

E-didactic Strategies with Peer Feedback Processes for Online Learning

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ABSTRACT

This article focuses on strategies for how online course outlines can be designed to improve the use of collaborative peer feedback in distance education and how different dialogic patterns can be identified. Two separate studies were conducted to investigate students' use of own and others' texts meaning content in their peer feedback as a tool for learning and how the content can be analysed. Data were collected from two student groups; one from 40 student teachers' peer feedback and discussions of four assignments (N=759) from two 15 credit web-based courses; and one from 30 student teachers' argumentations and discussions of one assignment (N=253) from one 15 credit web-based course. An analytical framework, based on Bakhtin's theories of dialogues in study one, and combined with Toulmin's argument pattern (TAP) in study two, are employed to assess the quality of the meaning of peer feedback and argumentations. A close investigation of the dialogical patterns shows the extent to which students distinguish, identify and describe the meaning content in their peer feedback that emerge in collaboration with other students in an online setting as an important aspect. The dialogue patterns that developed are illustrated in selected excerpts.

Keywords: *Computer Supported Collaborative Learning; Computer-mediated Communication; Distributed Learning; Interactive Learning; Peer Feedback.*

1. INTRODUCTION

The background of this research is to meet the increased request on distance education with high quality and performance level in professional degree programs. Another setting is to improve the use of peer feedback in distance education, which can promote students' learning and development, as well critical ability. Peer feedback uses in this study as information provided by students with aspects of each one's understandings as well alternative strategies and solutions based on literature. University assessments such as reports, articles and project presentations are more complex work. Students need to have emphasis on the learning processes in writing, inquiring and problem solving. A practical benefit of implementing peer feedback is that the feedback becomes available during the learning process and in much larger quantities, than the teacher could ever provide alone.

A clear trend is that distance education in whole or in part is organized with support of online learning environments, is steadily increasing and is currently the higher education sector that is growing fastest (ICDE, 2009). The development of distance education has thus resulted in a *new way of teaching* and to learn *in* and *with*. The importance of developing critical reasoning and self-reflective learning has been highlighted in several studies within the field of distance learning and education (e.g. Vonderwell, 2003; Finegold & Cooke, 2006; Wegerif, 2006; Swann, 2010). While many models are available for content analysis of asynchronous discussion groups and the design of online activities to promote e-learning (De Wever et al., 2006; Schrire, 2006; Strijbos et al., 2006; Weinberger & Fischer, 2006; Sun et al., 2008), there are considerably fewer models that analytically investigate the meaning and quality of peer feedback.

2. PREVIOUS RESEARCH

A general overview of the state of research in the last decade of online learning shows that the research design in most studies in the area primarily involved experimental, descriptive and iterative studies (Suthers, 2006). Either have researchers examined the technical opportunities, how individual learning can be described and explained and compared how learning is developed in campus courses and in online courses. A frequent pedagogical problem in web-based education, discussed by Stahl and Hesse (2008), and Garrison and Arbaugh (2007), is that students and teachers mainly focus on the individual learning process. Self-regulated learning through using web-based tools and wireless technology module systems on their own is not nor enough. Another educational problem, described by Stahl and Hesse (2008), is that students and teachers tend to focus on procedural learning and ignore the conceptual learning intended by the curriculum designers. These courses tend to result in relatively superficial or unreflective re-productions among both individual students and student groups. The dialogues investigated in these studies soon assume the character of transmitting 'information'. They become a simple confirmation of what others already have written, and therefore the participants do not succeed in developing deeper knowledge construction.

