self-perception and engagement with feedback.

In existing literature on dialogic feedback, a discussion or even definition of the term *dialogue* is very rare. Since it is well-documented that the quality of students’ interaction with feedback is important for their learning, and that dialogue is central in interaction, we find it important to elaborate and discuss the term *dialogue* in this paper. We will now turn to this.

2.2. Dialogue and dialogic feedback

The term *dialogue* builds on the Greek *logos* and *dia*, which mean “speech” and “two,” respectively. Traditionally, dialogue is understood as a conversation between two or more persons. In Bakhtin’s (1981) work, the dialogic principle is central because it sheds light on how dialogue is part of our thinking and language, which in turn shape our cognitive development. For Bakhtin (1981), the term *dialogic* refers to the ways in which meanings are created and understood, in both written and spoken practices. It is not just about general dialogues individuals conduct in everyday life. A main point in Bakhtin’s dialogism is that individuals always exist in relation to others and that individuals always are in dialogue – with others and everything in the world. Therefore, he argues that dialogue is a relational principle. Linell (1998, 2009) builds on Bakhtin’s understanding of dialogue and uses it to explain human cognition and development. Linell defines *dialogue* as “any interaction through language (or other symbolic means) between two or several individuals who are co-present” (Linell, 1998, p. 13). Moreover, Linell (1998) claims that dialogue is a social activity to which coordination is fundamental, meaning that there must be some degree of coordination, reciprocity, and mutuality in verbal interaction. Linell further argues that dialogue occurs not only in interaction with others but also in interaction with the self, artefacts, and contexts (Linell, 2009). This argumentation is consistent with Bakhtin’s (1981) dialogic principle, meaning that when one is engaged in dialogue with oneself, one’s thinking is oriented to a recipient, against the context in which the individual is part of, and in relation to artefacts. Linell (1998) says that dialogue is “any interaction through language (or other symbolic means) between two or several individuals who are co-present” (p. 13). Exposure to academic language through dialogue is valuable for learning because it gives the individual an opportunity to make use of academic terms before she/he fully understands them. In this way, the transformation of cultural knowledge becomes, as Vygotsky (1978) puts it, internalized in the individual.

Dialogic feedback is a process in which individuals learning can be activated because that others experiences, thoughts and utterances are made visible and available in concrete contexts. The parties in a dialogue appear as “co-authors of each other’s’

contributions” (Linell, 2009, p. 73). This means that the recipients (or rather the idea of them) are present already when the sentence is formulated. The idea of who we are talking to mediates the action of deciding how to formulate oneself. Co-authors can be both physically present and represented as third parties, like for example the author of a syllabus book.

Wertsch (2007) argues that exposing students to academic language before they actually understand it “unwraps” the language and, in that sense, provides a potential learning situation. Daniels (2016) argues along the same line of reasoning, when he states that students must play around with concepts and signs, explore them, and investigate the relationships between them. By doing that, the newcomers are invited to “the stage” (Daniels, 2016, p. 14), but the newcomers are not alone on this stage. Others on stage already have a sense of what the play is about, enough of a sense to make interaction with a newcomer possible. In this case, the word others refers to teachers or other, more experienced students. When students in higher education are invited to the “stage,” their experiences might form significant opportunities for meaning-making and cognitive development (Wittek, 2016). By opportunities, we mean possibilities to investigate the established knowledge within the disciplines, but also the relationship between spontaneous and scientific concepts on a personal level (Vygotsky, 1986). Established ways of thinking and acting are embedded in core tools within a profession or a discipline. However, they have more or less clear limitations for acceptable ways to build up a scientific argument and structure a text (Wittek & Habib, 2014). Moreover, students also encounter possibilities for negotiation and agency within the established frames when they are invited into feedback dialogues as active participants.

Inviting students into a dialogue can support opportunities for individual growth and development. However, not all dialogue necessarily supports individual growth. A dialogue is also an arena for different interpretations that may not be made accessible, for misunderstandings to remain misunderstandings, and for an individual's display of vulnerability. Individuals vary in their ability to carry out cognitive and communicative tasks, and some individuals can therefore be vulnerable in terms of achieving their best, or making use of the other's support and guidance. Also, the other's contributions may fail to do exactly that – contribute – because utterances and support are experienced as threatening, not supportive or even not recognized. Importantly, understanding feedback in a dialogic sense means that there must be a fundamental shift in the power balance of authority in the teacher and student relationship. Without this, feedback is simply traditional and transmissive in the way of the teacher listening for comprehension, and thus also of power that unbalances dialogue. In Vygotsky's (1978) “zone of proximal development” (ZPD), the other, being more competent or more advanced, provides the necessary scaffolding for the newcomer to achieve individual growth. Although there is an asymmetric relationship between the participants in a disciplinary dialogue, Vygotsky (1978) asserts that the dialogue and its contributions make individual competences and development possible. Social interaction is transformed into cognitive structures on a personal level. However, this implies that they are supported by an other who is more competent, because carrying out an individual's potentialities means promoting and supporting what he or she is almost able to do, or even what he/she might manage within the right environment and with a supportive, communicative partner (Linell, 2009). Wegerif (2011) problematizes the concept of the ZPD and its appropriateness to a dialogic approach to learning, arguing that the ZPD is already envisioned as the desired learning outcome in the mind of the teacher (or curriculum), and is thus limited in its responsiveness to the students' utterances. Balancing this in a disciplinary dialogue requires a competent and qualified teacher (or more competent other) who has carefully considered and reflected on his/her and the students' role as contributors in dialogic feedback. Thus, generating supportive responses, developing opportunities for change, and avoiding power limitations in a dialogic feedback practice are demanding tasks.

