



Shared regulation in CSCL

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Prof. Sanna Järvelä

sanna.jarvela@oulu.fi

Learning and Educational Technology Research Unit
(LET)

Department of Educational Sciences and Teacher
Education

University of Oulu, Finland





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



21st century learning challenges

Collective thinking and shared problem solving instead of individual

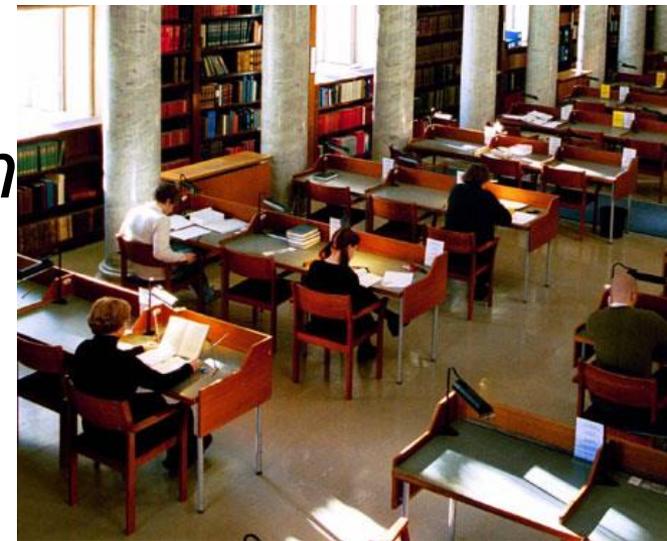
Active interaction and multiple expertis

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)



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

(Hadwin, Järvelä, Miller, 2011; Järvelä & Hadwin, 2013; Winne, Hadwin & Perry, 2013; Janssen, Erkens, Kirschner & Kanselaar, 2012; Kirschner & Erkens, 2013)

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



SSRL theoretical grounding

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).



