Consecutive cycles of “whole class” Lesson Study
A format for development of shared teacher knowledge in preservice teacher education
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Abstract

An analysis of three lesson study cycles of the same research lesson carried out by 16 pre-service lower secondary teachers. The process of lesson planning and revision is displayed and it is shown how the pre-service teachers develop knowledge about critical details of the lesson, its contents and pupils’ learning.

Research Questions

How is knowledge gained from each research lesson and post-lesson reflection incorporated in subsequent re-teaching?

What are the benefits and drawbacks of large group sizes in pre-service teacher lesson study?

Knowledge development

Initial task type (T) put to the pupils, anticipated techniques (t)

T1: Who in the class is most likely to be selected to pick up milk.

T2: Investigate who of three pupils are most likely to be the one pick up milk, if they use two coins.

T3: Make a combinatorial argument to answer T2.

T4: Peer/class discussion based on prior experiences.

T5: Perform physical simulation, take count.

T6: Perform large number of simulation using padlet (mobile phone).

T7: Draw a schematic of sample space.

Associated didactic techniques (κ)

τ1: Use of familiar context engages the pupils.

τ2: Pupils become aware of subjective beliefs about probability.

τ3: Pupils become aware of combinatorial probability.

Reasons (β) for tasks and techniques.

β1: Pupils should become of subjective beliefs about probability.

β2: Pupils become aware of statistic probability.

β3: Pupils aware that statistic probability variation decreases.

β4: Pupils become aware of combinatorial probability.

Concluding Remarks

Knowledge that the lesson does not work optimally are first sought remedied with minor didactic changes, before major changes are attempted.

A “knowledgeable other” is crucial to overcome reluctance to make major changes.

The semi-autonomous process of lesson study need another scaffolding to engage a whole class and thus produce didactic knowledge common to all pre-service teacher students.

Conclusions from post-lesson reflection:

- Lessons are unclear to the pupils. (lack of “raison d’être”)
- ICT simulation difficult, unclear if pupils realise what they are doing.
- The lesson need a central problem to focus on.

References