Based on the literature review as discussed above, we derive four quality dialogic dimensions from dialogic theory which are important in supporting students' learning. These are: 1) emotional and relational support, 2) maintenance of dialogue, 3) students' opportunities to express themselves, and 4) the others' contribution to individual growth. These four dimensions will be extensively discussed in a later section in relation to the findings from our empirical study. First, we will describe the empirical context, methods and analysis procedure.

3. Empirical context, methods, and analysis

The current case study employed a longitudinal, ethnographic research design inspired by Alvesson and Sköldbberg (2000). We drew on several data sources, including audio recordings of oral feedback dialogues, field notes, assessment templates, classroom observations, and recordings. This study is part of a larger study that was carried out at a university college in Norway on a first-year bachelor program in international business communication, led by the first author. In the present paper, we concentrate on oral feedback dialogues between 11 students and their teacher. This course attracts international students, and our participants are from Iran ($n = 1$), Germany ($n = 1$), England ($n = 1$), Russia ($n = 1$), and Saudia Arabia ($n = 1$). However, the majority ($n = 6$) were from Norway. The first author audio recorded and transcribed the oral feedback dialogues. The duration of the feedback dialogues varies from 4 min to 12 min. A total of 18 oral feedback dialogues were analysed in depth, according to the four dialogical dimensions referred to in the previous section. Context-relevant aspects were noted, such as body alignment, for example, if a student folded her arms over her chest. When the participants made relevant artefacts available, such as the use of the teacher's assessment template or when the teacher noted speech phonetically on a blackboard while giving an oral explanation to the student, this was also noted. The recordings of the students' oral feedback dialogues overall are 113 min and 40 s, and their transcripts are 42 pages (Table 1). The data were supplemented with secondary data including assessment templates, observations and recordings of classroom activity, and field notes. Table 1 provides an overview of the data from the feedback dialogues.

During their first semester, the students give two presentations in class on an optional topic. The presentations have a maximum length of 8 min. The students give their presentations in class, and their fellow students can comment and ask questions. However, giving feedback to their peers is optional, and the students are not involved in systematic peer feedback. The teacher observes the student and his/her presentation and makes notes on a predefined assessment template. Immediately after the presentation, the

Table 1
Feedback sessions – recorded and transcribed.

Student	Feedback session one (time)	Feedback session two (time)	Transcribed (wordcount)
Margareth		04:02	755 words
Sandra	07:35	06:00	1988 words
Jennifer	07:35	06:30	2256 words
Shelley		04:20	932 words
Mathew	05:38	05:15	2049 words
Paul	04:24	04:00	1455 words
Vicky	09:04	05:21	2295 words
Joanne	06:44	04:40	1727 words
Eric	12:10	11:30	4535 words
Anne	04:26		845 words
Mary	04:26		1003 words
Total (all feedback dialogues):		Minutes 113:40	19,840 words

teacher and student go to a room nearby where the oral feedback dialogue takes place. The remaining students work on a group assignment during this time. Based on the overall analysis, the feedback dialogues are teacher-centred, and possible feedback from peers are more or less included in the feedback dialogue.

The academic goal for this activity is for the students to improve their presentation skills and proficiency in business communication. Every student completes two presentations during the first semester, with a subsequent feedback session. The students receive a tentative grade on their presentation. At the end of the course, the students hand in a portfolio including three written assignments. Their final evaluation is based on the portfolio combined with an oral presentation. Teaching, presentations, and oral feedback dialogues were all conducted in English, which was the second language for all the students.

The selection of informants was based upon purposive sampling (Jupp, 2006) and their interest in participating in the project. All students in the course were informed about the project, and 13 students volunteered to participate as key informants. However, one student quit school after a few weeks. This left us with 12 remaining students (eight women and three men). The students were informed in detail about what it meant to participate and that they could, at any time, withdraw from the project.