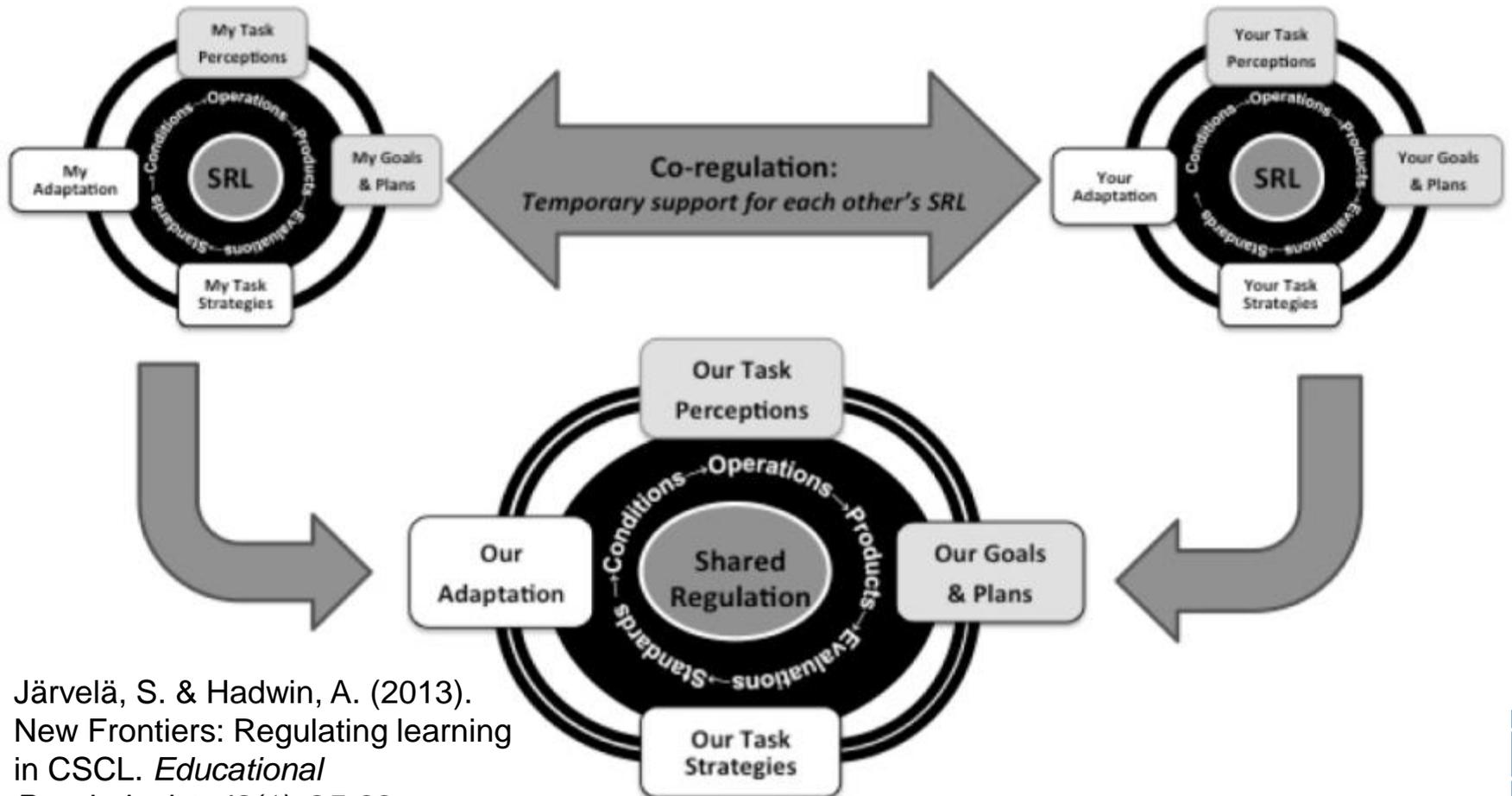


Task 1.

What is a difference in shared knowledge construction $><$ shared regulation?



Regulation of learning in collaboration



Järvelä, S. & Hadwin, A. (2013).
New Frontiers: Regulating learning
in CSCL. *Educational
Psychologist*, 48(1), 25-39.

SELF-REGULATION IN COLLABORATION

(Volet & Järvelä, 2009; Järvelä, Volet & Järvenoja, 2010)

