Pre-service teachers’ use of textbooks in classrooms in England

Julie-Ann Edwards, Rosalyn Hyde & Keith Jones
31 July 2014
Context

- In England there are no state or regionally determined textbooks

- Textbooks are commercially written, often in partnership with examination boards

- Design tends to be standardised with the national curriculum and examination syllabi
Textbook structure

Commonly,

- Explanation or description of the mathematics
- Examples of how to present the mathematics
- Some questions in increasing difficulty for practice
- Occasionally, a context-situated problem to summarise learning
Research design

• How do teachers use textbooks resources available to them to teach the national curriculum?

• Small-scale purposive sample of post-graduate pre-service teachers training to teach mathematics to 11-18 year olds

• Qualitative, and some quantitative, data from two cohorts
  – 25 on a university-based route spending 2/3 of their time in schools
  – 17 on a school-based route who spent 15 days in university over the year

• Survey undertaken 2/3 of the way through the course
Analytical framework (Pepin & Haggarty, 2001)

- whether textbooks are actually used in the process of teaching and learning;
- how the authority of the textbook is viewed in the context of the classroom;
- where textbooks are used, who makes the decisions about use and whether these are used by the teacher or students;
- who makes the decisions about what textbooks are used for and what aspects of textbooks teachers value;
- how teachers mediate the textbook for learners;
- the culture of the classroom or educational institution and how this affects how textbooks are used in classrooms.
Textbook use - Findings

Pre-service teachers use textbooks for a wide range of purposes, in particular:

- to support their planning for teaching;
- as a source of example problems;
- for determining the sequencing of topics;
- to provide activities;
- as a resource for individual students.
Use of textbooks

- “only used once”;
- “have not used a textbook to plan any lesson so far”;
- “not seen them being used within teaching”;
- “commonly used in lessons”;
- “great for lower ability classes”;
- “I don’t use textbooks much but the more established members of staff use them for most lessons”;
- “work is based on these textbooks”;
- “I was told to use textbooks to help plan and to use as a resource”.
The authority of the textbook in the classroom (1)

• “for ideas on the order, the level and type of questions”;

• “good for sublevels”;

• “make the progression through the topic clearer”;

• “books say what within ratio I need to do”;

• “break down topics”;

• “questions are not always appropriate/well-planned....level of differentiation ... is not supported by textbooks”;
The authority of the textbook in the classroom (2)

• “boring”;
• “jumps about a lot”;
• “topics separated”;
• “the approach of most textbooks denies the fundamental interconnectedness of mathematics .... dull, bland, generic .... culturally narrow, hard to read”.
Decisions about use and whether use is by the teacher or students:

- “I use pages from different books to produce own resources”;
- “tasks are selected for particular classes based on their skills/preferences/prior knowledge”;
- “varying use of textbook depending on topic and class”.
Decisions about what textbooks are used for and their value

• “pupils can see progression”;  
• “books say within ratio what I need to do;  
• “good for questions to practice algebra”;  
• “good range of examples”.

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How teachers mediate the textbooks for learners

• “no one textbook covers every topic [the] best way”;

• “I use pages from different books to produce [my] own resources”;

• “tasks are selected for particular classes based on their skills/preferences/prior knowledge”;

• “not a ‘ready to use’ resource as it stands”.
Culture of the classroom and how this affects how textbooks are used

• “do not provide enough differentiated tasks”;

• “not enough examples”

• “examples progress too quickly”.
Discussion

• Under-use, in general, of mathematics textbooks by pre-service teachers

• Self-determining practice

• Varied use supports the findings of Haggarty & Pepin that teachers often use textbooks in ways not envisaged by their authors

• Suggests that they are imposing their own pedagogical judgments over those of the textbook author.
References