We chose interaction analysis for the in-depth analysis of the oral feedback dialogues (Furberg & Ludvigsen, 2008; Jordan & Henderson, 1995), an innovative methodological approach that rarely has been used in previous research on feedback in higher education (Ajjawi & Boud, 2017). Interaction analysis was chosen for its underlying assumption that knowledge and action are social in origin and, further, that knowledge is situated in social and material settings. As such, it aligns well with our theoretical framework for this study. The purpose of interaction analysis is to identify regularities in people's interactions, nonverbal and verbal, with each other and with objects in their environment (Jordan & Henderson, 1995). The use of interaction analysis gave us an opportunity to assess how meaning was created during the feedback dialogues, and gave us an understanding of how this is constituted interactionally. Thus, using interaction analysis provides deeper and more detailed insights into naturally occurring social interactions, such as feedback dialogues. The unit of analysis was the oral feedback dialogues as they occurred in interaction between the teacher and the student, and the analysis focused on identifying regularities and patterns in these. For the purpose of our investigation for empirical indications of the four dimensions in the audio data, we operationalized the four quality dimensions as follows:

Emotional and relational support	If the teacher provided positive emotions, showed empathy; was willing to listen to the students; was encouraging; was supportive; acknowledging and showing in words he valued the students
Maintenance of the dialogue	Who introduced themes in the dialogue; who was in charge of turn allocation (verbal and non-verbal); what kind of initiatives and responses were displayed and how follow-ups and progress developed
Expressing themselves	Who took initiatives, such as beginnings and endings; who introduced new topics; the students' utterances such as explanations and analysis; the students' involvement in words; and general reflective activities done by the student
The other's contribution to individual growth	Characteristics of the teachers' utterances; whether his responses were developmental, supportive or argumentative; if he was listening or inviting. Also, we searched for artefacts that were in use during the feedback dialogues and linguistic phenomena such as written and verbal language.

The process of analysing the data was validated through presentations and discussions in research groups. The feedback was used to enhance the reliability of the study findings.

4. Findings

In the following, we present the findings from the analysis and we illustrate by using excerpts from the transcribed material. We discuss and detail the oral feedback dialogues using the four dialogic dimensions as an analytical framework. We present our findings by using the four dimensions as separate themes; however, the richness of the data implies that some quality features may partially overlap. We begin our presentation of the four quality dimensions with a short summary of the core findings. All participants have been given anonymous names. We named the teacher Andrew.

4.1. Emotional and relational support

The overall finding from this quality dimension was that Andrew displayed emotional and relational support in both the classroom and the feedback dialogues. He was engaged and present, direct and supportive. Through personal and individualized feedback to each student in the feedback dialogues, Andrew supported and motivated students' development by using personal pronouns, supportive words, showing empathy and trust, and acknowledging students' emotional expressions.

Based on field notes and observations of classroom activity, Andrew appeared secure, confident, and interested in his students; additionally, he often told jokes. The classroom atmosphere was safe and Andrew would, typically, give of himself in the classroom. The following excerpt is an example from the field notes of this, where Andrew described the criteria for the oral presentation:

When the teacher presents criteria for the oral presentation, he does this by using PowerPoint, including writing the criteria on the blackboard. He explains and elaborates the criteria by giving concrete examples. One criterion is appearance in respect to customers. He takes off his shirt, displaying a stained t-shirt underneath. He says, "What impression does a stained t-shirt give?"

A different example from the field notes illustrates how Andrew stays in the classroom during breaks, and how the students use this opportunity to approach him:

The majority of the students go outside the classroom for a break; however, several students use the break to approach the teacher, asking different questions.

Giving personal feedback to students twice during a semester is time-consuming. However, the audio recordings, the field notes from the feedback dialogues, and the observations of classroom activity displayed a teacher who was gave of himself, was engaged and available to the students. In the feedback dialogues, transcripts illustrate how Andrew gave emotional responses. For example, Andrew often used personal pronouns in combination with supportive words. He would, for example, say "I want to see you improve" or "I know you can do better." This combination of personal pronouns and support is likely to motivate the students as it is showing positive emotions. As illustrated in lines 1–2 below, Andrew showed empathy by putting himself in the student's shoes, which is a classical dialogic approach, as identified by for instance, [Bakhtin \(1981\)](#):

1. 'Andrew: and believe me, you will improve (.) you just need practice (.) I've been
2. there myself, I've been extremely nervous (.) so it's just a matter of getting up there
3. and you know (.) I'll show you, right?
4. Shelly: mm'

This example shows how Andrew encouraged another student, Paul, by acknowledging his progress:

1. 'Andrew: okay? So continue working, this is this is going the right direction
2. Paul: mm'

[Pekrun et al. \(2002\)](#) argue that feedback can arouse negative as well as positive reactions, feelings and responses. Dialogic feedback can entail exposing yourself, showing vulnerability, and revealing misconceptions or misunderstandings. The following excerpt illustrates how Andrew asked Vicky to consider her presentation (line 1). Vicky responded emotionally (line 2), which surprised Andrew (lines 3 and 5). Andrew acknowledged her nervousness (line 7) and encouraged her confidence when he said '... that's impressive, because it didn't show (.)'