When looking for studies on peer learning, Dochy et al. (1999) and Topping (2005) emphasize that by assessing the work of fellow students, students also learn to evaluate their own work. Producing and receiving peer feedback have a considerable profit in order to account for the time and effort that is required to engage in the learning process of peer feedback. This view is also supported by Shekary and Tahririan (2006), who state that peer assessment in language-related episodes (LRE) resembles any other form of collaborative learning. LRE are mini-dialogues, in which students ask or talk about language, or explicitly or implicitly questions of their own language use or that of others. The result of the study suggested that it offers students the potential to develop new knowledge and understanding. Most benefit to students was the nature of acceptance, not its mere presence. Another studies (e.g. Dysthe, 2002; Amhag & Jakobsson, 2009; Amhag, 2010; 2011) illustrate the potential and voices in online peer feedback as the range of meaning-mediating possibilities, as an active tool with self-reflective and interdependent arguments and thoughts, where each student can contribute with his or her own expertise and receive new information and experiences from others. Compared with Saunders (1989) combination of two factors: 1) what students do together with the tasks assigned to them as collaborators, and 2) the roles and responsibilities the students assume as collaborators and the interactive structure underlying the activity, is peer assessment often more limited than other forms of collaborative learning in the sense that it generally offers a lower degree of interactivity. He calls this process as "co-responding" and affects students' possibilities for interactive meaning making and collaborative knowledge construction.

In order to shed more light on the meaning and quality of collaborative peer feedback online, this study aims to investigate in two studies; one study with response activity and one with argumentative activity, how online course outlines can be organized to improve students' use of their own and others experiences, texts and productions to develop critical thinking, as well as peer feedback ability, individual as collective, as a

tool for learning. Additionally, the aim is to develop patterns of qualitative peer feedback, who are allowing to distinguish, identify and describe the meaning content that emerge in collaboration with others in an online learning setting, both directly and retrospectively as an important aspect. Response ability is here related to a concrete answer to a specific text in order to become a more conscious writer. Argumentative ability is related to the process of assembling and reassembling different components of the students' own and others' words and meanings. There is also a need for the students to understand the "ground rules" of peer feedback and to respond, argue and discuss with one another in a reasonable way. According to Scheuer et al. (2010), students not only need to "learn to argue" or "learn to respond", they also need to learn good responding and argumentation practices, through aspects of each one's understandings as well alternative strategies and solutions about specific topics. In other words, collaborative peer feedback for online learning in the sense with practicing of responding and argumentation skills that supports critical thinking, as well as other important aspects in collaboration with others. The research question in this study is:

- How can the quality of peer feedback be analyzed and practiced online in which students' in collaboration with others can use own and others' texts meaning content as a tool for learning?

3. THE STUDY

Method and data collection

Each of the two present studies follows one student group. The first study monitored 40 student teachers (of which 22 were women and 18 were men), who were studying teacher education at distance as part of the credits they needed in order to become qualified teachers. During the six courses, the students continued working as teachers in upper-secondary schools in Sweden. The majority had already worked between one and five years, while around one fifth had worked for more than five years. Data were collected from the student teachers' peer feedback and discussions which was given as part of the first two consecutive 15 credit web-based courses called *Teacher Assignment* and *Learning and Development* with two assignments in each with peer feedback activity (N=759; 350 in course 1; 409 in course 2).

The second study monitored 30 student teachers (of which 19 were women and 11 were men) at a Swedish School of Education. Data were collected from the student teachers' peer feedback and argumentations of one assignment (N=253) from the first 15 credit web-based course *Teacher Assignment*. In the first course assignment, about school development in their subject, the students had trained providing peer feedback in their groups. The study focuses the second course assignment, where the students worked both individually and collaboratively with 31 cases of teacher leadership (one official case and one from each student).

In both studies the students were divided into groups, with five to seven individuals in each. Each group included both men and women. The students first submitted their own particular contribution to the assignments. Afterwards, they had to give peer feedback and discuss in study one and in study two argue in their peer feedback and discuss the contributions of the other members of their group, over a period of a week. The purpose of the assignments was to start a discussion and an argumentation concerning different solutions to the underlying problems in the content of the assignments and relate to own experiences and literature.

Analysis of peer feedback in study 1

The analysis and interpretation of the students' meaning content in the online peer feedback in study 1, the following quotation

by the Russian linguist Mikhail Bakhtin's theoretical framework of dialogues (1981; 1986, 2004a; 1986, 2004b) was used and implemented: "as a neutral word of a language, belonging to nobody, as an *other's* word, which belongs to another person and is filled with echoes of the other's utterance; and, finally, as *my* word, for, since I am dealing with it in a particular situation, with a particular speech plan, it is already imbued with my expression" (1986, 2004b, p. 88). The first aspect is the *neutral* word that reflects the world of others, in the sense of more general meanings. This word is not built on specific words from literature or personal experiences. The second aspect is *others'* word, which is filled with echoes of others' voices, based on others' experiences and reasoning from others' texts, including references and paraphrases of other people's words from literature. Others' words have been created in another context. They are negotiated, and confirm a certain meaning relating to the argument at hand, but they do not originate in the person him/herself, and are not necessarily related to the person's own experience. Finally, the third aspect is *my* word, because the speaker or writer has experience of a particular situation, and connects a certain line of reasoning with internal reflections and feelings. A summary of Bakhtin's multiple voices is outlined in Figure 1.

