



CASE STUDY REPORT

Gloucestershire Assessing Pupils' Progress (APP) Secondary Mathematics

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This study was originally published in 2010 as part of the 'What Works Well' initiative, part of the National Strategies for Education in England.

Abstract

Background: The purpose of the study is to assess pupils' progress in mathematics throughout KS2 and KS3, focus on progression, strengthen approach to AfL, and provide meaningful target setting to improve teaching and learning.

Aims: The main aim of Assessing Pupils' Progress (APP) is to provide diagnostic information to improve teaching and learning, focus on progression, and strengthen approach to AfL.

Methods: The participants in this case study are support staff, head of school improvement, middle leader, national strategies consultant, pupil, senior leadership team, SIP, subject leader, and teacher. Methods used include: observation outcomes, CPD approaches, CPD materials, research, and expertise; external agency support; data comparison of cohorts; qualitative evidence; probing questions; AfL; and strategic planning.

Findings: APP provides diagnostic information to improve teaching and learning, helps focus on progression, strengthens AfL, and provides meaningful target setting. It has improved motivation, engagement, and understanding of levelness, and has been supported by external agencies.

Implications: The findings suggest that APP can help improve teaching and learning, motivate and engage pupils, and provide teachers with more effective ways to close gaps in learning. It also encourages AfL and better use of open questions and probing questions.

This abstract was generated by Camtree using a large language model (LLM) and added to the original report in 2023.

Keywords: Gloucestershire education; Assessment and target setting; Mathematics

Introduction

What were your reasons for doing this type of development work?

Assessing Pupils' Progress (APP) is a systematic approach to ongoing assessment that provides:

- diagnostic information about pupils' strengths and weaknesses to improve teaching and learning.
- an overview of pupils' progress in relation to NC levels in mathematics throughout KS2 and KS3

It helps to:

- Focus on progression – stage not age
- Strengthens approach to AfL
- Makes target setting meaningful and target getting achievable
- Provides a picture of the mathematical ability of a pupil that ensures pathways are appropriate (e.g.5 to C+)

(This case study remains unapproved only because of a lack of quantitative impact evidence.)

Who might find this case study useful?

- Support staff
- Head of school improvement
- Middle leader
- National Strategies consultant
- Pupil
- Senior leadership team (SLT)
- SIP (School Improvement Partner)
- Subject leader
- Teacher

Description

What specific curriculum area, subject or aspect did you intend to have impact on?

- Assessment and target setting
- Mathematics

How did you intend to impact on pupil learning?

- Help pupils to develop the ability to self assess their own progress against clearly identified learning objectives and success criteria.
- Provide opportunities for pupils to learn through thoughtfully facilitated and supported questioning and dialogue
- Link to the use of carefully designed activities
- Giving pupils the opportunity to explain their thinking through group work / paired work / presentations

What were your success criteria?

- Greater understanding of levelness – teachers and students
- Focused ongoing formative assessment leading to clear curricular targets that are shared effectively with pupils and leads to action by teachers and/or pupils to achieve these targets.

What information or data did you use to measure progress towards your success criteria?

- Observation outcomes

Describe the CPD approaches you used

APP network – 3 meetings a year 3 + 3 funding model

Feedback from network to all subject leaders at termly subject leader development meetings.

On site consultant support

Writing days for level 7/8 probing questions. Cross phase (KS2/KS3) day. Development of material and use of portal to share this material.

See also "The Journey so far" attached (Summary page).

What CPD materials, research or expertise have you drawn on?

APP Handbook and Materials

AfL Whole School support material, Secondary National Strategy (SNS)

Links to Making Good Progress (MGP) Pilot

Dedicated consultant and RA support.

Who provided you with support?

- External agency

How were you supported?

SNS APP material and Mathematics Regional adviser.

Impact

What has been the overall impact on pupil learning?

Greater motivation and engagement. Improvement in behaviour in some previously challenging classrooms.

Pupils now have focus and direction for their learning which helps to keep them on track during lessons. Planning is more targeted and there is a greater understanding by teachers of progression which allows them to target teaching more accurately.

Feedback to pupils has become more focused and diagnostic therefore helping them to close the gap in their learning.

Thoughts you think are relevant to overall impact on learning

Content more appropriate due to greater clarity about "levelness". There is now a shared awareness that the best assessment is through dialogue and therefore the challenge is how to make this happen. One or more of the following might be considered as a target group:

- pupils who are at risk of missing level 5 (or level 6) at the end of Key Stage 3;
- pupils who are at risk of not making two levels progress;
- other under performing groups of pupils;
- one year group;
- one area of mathematics, for example algebra across the whole of Key Stage 3.