1. 'Andrew: have a seat (.) alright what do you think?
2. Vicky: I was very nervous
3. Andrew: you nervous?
4. Vicky: yeah yeah
5. Andrew: You were nervous?
6. Vicky: yeah
7. Andrew: I mean really nervous? Ok. That's (.) that's impressive, because it didn't show (.) to me'.

This interaction sequence shows how Andrew communicated support and trust to Vicky by acknowledging her nervousness (lines 3–7); a point discussed by [Carless \(2013a\)](#) when he argues for the importance of building communication trust in feedback practices. Developing trust is an important element of student–teacher relationships, he claims, because it can prepare the ground for dialogic feedback, making it easier for students to involve themselves in feedback, to be open, and to show vulnerability in the presence of the other.

4.2. Maintenance of the dialogue

Being present in an oral feedback dialogue, the participants have opportunities to influence the content, length, and development of the feedback through the means dialogue. Of the core findings, we found that the dialogue was dynamic and prolonging, and that Andrew and the students' both contributed to the maintenance of the dialogue. Typically, the teacher contributed by initiating new beginnings and asking meta questions; and the students' contributed by using minimal responses. We will exemplify this in the following.

The first interpretation of the in-depth analysis was that Andrew was dominant in the dialogue, characterized by the traditional asymmetrical power balance. We found, for example, that Andrew had the largest share of utterances in the feedback sessions.

However, after careful analysis of the relevant episodes, a clear pattern became visible. The analysis indicates that the dialogue was dynamic and prolonging in its character, and that there was never a breakdown in the form of a halt in the dialogue or the like. Andrew initiated new beginnings, such as introducing topic-relevant feedback, and brought in new relevant feedback content, such as illuminating quality standards. The following excerpt shows Andrew giving feedback on achieved performance to Mathew:

1. 'You're adapting your (.) your message to the audience (.) ehh (.) so in that sense
2. think your communication with the audience is very good, you're involving them,
3. you have good eye contact, your smiling, I think that is always a good thing to do,
4. ehh (.) you are very good at speaking freely, you have a very good English
5. proficiencies, your structure is good, I think the pace was good as well (.)'

However, further analysis revealed that the students varied in the way they used this opportunity and in what way they responded to the feedback. Some students made use of this opportunity by expressing themselves, building on the teacher's utterances; others, however, gave what [Linell \(1998\)](#) name "minimal responses," such as "mm." Minimal responses can express an understanding of a previous utterance and therefore maintain the dialogue. However, this utterance, "mm," does not elaborate upon the dialogue, leaving the initial utterance as the meaningful one. Nevertheless, as minimal responses, these are essential components in dialogue because they give information on turn allocation and let the speaker know he or she is listening. They also encourage the speaker to continue. The following excerpt illustrates how Joanne's minimal responses, such as "mm," kept the dialogue going:

1. Andrew: so, this is of course eh this is of course (.) and then also something one could think even more about is transitions when you go from one to point to the next.
2. Joanne: mm
3. Andrew: but of course I understand it's difficult
4. Joanne: mm
5. Andrew: you have a [...]
6. Joanne: mm yeah
7. Andrew: your English is (.) proficiencies at this level I would say are between good and
8. very good
9. Joanne: mm
10. Andrew: ehhh you make some mistakes, 'in 2004 I have been to Mich Michigan' [shh] this is a typical German error
11. Joanne: ok

Although Joanne's minimal response did not contribute to content development in this interaction sequence, it contributed to maintenance of the dialogue. Being part of the interaction sequence, this functioned as a confirmation for Andrew that the student was listening and encouraged the dialogue's development.

Excerpts show that Andrew asked meta-questions such as "are you with me now?" and "do you follow me on this?" in the oral feedback dialogues. The developmental potential in using such meta-questions is prominent, providing a possibility for the students to share their thoughts and reflections. Even so, the analysis showed that most of the students responded to this question by using a minimal response ([Linell, 1998](#)). No further elaborations were made by the students, leaving Andrew's meta-question as the last meaningful utterance:

1. Andrew: Because one thing I sort of I missed out on your topic sort of (.) when you
2. get there and to talk about opener, a strong opener ok [claps his hands] to get
3. people's attention, clap your hands whatever, wait for silence, then ok my topic for
4. today is (.) then slow down. Are you with me now?
5. Vicky: mm

A main target of dialogic feedback is its opportunities for participants to contribute to the dialogue by bringing in new meanings and perspectives. This excerpt offers an example of how the dialogical potential was not fully utilized by the student because she responded by using a minimal response. However, although Andrew's use of the current meta-question in line 4 ("are you with me now?") did not trigger this student's contribution to the dialogue, further analysis of the feedback sessions displayed how the feedback dialogue gave the students other opportunities to express themselves, hence developing the dialogue. In the following third

dimension, examples of how participants made better use of the dialogical potential are presented as the possibility for the students to express themselves in the feedback dialogue.

