Peer assessment
in learning contexts

Jan-Willem Strijbos

LUDWIG-
MAXIMILIANS-
UNIVERSITÄT
MÜNCHEN

I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.
I cannot hire a substitute student.

Peer evaluation

Peer marking

Peer review

Peer appraisal

Peer assessment (PA)

Peer feedback

Peer grading

Peer revision

**Responsibility for own learning
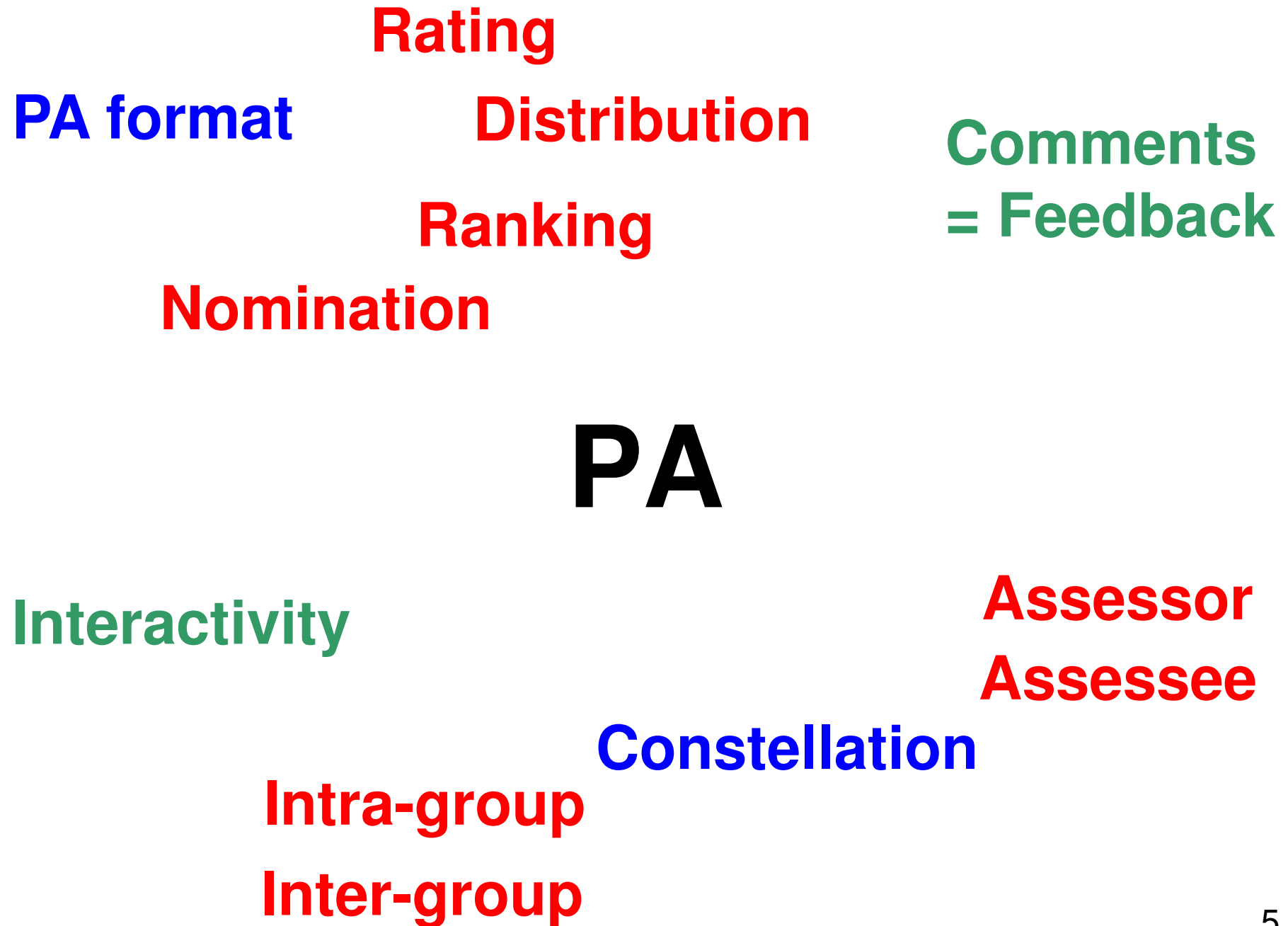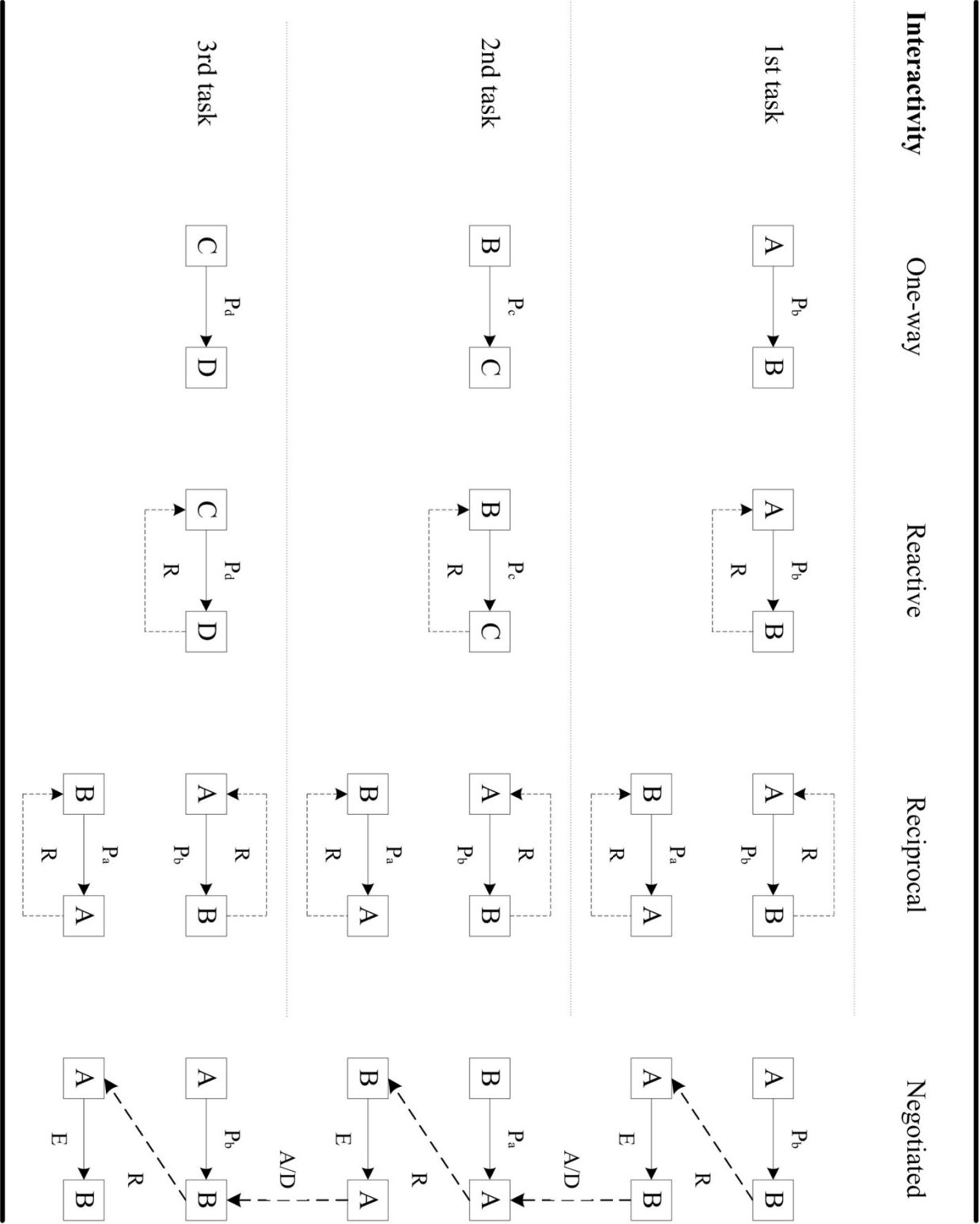and that of a peer(s)**

