

Effects and examples of different collaboration scripts

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Aims

- explore how different ways of scripting affect the collaboration process at an individual and at a group level in different face-to-face and virtual settings

- 255 higher education students studying social sciences (Jyväskylä & Oulu)
- students were divided into different types of intervention groups 2 type of scripted (f2f and virtual) and a control group (non-scripted)
- three different scripts (case, grid and open-problem) were employed to make learning more efficient both in face-to-face and virtual settings

Participants and context of the study			
N= 90 Teacher education	Name of the script		
Web-based environment (7 small groups)	Case	Grid	Open problem
Face-to-face (5 small groups)	Case	Grid	Open problem
Face-to-face control (5 small groups)	Non-scripted	Non-scripted	Non-scripted

all the scripted groups studied with the help of all these three scripts, which together formed a macro script for the working period

Case script

- **familiarise with an authentic learning problem concerning learning readiness** (of two different learners, Matti and Timo)
- **read theoretical background material about such cases**
- **shared web discussion** about constructing a shared plan for a personal curriculum for Matti or Timo
- **students accomplish a shared plan for this personal curriculum as a group**
- **comment other groups' curriculum plans** (with a different case) **and evaluate** how realistic the plan was

Grid script

The basis of the script used leaned on "ConceptGrid" (see Dillenbourg & Jermann, 2005), but some context-specific modification were made

- groups receive different theoretical background information (for each participant), which students deviate by themselves
- each student reads his/her theory and makes a visit to the related learning center
- each student fills a table considering his/her opinion, which is based on background information and the visit
- each group has shared discussion and formulates final statements around the topic on basis of the tables
- each group has an analytic discussion about how well were their able to construct the task and complete the final statement

Open problem

- theoretical background material
- groups created own problem (about teaching reading)
- solved their problem based on background material
- final output

Qualitative and quantitative data

(See Arvaja, Salovaara, Häkkinen & Järvelä 2005)

- questionnaire (Salovaara *et al.* 2005) - the begging and the end
- self-report questionnaire (Järvenoja *et al.* 2005) - after each script
- video tapings + observations
- logged data in the web
- group-level interviews
- final test of the course

Virtual scripted groups: Preliminary Findings

- all the groups followed scripts
- scripting guided collaboration at a general level
 - shared information
 - co-ordinate work
 - no-one were lost
- scripts did not guarantee “high level” participation:
 - conflict situations were rare
 - problems with “free riders”
- personal experience:
 - experience and actions within the groups may differ
 - bad learning experience may prevent reflection
 - student did not use humour
- possibility for time and place flexible working
 - all the students did not have internet at home
- script - contextual resources

Findings – Case

(Hämäläinen & Arvaja 2005)

- **all the groups followed script** (although 10 of the 30 participants skipped some steps)
- **each group produced a shared plan** (varying individual contributions)
- **guided work at a general level**
- ensured that all groups were able to accomplish the task
- **did not guarantee “high-level” participation**
- groups **differed in collaboration shown**
- learners had **different roles + level of individual participants varied** between the different steps of the script
- learners had **shared background knowledge** (directed their work)
- **some learners** would obviously have needed **more support or supervision**
- **self-scripting**
- web discussion was “**memory bank**”
- problems with “**free riders**”
- **group 1** - active members reached very high level collaboration
- **group 4** - mutual understanding
- **group 5** - a high activity level is not always an indication of good collaboration.

Preliminary Findings - Grid

- students followed orders but did not reach higher levels argumentation (mutual understanding)
- problems:
- nature of the task
 - copy-paste
 - discussion after filling the table did not work
- f2f problems do not necessarily work
 - not so many “free rider problems”
 - quality of collaboration quite low (Case + Open problem)
 - only some groups reached discussion
 - teachers participation activated some learners
 - group 4 an example of non-motivational monologue

Preliminary Findings – Open problem

- lot of discussion about forming the problem
- in the beginning lot of effort on defining the problem
- lot of differences between the groups
- motivated / skill full groups managed
- non-motivated failed

G1	Use of materials	Mutual understanding	Lot of discussion	Positive feedback	Positive solution
G2	Low motivation	Easy / low level solution based on discussion		Experienced problem difficult	
G3	Discussion dialectic		Were able to listen each other	Run out of time	
G4	Nature of the task: Depending only one person		Problems with dialogues	Low use of resources	
G5	Lot of “facts” used	+ Reflection	+ Roles More equal than in other tasks	- Level of the document	
G6	3 active	Reflection on the document		Not very collaborative	
G7	High level conversation	Reflection on own experiences		Some social features	

Conclusion

- scripting guided at the general level
 - helped to find resources
 - helped to proceed in different steps
 - guaranteed that all the students were able to “go through”
 - did not guarantee “high level” participation
- variations between the groups
 - social features
 - contextual features
- variations between amount and type of the scripts
 - motivated / skill full groups seems to benefit very macro level scripting
 - non-motivated groups benefited more detailed scripting

THANKS!

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