From dialogic to trialogic learning

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Abstract: This poster looks at dialogic learning in academic practice with the specific aim of the collaborative processing of texts. In identifying some shortcomings of these dialogic practices it introduces the notion of trialogic learning, and presents the results from a comparative study on the affordances of different asynchronous discussion tools to support a more content-oriented and trialogic form of conversation.

Dialogue in education

As thinking and learning can be seen as being inherently dialogic in nature, giving the 'voice of the other' a more prominent role in learning has since long been an aim of educational research. Creating a more dialogical form of learning has been especially important in academic education, which deals primarily with abstract or discursive knowledge that can only be shared trough communication and hence presents a form of 'mediated learning' (Laurillard, 1993). Not only does dialogue involve powerful learning activities such as questioning, explaining and making explicit, but it can also be seen as the only way to create an open and thus fundamentally 'authentic' learning environment. Being open to students' input, dialogic learning makes students´ conceptions of their learning content explicit, inviting them to engage in a process of collaborative meaning making.

Dialogic learning in practice

When students interact in a constructive and collaborative way, two different kinds of argumentation can emerge. Students may argue about the value of certain statements in a text, or they may argue about the meaning they attribute to it. As a result of our focus on students' collaborative processing of text, we have a special interest in the second, meaning-oriented kind. This preference of meaning-oriented communication over opinion-oriented communication when using online discussion forums for learning, is also shared by Klemm, who expresses it in the following way:

> Don't settle for just opinions. Everybody has opinions. They are like knee jerk reflexes, occurring with little thought once they have been formed. Thus, it is not surprising that many classroom discussion groups online are dominated by opinion messages, rather than rigorous analysis and creative thought. (Klemm, 1998, p. 3)

In line with Klemm's statement, our experience with online discussion groups for the collaborative processing of texts in academic education yields that students seem to prefer to exchange existing opinions about practical issues related to the text, above trying to develop their understanding of the meaning of the text. It seems that, with only a limited understanding of the subject matter, constructing relevant reactions to the questions of other students requires a considerable amount of content processing effort. However, this effort is highly valuable from a constructivist learning perspective. In order to investigate how to maximize students' content processing effort in online discussion forums, we have investigated how we can draw student's online learning conversations closer into their study material. In a sense, this converts students' *dialogic* and opinion-oriented learning (see Figure 1) into a more *trialogic* and meaning-oriented one (see Figure 2).

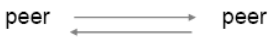

Figure 1. Dialogic learning as open interaction on a conceptual level to stimulate personal meaning making.

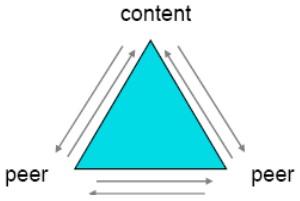

Figure 2. Trialogic learning (Paavola et al, 2004), as open interaction on a conceptual level that includes content in the dialogue, making the 'voice' of the study material more prominently present.

A tool for online anchored discussion

The IVLOS Annotation system is a tool for online discussion which integrates students' online dialogues with the subject matter at hand. Figure 3 displays a screenshot of the system, with the triangle from Figure 2 overlaid to indicate the interplay between dialogue and content. Due to the 'anchoring' of discussion threads to specific passages from the text (highlighted in green, with a red number), we expect to be able to draw student's online learning conversations closer into their study material.

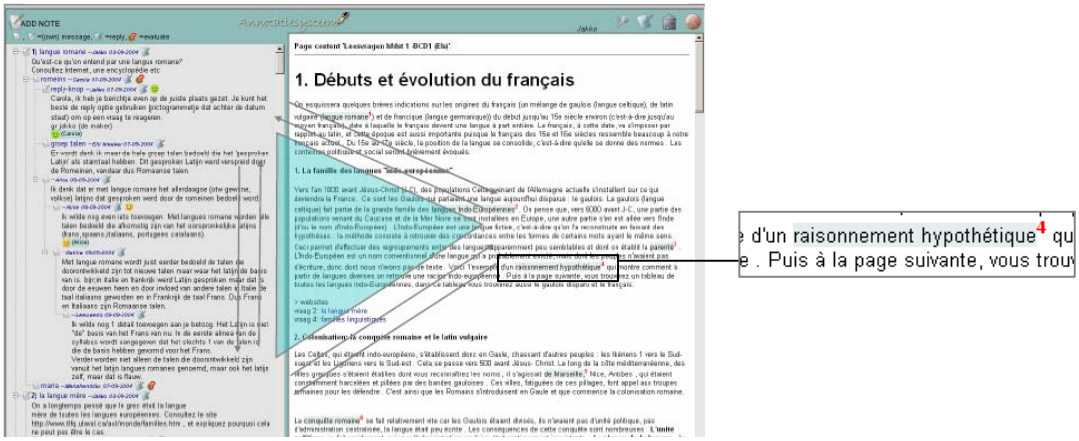

Figure 3. The IVLOS Annotation system for online anchored discussion.

We have conducted a experimental comparative study (for the followed methodology, see Van der Pol, Admiraal & Simons, 2006) on the affordances of two online discussion tools to support a more content-oriented and trialogic form of conversation. In total, 1296 messages generated in a university course on General Pedagogy were coded by a newly constructed coding scheme (with message as unit of analysis and an average interrater reliability across all variables of Cohen's kappa = 0.82). Results of the study (see Table 1) show that dialogue in the system for anchored discussion is more directed at reconstructing the meaning of the text (or, reconstructing the ´voice´ of the author) than discussion in the traditional forum, which is more oriented towards the sharing of personal opinions and experiences. This difference in orientation produces a more constructive dialogue in the system for anchored discussion, versus a more debate-like dialogue in the forum discussion. Additionally, while messages in the traditional forum resemble usual email conversation and contain social and regulative comments, dialogue in the system for anchored discussion is seen to be more efficient and 'to-the-point.' Although the presence of social comments is often regarded as a positive outcome (functioning as a ´social lubricant´), they seemed in this case not to be required for an effective collaboration. We thus conclude that for collaborative text comprehension by undergraduate students, anchored discussion might be more suitable than traditional forum discussion. Finally, the observed differences can be explained by the stronger defined collaborative context in the system for anchored discussion, which focuses participants' collaborative intentions and their frames of reference.

Table 1: Comparing the affordances of anchored and 'regular' online discussion.

	Percentages of activities:	'Regular' discussion tool (n=462)	Anchored discussion tool (n=719)
1)	Reconstructing meaning	58 %	77 %
	Social comments	42 %	2 %
	Regulation of the process	25 %	4 %
2)	Self-clarifications	35 %	20 %
	Demonstrative referring	5 %	19 %

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