

Book on Curriculum Standards

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Teacher Quality: Challenges in Math Education

Objectives

- The proposed book aims to share the contemporary and challenging issues in mathematics education that are related to the quality of mathematics teachers from global perspective.

Proposed Sections

- The conceptualisation of a good mathematics teacher from a global perspective;
- Southeast Asia Regional Standards for Mathematics Teacher (SEARS-MT): For whom and what?
- Mathematics teachers' knowledge in teaching mathematics;
- Assessing mathematics teacher competency; and
- Mathematics teacher education: Challenges and initiatives.

Process

- Submit abstract of not more than 400 words
- Submit complete paper upon acknowledgement by editors (Dr Isoda, Dr Thien & Dr Toh)
- Paper sent for thorough review
- Decision communicated to the author

Progress

- So far, five papers have been accepted and one chapter is under review.
- You are encouraged to contribute one chapter to one of the above topics.
- Please send in your abstract to me at tinlam.toh@nie.edu.sg by 28 Feb. We will review the relevance and give you the go-ahead sign.

Presentation of Chapters

- Those who present their proposal on 9 Feb could submit their full paper to the editors without the need to submit their abstract for approval.

Presentations

- Mizoguchi Tatsuya
- Yuriko Yamamoto Baldin
- Nyugen Chi Thanh
- Wahyudi
- Maitree Imprasitha
- Hee-chan Lew
- Toh Tin Lam
- Masami Isoda

Reflections about the Role of Problem-Solving Lessons in the Competency in Assessment for Teacher Standards

A chapter contribution to the Book on Teacher Standards
APEC- SEAMEO- Conference
2018- U. Tsukuba Tokyo Campus

Yuriko Yamamoto Baldin – UFSCar- BRAZIL

ABSTRACT

The chapter aims to present some reflections about **the role that Problem-Solving Lessons** can play **in the professional development of teachers** regarding the objective of **the competency in assessment**. The chapter intends **to discuss the dimension of the competency in assessment as a component of Standards for Teachers**, such as those proposed in documents of some leading countries in Mathematics Education for Teachers, for instance Australia and USA. These documents can guide the reflections of developing countries facing urgent needs of **Quality Education of Teachers** as a key strategy to promote improvements in Basic School Mathematics Instruction. The recent movement of developing countries to organize **the Standards for Teacher Qualification is a trend that can contribute to the Mathematical Quality of Instruction in those countries**. **One example** is the document **Standards for Mathematics Teachers-SEARS-MT of Southeast Asian countries** that presents an organized summary of a consistent proposal of distinct dimensions and indicators of Standards, which **may serve as a model to other developing countries undergoing curricular reforms for Teacher Education Programs**. **This text intends to elaborate some reflections about assessment as a competency for teachers**, backed by literature and based on the previous experiences of the author,

The chapter attends to the requirements established by the BOOK in bringing the dimensions and indicators of the competencies for Teachers of SEARS-MT to the practices and the processes of teaching and learning inside the classrooms regarding the subject of problem-solving, lesson study and the formative assessment.

Contents

- Introduction: assessment and teacher education
 - *Theoretical considerations about the importance of **formative assessment** as central concept in competency for teaching*
 - *The indication of SEARS-MT alignment with the Teacher Standards for High Quality Education*
- The Standards and problem-solving lessons
 - Discusses the structure of *the dimensions of competencies for teachers* of the Standards and relates *its indicators to the participative problem-solving lessons*
- Lesson Study principles in Problem Solving approach for Teacher Education
 - *Open-ended problem solving lessons* related to a shift from *the dimension of Professional Teaching and Learning Process to the dimension of Personal and Professional Attributes (SEARS-MT)*.
- The role of error analysis in the steps of problem solving lesson in teacher learning to teach.
 - *Analysis of errors* during the problem solving lesson related *to the competency in formative assessment of teachers*
- Concluding remarks

NGUYEN Chi Thanh Presentation

- Brief presentation about Vietnam general (secondary education: from primary education to high school education)
 - General Education system
 - Curriculum reform in general education:
 - + years 1950
 - + years 1980
 - + years 2000
 - + years “2015” -> after 2015
 - Current teacher education: models and content
 - Current curriculum in Mathematic teacher education

NGUYEN Chi Thanh Presentation

- Vietnam teacher standards (VTS): For whom and what?
 - The first standards in 2009
 - + Rational for an establishment of VTS
 - + Purpose of setting up VTS
 - + Key terms
 - + Structure of the VTS
 - + Application and challenges
 - Undergoing project of standards in 2018
- Mathematics teacher education:
 - Mathematics teachers' knowledge in teaching mathematics;
 - Assessing mathematics teacher competency; and
- Challenges and initiatives for a radical teacher education reform in order to adapt to new “after 2015” curriculum.

NGUYEN Chi Thanh Presentation

Some issues to be mentioned

- Global perspective?
- How to relate to SEA-MT?
- Clarify the relationship between quality of mathematics teachers and contents mentioned in the books such as standards, mathematics teachers' knowledge, assessing mathematics teacher competency; and mathematics teacher education in order to have a clear "philosophy" when making chapters
- Two approaches: by country/themes or by theme/countries. Which one to be adopted?

One chapter to one of the above topics.

- To have common "standards" when writing chapter as title, sub title, bibliographies, number of pages for a contribution...