

TEACHERS' USE OF JUMP: A DISCURSIVE APPROACH TO STUDYING PROGRAM FIDELITY

Nathalie Sinclair & Joan Moss

(nathsinc@sfu.ca & jmoss@oise.utoronto.ca)

TEACHER FIDELITY & UP-TAKE

- Research continues to show that teachers adopt reform-based curricula with very low levels of fidelity
- Fidelity has been measured in terms of the following reform-oriented *practices*: use of problem solving (real-life problems, complex problems, etc.), developing reasoning and proof, communication, connections, using a variety of representations. (Jacobs et al., 2006)
- Why such low fidelity?



TEACHER FIDELITY TO JUMP?

- Self-motivated teachers doing PD on their own time and through their own self-organisation: does this result in higher fidelity?
- JUMP not a reform curriculum (and not a traditional one either): Does this result in higher fidelity?
- What does teaching JUMP look like? Do teachers teach JUMP?
- Discursive approach to answering these questions: how similar are their discourses? Specifically, how do their *routines* compare? (*routines* are well-defined, repetitive patterns of interaction, see Sfard, 2008)



EXAMPLES OF REFORM ROUTINES

- Asking students to express themselves in spoken words
- Asking students to write down their work
- Working on language of conjecturing, arguing, proving, etc.

- Asking students for multiple solutions
- Choosing real-life problems
- Using open-ended problems



METHOD FOR STUDYING JUMP FIDELITY

- Analysis of videotapes of classroom teaching by JM
- Identification of routines (repeated well-defined patterns of interaction) drawing on videotapes, and supported by interviews)
- Analysis of classroom teaching for 3 teachers (PD 1 full day and about 5 after school sessions)
 - David: novice, grade 3, Mid SES, 60% esl
 - Maggie, experience, grade 5, High SES, 30% ESL
 - Alana: novice, grade 5/6, Low SES, 70% designated, 60% ESL
- Comparison of JM routines with case study teacher routines

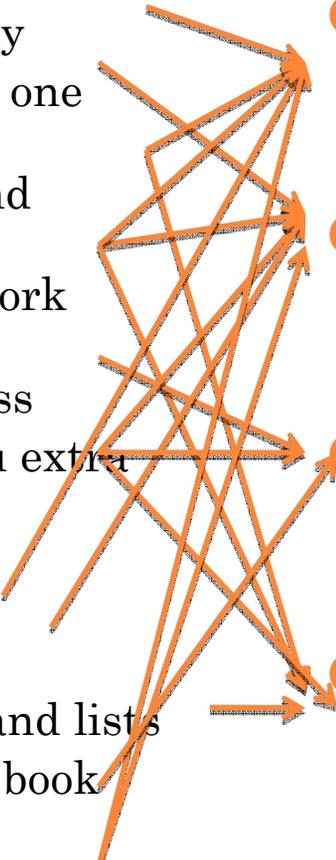


ROUTINES OF JUMP (FROM JM)

- Waiting until all hands are up
- Praising students frequently
- Asking questions that have one short answer
- Giving hints, rephrasing and clarifying
- Checking every student's work frequently
- Giving "quizzes" during class
- Keeping students busy thru extra questions
- Offering "Bonus" problems
- Referring and relating to mathematicians
- Organising work in tables and lists
- Asking students to work in books
- Being dramatic



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- 
- Engaging the Collective
 - Confidence Building
 - Continual Assessment
 - Raise Bar Incrementally



RESULTS: ROUTINES OF JUMP

- **Waiting until all hands are up**
- **Praising students frequently**
- **Asking questions that have one short answer**
- **Giving hints, rephrasing and clarifying**
- **Checking every student's work frequently**
- **Giving "quizzes" during class**
- ~~Giving Bonus problems~~
- **Referring and relating to mathematicians**
- **Organising work in tables and lists**
- **Asking students to work in books**
- **Being dramatic**



REFLECTIONS ON FIDELITY

- Comparatively high level of fidelity
- Routines not used Giving BONUS. Why?
 - Making up BONUS questions mathematically challenging
- Why are so many routines taken-up?
 - They match shared desire (and endorsed narrative) of supporting all children (esp. given the ESL situation)
 - They are more explicit in their directions for action (c.f. “promote mathematical discourse” or “making connection”)