Multiple voices	Patterns of meaning in peer feedback
1. Neutral word of a language	<ul style="list-style-type: none"> • reproduces other people's world view • aims at any general meanings and thinking • is not built on words from literature or personal experiences
2a. Others' word	<ul style="list-style-type: none"> • reproducing reproductions of previous voices • contains echoes of other voices, dialogic overtones • explicit voices can be heard presenting voices • the voices do not originate in the person himself
2b. Others' word from literature [my addition]	<ul style="list-style-type: none"> • reproducing reproductions of other authors' voices • drawing on other subject experience and reasoning from other texts • references to and paraphrases of other people's words from literature, expressing these in their own words • creating, negotiating and confirming the meaning
3. My word	<ul style="list-style-type: none"> • carries internal reflections and feelings • contains their own and others' voices, arguments, justifications, contradictions, experience etc. as appropriated to the speaker's own words • constructs and reconstructs a mutual meaning or a part of it • creating, negotiating and confirming the meaning

Figure 1: Summary of multiple voices and patterns of meaning in peer feedback in study 1.

The analysis phase involved taking into account that every utterance, spoken or written, always is formed by a voice, and expressed from a particular viewpoint or perspective (Bakhtin, 1980, p. 293). Voice shall here be understood as person's utterance, including meaning of own and others' words from different contexts, and expressed from a particular viewpoint or perspective. Bakhtin (1981, p. 427) talks about a 'discourse' [Rus. slovo] in the dialogue, and points to social and ideological differences within a single language. In Bakhtin's account, the notion of utterance is inherently linked with that of voice. It is "the speaking personality, the speaking consciousness. A voice always has a will or desire behind it, its own timbre and overtones" (1981, p. 434). In other words, the utterances contain

dialogic overtones, which can, for example, be composed of assertions regarding the world, ontological conclusions, or hypotheses regarding a phenomenon. Bakhtin emphasises that language has multiple functions, and every utterance, with its attitudes and values, places humans in a cultural and historical tradition.

Analysis of peer feedback in study 2

In the analysis and interpretation of the students' meaning content in the online peer feedback in study 2 was Bakhtin's theoretical dialogic framework combined with Toulmin's argument pattern. Toulmin (1958, pp. 98, 101, 103) describes how writers and readers can deal with texts, and how they can use the resources of texts to determine what they mean – or rather, some possible meanings – and how it can be achieved with an argument model containing six elements. Three elements are mandatory, while the remaining three are more voluntary or optional, since they occur often, but not always. The basic argument model consists of three mandatory elements: C (*claim*), D (*data*) and W (*warrant*). The extended argument model includes three more optional elements; Q (*qualifier*), R (*rebuttal*) and B (*backing*). The task is to show students how to present their ideas in an understandable and coherent manner, based on these data and the claims of the original opinion. A summary is given in Figure 2.

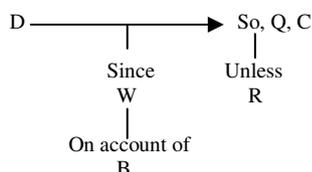


Figure 2. Summary of Toulmin's argument pattern (Toulmin, 1958, p. 104)

