

IMPLEMENTATION OF LESSON STUDY IN MATHEMATICS IN ZAMBIA

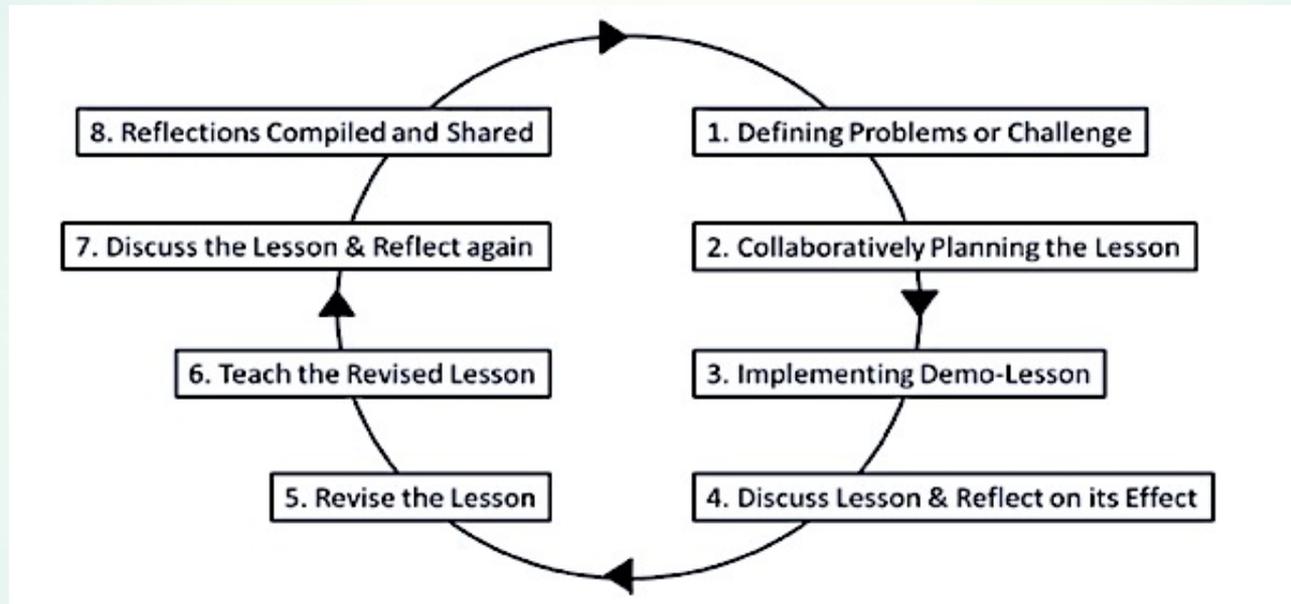
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Introduction

- ❖ Several countries have **adapted** Japanese Lesson Study to **improve** the quality of teaching and enhance students' learning experiences in subjects such as mathematics.
- ❖ Zambia **adapted Lesson Study in 2005** with help of Japanese International Co-operation Agency.
- ❖ However, researchers have recounted instances where adaptations have **overlooked** some **critical features** of Lesson Study (e.g. Fernandez, Cannon, & Chokshi, 2003).

