

D&T – where now?

Gina White HMI

Subject Specialist Adviser for D&T

NAAIDT National Conference April 2009



Strengths in D&T

- popular, enjoyable and makes a good contribution to pupils' personal development and well-being
- steadily rising standards
- good or better provision in two thirds of secondary schools and one third of primary schools visited
- new technologies pushing the barriers of what is possible and the speed of making e.g. laser cutters, 3D printers/ rapid prototyping machines

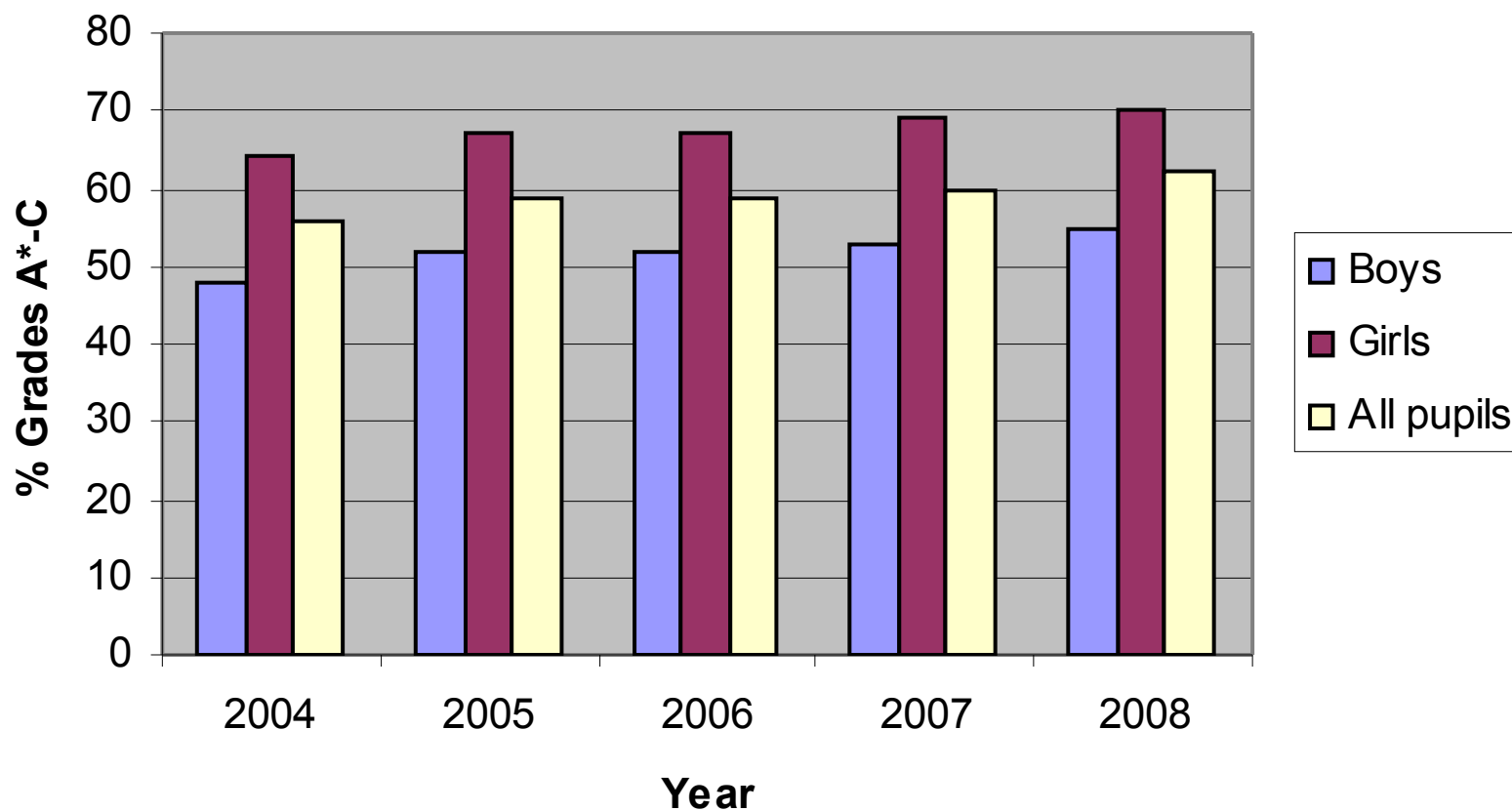


Barriers in some schools

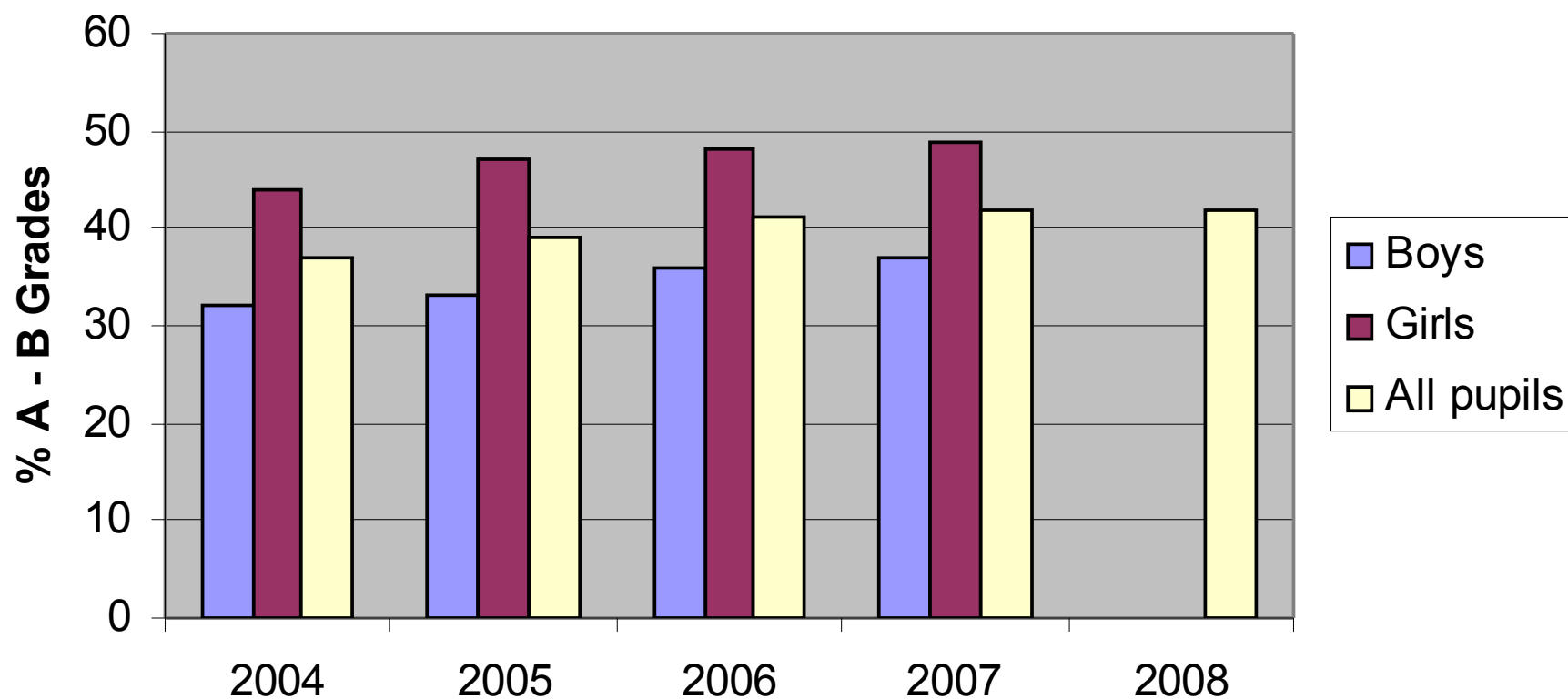
- resource issues: staffing shortages, equipment, accommodation
- CPD issues: teachers' lack of expertise in particular areas of D&T and awareness of teaching materials
- narrow curriculum ... leading to
 - lack of challenge for Years 5&6 and for some groups of pupils; less able and more able pupils
 - formulaic teaching of coursework diverting pupils from creative designing and making
 - teaching of designing and evaluating not as developed as craft skills
- weak leadership and management



Attainment at GCSE D&T A*-C



A Level D&T A - B Grade Attainment



Features of high achievement

Pupils.....

