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## Learning to Facilitate (Online) Meetings

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**Abstract:** We describe an approach to teaching collaboration skills directly by building on competences for meeting facilitation. (Online) meetings provide a rich arena to practice collaboration since they can serve multiple purposes: learning, problem solving, decision making, idea generation and advancement, etc.. We argue that facilitating meetings is a competence worth developing in students, and describe the main knowledge and skill components that pertain to this competence. We then describe some implemented software tools that can be used in schools and colleges to provide opportunities for practicing and developing group facilitation skills.

### The Challenge of Teaching Collaboration

The focus in CSCL is naturally on group learning: the group comes together with the main purpose to learn about something. This is different from collaboration outside of educational settings, where the main purpose of collaboration and cooperation is not only learning (building capacity), but also (and more frequently) problem solving, decision making, deliberating issues of shared concern, engaging in a change process, etc (Romano & Nunamaker, 2001). The purpose of real world collaboration is as often to organize for action and to create commitment to a course of action than it is to distribute information and get agreement on terms (share information, build community). Another purpose is to advance the thinking, which can be seen as similar to the goals of knowledge building (Hakkarainen, 2009). However, even in real world settings rather than academic ones, the advancement of thinking is often embedded in a more action-oriented endeavor, such as creating new products, services, or processes.

While there are many good reasons for separating collaboration for learning from other purposes, this can lead to a restriction of opportunities to practice these other forms of collaboration, which are not only important for business purposes, but also for civic action. The situation is not quite as bleak, since educational collaboration will often include problem solving and decision making etc., but it is worth keeping in mind that collaboration for the (sole) purpose of learning is comparatively rare in non-educational settings; there, people meet and collaborate to get things done.

Our general suggestion is to extend the forms of collaboration considered in CSCL beyond those focusing primarily on learning, so as to develop in students in secondary and tertiary education a broader set of collaboration competences. This extends the argument made by Hakkarainen and others with respect to idea advancement. Our specific proposal is to exploit the richness that meetings, both face-to-face and on-line, offer for learning. We follow Romano and Nunamaker's definition of a meeting: "a focused interaction of cognitive attention, planned or chance, where people agree to come together for a common purpose, whether at the same time and the same place, or at different times in different

places” (2001, p. 1). But just participating in meetings will not be sufficient for learning about group and communication processes, to develop skills for productive collaboration, and to develop attitudes and values that are conducive for productive team work. Therefore, our approach includes teaching students how to facilitate meetings, how to help a group to do its best thinking. The meeting format we focus on is that of synchronous meetings, both with co-location of participants (“face to face”) and without (e.g., chat based, and/or some form of audio/video conferencing).

Space is too short to provide a comprehensive research overview. Suffice to say here that the work from CSCL closest to ours is on knowledge building (already mentioned), and on supporting synchronous argumentation (Asterhan & Schwarz, 2010; B.B. Schwarz & Asterhan, 2011). We will present more of the literature in the Discussion section, after having introduced our own approach.

### **Learning to Facilitate Group Meetings**

In order to identify the competences that are required to facilitate meetings, we are guided by the literature on professional meeting facilitation. A facilitator is one “...who contributes structure and process to interactions so groups are able to function effectively and make high-quality decisions. A helper and enabler whose goal is to support others as they pursue their objectives” (Bens, 2012, p. viii). While a meeting facilitator (also called meeting moderator) refers usually to somebody professionally trained (Schuman, 2005; R. Schwarz, 2002), we use the term here as a role a group member takes on for a limited time (one or more group meetings) to help the group in specific ways to do its best thinking. While a facilitator’s activities are to some extent always contingent on how a meeting develops, there are numerous ways in which the facilitator can prepare meetings, anticipate meeting process and outcomes, and document process and outcomes. It is in particular these preparatory steps that make facilitation a teachable skill set in the context of schools and colleges, whereas the larger skill set required for proficient facilitation—including strategies to cope with difficult group dynamics— need to be developed through systematic professional education and ample practice. The activities that a student in the facilitating role can prepare and help to enact comprise agenda planning, meeting activities planning, keeping group memory, facilitating decision making, and documenting meeting outcomes. The literature on how to realize these types of activities and what artifacts are involved is extensive (e.g., Justice & Jamieson, 2006; Kaner, 2007). The skills that we think can realistically be developed on the middle school level, for instance, are depicted in Table 1.

Table 1: Meeting facilitation skills.