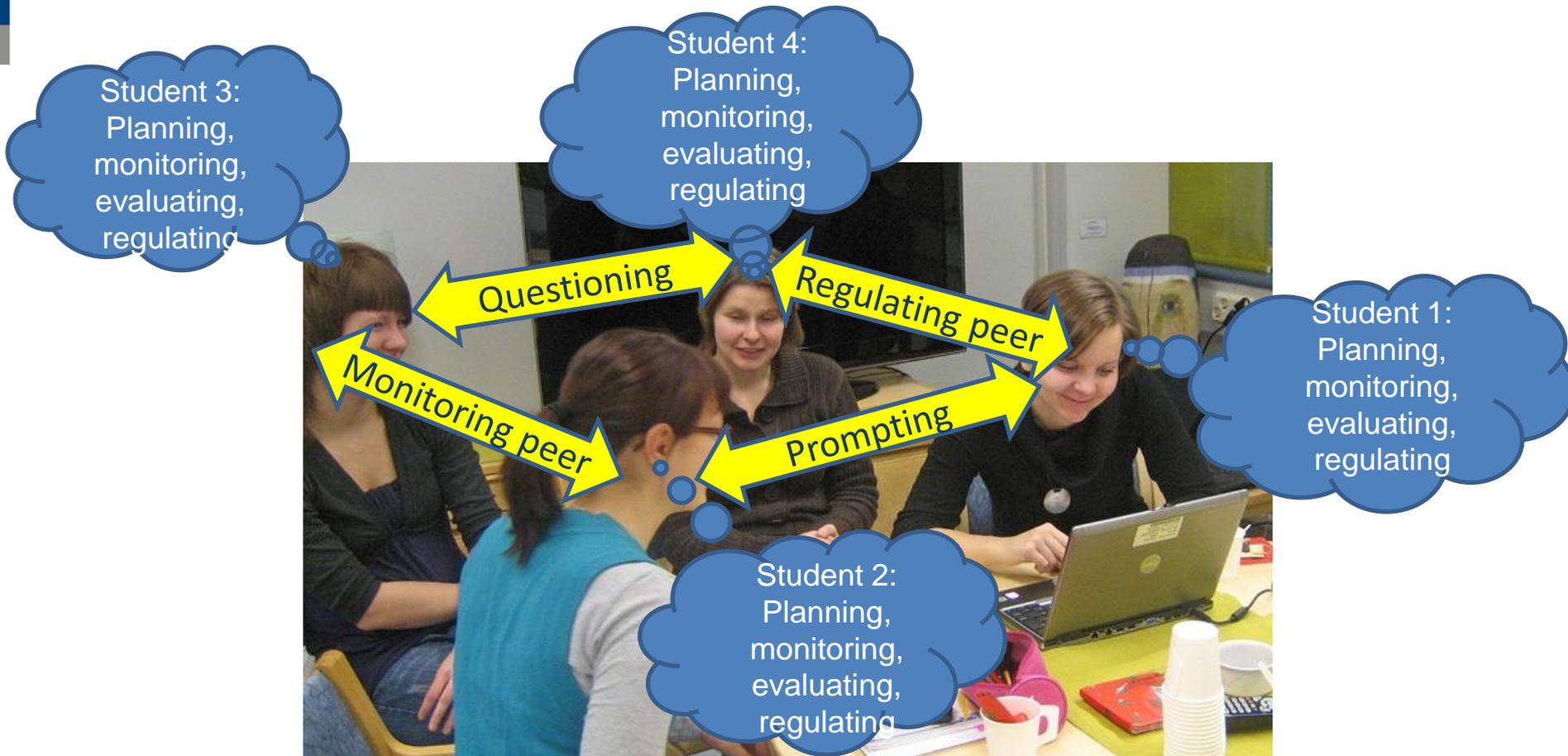


Järvelä, S., Järvenoja, H., Malmberg, J. & Hadwin, A. (2013).
Exploring socially-shared regulation in the context of collaboration.
The Journal of Cognitive Education and Psychology, 12 (3), 267-286



CO-REGULATION IN COLLABORATION

(Hadwin, Järvelä & Miller, 2010; Järvelä & Hadwin, 2013)



Näykki, P., Järvenoja, H., Järvelä, S., & Kirschner, P. (2014, submitted).
Monitoring as a regulation activity in higher education students' collaborative learning – Quality and temporal variation

SHARED-REGULATION IN COLLABORATION

(Hadwin, Järvelä & Miller, 2010; Järvelä & Hadwin, 2013)



Malmberg, J., Järvelä, S., Järvenoja, H. & Panadero, E. (2014, submitted). Socially shared regulation of learning in CSCL: Patterns of socially shared regulation of learning between high – and low performing student groups .





Task 2. How SSRL can be researched?