- demonstrate high commitment to acquiring, analysing knowledge and applying it
- work with increasing responsibility and independence
- produce innovative ideas, varied and visually interesting
- are extremely productive, demonstrating good project management and use of time
- demonstrate innovative designing and prototype manufacturing.



What do pupils enjoy about D&T?

- practical and active learning
- opportunities to work on individual projects
- opportunities to develop own ideas
- using CAD/CAM to create professional products
- products that work realistically
- its relevance to life skills and careers.



Personal development & well-being

Pupils...

- attend, behave well and enjoy good relationships
- work maturely in professional working situations
- manage H&S risks very well
- are mostly well motivated
- are proud of what they create.



Features of good or better T&L

In primary schools teachers

- emphasised the functionality and testing of products
- trialled the things they expected pupils to do when planning lessons
- drew upon pupils' experience as users of products to identify clear and agreed criteria for successful products
- made effective cross curricular links to enhance pupils' learning and progression in designing and making
- used written or pictorial instructions well with very young pupils and those with learning difficulties.

Features of good or better T&L ...continued

- The curriculum includes well planned use of experts, AoTs, visits and real application of D&T to projects in and around local community.
- L&M ensure access to external support and training.



Features of good or better T&L

In secondary schools

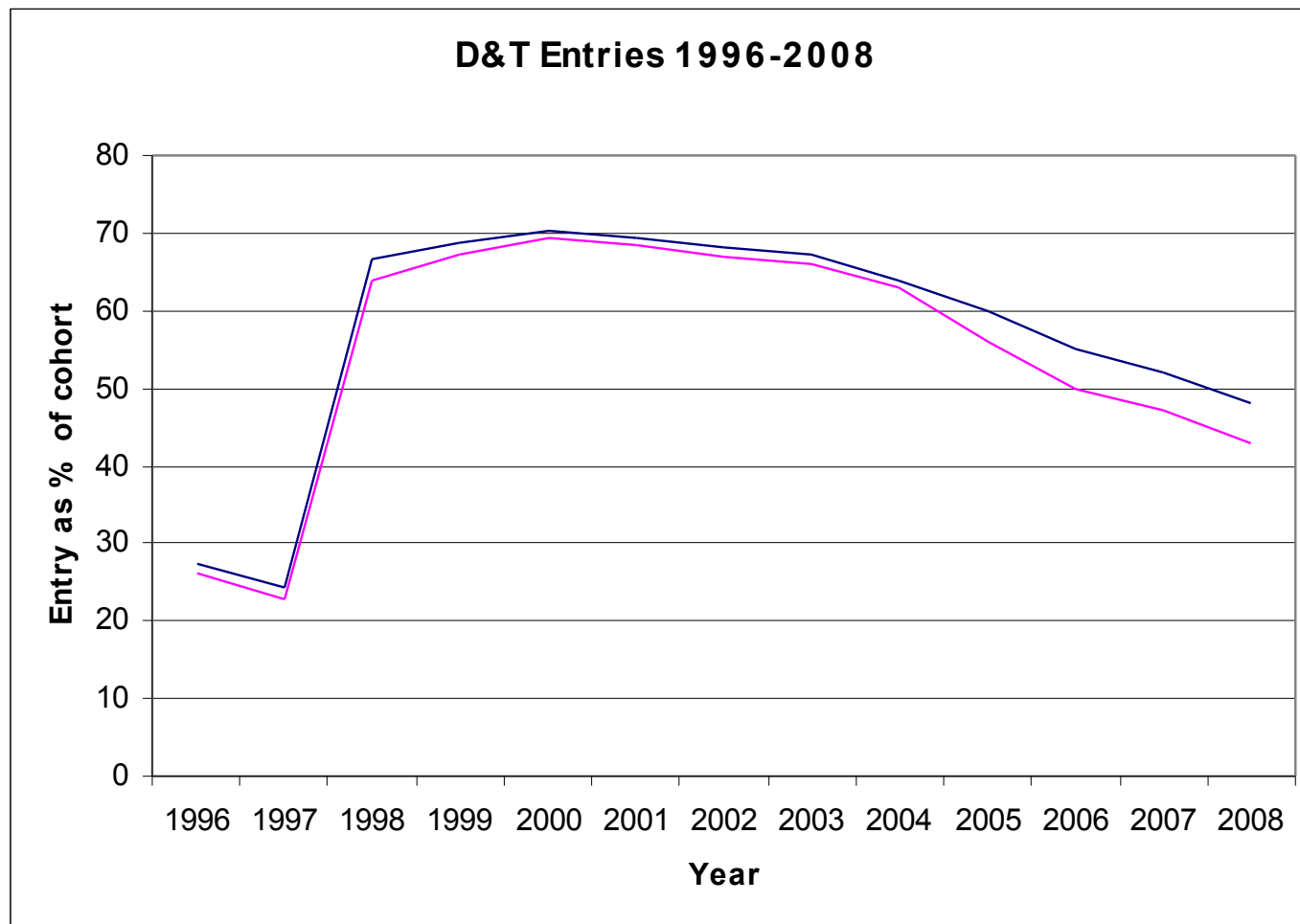
- well planned sequencing of learning
- structured discussion of real examples of designing and making, purposeful group work, time for students to think and formulate ideas
- a varied range of teaching methods and a variety of ways of involving pupils in recording their learning
- regular assessments and constructive and detailed feedback
- the making and testing of prototypes
- setting precisely defined research about design problems - especially important when challenging more able students.

