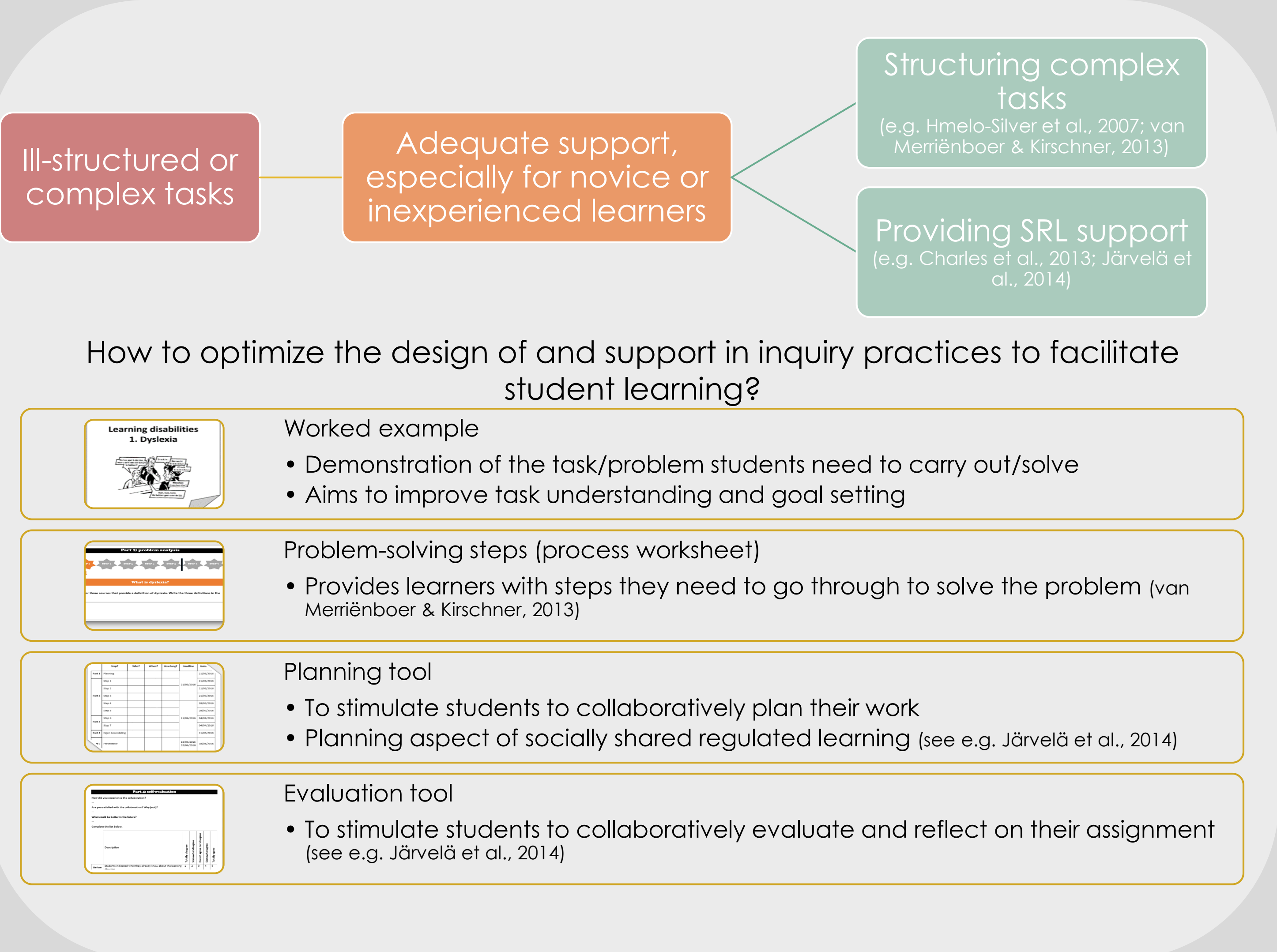


Scripting inquiry-based learning in a teacher education program for adult learners: how learners use and experience structuring interventions

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Introduction



Aim and research questions

- RQ1** How and to what extent were the scripts **actually used** by the groups, and is this related to (a) how they tackled the assignment, and (b) the quality of the final product?
- RQ2** To what extent do students **perceive** the scripts as helpful for the development of their written product?

Method

- N=9, adult learners with a background in secondary education (no HE degree)
- Design & implementation of an inquiry task in pre-service teacher training
 - Inquiry task was to solve a problem (a case study) by conducting a problem analysis (5 steps) and preparing an action plan (2 steps)
 - Collaborative learning (3 dyads and 1 group of 3 students)
 - Shared google document, 4 weeks
 - Product = written assignment
 - Support: worked example, problem-solving steps, planning & evaluation tool
- Analyses
 - Detailed revision history in the shared google document (coding scheme)
 - Semi-structured interviews with students (during & after assignment)
 - Final product (content analysis, rubric)

Results

Research questions	Groups	Worked example	Problem-solving steps	Planning	Self-evaluation	Task execution	Product score (max=10)
RQ1 Actual use of scripts	Group 1 (n=2)	Went through and evaluated the worked example during face-to-face meeting with teacher	Completed the steps in a sequential way, from step 1 to step 7	Filled in the planning tool during task execution, i.e. didn't think about it in advance	Completed after task execution No specific changes were made based on this evaluation	One group member did most of the work, while the other person added a few things	6.14
	Group 2 (n=3)		Since the work was divided, steps were not handled sequentially	Divided the steps and set deadlines before task execution		All group members contributed equally to the written product: provided feedback to each other	8.86
	Group 3 (n=2)		Information is missing	Filled in the planning tool during task execution, i.e. didn't think about it in advance		All group members contributed equally to the written product: one person started, afterwards the other person came into action	7.50
	Group 4 (n=2)		Completed the steps in a sequential way, from step 1 to step 7	Filled in the planning tool during task execution, i.e. didn't think about it in advance		All group members contributed equally to the written product: one person started, afterwards the other person came into action	5.68
RQ2 Students' individual perceptions (n=9)		Clear expectations (n=7)	Provided direction, made the task more easy to tackle (n=8)	Useful to regulate myself and other group members (n=3)	Useful (no explanation) (n=2)		
		Unnecessary (n=1) Useful, but insufficient (n=1)	Too much repetition (n=1)	Not useful, hard to foresee when time will be available to work on the task (n=6)	No opinion (n=2) Missing (n=5)		

Conclusions and discussion

	Actual use	Perceptions	Conclusions
Worked example	Obligatory	Positive, contributed to task orientation	⇒ Seem to work well
Problem-solving steps	Sequentially or divided the steps		
Planning	Only used by 1 group > related to task execution and product score ⇒ G2: clear planning + deadlines > divided steps, all members contributed equally, and provided each other with feedback > best product score ⇒ G1,G3,G4: no planning, X started, and Y needed to catch up or did little of the work	Majority: no added value	⇒ Some work to do...
Self-evaluation	Used as summative assessment	(?)	

Future research

Redesign learning activities

Focus on:

- Collaboration scripts (e.g. De Wever et al. 2014)
- (Self-)evaluation / reflection (e.g. Ng, 2016)

⇒ Important to investigate to what extent scripts are actually used by students (see e.g. De Wever, et al. 2008) to explore what works and what students need