The first mandatory element, *claim* (C), is a superior standpoint, with a relationship to any determination or assertions about what exists, or the justification of the norms or values that people hold or desire for acceptance of the claim. The second mandatory element, *data* (D), is the information which the claim is based on, and may consist of previous research, personal experience, common sense, or statements used as evidence to support the claim. The third mandatory element, *warrant* (W), is explicit or implicit argument that explains the relationship between data and claim, for example, with words such as *because* or *since*. The first optional element, *qualifier* (Q), is related to the claim, and indicates the degree of strength in the claim of using peculiar comments, for example, with words such as *probably*, *maybe*, *therefore* or *so*. The second optional element, *rebuttal* (R), is connected to the *qualifier* (Q), providing statements or facts that either contradict the claim, data or rebuttal, or qualify an argument, with words such as *but* and *unless*. The third optional element, *backing* (B), can be connected directly to the *warrant* (W), with often implicit motives underlying claims, expressed with words such as *because of* or *on account of*. According to Toulmin, all terms of the basic argument model (C, D & W) are required to describe or analyse the argument. A revised version of Toulmin's argument pattern with the mandatory and optional elements, inspired by developments of the specific features in the TAP made by Kneupper (1978) and Simon et al. (2006), is given in Figure 3.

The first phase of analysis was focus placed on specific features: the extent to which students had made use of Toulmin's mandatory elements; data, claims and warrants, the optional elements; qualifiers, rebuttals and backings (which in English are often presented by characteristic words, such as *because*, *so* or *but*), and how the different elements in the same argument are related to each other. However, this phase of the

analysis does not show how the elements relate, explicitly or implicitly, to other arguments in a chain of utterances. The dialogical interaction with other claims, data, warrants, etc. cannot be distinguished, as such, in the first phase of analysis, or the creation of meaning, when two or more voices or discourses encounter each other, as Bakhtin emphasizes. The second phase of analysis involved discovering and identifying another set of relevant aspects, using an approach based on Bakhtin's theories of *double-voiced discourse* (1984, p. 185), which inevitably occurs under conditions of dialogic interactions. On the one hand, Bakhtin broadens the concept of language, by pointing to the fact that dialogic interaction and a dialogic relation are inherent to all communication. On the other hand, Toulmin's cognitive and practical argument pattern makes the structure visible that connects various data, claims and support for the arguments to each other. Using a combination of these perspectives thus makes the analysis of written asynchronous responses and arguments more explicit, reliable and valid.

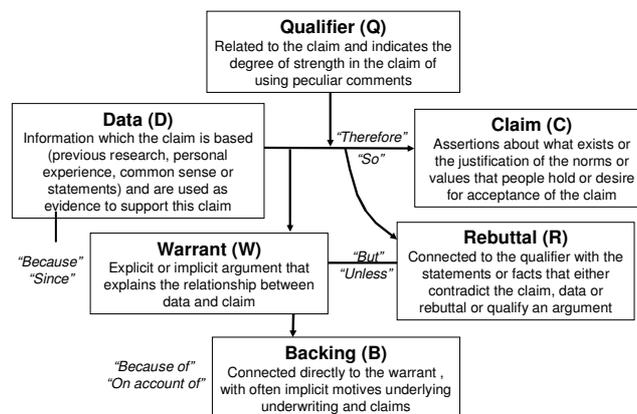


Figure 3. Revised version of Toulmin's argument pattern (TAP) in study 2.

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4. RESULTS

Results in study 1

The two studies led to two main sets of results. First in study 1, that the students' task-related meaning content and multiple voices in the responses gradually change character, as the personal, social dialogic interaction in course 1 becomes more objective and task-related during course 2. When the voices are "half someone else's", they can also become "one's own", when the students appropriate the words of others, and invest them with their own intentions and capabilities. When students can communicate their knowledge in more insightful ways than before, they become aware of what is understandable or

incomplete. This process *generates new meaning* between writer/author and reader/addressee. In the following excerpt from course 2, *Learning and Development*, we can observe that the students' utterances contain examples of all of Bakhtin's multiple voices. Three student teachers are engaged in a discussion about the impact the pupils' social situation may have on their learning and development. The students have studied literature on socio-cultural learning and development processes. In the assignment, they are requested to describe a concrete teaching situation that is linked to the literature, and to reflect on the course of events in the situation. In this assignment, the multiple voices arise primarily from the students' own examples, and from how they are able to use the literature to analyse the described teaching situation.