<p><b>1. Preparing a meeting:</b>  1.1 The group’s agenda  1.2 The facilitators meeting process plan</p> <p><b>2. Conducting a meeting:</b>  2.1 Guiding the group through the process  2.2 Keeping group memory (note taking, visualizing)</p>	<p><b>3. Documenting meeting outcomes:</b>  3.1 Preparing meeting minutes for group use  3.2 Communicating the meeting outcomes beyond the group</p> <p><b>4. Reflecting and learning:</b>  4.1 Soliciting feedback on one’s facilitation work  4.2 Formulating insights and future learning goals regarding group facilitation</p>
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## Towards Computational Support for Practicing (and Assessing) E-Facilitation Skills

We have in the Next-Tell project ([www.next-tell.eu](http://www.next-tell.eu)) developed computational support that can be used in classrooms to provide opportunities to practice meeting facilitation, and to help the teacher provide guidance and feedback. The guiding scenario is one where the class is engaged in some kind of group-based project work that extends over a couple of weeks; for instance, a longer lasting inquiry process in science that culminates in a presentation of findings. We assume that students have (e.g., weekly) face-to-face meetings (with at least one laptop per group), and/or online meetings, using Skype or similar as the web-conferencing tool. A group is formed of 5-7 students, by the teacher. The teacher also has created a schedule that specifies who will be in the facilitator role for each meeting. Our technical solution supports in particular the student in the facilitator role.

### Planning a meeting

A week or so before student F has to facilitate a meeting, she is required to engage in the meeting planning, and discuss her plan with the teacher. F uses a meeting planning tool that allows her to select from a pool of meeting activities (called meetlets, Fig. 1A) and arrange these in a sequence (Fig. 1B). The planner also allows her to express parallel activities, for breaking the group into subgroups, e.g., pairs. Any meeting plan can be stored at any time, and accessed from a library of plans (Fig. 1C), thus also allowing re-use of plans and plan components. Both student and teacher can access the tool and the library via a web browser.

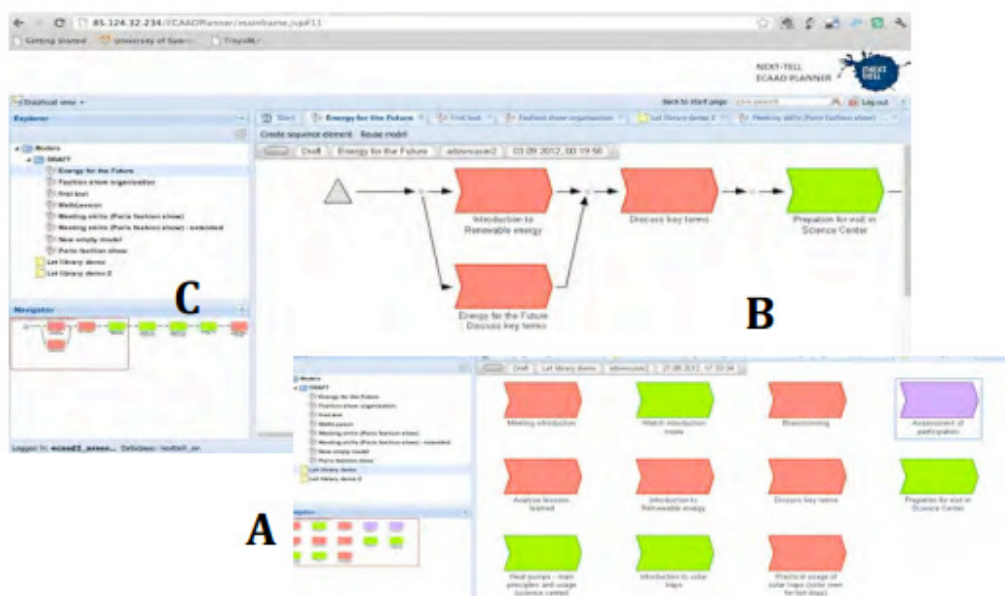


Figure 1: The graphical meeting planner

Each node in the meeting plan (Fig. 1B) can be expanded, offering the user a set of attributes that can be further set or changed from their default values. Since each node, i.e., meetlet, represents an activity, the attributes refer to parameters of the activity. For instance, for a meetlet describing a brainstorming activity the student could further specify details of this activity. An important set of

parameters describes which artifacts the activity overall (or each sub-step in the activity) needs and/or generates. For instance, for a brainstorming exercise the student may set up a Google document for each group member plus one to bring the ideas together, and specify the links to these documents in the plan. Both the student and the teacher can step through the (partial) plan at any time to see how the activity (sequence) will look like to the group (“activity stepper”). The meeting agenda that the participants get is a substantially reduced subset of the information in the facilitation plan.

#### Running and documenting a meeting

Depending on the circumstances when the meeting is conducted, F can decide to print out all documents needed for the meeting in advance, or in the case that all team members have access to a computer or tablet device, can present the documents needed for the activities online. In the case where the technology is available, F can use the Activity Stepper, a piece of software that interprets the plan and presents the activities step by step, under the control of F. This makes it easier to conduct and document the meeting (no paper handling), but requires that each group member has access. The online meeting resources are essentially made up of Google Apps, with a particular use of Google Spreadsheets, but also Docs, Presentations, and Drawings. In addition to gathering these artifacts, which reflect the meeting activities, F is requested to solicit towards the end of the meeting, feedback from the group members, and to write a reflective piece, all of which is then shared with the teacher (either through Google Folders, and/or through an e-portfolio that we provide in addition, but that is not further described here.)

