

Computer-supported team-based learning:

The impact of motivation, enjoyment and team contributions on learning outcomes

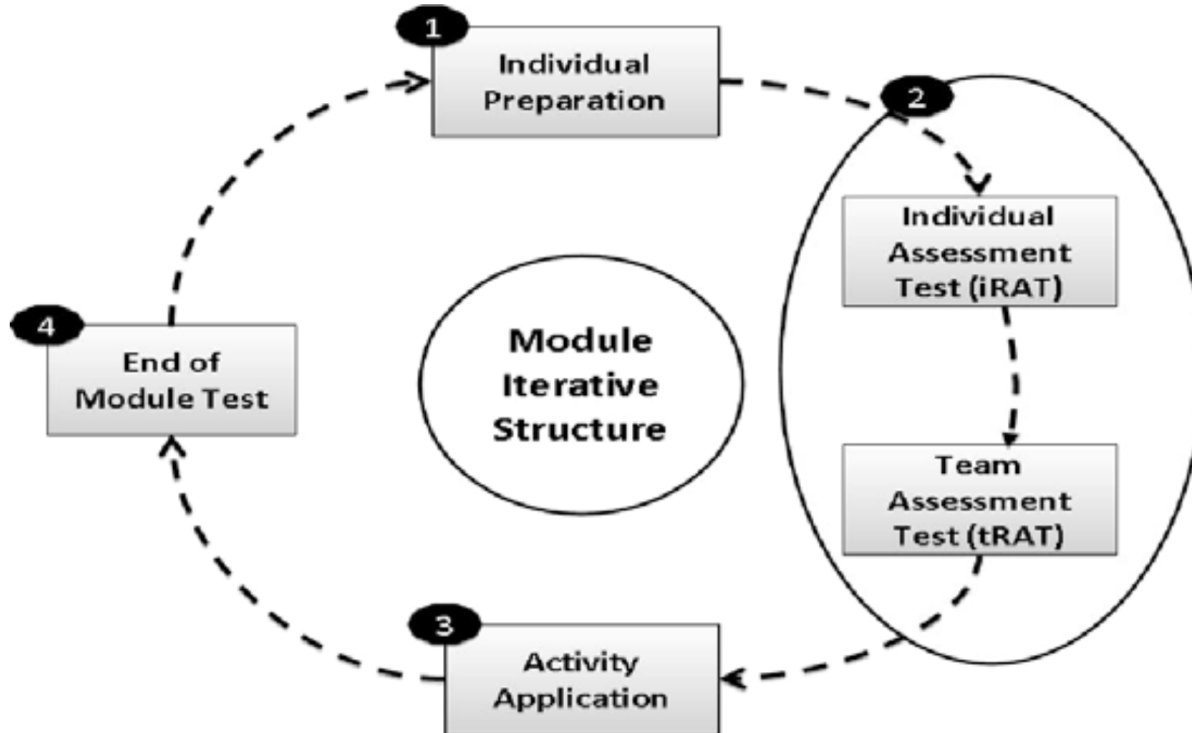
Stephen MacNeil

TBL (team based learning)

- Pioneered in **2002** by Michaelsen et al.
- **Group size:** 5-7
- **Team roles:** unspecified
- **Team composition:** random

How does this original model differ from your expectations?

TBL: original model



TBL: key features

- grounded in **constructivism** and **social learning**
 - ◆ Bandura
- allows for **multiple representations** of one solution
 - ◆ Taylor et al. (2008)
- **team engendering** activities (traditionally t-rat discussions)
 - ◆ Gomez et al. (2007)
- Partners well with problem-based learning (**PBL**) and **discussion-based learning**.
 - ◆ Barrows and Tamblyn (1980)

TBL: key problems?

→ Problems in classroom?



→ Limitations of benefits?



→ Problems outside of the classroom?



