How can students learn to use argumentation and the processes of giving responses in a web-based setting, as a tool for individual and collective learning?

According to several researchers, academic education should place value and emphasis on the processes of argumentation and responses through collective higher-order-and critical thinking that enable students’ ability and attitude to cooperate.
The aim was to investigate the quality of students’ (N=70) web-based written asynchronous dialogues (N=2 430) in four 15 credits courses, and how they can be encouraged to use and evaluate their own and others’ web-based arguments and responses, both directly and retrospectively.

Additionally, the aim was to develop analytical dialogic models, that can be used to distinguish, identify and describe the meaning content in asynchronous dialogues.

Method

Besides a general socio-cultural understanding of learning and development aims, the three studies were based on Bakhtin’s theoretical framework of dialogues, as well Rommetveit’s concepts of meaning potentials and Toulmin’s argument pattern.

The CSCL perspective (Computer-Supported Collaborative Learning) is here related to the theoretical approach in both socio-cultural theory, and Bakhtin ’s theoretical framework.

Learning always arises as a product of dialogue processes, aiming to create meaning.
Toulmin’s argument pattern (TAP)

Claim (C)
Related to the claim and indicates the degree of strength in the claim of using peculiar comments

Data (D)
Information which the claim is based (previous research, personal experience, common sense or statements) and are used as evidence to support the claim

Warrant (W)
Explicit or implicit argument that explains the relationship between data and claim

Backing (B)
Connected directly to the warrant, with often implicit motives underlying underwriting and claims

Qualifier (Q)
Related to the claim and indicates the degree of strength in the claim of using peculiar comments

Excerpt argument pattern (N=253)

Chris: I see that all cases have in common that there are boys who get in trouble and boys or men who are the cause. It is not difficult to react with Mats Björnson’s report: Gender and school success: Interpretation and perspective (2005). I see that here we have reproduced a problem image that goes through a lot in school. I think we as future educators have a great responsibility and a lot of work ahead of us that these boys must have a functioning school. This concern obviously both sexes and all regardless of gender who considers unfairly treated.

(Published 2008-10-08 20:30)

Katrina: Since I will become teacher in the hairdressing program, with a very large majority of female students, it seems I get on an untroubled situation. No, joking aside, my years as a teacher showed me that there are problems among female students as well. No cases of violence, but bad household conditions, eating disorders, fights and jealousy, etc.

(Published 2008-10-08 20:49)
### Bakhtin’s voices

<table>
<thead>
<tr>
<th>Multiple Voices</th>
<th>Pattern of meaning in the dialogue (N=265)</th>
</tr>
</thead>
</table>
| 1. Neutral word of a language | • reproducing others’ perception of their surrounding world  
• aim on something generally acknowledged  
• are not supported with my own words from literature or own experiences |
| 2a. Others’ word | • reproducing earlier voices  
• contain echo from others’ voices  
• explicit voices are proper to other’s voices  
• the voices are not always from the bottom of one self |
| 2b. Others’ word from literature | • reproducing other authors voices  
• built on others’ subject based experiences and arguments from other texts  
• others’ statements from literature rewords to own words  
• create, negotiate and confirm the meaning |
| 3. My word | • involves inner reflections and feelings  
• contain own and others’ voices, arguments, justifies, contradictions, experiences etc. which appropriates to my own words  
• construct and again construct a mutual meaning or a part of it  
• create, negotiate and confirm the meaning |

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### Excerpt different voices

- **Chris:** I see that all cases have in common that there are boys who get in trouble and boys or men who are the cause. It is not difficult to react with Mats Björnson’s report: *Gender and school success: Interpretation and perspective* (2005). I see that here we have reproduced a problem image that goes through a lot in school. I think we as future educators have a great responsibility and a lot of work ahead of us that these boys must have a functioning school. This concern obviously both sexes and all regardless of gender who consider themselves unfairly treated. (Published 2008-10-08 20:30)

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Rommetveit’s meaning potentials

<table>
<thead>
<tr>
<th>Bakhtin’s discourse</th>
<th>The levels of thematic pattern in the dialogue (N=189)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passive and authoritative</td>
<td>• accepting and confirming</td>
</tr>
<tr>
<td></td>
<td>• passively reproducing</td>
</tr>
<tr>
<td></td>
<td>• monological and authoritative</td>
</tr>
<tr>
<td></td>
<td>• failure to explicate the possible meaning potential in the dialogue as a basis for learning and development</td>
</tr>
<tr>
<td>Persuasive and preliminary negotiation</td>
<td>• accepting, confirming and questioning</td>
</tr>
<tr>
<td></td>
<td>• elements of passively reproducing posts</td>
</tr>
<tr>
<td></td>
<td>• negotiations</td>
</tr>
<tr>
<td></td>
<td>• responses create possible meaning potentials</td>
</tr>
<tr>
<td></td>
<td>• failure to use meaning potential as a basis for learning and development</td>
</tr>
<tr>
<td>Persuasive and co-authorial negotiation</td>
<td>• accepting, confirming or actively questioning and a desire to develop the discussion</td>
</tr>
<tr>
<td></td>
<td>• few or no elements of reproducing posts</td>
</tr>
<tr>
<td></td>
<td>• others’ statements reworded to own words</td>
</tr>
<tr>
<td></td>
<td>• participants are shareholders and co-authors in the account</td>
</tr>
<tr>
<td></td>
<td>• negotiations</td>
</tr>
<tr>
<td></td>
<td>• responses create possible meaning potentials</td>
</tr>
<tr>
<td></td>
<td>• use of meaning potential actively as basis for learning and development</td>
</tr>
</tbody>
</table>

Excerpt meaning potentials

2. Martin  

I know that this is your area of expertise, so I was a bit curious to know how you would interpret that report. I get a feeling that your post expands on the report we had to read, and, essentially, I think that you describe today’s situation among teenagers’ use of technology perfectly. However, what I don’t have is your personal interpretation and reaction to the report.

3. Harry  

[Dec 14 2005]  

I can agree with Martin in certain respects that you expand upon the report with your knowledge of the area and don’t give your own slant on it. It is, after all, your subject. However, I do think that you raise an important question that isn’t illustrated in the report, that is, if children have rules around media they learn indirectly that that which we receive via the media is important and isn’t something to just waste. That’s what I believe. If children have free access to all types of media, I believe that they don’t learn to sift through it and...
Findings
The dialogic interactions between students gradually change to scientific writing, when they become shareholders and engage in co-authorship of meaning. In these relations, meaning potentials arise, as the range of meaning-mediating possibilities. The students borrow each other’s utterances and words and voices from literature, and the dialogue becomes a venue for interaction and confrontation between the meaning content of arguments and responses.

Student need: strategies for peer scaffolding and critical and higher-order thinking. That is, to be co-actor in a joint learning process with self-assessment.

Online education implications
How can we offer students, student groups and teachers further insights into how they can use 'meaning potential', dialogue language concepts and argument models and thereby gain greater awareness of how “arguing to learn” and “responding to learn” can be evaluated and developed in web-based education?

Student need: strategies for peer support with collective argumentation and providing response on concrete and literature related assignments. That is, to be each other’s “critical friends” in a joint learning process.

Thank you!