



Examining Primary School Mathematics Teachers' Understanding of How Being Out-of-field Affects Their Experience
in Practice: Wenger's Social Theory of Learning

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Presentation at the 5th Teaching Across Specializations (TAS) Collective Symposium

"Researching teaching out-of-field in Maths, science and beyond"

2-3 September 2018, Bolzano

Out-of-field teachers, by definition, refer to teachers teaching outside their field of training or education (Ingersoll, 2002) or year level they are supposed to teach (Du Plessis, 2017).

Accomplished teachers refer to teachers who have been teaching more than 5 years in the same field and members of a professional community who are ready, willing, and able to teach and to learn from their teaching experiences

Shulman (2004), Du Plessis (2017)

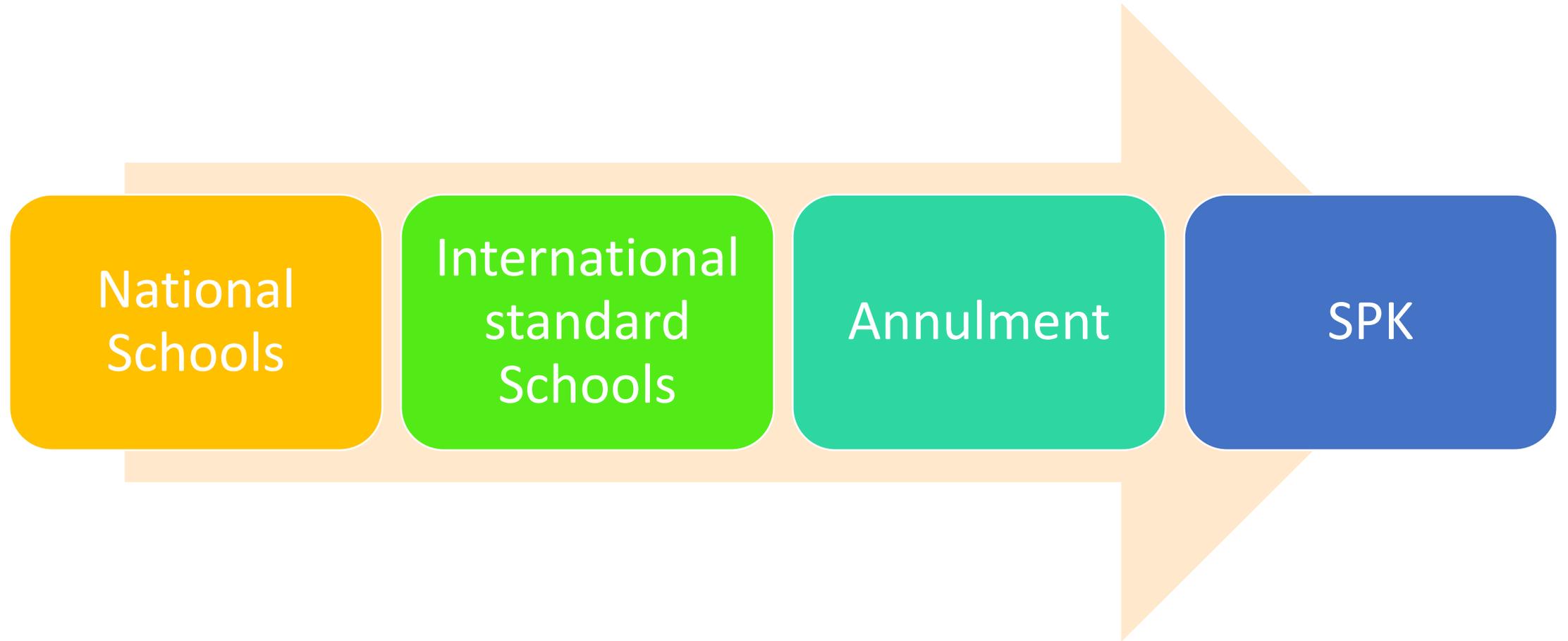
International Schools

Type A traditional definition, market-driven for the children of expatriates and predominantly not-for-profit

Type B based on ideology, mission-driven to promote international understanding and peace such as United World Colleges and Aga Khan Academies

Type C market-driven for the children from the local (indigenous), wealthy population or local elite, predominantly operated on a for-profit commercial basis; and have been defined as international schools because they are located in a non-English speaking country and English is the school's medium of communication

Indonesian context



Background

1. Numbers of SPK by November 2017
2. Out-of-field local teachers
3. No regulations until 2014
4. No academic articles related to these teachers

Level	
Pre-school	58
Kindergarten	99
Primary Schools	209
Junior High Schools	176
Senior High Schools	124

Research Questions	Wenger's
How are teachers' reflections of their changed role?	Identity
How are teachers' processes and experiences of participation and engagement in their current teaching practice?	Practice
How do the teachers interpret and understand their transformation from being out-of-field to accomplished teachers?	Meaning
How are the teachers' processes and experiences of belonging to their current teaching practice?	Community

Methodology

- Case study
- Interview three teachers and Math coordinators
- Artifacts of teachers' professional learning

Wenger's Social Theory of Learning



Participants

Megawati

- Economics
- 13 years

Risma

- Journalism
- 11 years

Jokowi

- English Letters
- 15 years

How they started



When I started at that Christian school, no training for new teachers in relation to teaching, the only training they provide was how to be a good christian.



I applied to that school because it was in Jakarta, the capital city. That's it!



I was obsessed working at the biggest publishing company, I promised myself no to work in Jakarta, not to teach and not to work in English speaking environment

Identity



She did all trial and error for her teaching, getting feedbacks (self-initiative) from students, peeping into senior teachers' classes to see how they delivered the class, become VP, move to another school, got a clue on how effective and engaging teaching should be.



She stayed in the same school. Started off with difficult technical terms, confused, read books, tried different levels, got a big picture why things happen, train teachers with much simplified terms to understand



Job-hopper and has been staying in the current one for more than 8 years. Learn how to teach from books, having a community of "classroom without borders" as a means for sharing with other teachers.

Practice



I changed the initial plan to teach prisma segitiga (triangular prism) as I observed my students are more of visual learners, so I used a play dough for them to discover the volume.



Teaching concept is not easy. The use of manipulatives helps me and my students understand the topic better. Choosing the right manipulatives, delivering materials with manipulatives are challenging but fun at the same time



I integrate technology in my math class by using the apps called explain everything to engage students.

Meaning



To me, teaching primary school, specifically math is the great leveler.



It is interesting to think about how my life has been touched through teaching.



This is literally a journey to the unknown

Community



Collaborating planning, team teaching and sharing session



Mentor-mentee, open for sharing and discussion



Classroom without borders

Research Questions	Conclusion
How are teachers' reflections of their changed role?	The importance for teachers to allow themselves to grow through unlearning, relearning
How are teachers' processes and experiences of participation and engagement in their current teaching practice?	the importance for teachers to collectively discuss their experiences in their teaching practices, specifically Mathematics
How do the teachers interpret and understand their transformation from being out-of-field to accomplished teachers?	the importance for teachers to engage in reflection throughout their professional learning
How are the teachers' processes and experiences of belonging to their current teaching practice?	importance for teachers to observe and view other colleagues', and the opportunity for teachers to become more familiar with Mathematics teaching materials and methods to enable for more authentic teaching experiences with their students