Research on SRL, CoRL and **SSRL** in CACL

- ➔ 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



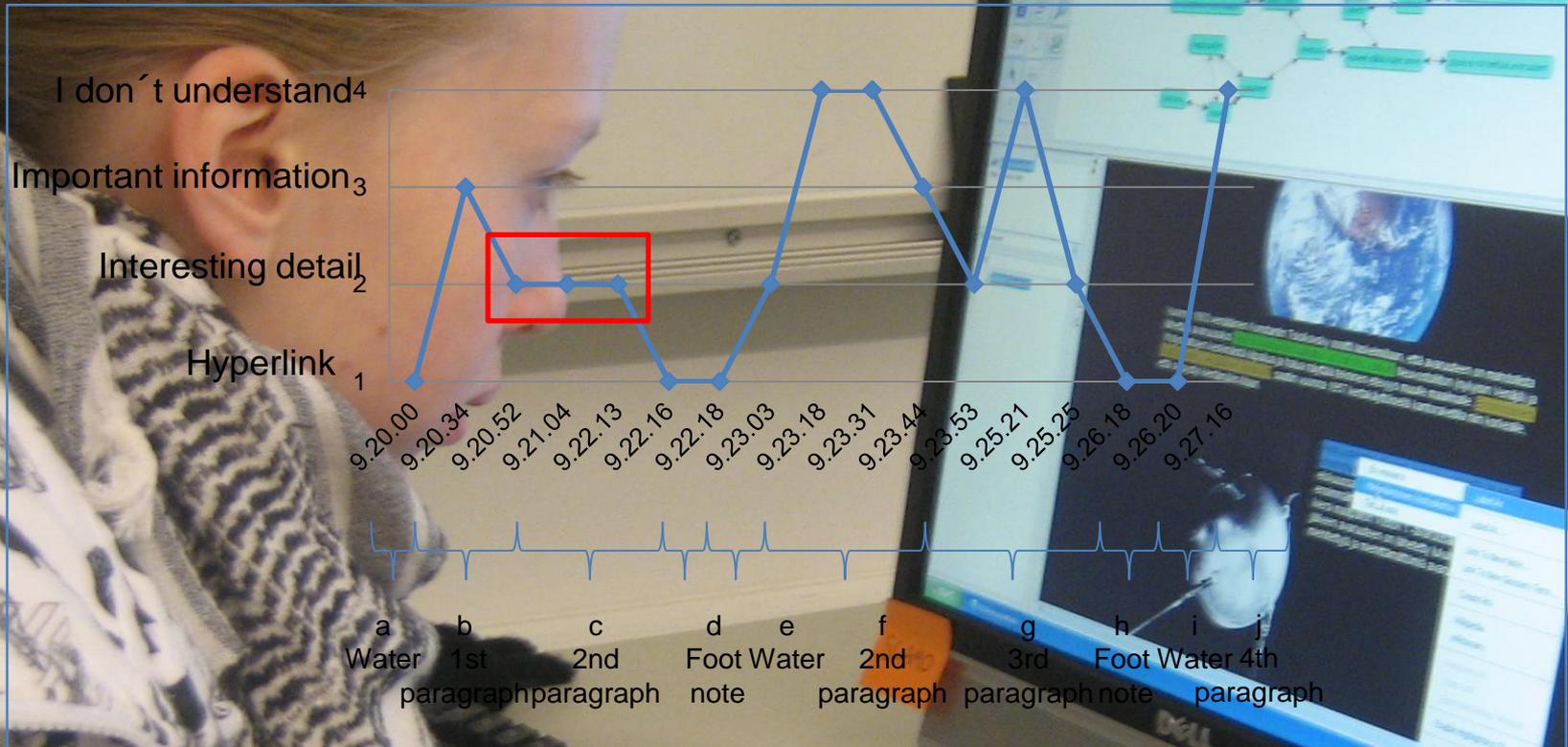
Our current research

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

Kit:Vesi ja Ilma5-6 - Browser:Millainen on ilman ja veden rajapinta

File Edit Format View Tools Window Help

http://cc.oulu.fi/~jonnaka/VesijaIlma/VesiJaIlma/Rajapinta.htm

Ilmalava

mitä vesi on?

vety ja happi

Kit:Vesi ja Ilma5-6 - Note:null

File Edit Format View Tools Window Help

Find:

Sisällöt

Mika

Miss

Johd

Kuin

Kuin

Miks

Milla

Choose a Template: Vertaile

Note | General

Vertaile asioita keskenään. Nimeä vertailemasi asiat:

[Kelluminen ja pintajännitys]

Mitä yhdenmukaisuuksia niiden välillä on?

Miten ne eroavat toisistaan?

Millainen on ilman ja veden rajapinta?

Miksi veden pinnalla näyttää olevan kalvo?

akennehiukkaset eli molekyylit ovat kuin kolmpäisiä magneetteja. Ne vetävät puoleensa. Veden pinnalla rakennehiukkanen ei tartu ilmaan, vaan entistä in **muhiin ves**ihiukkasiin. Niinpä näyttää kuin veden pinnalla olisi kalvo, päälle voi jättää lepäämään vaikkapa alumiinikiekon. Huomaa kuitenkin, että epäamminen kaivomaisella pinnalla ei ole kellumista. Veden pinnan sitkeyttä an pintajännitykseksi.

pitään, on kyseessä aito kelluminen. Täällöin esine on vettä harvempaa Jos vaikka **alumiinikiekk**o painetaan pohjaan, huomataan, ettei se enää heiltä. Tästä voidaan päätellä, että alumiini on vettä tiheämpää ainetta. Jos