Similar status

PA

Student-Teacher scoring ➔ r > .60

Multiple PA is more reliable

Cho et al. (2006)

Rating

PA format   **Distribution**

**Comments
= Feedback**

Ranking

Nomination

PA

Interactivity

**Assessor
Assessee**

Constellation

Intra-group

Inter-group

Interactivity	One-way	Reactive	Reciprocal	Negotiated

1st task

2nd task

3rd task

P = peer assessment (subscript indicates who is assessed), R = response, E= elaborate, A/D = agree/disagree

Needs for Peer Assessment	Needs for CL assessment
Conceptual development: regarding PA as interactive process (and/or as specific type of CL)	Assess individual and group level
Functional development (purpose): more formative, i.e. peer feedback	Assess transformation over time: before, during and after CL
Methodological development: more (quasi)experimental / control group studies. Greater variety in research design, instruments, analyses	Assess multiple and concurrent processes + outcomes (cognitive, social, motivational)
(Strijbos & Sluijsmans, 2010)	**(Strijbos, 2011)**

Topic 1

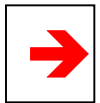# PA multiplicity ...

17 variables (Topping, 1998)

17 variables in 4 clusters (Van den Berg et al., 2006)

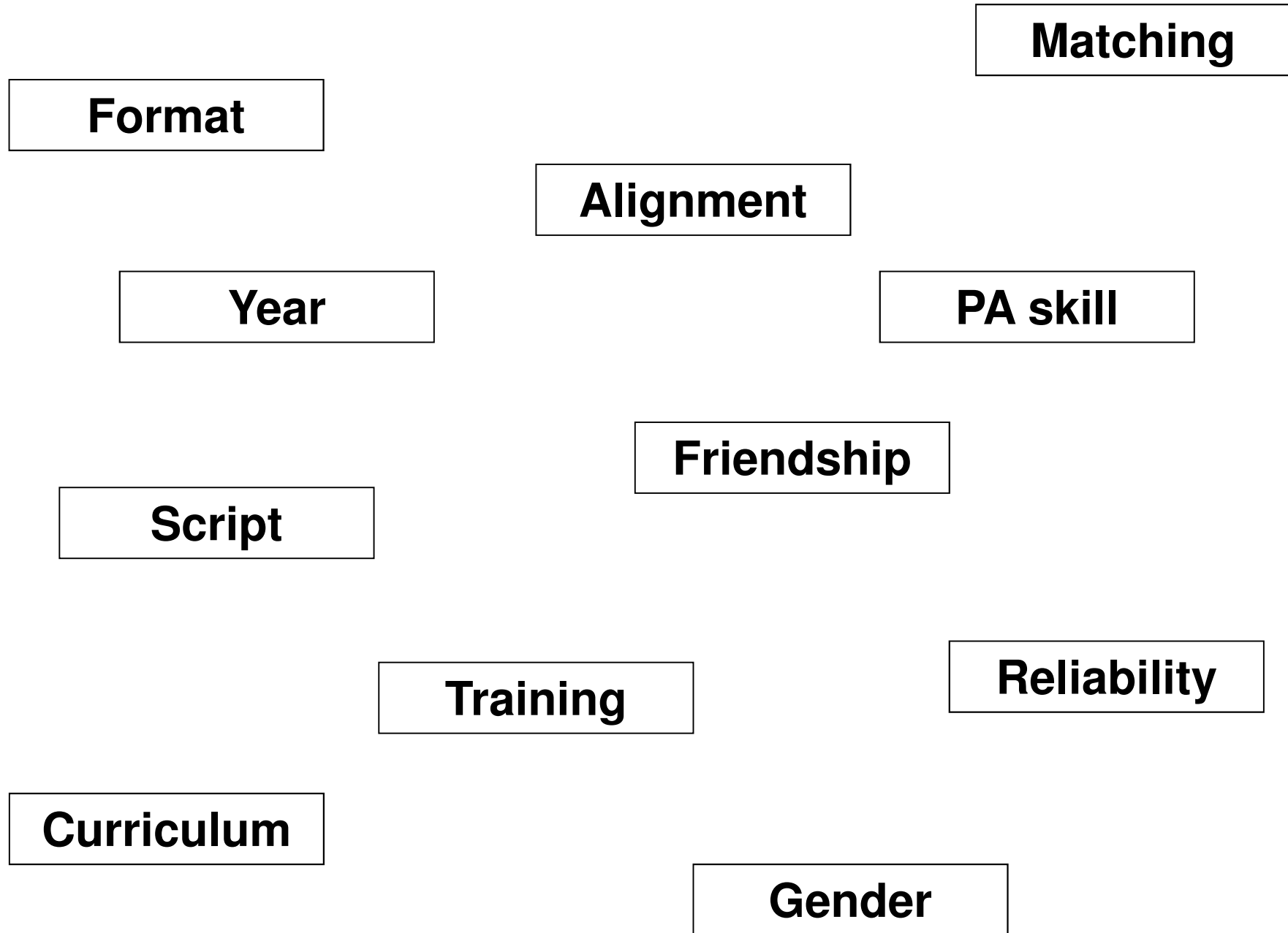**17 variables in 3 clusters (Van Gennip et al., 2009)**

Specification of PA interactivity (Strijbos et al., 2009)

"54 research variables" in 5 clusters (Topping, 2010)

20 variables in 5 clusters (Gielen et al., 2011)

How can we (systematically) describe PA contexts?

Matching

Format

Alignment

Year

PA skill

Friendship

Script

Training

Reliability

Curriculum

Gender

Context	IS-Design	Outcomes	Moderators
Curriculum	Format	PA skill	Gender
Alignment	Training	Reliability	Friendship
	Year		
	Matching		

Alqassab et al. (in prep.)

12

Topic 2

How can peer assessment contribute to learning?