4.3. Expressing themselves

A third core finding from our overall analysis, was that the students were given the possibility to express themselves by using their own words. This supported students' reflection and displayed their current understanding of their performance, which gave the teacher a unique opportunity to adjust the feedback accordingly and based on that, guide further development. We identified this in every oral feedback dialogue, beginning with Andrew asking the following question: "Did everything go according to plan?" This initiative encouraged the students to talk about their performance, making their interpretation and assessment available for the teacher. All 11 students made use of this opportunity, and they all elaborated on this question. Mainly, the students reflected on how their initial plan for the presentation went according to their actual performance, as they perceived it:

1. Andrew: Ok, what do you think? Did it go according to plan? [making eye contact with the
2. student]
3. Mathew: no, not exactly, I talked a bit faster and I expected a bit more feedback from the
4. audience than I got (.) so it (.) ehh
5. Andrew: right, right, because you tried to involve them
6. Mathew: yeah

In this excerpt, Mathew reflected on his performance, saying he was not satisfied. Andrew responded to Mathew's reflection by acknowledging his own judgement of the presentation (line 5). This indicates that Andrew's acknowledgement served as a confirmation of Mathew's own interpretation of his actual level of performance, as defined in the ZPD. The following excerpt illustrates how the interaction sequence between Andrew and Eric gave Eric the opportunity to express himself:

1. Andrew: yes, because we've talked about, in Locker and [Germarrek]
2. ([textbook]) they talk about, paiboc (.) you have to think about the purpose, and
3. the audience
4. Eric: the audience is of course the students
5. Andrew: that's good
6. Eric: it's only the students who can
7. Andrew: good. And then the next question is what is the purpose, what is it that
8. you want them to do?
9. Eric: to get them interested
10. Andrew: exactly.

Andrew referred to a topic previously discussed, bringing a relevant theme to the foreground in the dialogue. Eric responded by acknowledging this when he said, "the audience is of course the students" (line 4), giving Andrew a possibility to enhance Eric's understanding by offering positive feedback ("that's good", line 5). However, lines 6–7 show how Andrew cut off Eric's ongoing reasoning, not supporting Eric's contribution in the dialogue. This indicates an asymmetry in the relation, showing unbalance in the dialogue (Boud & Falchikov, 2007) which, in turn, limits the student as a contributor to the dialogue. We do not know how the dialogue would have developed if Andrew had let Eric go on with his reasoning; instead, Andrew posed a new question (line 8). This interaction sequence contributed to the ongoing dialogue around the topic because Andrew brought in new topic-relevant aspects when he introduced a question. Eric responded to this question by saying "to get them interested" (line 9), and Andrew supported this understanding as he said "exactly" in line 10. In the section below, examples of the other's contribution to individual growth are discussed.

4.4. The other's contribution to individual growth

As underscored in an earlier section, a main point in dialogic feedback is to enhance and develop individuals' growth through collaborative processes with the contribution of others (Linell, 2009; Vygotsky, 1978). Core finding from the analysis of this dimension was that the students' individual development was encouraged and supported with the contribution of the teacher. Typically, Andrew challenged the students' understanding by asking questions that triggered the students to elaborate, reflect and articulate their own understanding. Andrew also introduced new knowledge and understandings, used non-verbal communication and artefacts in the dialogue. By doing so, Andrew contributed to bridging the gap between the students' current understanding and further development.

The following excerpt presents Joanne's reflection on her presentation, as a response to Andrew's question on how she thought her presentation went:

1. Andrew: Ok, so what do you think? Are you happy with the performance?
2. Joanne: ehh (.) I don't know, I think it was different than last time

3. Andrew: in what way was it different from last time?
4. Joanne: eehhmm (.) cause I (.) got somewhat stuck from where I was standing and eeh
5. Andrew: ok
6. Joanne: because I always had to go around with the (.) last time I was standing closer
7. to the
8. Andrew: to the screen
9. Joanne: to the screen
10. Andrew: ok ok

This excerpt illustrates how Joanne used her own words and articulated her own understanding (lines 4, 6), making her a relevant participant in the dialogue. This exposure of Joanne's current understanding of her performance also “unwrapped” her understanding of assessment criteria for the presentation, giving Andrew a unique insight into what to further focus on in his feedback. In this excerpt, Andrew challenged Joanne's actual competence when he asked her to elaborate on her view (line 3), pushing her level of development further. Joanne then reflected on her presentation (line 4), which Andrew acknowledged (line 5), and Joanne fulfilled her reflection in line 9, again being supported by Andrew (line 10). From line 4 to line 6, Joanne analysed aloud why she believed her presentation was different from last time, making her interpretation available for Andrew to give feedback on. This is a central point in a dialogic approach to feedback because Joanne's interpretation was displayed and made available for the other to respond to. In our case, Andrew acknowledged Joanne's contribution in the dialogue (“ok”, line 10), appearing as a co-author of Joanne's contribution (Linell, 2009). The opposite outcome could be Joanne withholding valuable information on her interpretation of the feedback, which would limit the further development of the dialogue.

