

Promoting improvement in initial teacher education (ITE)

As part of the ITE inspection framework from September 2012, Ofsted is promoting further improvement in the ITE sector by providing annual dissemination conferences and associated web-based materials for each of the thematic inspections conducted alongside individual inspections of ITE partnerships in 2012–13.

During 2012–13, these focused on:

- primary mathematics
- secondary modern languages
- secondary science
- secondary history.

Thematic inspection of primary mathematics

The evidence base

During the course of 2012–13, HMI focused in depth on provision and outcomes in mathematics for primary trainees in 21 of the ITE partnerships inspected.

Inspectors:

- observed
 - mathematics teaching by trainees and by newly qualified teachers (NQTs)
 - centre and school-based training sessions
- held discussions with
 - partnership leaders responsible for mathematics
 - trainees and NQTs
- scrutinised various documents, including
 - course information
 - trainees' and NQTs' folders
 - records of observations and discussions with trainees.

The overview

- Of the 34 inspections of primary ITE, 21 included a focus on primary mathematics.
- Taken together, the effectiveness of partnerships' work in primary mathematics was weaker than the picture overall for primary ITE.

Key findings

Strengths of stronger practice / partnerships

- Trainees are increasingly enthusiastic, confident about teaching mathematics as the course/training progresses.
- Trainees generally plan interesting lessons planning that take account of the skills and knowledge of different groups of pupils.
- Improving strengths in teaching include use of:
 - a range of resources and activities, including problem solving and use of outdoors for younger pupils, that interest pupils and promote good behaviour
 - questioning to check learning (although not always to re-shape teaching subsequently, except by the best trainees)
 - mathematical vocabulary by trainees and pupilsand provision of opportunities for pupils to use different strategies and share their ideas and thinking
- Training often includes an emphasis on misconceptions and problem solving.
- The best training:
 - establishes a baseline of trainees' subject knowledge, promotes and tracks its development
 - focuses on developing trainees' understanding of progression in strands of mathematics and teaching approaches that develop pupils' conceptual understanding (including through models and images)
 - models a range of high quality teaching approaches, promoting reasoning and discussion and a coherent view of the subject
 - is informed by current educational research and thinking, including Ofsted survey reports, and changes such as the new National Curriculum and EYFS framework
 - gives due weight to observing trainees' teaching of mathematics in school.

Areas of inconsistency

- Trainees' lesson planning showed a lack of awareness of progression, often due to training that focused on unit plans or textbook schemes coupled with insufficient opportunities to plan longer sequences of lessons.
- A common clear emphasis on problem solving in training is not reflected in trainees' teaching.
- Where trainees' explanations and work set for pupils focused on 'how' rather than 'why, pupils' understanding was not secure.
- The quality of school-based training varies and is too dependent on:

- the quality of the mentor, especially in terms of her/his knowledge of good practice and insight of guidance provided
- the suitability of the placement, particularly in terms of the calibre of practice demonstrated in the school and the age assigned to the trainee.
- Recruitment information is not followed-up rigorously and subsequent subject-knowledge audits are not used to track impact.
- Not enough detailed knowledge is gathered on how all trainees teach mathematics, particularly whether the focus is on 'why' as well as 'how'.
- Feedback on teaching does not contain enough mathematics-specific detail to promote improvement in subject expertise and is not followed up in a timely, rigorous way.

Areas for improvement

- Areas for development in teaching include:
 - planning and assessing problem solving and application of mathematics in real-life contexts
 - deployment of additional adults – in trainees' lessons, additional adults were often deployed to support lower-attaining groups and/or pupils with special educational needs
 - catering effectively for higher attainers.
 - use of ICT as a tool for learning or to support conceptual understanding – rarely used in these ways by trainees.
- understanding of progression from EYFS to Year 6 is insecure, in part because not all trainees gain insight into, or experience of, early learning in mathematics.
- Where trainees had gaps in their subject knowledge, they:
 - tended to lack confidence and did not enthuse pupils
 - did not challenge pupils' thinking, especially high-attaining pupils
 - struggled to plan and teach for progression and/or understanding
 - did not spot misconceptions or missed opportunities to build on pupils' responses.