Lesson study in Zambia



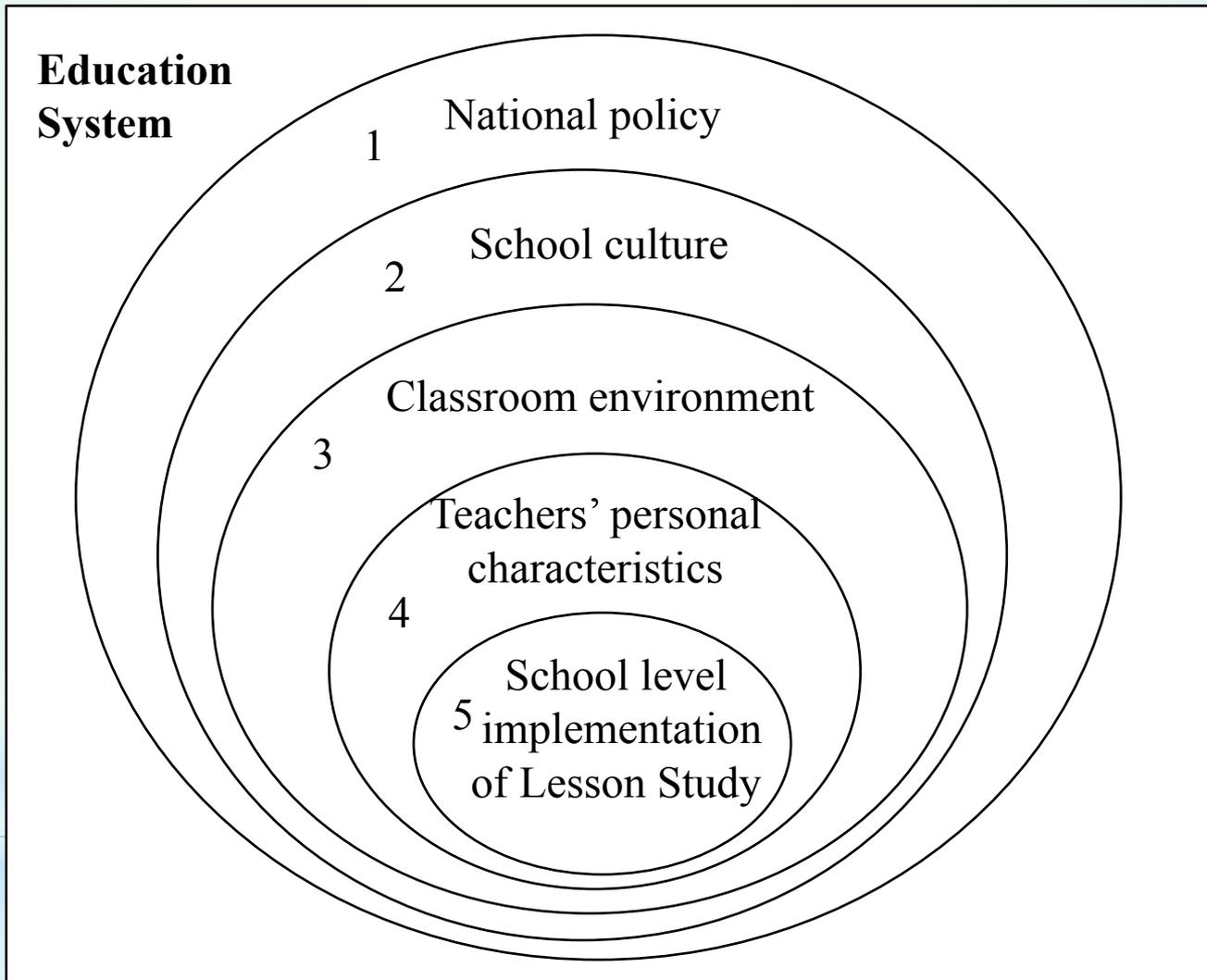
Lesson study cycle

- ❖ Ministry of Education requires public schools to implement Lesson Study once a month in all curriculum areas.
- ❖ This study investigated the implementation of Lesson Study in mathematics in Zambia.

Research questions

- SQ1: How is lesson study in mathematics defined by the Zambian Ministry of Education, in-service providers, school administrators, and teachers of mathematics?
- SQ2: What mechanisms have been put in place to establish lesson study as a model for professional development in Zambian schools?
- SQ3: How is lesson study being implemented at the school level?
- SQ4: What has been the effect of the implementation of lesson study in mathematics in Zambia?