The students' oral presentations were responded to by the other: the teacher. The other offers a perspective that differs from one's own (Bakhtin, as cited in Linell, 2009). This allows for opposing views and disagreements between perspectives, leading to thoughts in the self. Others, in this case Andrew, introduce knowledge and understandings other than those the student had before. This may contribute to viewing things differently, forcing the student to reflect and try to understand. It gives the student the opportunity to internalize the more competent other's knowledge. In the following interaction sequence, Andrew questioned Eric's actual level of development by challenging Eric's understanding (lines 1–2):

1. Andrew: it could be more difficult (.) for example you say for example “the
2. effects of the division of elements” – okay, what does that mean? Right?
3. Eric: and maybe I should explain what?
4. Andrew: I think that's a good idea, actually

By asking direct questions to Eric, such as “what does that mean? Right?” (line 2), Andrew encouraged further development of Eric's understanding of a concept he used. Because of this contribution, Eric realized he must explain the concept (line 3), which Andrew acknowledged in turn (line 4).

In the next excerpt, Mathew's response to Andrew's feedback indicated that he was aware of the area that needed to be improved:

1. Andrew: but you know, practice doing this, and look at yourself in front of the mirror,
2. because if you look at confident public speakers they will stand like this or like this,
3. not like this (.) right? [illustrating by holding his arms in different positions]
4. Mathew: yeah, I've heard that before (.) he-he
5. Andrew: yeah right and then (.) because automatically, you look much more confident
6. Mathew: yeah

Here the other, Andrew, brought in a perspective that relates to Mathew's current understanding, contributing to emphasize what Mathew needed to work on. Andrew reinforced this point by using nonverbal communication when he held his arms in different positions. The current use of nonverbal communication, as this excerpt illustrates, was conducive to Mathew's understanding, as he said, “yeah, I've heard that before”. We also found indications of the use of nonverbal communication in the field notes:

When giving feedback, the teacher concretized with both body language and written words. For example: one student held his hands in his pockets during his presentation. In the feedback session, the teacher explained this as an insecure body language. The teacher used his own hands to illustrate how the student could change this.

Nonverbal communication was one of the core resources we identified from our analysis within this dimension. Andrew also made use of artefacts such as the assessment template in every feedback dialogue. He used the template as a baseline document for his feedback as well as to exemplify points in writing for the students. The exemplification was specific and concrete, and often a combination of verbal and written examples. The following excerpt illustrates how Andrew, by bringing sociocultural resources (the assessment template) into the situation, elaborated on the correct pronunciation of the word “of” in his dialogue with Joanne:

1. Andrew: articulation is loud and clear, some Germanic interferences but that's
2. normal, say ov [off] in this is typically Germanic...you have this [...] say, tak, a
3. Norwegian would say tag, so you say... and then you say, you pronounce the word
4. word ov off

5. Joanne: off
6. Andrew: ov
7. Joanne: ov
8. Andrew: because that's the typical Germanic way of saying...
9. Joanne: [...]
10. Andrew: yeah, for example you would say [...] an Englishman would say [thought]
11. Joanne: [toug]
12. Andrew: yeah yeah that's yeah yeah yeah if you take [...] if you take the German word, if an Englishman pronounced this word he would say like, uh, this is an
13. [holding up the assessment template and writing phonetically the word 'of'] this is a v
14. [the teacher pronouncing v]
15. Joanne: oh, really?
16. Andrew: pronounce
17. Joanne: uh-huh, I didn't know that
18. Andrew: exactly. Because when you say off...with...some Norwegians would [...]
19. they could say ov course
20. Joanne: ov course
21. Andrew: exactly, so when they say, if you say off course [holding up his hand,
22. pointing it towards the end of the room]
23. Joanne: ok ok, I see it now

As we see in this excerpt, by making resources in the room relevant for the participants involved, the interaction in the feedback dialogue created opportunities for bridging the gap between Joanne's current understanding and further development. Even more interestingly, the excerpt illustrates how Andrew was a more competent other *because of* his exemplification, giving feed-forward to the student. At the beginning of the excerpt, Joanne (line 5), at her current level of performance, was repeating the incorrect pronunciation (“off”), but as Andrew introduced the correct pronunciation (“ov”), Joanne repeated it out loud (line 7). Andrew was scaffolding Joanne's development by exemplifying and writing phonetically on the assessment template. Joanne seemed surprised as she said “oh, really” (line 15), discovering new insight because of Andrew introducing new knowledge into the situation. Joanne even pointed out – for herself and for the teacher – that she did not previously have this knowledge (line 47). Joanne summed up the interaction sequence by saying, “ok, I see it now”, bridging from the current level of performance to the desired level, as articulated by Vygotsky (1978) in the ZPD.

5. Discussion

Through our previous presented literature review on dialogic theory, and our presentation of the empirical findings, we will in this section suggest a possible model for dialogic feedback. The model merges the four theoretical dimensions with the findings from our empirical case, which we sum up and present as four potentialities for learning. We use the term potentialities to describe an individual's opportunities for development and underlying capacities that can be actualized, activated, utilized and developed in contexts (Linell, 2009).