What do pupils dislike about D&T...

- the paperwork?
- outdated ICT?
- boring projects?
- frequent change of teacher?
- being asked for ideas then given no opportunity to use them?



D&T GCSE entries over time



Challenges to overcome

Improving the quality of curricular planning and T&L

- ensure D&T challenges all pupils – particularly the most able pupils
- provide opportunities for pupils to be creative problem solvers, and to use scientific, technological and mathematical knowledge and skills
- scope for more teaching and learning about sustainability
- creativity and technological rigour of coursework
- creating modern D&T projects to keep pace with technological developments.

Challenges to overcome

Continuing professional development needs

- current mismatch between needs of subject and expertise of some new entrants
- access to CPD opportunities for teachers to update and maintain their subject skills
- assessment, recording and reporting of pupils' progress in primary schools.

How well are we doing in preparing the next generation of subject leaders?

Challenges to overcome

Issues in staffing, accommodation and resources

- adequate supply of specialist teachers across all parts of the country
- widening technological gap in resources between schools
- lack of updated advice and guidance for accommodation.



Developments in D&T provision

- well focussed initiatives to overcome weaknesses in food technology reported in previous Ofsted reports (£56.3m investment)
- practical cooking sessions for all pupils by 2011
- £53m for new cooking facilities
- 800 new food technology teachers who will specialise in cooking
- 750 specialist higher-level teaching assistants recruited and trained to help run classes
- 350,000 Real Meals cookbooks for Year 7 pupils
- over 2000 existing food teachers trained



Developments in D&T curriculum

- Early Years Foundation Stage
- awaiting revisions to primary curriculum
- new KS3 curriculum and food will be compulsory
- wider range of options for all 14-19
- changes to GCSE and GCE specifications
- STEM - science, technology, engineering and mathematics



D&T in the future?

Pupils' views of D&T by 2020

- “Pupils will make more cool electronic gadgets that do a variety of things”
- “Make the projects more exciting, more advanced”
- “No sewing: there may be more advanced techniques”
- “I would like to see more trips and visits and chefs and designers working in schools”
- “They will use computers more to design”
- “I would like them to make real things, real size, as a class. I saw a film about pupils making a classroom out of tubes. We designed things with an architect but didn't finish it.”