reproduced convincingly by Harry. The utterance is likely to have been expressed by another person, and thus contains echoes of other voices, something Bakhtin (1986, 2004b) describes as *dialogical overtones*. It can also be interpreted as the manifestation of *written polyphony*, because the argument using an other's word has the same value or authority as Harry's utterance above (Møller Andersen, 2002; 2007). As a conclusion to the initial argument, Harry writes: "[...] This has certainly meant that Maria has been viewed as less knowledgeable right from the first years of upper secondary school [...]". This claim can be interpreted as both Harry's *own* words, based on his own reflections and the words of *others'*, based on the arguments of others from the school, but which Harry appropriates to become his *own*. Harry continues in the course assignment with more *neutral* words when he writes: "[...] Teachers who have prejudices against certain students, regardless of the type of prejudice... [...]". This statement is neutral in the sense that it contains notions which are generally approved by teachers and colleagues. The view expressed can therefore be interpreted as not over-built with Harry's own words. He continues his argument by writing: "[...] it must be difficult, if not impossible to practice the kind of dialogic teaching Dysthe (1996) reports [...]". This claim can be considered as referring to evidence of *others'* words from the literature. It thereby indicates that Harry has insight into certain characteristics of a dialogic classroom, and that he relates his ideas on what classrooms look like – or should look like – on words of *others'* from the literature. In this case, the reference is to the literature of Dysthe, describing the classroom of multivoicedness. She gives examples of how the teacher Ann in the class of Baywater has authentic and open questions, which means that the pupils can think and freely articulate what they understand, regardless of whether their suggestions are simply temporary opinions, or if the responses are inadequate. Harry's knowledge of what a dialogic classroom is can be seen as an example that learning is not created from a single word or from the language system alone, but in the relationship and interaction between his *own* words and *others'* words from the literature. We are thus in the presence of a form of *intertextuality* in Harry's contribution, with different subject experiences and reasoning from other texts. In the responses, Carl (2) confirms with *neutral* words that he has read Harry's answer to the course assignment, but also uses to some extent his *own* words, when he writes "[...] you might also build up the confidence of Maria [...]". But Carl does not broaden and develop further Harry's arguments about Maria's situation, by using his own words, from experiences or from the literature. Eva (3) reflects more of the mutual respect between pupils and teachers. This may be considered as an example of her *own* words to express her own problems of workload and lack of time, as well as echoes of other's teachers' voices concerning the importance of being respected as a teacher. The tension or potential difference between Harry and Eva with respect to the "luxury" of a situation where the teacher only has to teach one pupil at a time, can be seen as an example that they are both shareholders and co-authors of a common narration (Rommtevit, 2003), and that they become aware of each other's words.

Results in study 2

The second set of result in study 2 shows the importance of dialogic interaction with both responding and argumentation activity. The students had before trained providing feedback in their groups. In the following excerpt, the argument patterns in written, asynchronous arguments will be distinguished, identified and described, as well as the dialogical relations between written contributions. The students' names are fictitious. The excerpt, in Figure 4, is from a discussion between Chris and Katrina. The discussion illustrates the significance of comparing opposing arguments between classmates' cases of

1. Harry	[...] Maria is a girl who has chosen the Vehicle Programme because she imagined a future as a driver. She is keen and forward and really wants to learn to drive a truck. Maria has, as I see it, two characteristics that have not located her in a barrel on the Vehicle Programme. Firstly, she is female. Prejudices are many from both classmates, other pupils and, unfortunately, also teachers. Truck driving is not for "womenfolk". This has certainly meant that Maria has been viewed as less knowledgeable right from the first years at upper secondary school. Teachers who have prejudices against certain pupils, regardless of the type of prejudice, it must be difficult, if not impossible to practice the kind of dialogic teaching that Dysthe (1996) describes. (One example she highlights is Ann in the class of Baywater who really understood the importance of authentic issues in the classroom).
2. Carl	Hi Harry! I think you grabbed the issues that Maria had in a very exemplary manner. You took not only time to show everything from scratch, you might also build up the confidence of Maria so that she passed the driving test and could proceed in training with the others.
3. Eva	Hi Harry and everyone else! I agree with Carl in a lot, your, Harry, exemplary manner gave Maria confidence back. Just by being taken seriously and therefore being respected, a pupil shows respect back. And it is good to be respected, isn't that what all teachers want most often? The previous teacher driving attitude is somewhat to my surprise something I also have encountered among other teachers. It is assumed that one's own way of teaching is the right thing ("It has been operating for 100 years before!") and that some of the pupils are "uneducated". For obviously these pupils can not learn what other pupils can. The specific learning style works for some pupils and not for everyone, they don't want to think about it, and blame everything on heavy workload, lack of time or all upper secondary schools forms. (Just school forms, I have noticed is a popular target to blame ...) We are probably ourselves here in the group a bit envious of your situation with the luxury to teach individually, with one student at a time. But on the other hand, you said that you have been teaching all day and have no time for planning, so maybe we should not whine... Fun to read!
4. Harry	Hi Eva! Yes, maybe you are right that it is a luxurious situation with one to two students at a time, but I can assure you that I am quite out of the box after a working day. To move around with an 18-year-old in a carriage that is 22 meters long and weighs 35-40 tons requires my undivided attention and concentration throughout. It is like driving myself while coaching. But it is a great advantage with only 1-2 students at a time. I come very close to the pupil, and can devote myself to one pupil at a time. It is an advantage.