Model 1

Dialogic feedback. Four potentialities for learning.

1. Emotional and relational support.

Dialogic feedback is a relational and emotional process, where positive and negative emotions affect student's active participation and engagement with feedback and hence, their learning from feedback. Facilitating a safe learning atmosphere, using personal nouns and supportive words in dialogue with students, showing empathy and trust, acknowledging students' emotional responses has potentialities for student learning.

2. Maintenance of the dialogue

Dialogue is part of our thinking and language, which shape our cognitive development. Engaging students in dialogue can support individual growth and development through sharing of meanings and understandings in interaction with others. Initiating new beginnings, asking meta-questions, and using minimal responses contribute to a prolonging and dynamic character of the feedback dialogue, which has potentialities for student learning.

3. Students' opportunities to express themselves

Letting one's voice be heard in the presence of the other is an important dialogical move. Encourage students' to express themselves by using their own words and asking questions that make students' reflect on their understanding and misunderstandings, supports student's active participation in a feedback dialogue.

4. The others' contribution to individual growth

Creating opportunities for displaying one's experiences, thoughts and utterances with the feedback, form potentialities for individual cognitive development through the support of a competent other. Challenging student understanding by bringing in new knowledge and understandings, and asking questions that make the students elaborate, reflect and articulate their own understanding. Using non-verbal communication and

relevant artefacts that support individual growth.

In the following, we discuss and detail our model of dialogic feedback and we argue that it has a strong potential to support student learning from feedback.

5.1. Emotional and relational support

Emotional responses are a part of students' general learning experiences, and feedback is a deeply emotional practice (Boud, 1995). Assessment and feedback are influenced by the relationship between teacher and student; likewise, how the feedback dialogue develops and potentially supports student learning is dependent upon the trust between the teacher and the student (Boud, 1995; Carless, 2013a; Higgins et al., 2001; Pekrun et al., 2002; Price et al., 2011). Andrews' personality was easy going, relaxed and he would often tell jokes in the classroom. The class atmosphere was relaxed and safe. Carless (2013a) argue that students' uptake of feedback is likely to be enhanced when the participants have faith and confidence in others, within a supportive atmosphere. In our analysis of the feedback dialogues we found that the teacher listened to the students, was available and used supportive and emotional words. Andrews' use of personal nouns ('I want to see you improve', 'I believe in you') was particularly dominant in our data, and is personal and strong statements communicating trust and encourage student engagement with the feedback. Andrew also displayed his own previous experiences with negative emotions giving presentations in one feedback dialogue (p. 18, excerpt with Shelly) and illustrates the assessment criteria for the presentation with the use of himself (p. 17, from the field notes). These are all potentialities for learning that contribute to building 'a trusting relationship' between the teacher and his students, as discussed by (Carless, 2013a). However, we argue that our findings; using personal nouns, being available to the students, and using supportive and emotional words, are relevant emotional and relational support that contribute to the development of trust, in dialogic feedback situations and as such, add to Carless (2013a) notion of trust in dialogic feedback.

5.2. Maintenance of the dialogue

The interaction, responses, and utterances displayed in dialogue can maintain or break off the dialogue. Engaging in disciplinary dialogue can be vulnerable and difficult as well as an arena for misunderstandings. Important aspects of a disciplinary dialogue are maintenance of the dialogue and preparing the grounds for meaningful interaction that supports student learning from feedback (Bakhtin, 1981; Carless, 2013a; Linell, 1998, 2009; Nicol & Macfarlane-Dick, 2006; Price et al., 2011; Vygotsky, 1978; Wertsch, 1991, 2007).

As the findings illustrated, Andrew was in charge of turn allocation and he did introduce new topics into the dialogue. The feedback dialogues were teacher centred, however, Andrew's being in charge of turn allocation and introduction of topic relevant elements does not imply that these students were passive recipients of feedback. Instead, we argue that Andrew provided necessary scaffolding for the students by doing so, carrying out his role as a more competent other, as defined by the ZPD. In doing so, Andrew invited the students as newcomers to the "stage," as discussed by Daniels (2016). Having said that, we do not know if this actually led to the development of students' knowledge. We cannot know if the feedback dialogues contributed to the students actually acting on the feedback, a central point in formative theory for closing feedback loops (Black & Wiliam, 2009). However, we argue that although the students' minimal responses did not contribute to the dialogue's content, the analysis showed that it contributed to maintenance of the dialogue. Being part of the interaction sequence, this functioned as a confirmation for Andrew that the student was listening and encouraged the dialogue's development. The discovery of this finding was made possible by our use of interaction analysis, applied on audio data. However, given the theoretical framework underpinning this paper, participation and minimal responses in interaction are not sufficient to enhance students' learning. Students also need to take concepts and ideas into use, and explore their potentialities for meaning. In the feedback dialogues, Andrew asked meta-questions such as "are you with me now?" and "do you follow me on this?", which is a useful way to start a dialogue. The developmental potential in using such meta-questions is prominent, providing a possibility for the students to share their thoughts and reflections. Even so, the analysis showed that most of the students responded to this question by using a minimal response (Linell, 1998). No further elaborations were made by the students, leaving Andrew's meta-question as the last meaningful utterance. In other words, we do not know if this actually led to students' learning in the future.