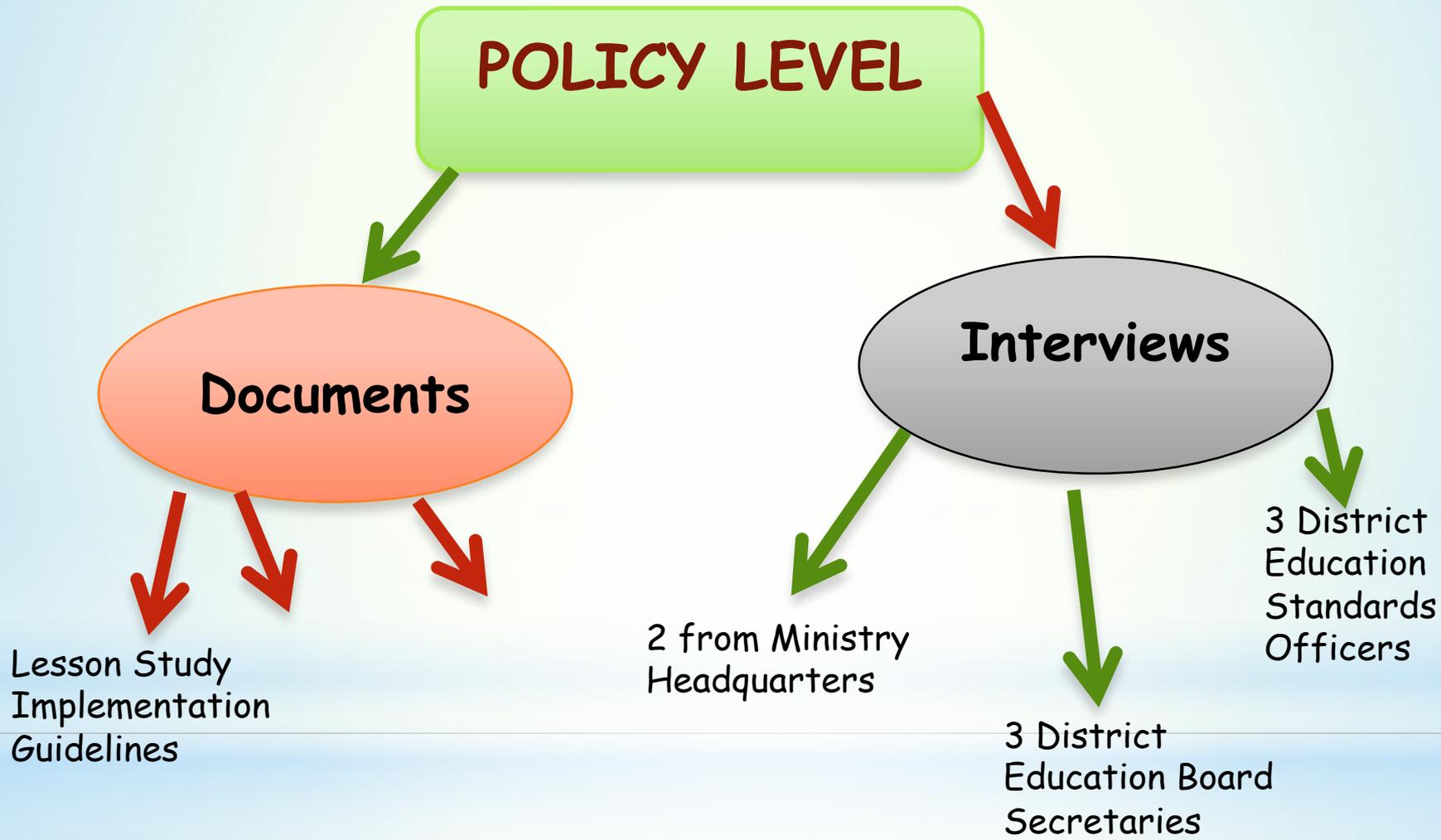
Onion Rings Model



Adapted: European Commission, 2011

The Onion rings

Ring	What the ring denotes	Implication for this research
1	National policy on education	Examine how Zambian Ministry of Education defined LS in mathematics
2	Focus on school culture, especially, school leadership, teacher collaboration, staff relationships and communication	Describe how LS was actually conducted within the school, and what school organisational procedures assist the implementation
3	Classroom environment (physical and pedagogical aspects, including instructional materials)	Ascertain effects of physical and pedagogical aspects of classrooms on LS implementation, and effects of LS on physical and pedagogical aspects of the classroom
4	Teachers' personal characteristics, specifically their competencies, beliefs and attitudes	Ascertain effects teachers' personal characteristics on LS implementation, and effect of LS on teachers' personal characteristics
5	Actual activities during Lesson Study cycle	Investigate LS activities in detail: (i) planning lesson research, (ii) teaching the lesson, (iii) re-vising the taught lesson, (v) re-teaching revised lesson, (vi) post lesson discussion



School level

Case studies of three schools

Central Province

- First implemented LS
- 2 schools randomly selected

Southern Province

- 1 school randomly selected

School level

At each school:

- ❑ Two Lesson Study cycles observed and video-recorded

- ❑ Each cycle:

- Planning →
- Teaching
- Revising
- Re-teaching
- Post-lesson discussion



School level



Two teachers

- Research Lesson 1
- Research lesson 2

Two School administrators

- Head teacher
- CPD coordinator

Grade 12 Examination data

Data analysis

Documents

- A checklist of issues that needed to be explored was used to analyse the documents

Interview data

- Transcribed and coded using NVivo.
- Codes were derived from the research questions.