#### Rubrics and other forms of assessments

A number of rubrics and checklists help the teacher, and/or the students themselves, to appraise the quality of the facilitation. This is mainly done based on the artifacts that get created during the meeting planning and while running the meeting. Depending on technology and time available, as well as on the aspirations of the teacher, students can also be required to audio-record the meeting, and to analyze these recordings for learning opportunities regarding the development of facilitation competences. In any case, the appraisal is currently done manually, i.e., by teacher and/or student and/or peers, but we are also working on methods for automatic scoring of meeting activity related artifacts and process records.

Since the knowledge and skills that go into meeting facilitation competences need to be developed across classrooms and across time, it is important for both teachers and students that they can track the development. In addition to an e-portfolio, we provide an Open Learner Model (OLM) (Bull & Kay, 2010) that can be updated manually as well as automatically, provided scoring algorithms are in place, and displays competence development in a variety of formats (Figure 2). For teachers, the OLM provides access to individual as well as aggregated (e.g., on class level) competence reports. The OLM supports multiple visualization formats, and can hence also be used for discussion with individual students or the class. It further supports drilling down into the evidence layer (specific Google docs, specific e-portfolio entries).

## Discussion

The user interface and the meeting activity templates are currently being refined and extended in cooperation with teachers and students, and empirical studies are being conducted in schools, in particular in second language education. These will be reported on at a later stage. There are a number of differences to other approaches to supporting online synchronous collaborative learning. We identify five points here.

- (1) The learning focus is on the student in the role of the facilitator: What she learns about group facilitation; if and what the others learn from the meeting is dependent on the purpose of the meeting and of course on the participants. We do not support assessing the content learning aspects further, but the teacher may very well. This is different from most of the work in CSCL, where the collaboration is for content learning. Our focus is on learning for collaboration, one of those “21st Century skills”.
- (2) While the facilitation plan can be seen as a kind of collaboration script (Kollar, Fischer, & Hesse, 2006), it is different from the typical use of scripting in as much as the script is created by the students themselves (namely the one in the facilitator role) and script ‘enactment’ is controlled by the student in the facilitator role. We provide technology to scaffold the ‘script’, but under the control of the facilitating student.
- (3) We intentionally use a broad concept meeting activity; “argumentation” or “discussion” of “decision making” would each only be one of a number of them. This is because in real world meetings, multiple activities occur and gatherings are rarely structured according to a single discourse genre A B C Figure 1. (e.g., formal debate). This explains why we cannot design the technical support around too strong an ontology, such as “argumentation moves” (Hoppe, De Groot, & Hever, 2009; B.B. Schwarz & Asterhan, 2011), but base monitoring and assessment on the artifacts created as a side-effect of engaging in specific activities, such as “making a decision”.
- (4) Even though we are building on a scenario where multiple groups work in parallel synchronously (say 5 groups of 5 students in a class of 25), our support focus is not primarily on the teacher (as in Asterhan & Schwarz, 2010, for example), but on the facilitating students. We argue that this way of “classroom orchestration” makes the job of the teacher achievable because the teacher does not have to micromanage each group; the facilitators do that. All the teacher needs is some high-level information if the facilitation “works”, perhaps as simple as a communication channel to the facilitators so that they can call on the teacher’s support if needed.
- (5) We are not imposing a specific communication technology onto the teacher or school; schools are now widely equipped with propriety web conferencing tools, and/or use freely available tools such as Skype, perhaps in combination with an online tool for sharing files and documents. It is difficult to envisage them switching to a research tool, however powerful, or starting from a niche tool. That means there will always be strong limits to process tracing; at least for the time being, it will be easier to capture artefacts at the file or document level, which are easily shared (e.g, Dropbox, Google Drive), uploaded (e.g., to an e-portfolio), or mailed.

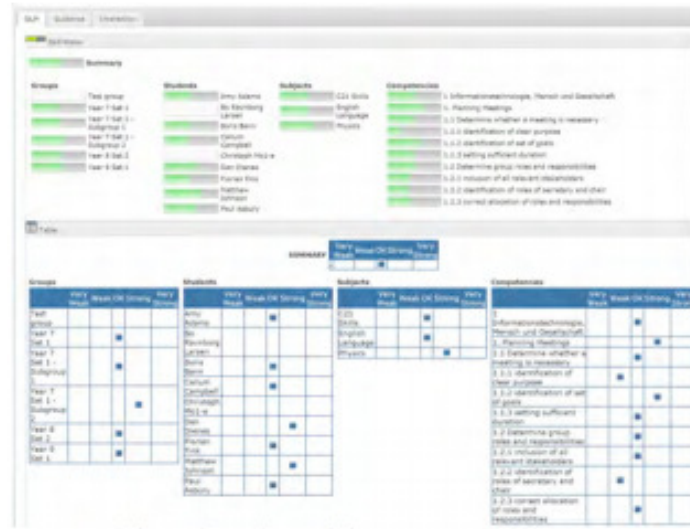


Figure 2: Partial teacher view of the Next-Tell Open Learner Model.

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