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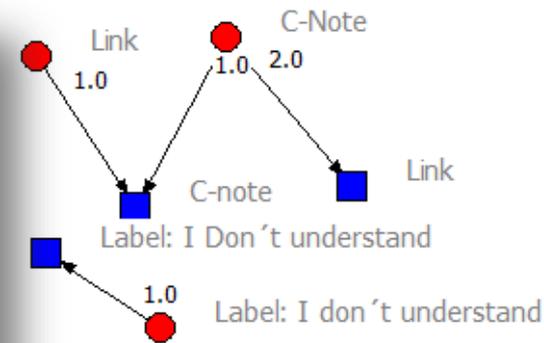
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	Start Time	Duration(s)
arkkai/lu...	2007.04.02**T10.16.49.077	0.301
	2007.04.02**T10.53.07.230	0.0
	2007.04.02**T10.55.17.823	24.228
	2007.04.02**T10.55.42.211	0.0
	2007.04.02**T10.55.53.268	0.421
	2007.04.02**T10.56.42.895	17.607
	2007.04.02**T10.57.04.398	1.653
	2007.04.02**T10.57.09.486	0.0
	2007.04.02**T10.57.14.634	1.553
	2007.04.02**T10.57.17.158	1.222
	2007.04.02**T10.57.19.301	0.942
	2007.04.02**T10.58.12.894	0.421
	2007.04.02**T10.58.42.049	0.401
	2007.04.02**T10.59.08.460	0.261
	2007.04.02**T10.59.11.225	0.36
	2007.04.02**T10.59.30.945	0.351
	2007.04.02**T10.59.34.921	0.361
	2007.04.02**T10.59.35.883	0.32
	2007.04.02**T10.59.44.316	0.39
	2007.04.02**T10.59.46.089	0.31
	2007.04.02**T10.59.52.749	0.43
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	2007.04.02**T11.01.27.445	0.571
	2007.04.02**T11.01.38.843	0.39
	2007.04.02**T11.01.40.516	0.37
	2007.04.02**T11.01.56.490	0.411
	2007.04.02**T11.02.06.416	0.33
	2007.04.02**T11.02.08.188	0.441
	2007.04.02**T11.02.32.466	0.491
	2007.04.02**T11.02.45.466	0.391
	2007.04.02**T11.02.46.898	0.391
	2007.04.02**T11.03.40.041	0.37
	2007.04.02**T11.03.54.703	0.431
	2007.04.02**T11.03.56.426	0.431
	2007.04.02**T11.04.19.792	0.471
	2007.04.02**T11.05.04.842	0.511
	2007.04.02**T11.05.47.368	0.32
	2007.04.02**T11.06.55.832	0.431
	2007.04.02**T11.07.06.358	0.351
	2007.04.02**T11.08.05.218	0.501
	2007.04.02**T11.08.20.662	0.25

PROMPTS

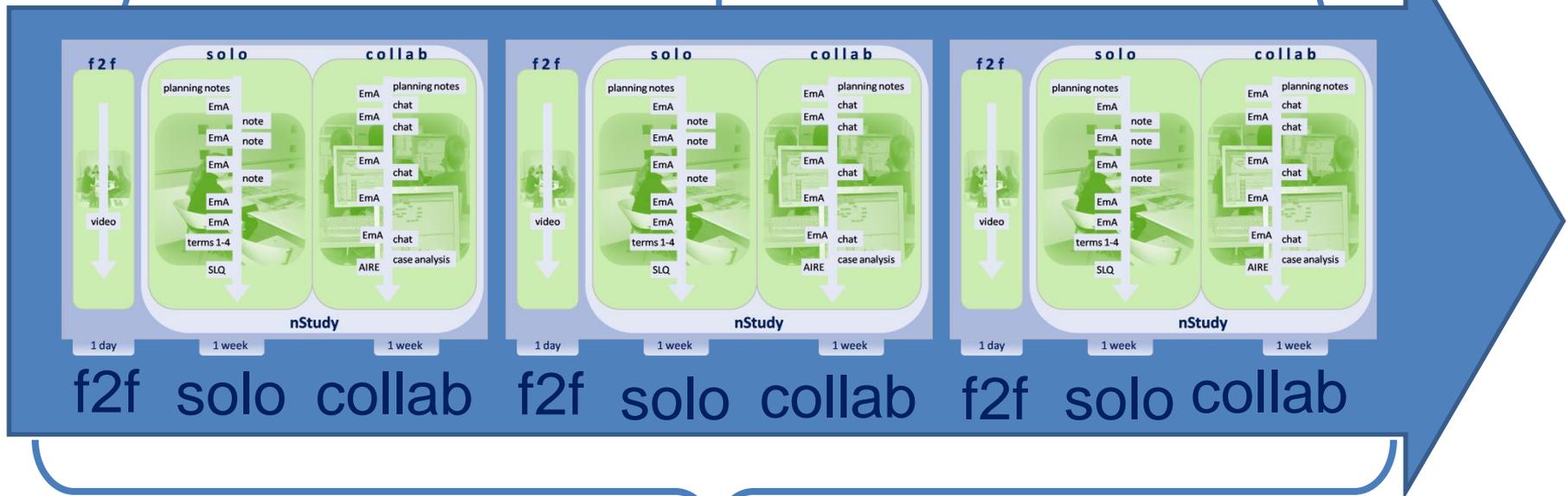
Process oriented and temporal data collection