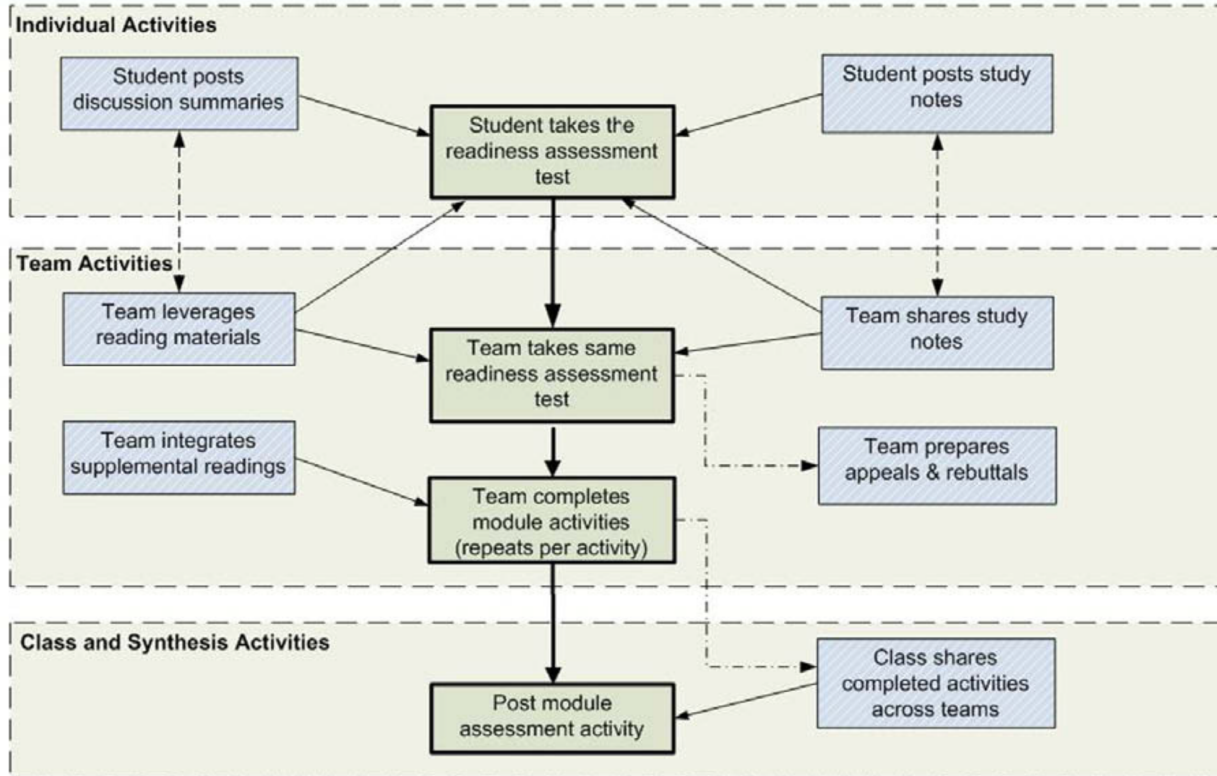
TBL: key problems?

- Problems in classroom?
 - ◆ Synchronous in nature.
- Limitations of benefits?
 - ◆ Limited to classroom time.
- Problems outside of the classroom?
 - ◆ Students are isolated to study alone (i-rats)

