Beschreibung der CSCL Skripts

1. Concept Grid

The Concept Grid script is a sub-class of the Jigsaw family, i.e. scripts that are based on making individual students manage some partial knowledge and then prompting them to solve collectively a problem that necessitates knowledge from each of them. Concept Grid includes four phases:

1. Groups of four students have to distribute four roles among themselves. Roles correspond to theoretical approaches of the domain under study (e.g. Karl Marx, Friedrich Engels, Max Weber). In order to learn how to play their roles, students have to read three papers that describe the related theory.
2. Each group receives a list of concepts to be defined and distributes these concepts among its members. Students write a 10 to 20 line definition of the concepts that were allocated to them.
3. Groups have to assemble these concepts into a grid and to define the relationship between grid neighbors. The key task is to write five lines that relate or discriminate two juxtaposed concepts: if Concept-A has been defined by Student-A and Concept-B by Student-B, writing the Concept-A/Concept-B link requires Student-A to explain Concept-A to Student-B and vice versa. The grid to be filled is a simple 4 x 4 html empty table.
4. During the debriefing session, the teacher compares the grid produced by different groups and asks them to justify divergences. This script has been operationalized by a platform proposing the grid construction.

Literatur:

- Kurzbeschreibung:
  http://manyscripts.epfl.ch/available_scripts
- Detailliert Beschreibung:
  Dillenbourg, P., 2002. Over-scripting CSCL: The risk of blending collaborative learning with instructional design. In: Kirschner, P. A. (Ed.), Three worlds of CSCL: Can we support CSCL? Heerlen: Open University of the Netherlands, pp. 61–91.
  http://telearn.noe-kaleidoscope.org/warehouse/Dillenbourg-Pierre-2002.pdf
- Original:
  Aronson, E., Blaney, N., Sikes, J., Stephan, G., & Snapp, M. (1978). The Jigsaw Classroom. Beverly Hills, CA: Sage Publication.

2. Peer Review Script

The Peer Review Script consists of at least three phases:

1. Authoring and submission of an artifact.
2. Review of the submission on the basis of a given set of criteria and feedback schema.
3. Discussion of a certain aspect exemplified by the artifacts or the reviews.

The discussion can lead to a new feedback loop which starts with the resubmission of the revised artifact. Each phase is defined by specifying input, output of the task, group formation, mode and timing as shown in Table I. For every phase the parameters are described in more detail in (Trahasch, 2004, pages F3F-18 – F3F-19).
The peer assessment script has two cooperative phases (1 and 2) and one collaborative phase (3) with peer interaction. The results of phases 1 and 2 - documents and reviews of learners - are triggers for an anchored discussion where students can interact directly with each other. The discussion phase can lead to revised or new artifacts that are starting points for a new review process or discussion.

TABLE I
FEATURES OF COLLABORATIVE PEER ASSESSMENT

Phase	Input	Group	Mode	Timing	Output
Author	Review	Individual, group, lecturer	-	Fixed time, user	Document
Review	Document, review	Individual, group, randomized	Anonymous, synonymous, personal	Fixed time, user	Review
Discussion	Document, review	Group, class	Anonymous, synonymous, personal	Fixed time	

Literatur:

- Original (s. F3F-17 – F3F-19)
  Trahasch, S., October 2004. From peer assessment towards collaborative learning. Frontiers of Education, FIE 2004, 34th Annual 2004 (2).

3. Social Script

The social script aims to foster critical negotiation in order to avoid quick and false consensus and foster elaboration. For this reason, each student in the social script condition is assigned two roles:

(a) analyst for one of the cases and
(b) constructive critic for the other two cases.

Role (a) includes taking over the responsibility for the preliminary and concluding analysis of one case and responding to criticism by the learning partners. In their role (b) as a constructive critic, the learners have to criticize the analyses of the two other cases presented by the learning partners. These activities are supported by the prompts of the social script (see table below), which are automatically inserted into the critics' messages and into the analyst's replies in order to help learners successfully master their roles. Students are given a time limit for each of the required activities. The students are guided through all three cases and are asked to alternately play the role of the analyst and of the critic.

Prompts for the constructive critic
These aspects are not yet clear to me:
We have not reached consensus concerning these aspects:
My proposal for an adjustment of the analysis is:
Prompts for the case analyst
Regarding the desire for clarity:
Regarding our difference of opinions:
Regarding the modification proposals:

Literatur:

- Kurzbeschreibung (auf S. 215):
  Kobbe, L., Weinberger, A., Dillenbourg, P., Harrer, A., Hämäläinen, R., Häkkinen, P., Fischer, F., 2007. Specifying computer-supported collaboration scripts. International Journal of Computer-Supported Collaborative Learning 2 ((2-3)), 211–224.
  http://www.ijcscl.org/_preprints/volume2_issue2/kobbe_2_2.pdf
- Original (S. 13f):
  Weinberger, A., Ertl, B., Fischer, F., & Mandl, H. (2005). Epistemic and social scripts in computer-supported collaborative learning. Instructional Science, 33(1), 1–30.
  http://epub.ub.uni-muenchen.de/293/1/FB_163.pdf

4. Reciprocal Teaching

This approach, developed by Palincsar and Brown (1984), was designed to support reading comprehension of reading beginners and children with poor reading comprehension abilities. At the core of this approach are four reading strategies that the teacher introduces to the class. These strategies are

1. questioning,
2. clarifying,
3. summarizing, and
4. predicting.