5.3. Students' opportunities to express themselves

A key element in dialogic feedback is the point of letting one's voice be heard in the presence of a more competent other (Carless, 2013a; Carless et al., 2011; Linell, 1998, 2009; Nicol, 2010; Nicol & Macfarlane-Dick, 2006; Vygotsky, 1978; Wertsch, 1991, 2007). Student learning and development are influenced by the social and cultural context in which they engage (Vygotsky, 1978). Learning is basically social in origin, where a student's cognition is constructed through participation in different contexts – through artefacts and in particular through linguistic artefacts. This supports learning and development and is therefore valuable for the individual's further action with the feedback.

Our findings illustrated that Andrew was in charge of turn allocation, and introduced the largest amount of new topics and initiating beginnings. In some cases, Andrew did not give the students pertinent time to reflect in the situation, which can restrain individual competencies and development, a central point in socio-cultural theory (Vygotsky, 1978). As such, the feedback dialogues were teacher-centred and the power balance of authority related to the teacher; which does not sit well with dialogic feedback and

the discussed dimension. Although the minimal responses did not contribute to the development of the dialogue, the findings indicated that the students were active in the feedback dialogues because they had a chance to express themselves. Andrews' use of meta-questions triggered students' elaborating and evaluating their presentation, which gave Andrew a unique opportunity to check for understanding. All of our participants used this opportunity to express themselves, a strong indication of a reflective activity undertaken by the student. These empirical findings support the dialogical point of co-authoring each other's contributions in a dialogue, as discussed by Linell (2009).

5.4. The other's contribution to individual growth

The role of the other is important in a dialogic approach to feedback because it renders individual growth and learning. The other can contribute to developing understandings and meaning making, and thus mediate individuals' learning from feedback (Bakhtin, 1981; Daniels, 2016; Linell, 1998, 2009; Vygotsky, 1978; Wertsch, 1991, 2007). However, taking the role as the other in a disciplinary dialogue, such as the feedback dialogue, demands reflectivity and careful considerations, as initiatives and developments in a feedback dialogue can be interpreted in many ways.

Our findings showed that Andrew, as a more competent other, challenged students' current understanding by asking questions that stimulated the students to reflect on their own development. We also found that Andrew brought new knowledge and understandings into the dialogue, which made the student view things differently and reflect on their understanding. However, the utilization of this potential is not straight forward, but was, in our case, triggered by Andrew as he would ask direct questions encouraging student engagement. We found that Andrew used other than verbal resources in the feedback dialogues with his students. Typically, he made use of relevant resources to underline and support his arguments, which in turn, created potentialities for bridging students' gap between current and desired development (Vygotsky, 1978).

6. Conclusions

In this article we have investigated dialogic feedback both theoretically and empirically. Based on our literature review, we have suggested four quality dimensions that are important in student learning. We then used these four dimensions as an analytical framework on our own empirical study. Furthermore, we have discussed and elaborated the suggested quality dimensions by showing how our findings add to the existing body of literature of dialogic feedback. We conclude our paper by suggesting a model of dialogic feedback holding four potentialities for student learning. These are: 1) emotional and relational support, 2) maintenance of the dialogue, 3) expressing themselves and finally 4) the other's contribution to individual growth. Based on our empirical findings, we have added nuances to the theoretically derived dimensions, and of particular importance in this regard, was the emotional and relational dimension.

The model we propose in this article provides rich and nuanced descriptions of potentialities for students learning from dialogic feedback. The main contribution is to propose the model as a tool for analysing in detail dialogic feedback and the potentiality for student learning in these kinds of practices. A second contribution includes practical implications from the four potentialities for learning as ways in which teachers can facilitate for dialogic feedback.

Dialogic feedback requires interaction with others, and its' development and potential for student learning is subject to a degree of uncertainty because of the complex nature of dialogue. In our study, the feedback dialogues are teacher-centred but with ample opportunities for students co-authoring and contribution to the development of the dialogue. The teacher managed to establish the four quality dimensions; by encouraging a safe and supportive environment, by giving personal face-to-face feedback, by inviting the students into a dialogue and letting them display their understanding and finally by supporting their individual growth and development. However, the findings also show how elements of traditional teacher-student role take place in the dialogue, and an asymmetrical power balance is displayed. In terms of future directions for research, we encourage more research investigating in depth how dialogic feedback can enhance student learning; and in particular how students' learning potentialities can be utilized within the teacher – student relationship. We welcome researchers in applying our model in analysing oral feedback dialogues, and as such identify further improvements that ultimately can contribute to enhance students learning from feedback in higher education contexts.

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