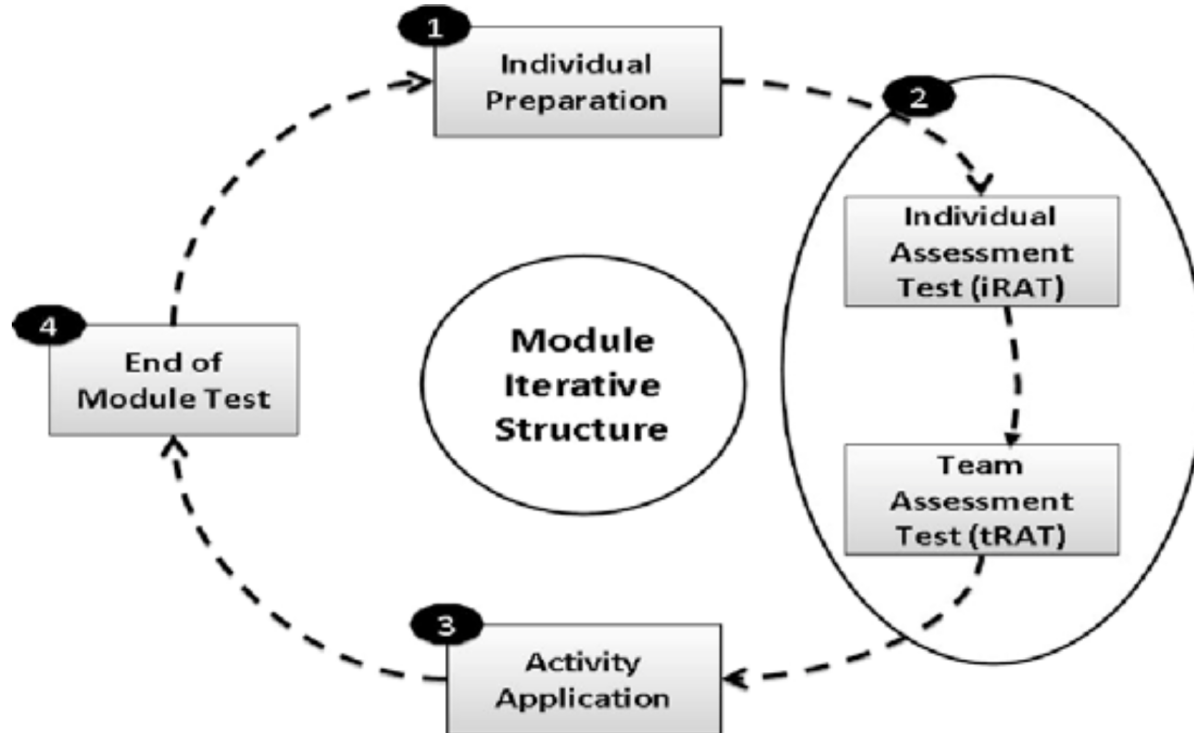
CMC(Computer supported communication)

- Supports **cooperative and collaborative learning**
 - ◆ Leider (1995)
- **Asynchronous learning** - extending beyond normal class time.
- Supports **Time- and Place-independent learning**
 - ◆ Berge and Collins (1993)