After the teacher has modeled the correct application of the strategies, learners are divided into small groups of variable size and work to apply the strategies when reading new text passages, thereby rotating the teacher role among them. The adult teacher then takes on a coaching role and, in the ideal case, eventually abandons the teaching role so that the learners can take it over. The four strategies form a broad framework in which discussion about the text takes place: At first, the student in the teacher role asks questions concerning the contents of the text. Next, the group discusses these questions and formulates further questions before the student in the teacher role summarizes the most essential parts of the text passage. If someone does not agree with that summary, all learners reread the passage and discuss the summaries until they have agreed upon one variant. After that, learners make predictions about the following text passage. The duration of the intervention can take several weeks.

Literatur:

- Kurzbeschreibung (auf S. 166f):
  Kollar, I., Fischer, F., Hesse, F., 2006. Collaboration scripts - a conceptual analysis. Educational Psychology Review 18 (2), 159–185.
  http://telearn.noe-kaleidoscope.org/open-archive/file?Kollar-Ingo-2006_(000958v1).pdf
- Original:
  Palincsar, A. S., Brown, A. L., 1984. Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. Cognition and Instruction 1 (2), 117–175.
  http://people.ucsc.edu/~gwells/Files/Courses_Folder/ED%20261%20Papers/Palincsar%20Reciprocal%20Teaching.pdf

5. Structured Academic Controversy

This method, developed by Johnson and Johnson (1994), involves groups consisting of four learners. Within these groups, dyads are created and assigned to opposing positions on a specific topic. The learning material is distributed between the two pairs and the dyads are instructed to make any information in their own material available to the other dyad when it might support their position. Pairs then develop their position and present their arguments to the other dyad. During this presentation, learners exchange thoughts and information, possibly create counterarguments to the other dyad's arguments and discuss the rationale of their group's approach. In this step, the discussion can be led relatively freely. However, the teacher encourages learners to abide by certain rules of constructive controversy, which they are introduced to before collaboration.

The listeners are instructed to listen to the arguments as carefully as possible because they will later have the task of supporting their counter-dyad's position. In the next step, a role switch indicates that the two dyads must adopt and present the position they have just tried to rebut.

After that, the positions are dropped and all four learners are instructed to seek a synthesis of their discussion by writing a joint position statement. This position is to be presented to the class later on.

Johnson and Johnson (1994) emphasize that training on social and interpersonal skills should precede the controversy, including "confirming others' competence while disagreeing with their positions and challenging their reasoning (being critical of ideas, not people)" or "first bringing out all the ideas and facts supporting both sides (differentiating the differences between positions) and then trying to put them together in a way that makes sense (integration of ideas)" (p. 80). The teacher presents these instructions prior to collaboration and the learners practice them. The instructions also appear on the learners' instructional sheets that they have at their disposal during collaboration.

Literatur:

- Kurzbeschreibung (auf S. 165f):
  Kollar, I., Fischer, F., Hesse, F., 2006. Collaboration scripts - a conceptual analysis. Educational Psychology Review 18 (2), 159–185.
  http://telearn.noe-kaleidoscope.org/open-archive/file?Kollar-Ingo-2006_(000958v1).pdf
- Original:
  Johnson, D.W., & Johnson, R.T. (1994). Constructive conflict in schools. Journal of Social Issues, 50(1), 117–137.

6. ASK to THINK – TEL WHY?

Alison King worked extensively on methods for scaffolding collaboration, with a focus on supporting peer questioning. She developed a peer-tutoring approach for classrooms to support knowledge construction in dyads or in larger groups of learners (King, 1997, 1998, 2002). The ASK to THINK - TEL WHY model distributes structured reciprocal tutoring roles (questioner vs. explainer) among the learners and attaches specific activities to these roles. These activities are initially introduced by the teacher, who models them in class before the learners apply them in their subsequent collaboration (the training time is about 160 min spread over four school lessons). There are three main groups of activities:

1. specific question types that the learner in the questioner role asks during collaboration (review questions, thinking questions, probing questions, hint questions, and self-monitoring questions);
2. elaborative explanations that the learner in the explainer role creates in reacting to those questions (including answering the "why" and "how" of the question, as well as establishing links to one's own prior knowledge – and to that of the partner – rather than merely describing objects); and
3. communicative skills, such as listening attentively, providing sufficient thinking time, giving evaluative feedback, etc.

After reading a text or listening to a class presentation, learners individually create and write down two review questions and two thinking questions. After that, the learning partners determine who plays the questioner and who plays the explainer first. The questioner then asks one review question (e.g., "What does. . . mean?") to activate the explainer's knowledge about the topic at hand. If the explainer fails to answer the question, the questioner then asks probing questions (e.g., "Tell me more about. . .") or hint questions (e.g., "Have you thought about. . .?"). If the review question is answered correctly, the questioner proceeds by asking thinking questions (e.g., "What do you think would happen to. . . if. . . happened?"). When appropriate, the questioner asks self-monitoring questions (metacognitive questions) that help the explainer make his or her learning process explicit and monitor it effectively. Throughout this process, learners are supposed to follow the communication rules mentioned above (giving appropriate thinking time, etc.). Learners are equipped with prompt cards that remind them to follow the sequence of question types. These prompt cards contain question starters for each question type and descriptions of what elaborated explanations are and what communication rules to apply during collaboration. After one complete cycle, the questioner and explainer roles are switched (King, 1997), (Kollar, 2006).

Literatur:

- Kurzbeschreibung:
  http://manyscripts.epfl.ch/available_scripts
- Original:
  King, A., 1997. Educational psychologist. ASK to THINK-TEL WHY: A model of transactive peer tutoring for scaffolding higher level complex learning 32, 221–235.