SITUATED DATA – chat, log, learning traces

QUESTIONNAIRES & TESTS

QUESTIONNAIRES & TESTS

INTERVIEW



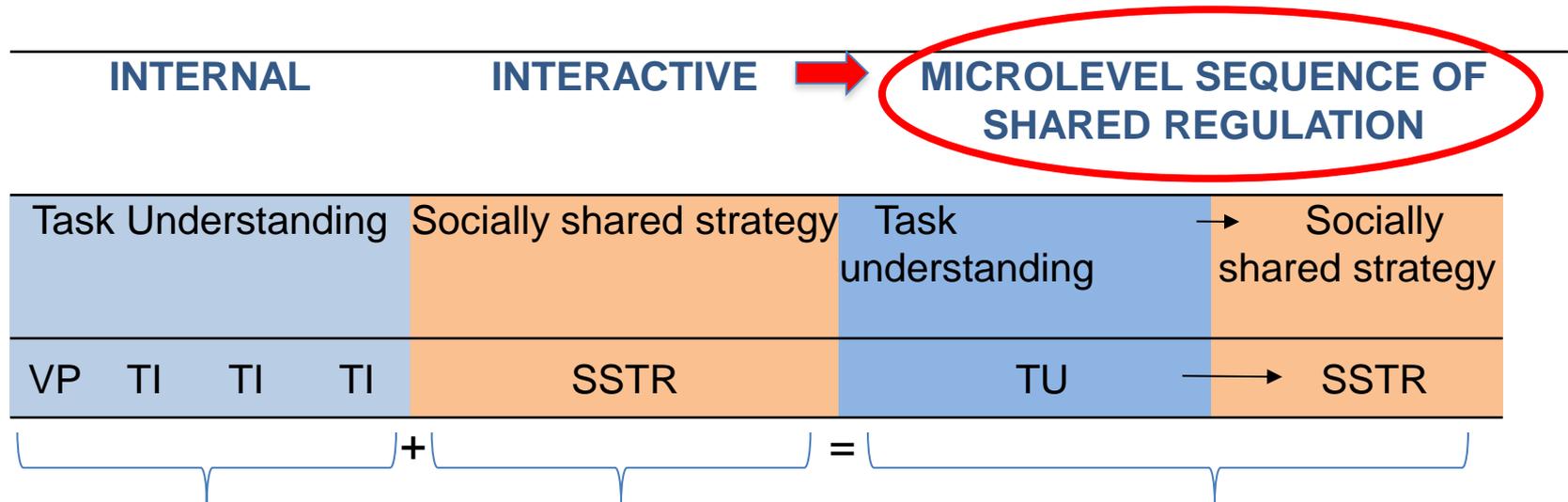
8 WEEKS



MICROLEVEL DATA EXAMPLE

Integration of coded chat and log data

(Järvelä, Malmberg & Koivuniemi, 2013)



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 CSCCL 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 CSCCL tools for supporting the planning, monitoring, and regulation of collaborative learning processes has been virtually ignored.



Implication 1.