Video data

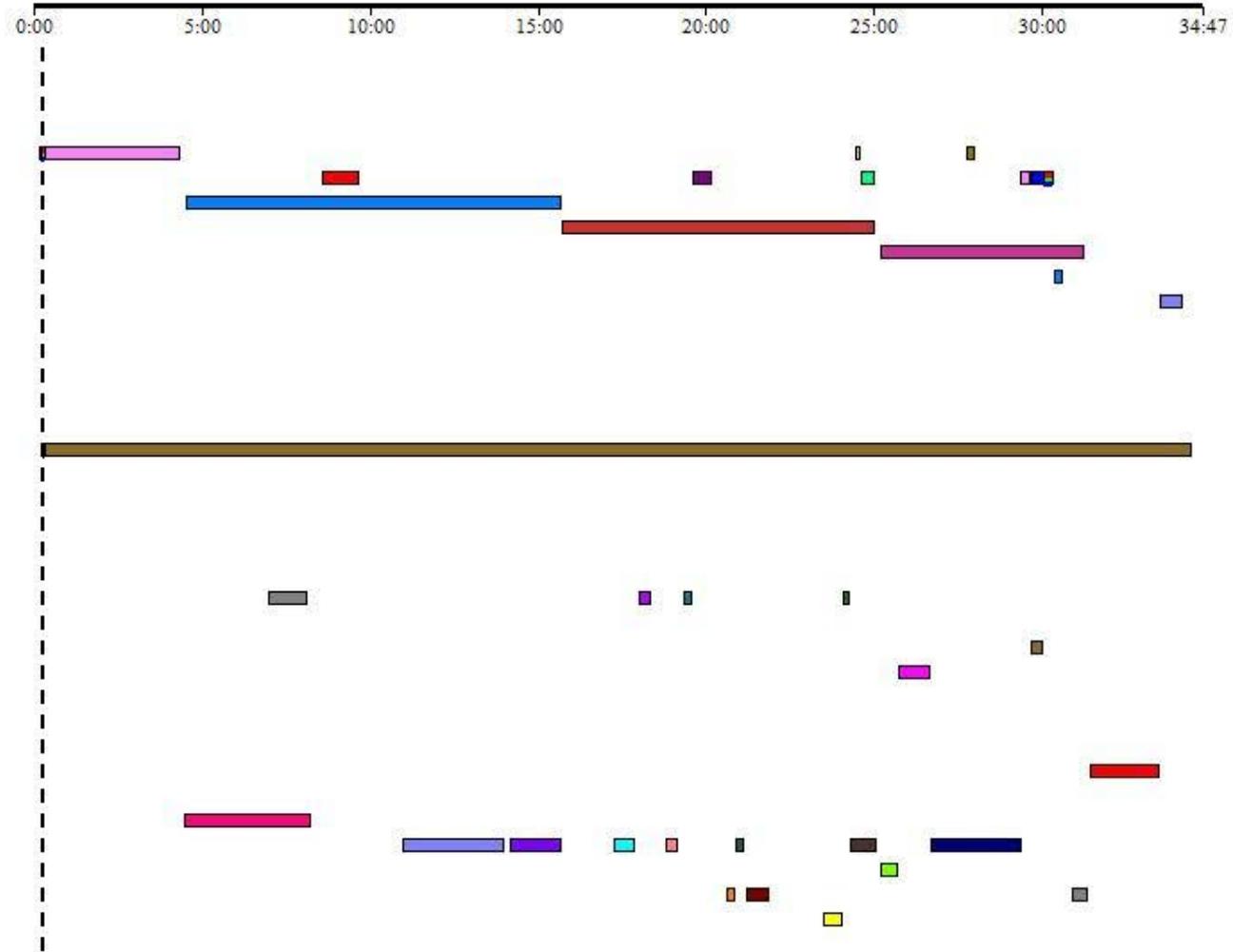
- Analyzed using Transana
- Keywords were created
- Coding was done

Example of Transana analysis: - Planning

Library: 1 Planning research lesson

Episode: S1-P1

File: HCP1.mp4



Thank you