The initial argument raised by Harry: "[...] Truck driving is not for 'womenfolk [...]" may be an example of *others'* words

teacher leadership, when Chris starts a discussion about what he considers has been developed in their collective contributions.

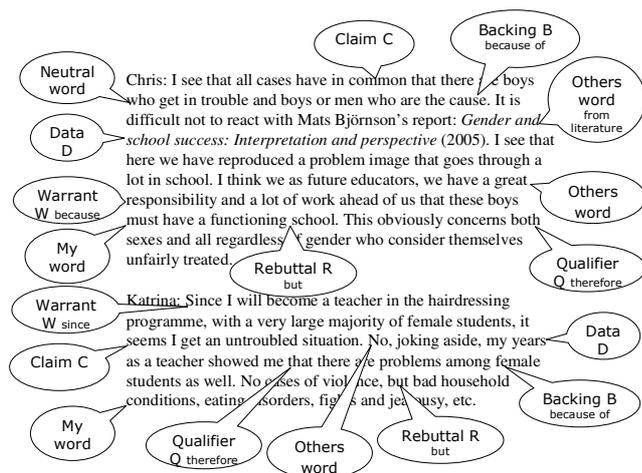


Figure 4: The specific elements and words with different voices in the meaning content of the argument.

Chris' standpoint that "there are boys who get in trouble and boys or men who are the cause", and Katrina's counterarguments that "there are problems among female students as well", are the *claims* in this excerpt. Both claims point to problem areas that exist at school today. The *data* of gender and school success in Chris' statement is supported in the literature, while Katrina's argument is based in personal experiences from her years as an unqualified teacher. The *warrant* in Chris' statement is here also explicit, *because* it explains the relationship between teachers' responsibility to have a functioning learning environment for both boys and girls and by Katrina *since* she will become a teacher with a large majority of female students. Chris writes: "I see that here we have reproduced a problem image that goes through a lot in school". This statement is the *backing* in the argument, *because* the meaning or motivation of the statement can be understood as: What I write is supported by the literature, therefore, I write it in my post. The corresponding meaning found in Katrina's statement can be understood as: What I write is supported by my personal experience. If we look at the *qualifier* of the two claims, it is confirmed in Chris' contribution by all, regardless of gender, who consider themselves unfairly treated, while in Katrina's contribution, the statement applies to female students suffering from bad household conditions, eating disorders, fights and jealousy, etc. Chris' statement that teachers have a lot of work in order to achieve a functioning school is the *rebuttal* in his argument. If we look at the continued discussions between Chris and Katrina, the creation of meaning here also depends on the discourse, with *neutral* word, *others' word* and *my words*, as well as the context in which these voices are expressed. According to Bakhtin (1981, p. 293), the word in language is half someone else's, and becomes "one's own" when the speakers or writers populate it with their own intention and appropriate the words as their own. In the excerpt above, Chris uses words from the literature, while Katrina puts words on her own experiences and ontological conclusions. The utterances thus contain *dialogic overtones*, since they are filled with echoes of other people's words, arguments, evidence and reasoning from other texts (Bakhtin, 1986, 2004b). The mandatory elements, *claim* (on gender-related problems), *data* (from the literature) and *warrants* (concerning the teachers' responsibility), can here be related to the corresponding *backing*, degree of strength in the *qualifier*, and connecting *rebuttal*. The relation between *neutral* words (with general meanings) can be evaluated with respect to *others' word* (from literature) and experiences. Some are appropriated to become