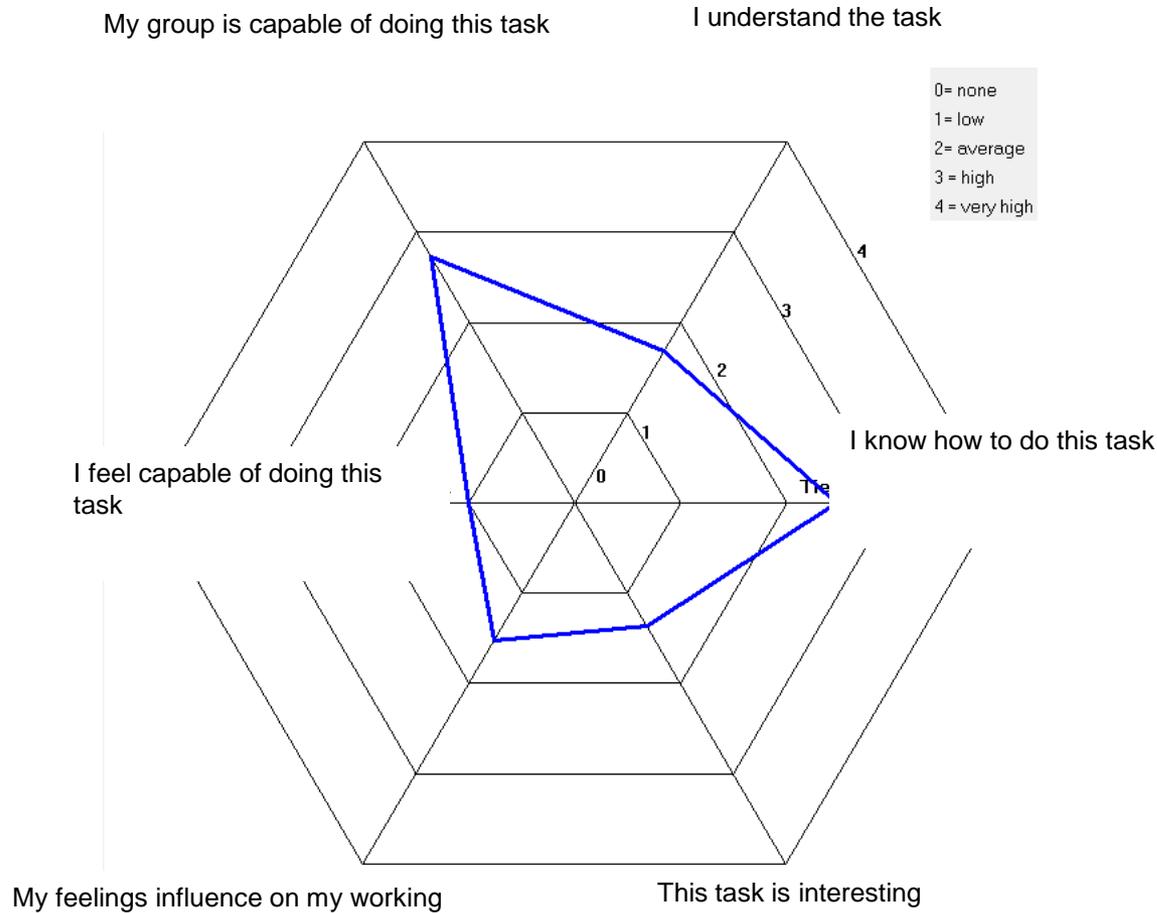
Developing SSRL tools

- 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)



Järvelä, S., Kirschner, P., Panadero, E., Malmberg, J., Phielix, C., Jaspers, J., Koivuniemi, M. & Järvenoja, H. (2014, submitted). Enhancing Socially Shared Regulation in Collaborative Learning Groups – Designing for CSCL Regulation Tools

SUPPORTING CSCL WITH SSRL TOOL

(html5 web apps)