Quotes you think are relevant to overall impact on learning

"A level is a level"!

"Pupils are now able to articulate their mathematical thinking" (ref: use of probing questions)

"Lessons have a point rather than a vague objective" (ref: use of probing questions)

"Something to mull over during a lesson" (ref: use of probing questions)

"Students enjoy the lessons more" (ref: use of probing questions)

Quantitative evidence of impact on pupil learning

- Data comparison of cohorts

Qualitative evidence of impact on pupil learning

- Observation outcomes

Describe the evidence of impact on pupil learning

Greater motivation and engagement in lessons. Pupils have a greater understanding of where they are and where they need to go. Links to the progression maps have provided teachers with more effective ways of closing the gaps in pupils learning once they have been identified using the APP material to support teacher assessment.

What has been the impact on teaching?

The use of the APP material encourages teachers to make AfL part of everyday teaching practice. It also helps staff develop a much better understanding of progression.

Improved structure to lessons including better use of plenaries. Move towards greater use of open questions including the use of probing questions.

Quotes you think are relevant to the impact on teaching

"Lessons have a point rather than a vague objective" (ref: use of probing questions)"Something to mull over during a lesson" (ref: use of probing questions)"Students enjoy the lessons more" (ref: use of probing questions)"End of my lessons are tidy""I now feel most confident about making judgements from discussion and dialogue not just tests."

Evidence of impact on teaching

- Evidence from planning
- Improvements in curriculum documentation
- Teacher perceptions

Describe the evidence of impact on teaching

Key Indicators (assessment foci) are mapped into schemes of work which gives a greater focus in planning for progression. Probing questions used as a 'target' for the lesson and made explicit in planning.

Assessment criteria highlighted in schemes of work and shared explicitly with pupils in some cases through the use of probing questions as objectives for lessons.

What has been the impact on school organisation and leadership?

Making target setting meaningful and achievable. Challenging the use of sublevels Challenging the concept that progress is continual and linear.

Strategic planning and commitment to supporting CPD through training and involvement in the network.

Evidence of impact on school organisation and leadership

It is building capacity at subject leadership level and encouraging collaborative practice within and across schools.

Summary

What is the crucial thing that made the difference?

APP will strengthen teaching and learning – it is not just about tracking and recording progress. Improving formative assessment is the key and making strong AfL practice part of everyday lessons.

Strategic planning and a requirement by the LA for SLT commitment to support the development work in school.

Funding and Consultant team support

Links to other developments for example Making Good Progress.

Viewing APP as a joint primary/secondary development - contributing to Building a Picture

What key resources would people who want to learn from your experience need access to?

Glosmaths building a picture resources – see attachment below

What CPD session and resources were particularly useful?

Network meetings to share good practice and build capacity.

If another individual or school was attempting to replicate this work, where would they start and what would the essential elements be?

Firstly

- Use the data to identify a focus group
- Choose a particular focus from the APP toolkit based on identified pupil need to start a small scale action research project
- Share developing good practice

Secondly

- SLT commitment to supporting developments in departments
- Access to expert input
- Peer support through coaching and/or mentoring
- APP support material
- Time to reflect and adapt practice as part of an action research model.
- Professional dialogue rooted in experimenting for the class / trying things out.
- Opportunities to build on their own expertise

What further developments are you planning to do (or would you like to see others do)?

- Further develop the use of the Assessment Packages to effectively support ongoing Teacher Assessment and inform L+T. In particular how to use the mark scheme more effectively to provide closing the gap comments for pupils.
- Extend practice across departments/schools/LA
- Extend the sharing of good practice and support materials such as the marks book with a wider audience.
- Extend from Ks1 to KS4 with a full range of probing questions and more Assessment packages.
- Make clear links to other developments such as MGP, Functional Skills and AfL.
- Strengthen Gifted and talented provision
- Strengthen the consistency of judgements through moderation
- Develop resources that support gathering evidence of impact.

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About 'What Works Well'

This case study was originally published as part of the 'What Works Well' section of the National Strategies for Education in England. The National Strategies were professional programmes aiming for improvements in the quality of learning and teaching in schools in England. 'What Works Well' involved teaching practitioners from all phases and areas of education sharing accounts of real developments which had improved learning and teaching, and made a difference to pupil progress. 'What Works Well' case studies were designed to support practice transfer and include sufficient detail and resources to enable others to implement the effective practice described. Most were reviewed by experts prior to publication as 'User Generated Content' (UGC) under a licence which encouraged reuse and derivative works, but which precluded commercial use. This report was awaiting final approval when the National Strategies site was archived.

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