Shared regulation in CSCL

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In this talk

1) Challenges for 21st century learning
2) What is SRL, coRL and SSRL?
3) Our research on SSRL
4) Implications to CSCL
21\textsuperscript{st} century learning challenges

Collective thinking and shared problem solving instead of individual

Active interaction and multiple expertise

Stress and burn out because of information overload and weak learning strategies
Learners need strategic skills and self-regulation in 21st century work.
What is self-regulated learning?
(Pintrich, 2000; Zimmerman, 1989; Winne & Hadwin, 1998)

- Active and proactive learning
- Process of learning to monitor, evaluate, and regulate (or change) your own
  - Learning and thinking
  - Motivation and emotion
  - Behaviour
- Lifelong process that can be developed and refined over time!
SRL in practice?
(Winne & Hadwin, 1998; Hadwin, Järvelä & Miller, 2010)

Understanding Task?
Goals and Plans?
Adapting and Regulating?
Monitoring and evaluating
Applying Strategies?
Self-regulation is important also outside of the school!

Successful athletes regulate training and performance.
Socially shared regulation of learning is needed for collaborative learning success
Successful groups

Two cornerstones of successful collaborative learning are (a) shared knowledge construction, and (b) productive collaborative interactions

BUT, THEY ALSO
• Construct shared task perceptions
• Negotiate their plans and goals together by building on each others thinking
• Share their strategic enactment to the task equally
• Collectively monitor their learning progress towards their shared goals
Achieving success in collaborative tasks depends upon:

(a) the SRL skills and strategies individuals bring to the group (Winne & Hadwin, 1998)
(b) support provided to one another to facilitate self-regulatory competence within the group (Volet et al., 2009), and
(c) shared or collective regulation of learning such as successful coordination of goals and strategies (e.g. Barron, 2003; Dillenbourg, Järvelä & Fischer, 2000).
Task 1.

What is a difference in shared knowledge construction vs shared regulation?
SELF-REGULATION IN COLLABORATION
(Volet & Järvelä, 2009; Järvelä, Volet & Järvenoja, 2010)

CO-REGULATION IN COLLaborATION
(Hadwin, Järvelä & Miller, 2010; Järvelä & Hadwin, 2013)

SHARED-REGULATION IN COLLABORATION
(Hadwin, Järvelä & Miller, 2010; Järvelä & Hadwin, 2013)

Student 1: Planning, monitoring, evaluating, regulating

Student 2: Planning, monitoring, evaluating, regulating

Student 3: Planning, monitoring, evaluating, regulating

Student 4: Planning, monitoring, evaluating, regulating

Student 5: Planning, monitoring, evaluating, regulating

Task 2. How SSRL can be researched?
Research on SRL, CoRL and SSRL in CSCL

- Little research about how groups (and individuals in groups) engage, sustain and productively regulate collaborative processes.
- How shared and individual regulations interact in the process is unknown.
- It is challenging to elaborate how shared regulation is different than shared knowledge construction.
- Challenging situations invite for regulation
Our current research

The aim is to investigate temporal sequences of SRL and SSRL in CSCL

1. How self- and shared regulatory activities are connected with learning outcomes?

2. What characterizes temporal sequences of self- and shared regulation activities?

3. More empirical evidence about SSRL
nStudy (Winne et al., 2007) allows students to practice e.g. study tactics and learning strategies, but also collect trace-data.

TRACING STRATEGIC LEARNING
Process oriented and temporal data collection

SITUATED DATA – chat, log, learning traces

QUESTIONNAIRES & TESTS

QUESTIONNAIRES & TESTS

INTERVIEW

PROCESS ORIENTED AND TEMPORAL DATA COLLECTION

SITUATED DATA – chat, log, learning traces

QUESTIONNAIRES & TESTS

INTERVIEW

8 WEEKS
MICROLEVEL DATA EXAMPLE
Integration of coded chat and log data
(Järvelä, Malmberg & Koivuniemi, 2013)

**INTERNAL** | **INTERACTIVE** | **MICROLEVEL SEQUENCE OF SHARED REGULATION**
---|---|---
Task Understanding | Socially shared strategy | Task understanding | Socially shared strategy

<table>
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<tr>
<th>VP</th>
<th>TI</th>
<th>TI</th>
<th>TI</th>
<th>SSTR</th>
<th>TU</th>
<th>SSTR</th>
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Self-regulated learning:
TI=Task Instructions
VP= View Planning

Socially Shared Regulation:
SSTR= Socially shared strategy

...tells about patterns of how students activate self-regulation, which generates or not generate shared regulation.
Task 2.
What are the possible implications of SSRL to CSCL?

a) to teachers at schools
b) to educational technology designers
Järvelä & Hadwin (2013) claims:

- In CSCL research it is mostly prompted collaborative knowledge construction, with little attention devoted to other facets of regulation such as motivation, emotion, strategy use, goals and task perceptions.
- The potential role of CSCL tools for supporting the planning, monitoring, and regulation of collaborative learning processes has been virtually ignored.
Implication 1.

**Developing SSRL tools**

- Support co-construction of shared task representations, goals and strategies (Järvelä & Hadwin, 2013)
- Integrate features of sociability tools and team effectiveness research (Fransen, Kirschner & Erkens, 2011)
- Increase awareness of motivation and emotion regulation (Järvenoja, Volet & Järvelä, 2012; Järvelä, Malmberg & Koivuniemi, 2013)
RADAR SSRL
(Research on collaborative learning + SRL)

My group is capable of doing this task  I understand the task

I feel capable of doing this task  I know how to do this task

My feelings influence on my working  This task is interesting

0 - none
1 - low
2 - average
3 - high
4 - very high

*Educational Psychology, 33* (1), 1-28.
Implication 2:

Preparing teacher students for 21st century learning practices
Ways of thinking and working

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Component B
PROCESS-ORIENTED EXPERIMENTAL DESIGNS

Component A
LONGITUDINAL DESIGNS

Repeated measures
Process oriented mixed methods
Implication 3: **PHYSICAL ENVIRONMENTS SUPPORTING SRL & SSRL**

Case **UBIKO**

Ubiko.eu

Supporting SRL in UBIKO
(Perry et al., 1999, Malmberg et al., 2010; Kontturi & Järvelä, 2013)

- Researchers working with teachers
- Teaching strategic skills to students
- Prompting planning and goal-setting
- Opportunities for choice and control
- iPad SRL learning diaries
Physical environment supporting SRL

Easy to re-group for solo and collaborative practices
Communal places for SRL and SSRL

Emotionally and motivationally inspiring
Flexible use of technology for solo and collaborative activities

Student centered use of ICT
https://www.youtube.com/watch?feature=player_embedded&v=5BR7hFt6izo
Conclusions

• Students’ “will and skills” need training!
• Training for solo and collective success, but also failure!
• Helping learners become aware of their strengths and weaknesses in a learning situation – to investigate their own learning.
• Knowing what group members do is different than understanding what group members do!

➡ Prompting and researching SSRL in CSCL