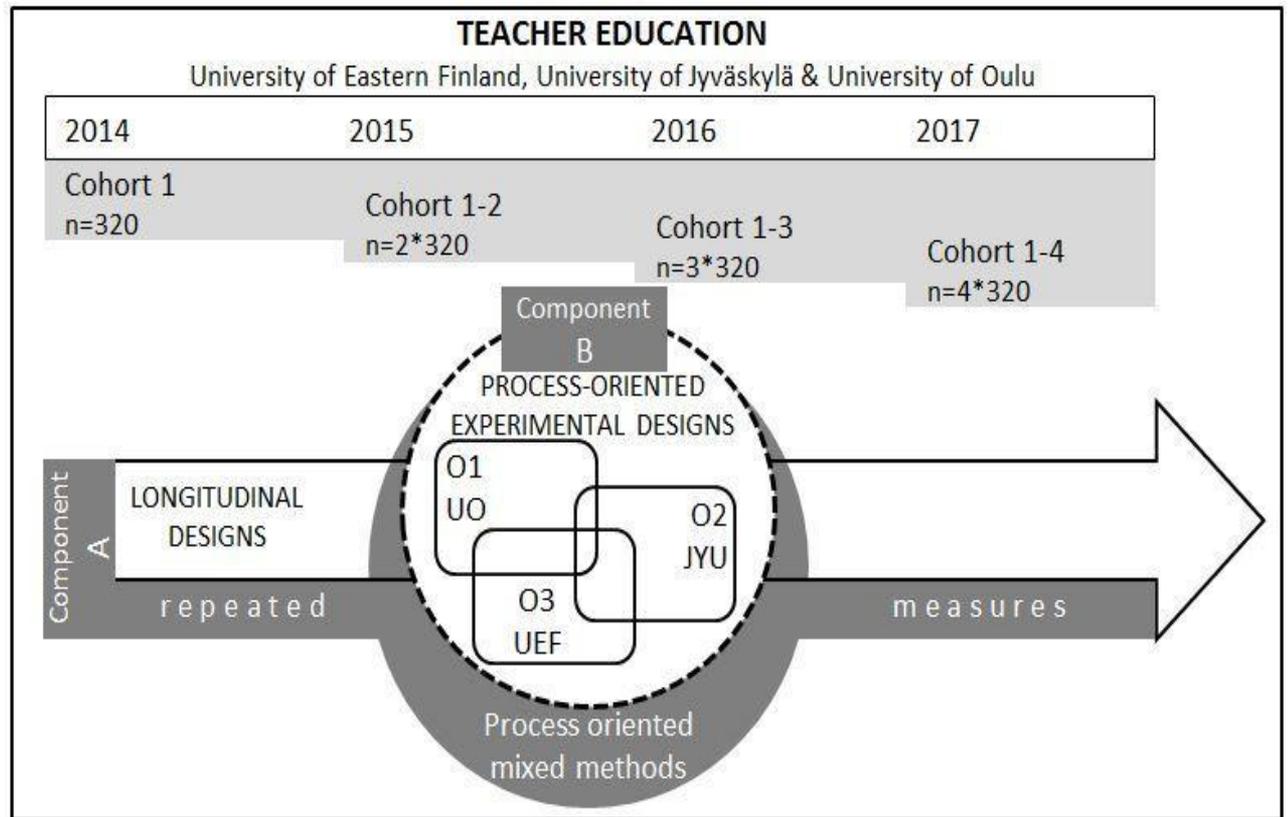
Järvenoja, H., Volet, S. & Järvelä, S., (2012). Regulation of emotions in socially challenging learning situations: An instrument to measure the adaptive and social nature of the regulation process. *Educational Psychology*, 33 (1), 1-28.



Implication 2:

PREP21

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



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FINNISH INSTITUTE FOR
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UNIVERSITY OF
EASTERN FINLAND

Implication 3: PHYSICAL ENVIRONMENTS SUPPORTING SRL&SSRL



Case *UBIKO*

Ubiko.eu



Kontturi, H., Juuso, H., Kangas, V., Kumpulainen, K., Tuominen, T., Järvelä S. (2013).
UBIKO - School unit as an inspiring learning environment.

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

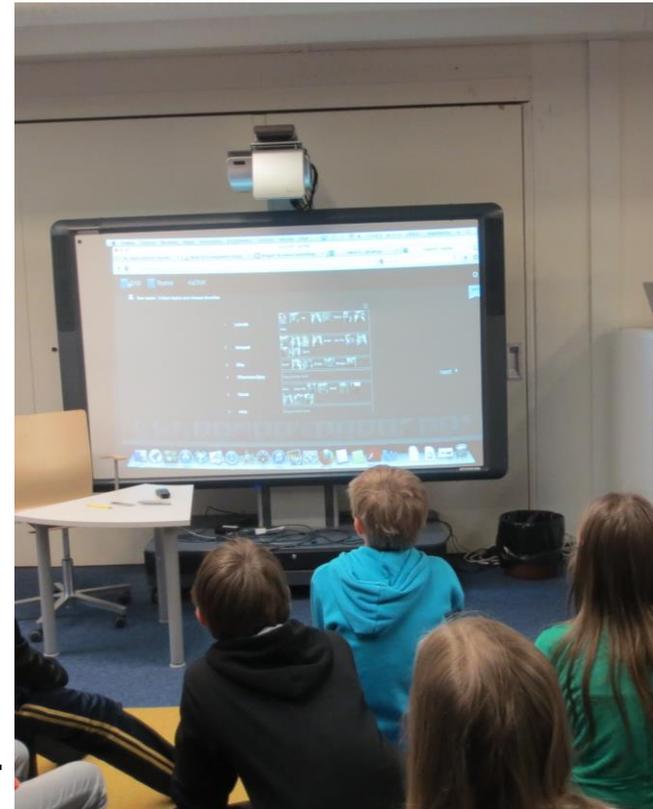


Communal places for SRL and SSRL



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

