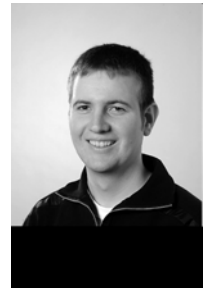




Adaptive Collaboration Support

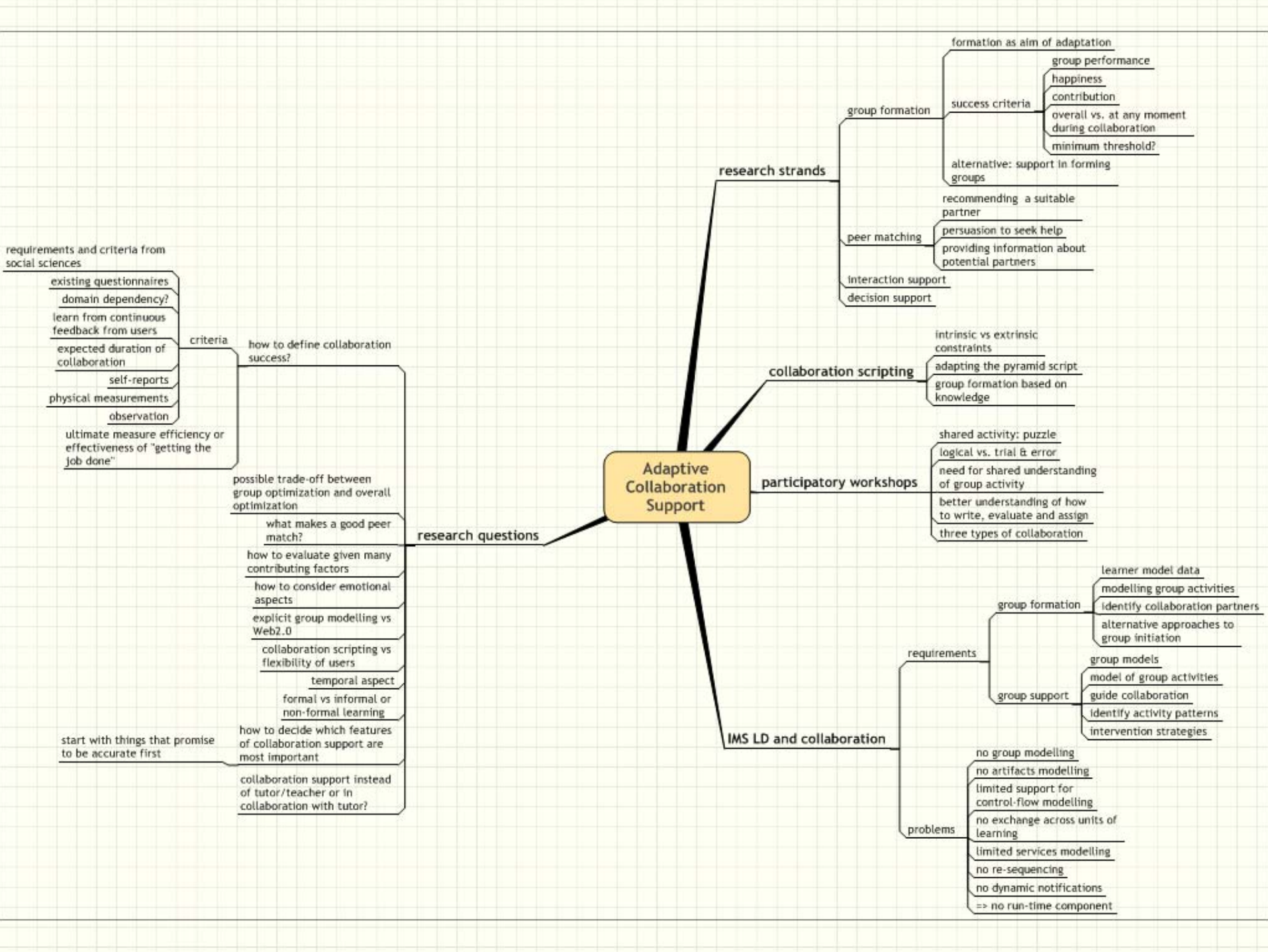
- Organisers:
Alexandros Paramythis &
Stephan Weibelzahl
- Sponsor: Adaptive Learning
Spaces project





Schedule

- **Invited Talk**
 - An Exploration of Adaptive Collaboration Support, *Judith Masthoff*
- **Paper Presentations**
 - Systems for Adaptive Collaboration Scripting: Architecture and Design, *A. Karakostas and S. Demetriadis*
 - Report on Participatory Workshops for the Design of Adaptive Collaborative Learning, *K. Muise, K. Tanenbaum, R. Wakkary and M. Hatala*
 - Adaptive Support for Collaborative Learning with IMS Learning Design: Are We There Yet? *A. Paramythis*
- **Identification and prioritization of research challenges for Adaptive Collaborative Learning**



Adaptive Collaboration Support

research strands

group formation

- formation as aim of adaptation
- success criteria
 - group performance
 - happiness
 - contribution
 - overall vs. at any moment during collaboration
 - minimum threshold?
- alternative: support in forming groups

peer matching

- recommending a suitable partner
- persuasion to seek help
- providing information about potential partners

interaction support

decision support

collaboration scripting

- intrinsic vs extrinsic constraints
- adapting the pyramid script
- group formation based on knowledge

participatory workshops

- shared activity: puzzle
- logical vs. trial & error
- need for shared understanding of group activity
- better understanding of how to write, evaluate and assign
- three types of collaboration

IMS LD and collaboration

requirements

group formation

- learner model data
- modelling group activities
- identify collaboration partners
- alternative approaches to group initiation

group support

- group models
- model of group activities
- guide collaboration
- identify activity patterns
- intervention strategies

problems

- no group modelling
- no artifacts modelling
- limited support for control-flow modelling
- no exchange across units of learning
- limited services modelling
- no re-sequencing
- no dynamic notifications
- => no run-time component

research questions

how to define collaboration success?

criteria

- existing questionnaires
- domain dependency?
- learn from continuous feedback from users
- expected duration of collaboration
- self-reports
- physical measurements
- observation
- ultimate measure efficiency or effectiveness of "getting the job done"

possible trade-off between group optimization and overall optimization

what makes a good peer match?

how to evaluate given many contributing factors

how to consider emotional aspects

explicit group modelling vs Web2.0

collaboration scripting vs flexibility of users

temporal aspect

formal vs informal or non-formal learning

how to decide which features of collaboration support are most important

collaboration support instead of tutor/teacher or in collaboration with tutor?

start with things that promise to be accurate first

requirements and criteria from social sciences



Topics and Questions Discussed

- Aspects of ACS include: group formation, peer matching, interaction support, decision support
- Collaboration Scripting: Adaptation might increase flexibility of collaboration scripts
- Participatory workshops to explore requirements for collaborative systems
- Limited support of IMS LD standard for modelling collaboration
- Definition of success criteria for collaboration is vital but hard