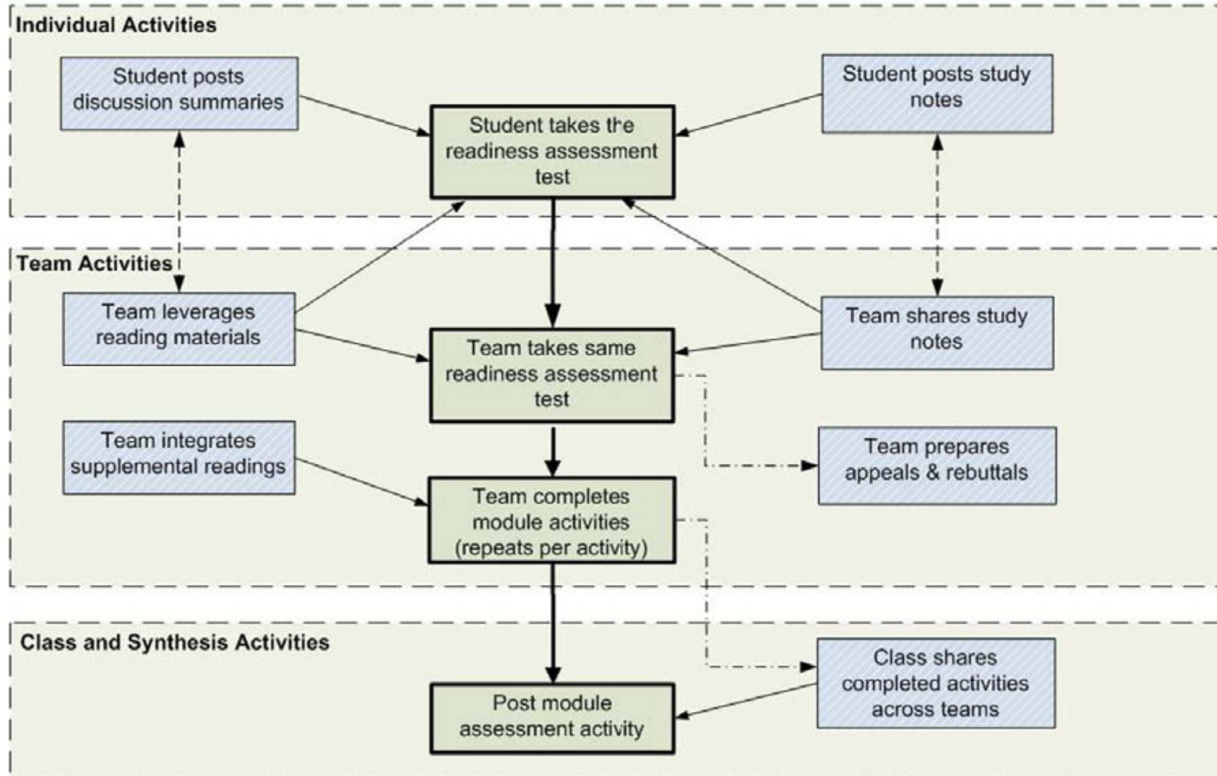
CMC: CS_(computer-supported)-TBL



TBL: original model



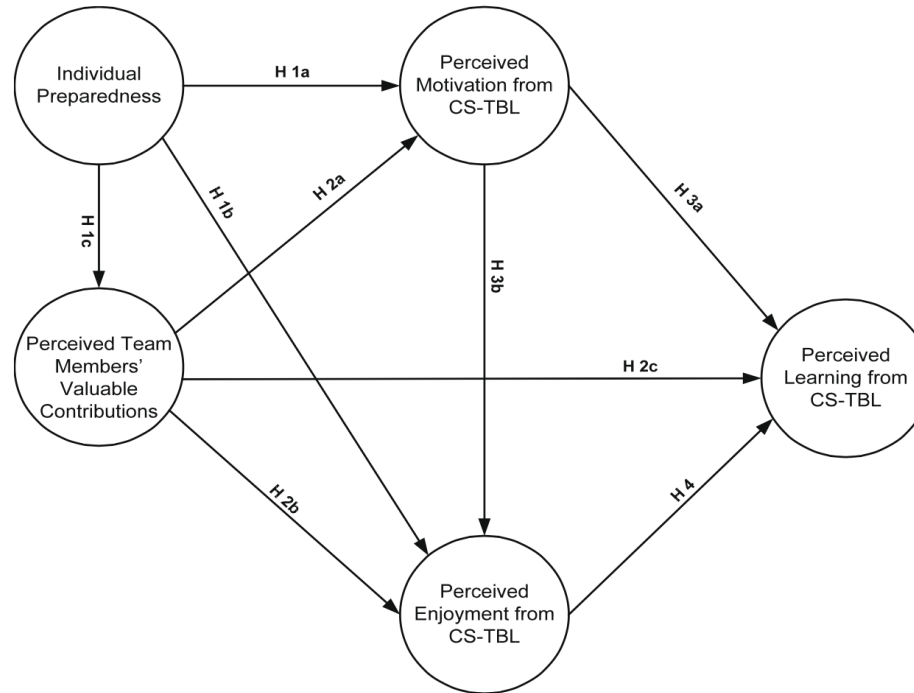
CMC: CS_(computer-supported)-TBL



Experiment Design

- Master's course in Information Systems
- Questionnaire for perceived learning (likert scale)
 - ◆ motivation
 - ◆ enjoyment
 - ◆ perceived learning
 - ◆ team-members contribution

Experiment Design: hypotheses



Conclusions

As reported by how students perceived CS-TBL

- Students were satisfied with their learning outcomes.
- Students were satisfied learning in CS-TBL

Limitations

- Very specific for their course and they worry about generalizability.
- There was no significant link between individual preparedness and learning in teams.