# Teachers as *Stakeholders* in Mathematics Education Research ?!!

*Konrad Krainer, Banff 2010, Canada*

**Teachers as Stakeholders in MER, BIRS-Workshop**

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# *Content*

Three claims about ...
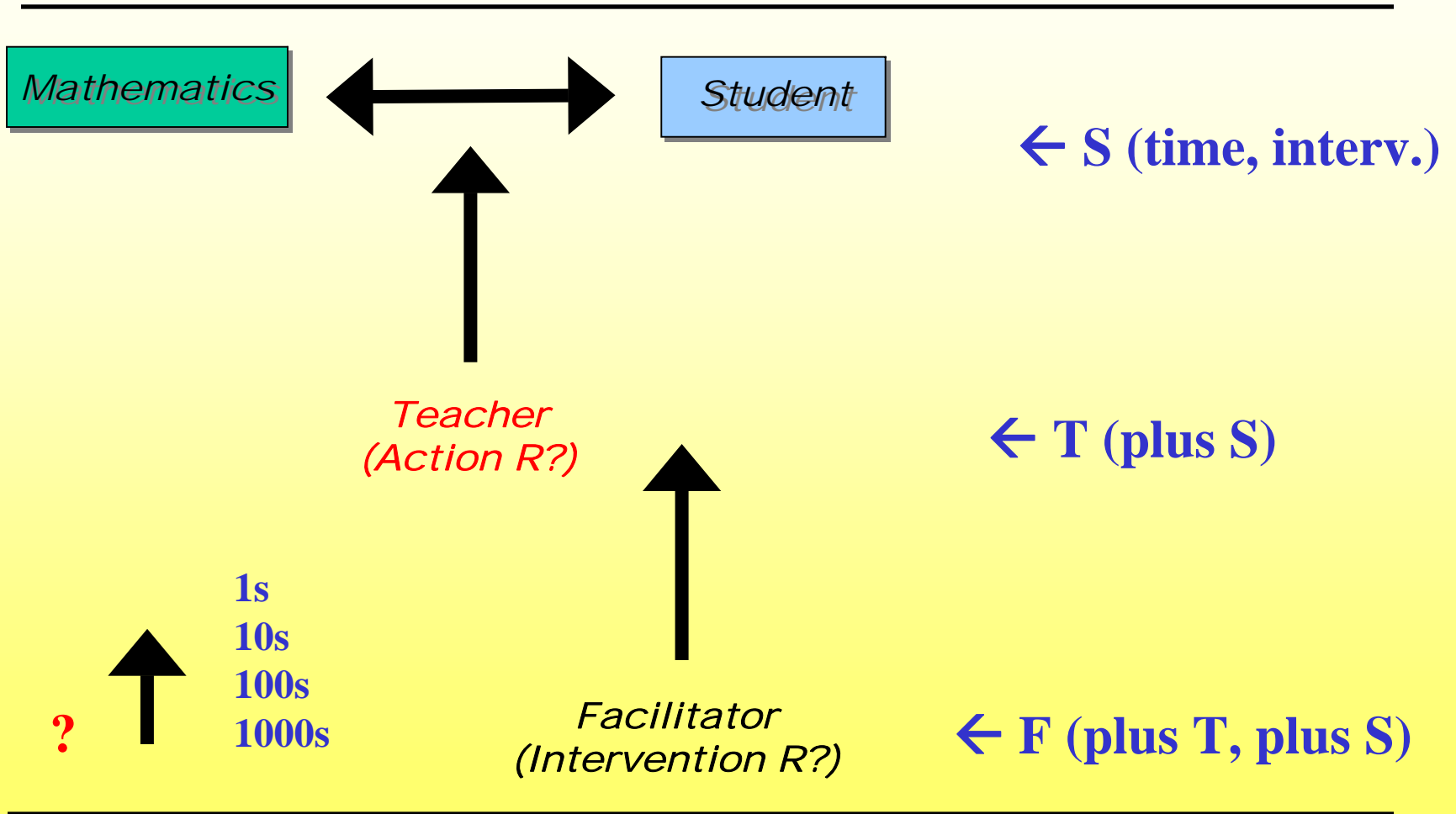
• The diversity of Mathematics Education Research

• The diversity of teachers' roles as „Stakeholders"

• „Fruitful differences" between improving (practice) and investigating

# *Claim 1*

**MER is a highly diverse field** (with a variety of potentially different roles)

- The BIG FIVE research foci are (at least):
    - Students
    - Students-Teacher
    - Teachers
    - Teacher-Facilitator
    - Facilitators

# Goals and formats of research

| Mathematics | ⟷ | Student |
|:-----------:|:---:|:-------:|

← S (time, interv.)

**Teacher (Action R?)**

← T (plus S)

1s
10s
100s
1000s

**?**

**Facilitator (Intervention R?)**

← F (plus T, plus S)

# *Another example for the diversity*

**Research on Professional Development of MTs**

Number of classrooms

| **Levels** | **Classrooms** | | **Research focus** |
|---|---|---|---|
| Micro | 1s <-> | Students, Parents, TEs | Individuals, Teams |
| Meso | 10s <-> | (Math) Leaders, TEs | Networks, Schools |
| Macro | 100s <-> | Policy makers, TEs | Districts, Nations |

# *Who is a Stakeholder in MER?*

*Based on more general definitions in wikipedia.de/en:*

- A Stakeholder in MER *(in a development, project, ...)* is a person, community, group, organization, union, system, ... *(a „natural or juristical person"),* who

–a) has an interest in the process and the result of MER and

–b) affects or can be affected by MER

# *Claim 2*

**Teachers have various roles as Stakeholders in MER**

- Researchers invite MT to take part in a study
- Math departments invite researchers for a R&D project
- Teachers and reseachers co-operate in a joint project (e.g. „Intervention research"; „give support - take data"; both are learners)
- Teachers as representatives of a profession initiate, fund, disseminate research (NCTM)
- Teacher unions hire researchers (Switzerland)

# *Relationship teachers-researchers*

- The question how intensively researchers regard teachers (and others) as stakeholders is an expression of the (intended and/or lived) relationship between teachers and researchers.

- This means that our view on „teachers as stakeholders" is about „us", about our beliefs and roles, about our understanding of „research".

# *Two recommendations regarding T's role*

- *Reflections before starting a MER project*

- How deeply do we expect teachers (and other stakeholders) to have an interest in the process and the result of the project?

- How much could/should the project affect teachers (and their practice), and how much could/should teachers (and their practice) affect our project?

# *One Example: "Good Teaching" (Norm)*

What is "Good" Mathematics Teaching, and How Can Research Inform Practice and Policy? (JMTE 8.2, 2005)

Relationship between research and norm-generating:

- Refusing norms

- Establishing norms

- Negotiating norms

# Claim 3

**Regarding teachers as stakeholders in MER affords reflecting some (fruitful) „cultural differences"**

| Dimension | Teachers | Researchers |
|---|---|---|
| Growth | Students, T | R, Sci Community |
| Knowledge | Local, Particular | Global, General |
| Transfer | Application (Prac) | Publication (Theo) |
| Action & Time | (Re)act immediately | Time to reflect |
| Sharing | Oral (→ w!) | Written (→ o!) |

# *Claim 3 (II)*

| Dimension | Teachers | Researchers |
|---|---|---|
| Field approach | Involved Nearness | Critical Distance |
| Attitude | Optimistic | Sceptical |
| Evidence | Experience (s-past) | Data (o-present) |
| Data/Int/Ass | Assessement | Interpretation |

**Progress: Looking into other's domain, negotiating interest, building trust!**