Initial search on PA = 1275 articles

Empirical + PA + Outcome = 83 candidates

Van Gennip et al. (2009)

Detailed examination = 59 articles

Included in review = 14 articles + 1 = 15

Domain specific knowledge & skills

Ability, Expertise, Competence …

PA and learning

PA/PF provision

PA knowledge & skills

PA/PF reception

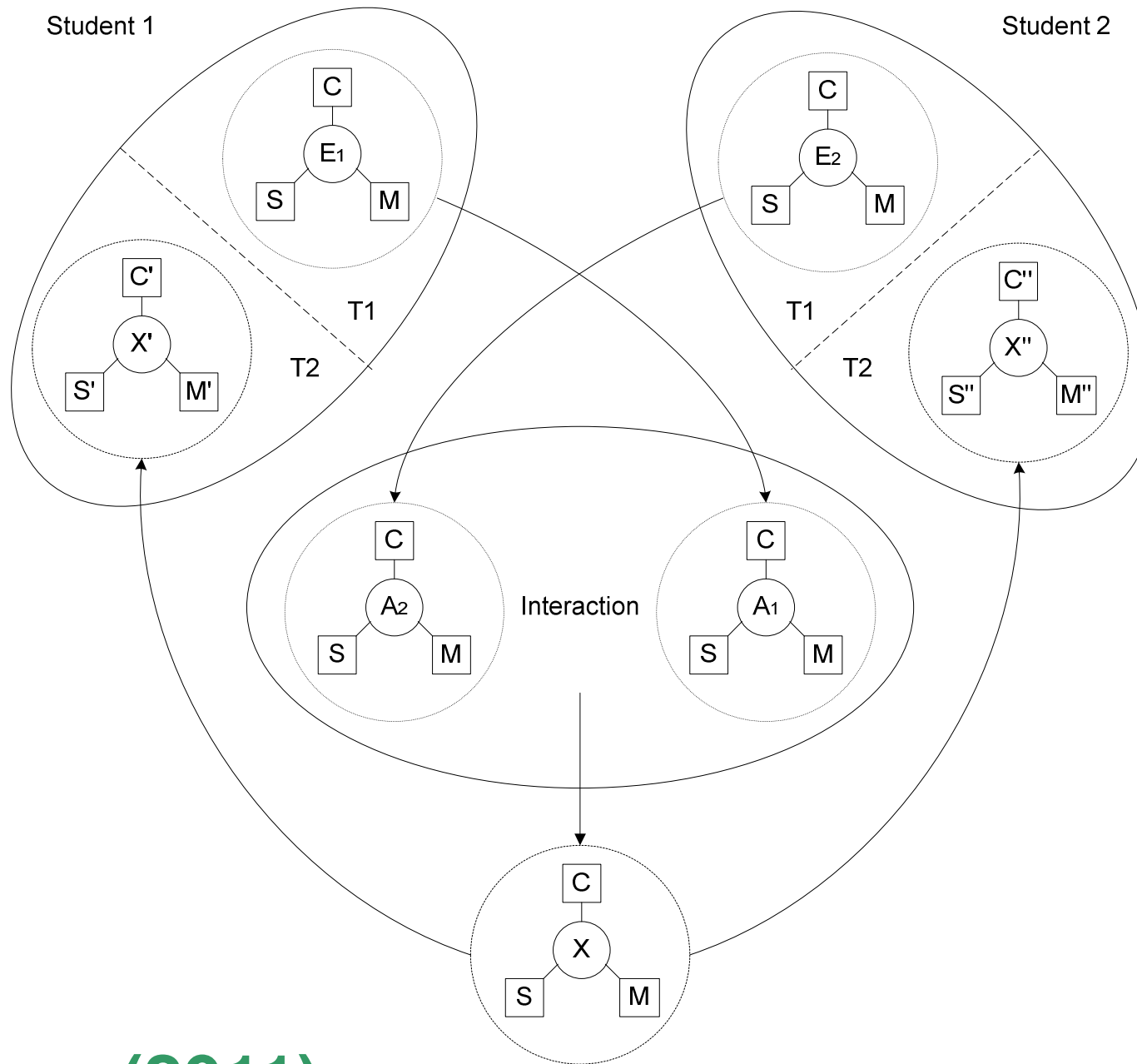# Topic 3

Social processes

Motivational processes

Cognitive processes

Assessing CL ...

1. Individual and group

2. Convergence and similarity

3. Multiple concurrent processes

18

Strijbos (2011)

Distributed emergent experience

19

How can we apply PA for CL assessment?

Assessment of CL: (mostly) summative

Group grade for each individual, or mixed with individual tasks

Assessing CL

I: 10%, G: 90% $\rightarrow$ free-riding

I: 90%, G: 10% $\rightarrow$ devalues collaboration

PA to help teacher assess "invisible" CL processes

F2F, online, *N* of groups

CL processes

PA to derive individual scores from group scores

Counteract free-riding

PA impact?

Weight criteria?

Reliability?

Cheating?

Issues with PA of CL

Formula to compute individiual scores

Strijbos et al. (in prep.)

Literature to read ...

(web-based) PA

(web-based) PF

Feedback

(CS)CL

Assessment (for learning)

360-degree feedback