Let’s go for a TRAIL

Teacher-Researcher
Alliance for Investigating Learning

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January 8 2019
Lost in translation...

MASHAL: Teachers Patriciate in Research

TRAIL: Teacher-Researcher Alliance for Investigating Learning
Where would you put yourself on the teacher-researcher coordinate system? It is a difficult question for me.

Where would you put yourself?
What is TRAIL?

-A project
-An emerging PD model
-A way for scaling up ed. research
-An emerging framework
The more practitioners are actively involved in research, the more chances there are that this knowledge would impact the field. And vice versa, the more impact research projects have on teaching practice, the more opportunities for professional growth of its participants emerge within these projects.

What problem TRAIL attempts to address?
Duality

Knowledge creation & use

(Koichu & Pinto, 2018)
Teacher - Researcher Alliance: On what ground?

Inquiry: “trying to develop some new knowledge or understanding” (Menter et al., 2011)
Both teachers and ed. researchers...

listen to students

examine student work

assess what students know

suggest how students think

design tasks

design teaching sequences

compare approaches

talk to colleagues

learn through practice

read

think...
**Teacher inquiry**

Practice-oriented

Normative

Experience-based

Particular

**Researcher inquiry**

Theory-oriented

Analytic

Methodologically sound

Universal

(Labaree, 2003)
Teaching cycle
(1 school year)

- Create a baseline
- Teach new material
- Practice
- Prepare for a test

Research cycle
(2-4 years)

- Identify research question
- Collect data
- Analyze
- Design
Both teachers and ed. researchers like solving interesting problems.

Twenty five tennis players take part in a tournament. A player who loses a match leaves the tournament. A player, who does not have a partner in one round, automatically advances to the next round. How many matches are scheduled in the tournament?
12 + 6 + 3 + 2 + 1 = 24
64 tennis players take part in a tournament. A player who looses a match leaves the tournament. A player, who does not have a partner, automatically advances to the next round. How many matches are scheduled in the tournament?
65 tennis players take part in a tournament. A player who looses a match leaves the tournament. A player, who does not have a partner, automatically advances to the next round. How many matches are scheduled in the tournament?
N tennis players take part in a tournament. A player who looses a match leaves the tournament. A player, who does not have a partner, automatically advances to the next round. How many matches are scheduled in the tournament?
The number of games = the number of losers

There is one winner at the end

Answer: N-1
What this problem about?

Flexibility
Who is TRAIL for?

What questions such teachers are interested to explore?
How can I help my students to deal with the stress of matriculation exams?

How to teach in a heterogeneous class?

How can I encourage my students to be more independent?

How can I know if my students really understand me?

How can technology help me in teaching trigo?

Which questions do I ask in my lessons and how these questions affect student learning?
Identification of questions

- **Chosen**
- **Filtered**
  - Researchable, worthy, interesting for theory and practice
- **Spontaneous**
Questions chosen

**Question on questions:**
What are characteristics of a classroom situation rich with student questions?
(Rehovot 1)

**Question on flexibility:**
How can we help students to flexibly move among different representations and different strategies? (Haifa 1)

**Question on “talking tasks”:**
How to balance problem solving and doing exercises, by means of sequences of “talking tasks”? (Rehovot 2)

**Question on surprises:**
What classroom events are surprising for me and/or my students? How can I surprise students in good ways? (Haifa 2)

**Question on problems we like:**
What mathematics problems do we like and how to incorporate these problems in teaching? (Mofet)
How does TRAIL work?

Choosing a worthy direction

Design (of tasks and tools)

Collecting evidence

Making sense of the evidence

Summarizing and reflecting

Theory is touched upon the need...
TRAIL premises

• *PD via Involvement in Research* premise
• *Authenticity* premise
• *Choice* premise
• *Shared Agency* premise
• *Win-win* premise
• *Feasibility* premise

(Koichu & Pinto, 2018, 2019)
What can TRAIL be good for?

**As a project**: attracts experienced and open-minded teachers

**As a research model**: opportunities to explore various research questions of R&P importance. Scaling up.

**As a PD model**: opportunities of *learning for* and *learning through* participation in research.

Mix of the didactical and the a-didactical
Let’s go for a TRAIL!