my words. The students become shareholders and co-authors in a joint meaning, in which knowledge and understanding develops. In short, the excerpt illustrates the fact that these mutual negotiations emerge in dialogues between students, and their *meaning potentials* arise as the range of *meaning-mediating* possibilities (Rommetveit, 2003). Such negotiations are illustrated in this argumentation about gender and functioning school for boys in trouble, and girls with bad household conditions, eating disorders, or fights and jealousy.

5. DISCUSSION AND ONLINE IMPLICATION

In present two studies, based on Bakhtin's theories of dialogues (1981; 1986, 2004b; 1986, 2004a) in study 1, combined with Toulmin's argument pattern (1958) in study 2, appears a new quality dimension in which the specific words with voices and elements and voices in the online peer feedback – as well as the dialogical relations between them – makes more explicit and more visible. It may be concluded from results emerging in these studies, that using assignments drawing on authentic assignments and cases with collaborative peer feedback, is indeed a way to make the words more genuine and living (Bakhtin, 1984). The peer feedback strategies with group activities over a specific period, where dialogue exchange and collaboration are in focus, opens for the manifestation of *written polyphony*, because the students' independent voices in their peer feedback have the same value or authority as authors in books (Møller Andersen, 2002; 2007). A more complex peer feedback character develops when the content is confronted with others' utterances, consisting of comparing different statements and justifying opposing words and voices. There may be direct and explicit opinions in the contributions and assertions about what exists, or statements that contradict, confirm, complement or develop further. Common sense or implicit or unspoken motives may also be expressed.

Students also learn to evaluate their own work when they are producing and receiving peer feedback. In this particular form of discourse, the students' peer feedbacks consist partly of their own words and voices, and partly of others'. Each peer feedback is an intersection of words, where at least one aspect of others' words can be read, and each utterance can be considered as an answer to preceding utterances, that is, it has *addressivity* (Bakhtin, 1986, 2004b). This addressivity is made more possible in collaboration with other students and can be compared with Hattie and Timperley's (2007) three major questions of effective feedback: Where am I going? (What are the goals?), How am I going? (What progress is being made toward the goal?), and Where to next? (What activities need to be undertaken to make better progress?). The questions correspond to the design of *feed back*, *feed up* and *feed forward* and they are partly dependent on to reduce the gap across the level of task performance, the level of process of understanding how to do a task, the metacognitive process level, and/or the self level. The combination of what students do together with the tasks assigned to them as collaborators, and the roles and responsibilities the students assume as collaborators and the interactive structure underlying the activity offer the potential to develop and expand the space of learning and understanding (Saunders, 1989; van del Pol et al., 2008).

The implications and results that the studies highlights are that it is in collaborative peer feedback understanding of different meaningful meanings is clarified and develops. A strategy to promote collaborative peer feedback with critical review and meta-reflection can be to let a) the students after the peer feedback processes compile their own posts and self-assesses them with further reflection, theoretically and practically. Another option can be to let b) the students compile others' peer feedback and analyze them further, theoretically and practically. A further strategy to promote collaborative and dialogic exchange may be to let c) peer feedback and critical

review of and between students be a part of the examination. These processes creates the conditions for students to find structure and patterns of how peer learning and reasoning can be shaped, negotiated and confirmed “between I and other” in an online context. Comparing to Lahteenmaki’s (2004) term “use theory of meaning” the situated “space” is expanding with meaningful learning, when students begin to reflect on the meaning content and when different extents attain an understanding, agreement and experience. In this manner, builds Bakhtin’s theories of dialogue bridges across the cognitive and the social–individual divide. The dialogue patterns that developed during the two studies provide examples of how the meaning content in collaborative peer feedback can be distinguished, identified and characterised. The analysis offers students, student groups and teachers further insights into how they can use Bakhtin’s theories of double-voiced discourse and Toulmin’s practical argument model, and thereby gain greater awareness of how “arguing to learn” and “responding to learn” can be promoted, evaluated and developed in online education at distance.

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