



## welcome

Design Museum 3-day CPD

'the designer within'





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'the designer within'

**Kevin Jones** 

www.attainmentpartnership.org.uk



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## Attainment Partnership Ltd

#### **Kevin Jones**

- Deputy Head
- AST
- 98 taking A. level design and technology
- SSAT National Subject Leader: Technology Colleges

### **Mary Southall**

- senior teacher
- AST
- 100% grade A's at A. level
- commissioner teacher: London Challenge









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### what do we do?

- Working in a variety of schools every week
- The **Design Museum** (write and deliver secondary CPD)
- The Victoria and Albert Museum (write and deliver secondary teaching and learning materials for design and technology)
- The Design Council (member of the national 'Design Skills' advisory panel and chair of schools steering group) including chief moderator Design Mark
- Specialist Schools and Academies Trust SSAT
- Qualifications and Curriculum Development Authority QCDA
- **IET Faraday** STEM materials (write and deliver)
- Detroit area Education Department, USA
- South East Asia International teacher's conference, Brunei
- Buffalo State University, New York USA
- D&T Association (write publications, deliver presentations, deliver CPD)









National context - then, now and what next!

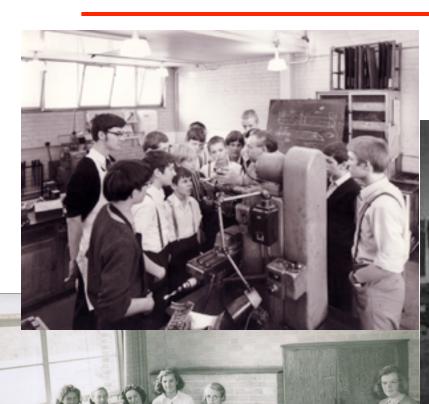


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## national context: history









### National context



- England was first country to have a design based curriculum compulsory for ages 5-16
- now optional at post 14, KS4 (complacent?)
- progression of learning should be paramount
- important to build on the good practice of leading primary schools





'our children don't like designing they only like making!'







## issues facing design and technology

- all things to all people
- still an infant in terms of other subjects: no single bedrock!
- many teachers still struggling with what it is, lack of professional development
- too many key bodies with self interests







### national context

## design and technology: what is it?

- product design (resistant materials wood, metal, plastic)
- fashion design (textiles)
- graphic design (communication)
- systems and control / electronics
- food
- STEM / engineering

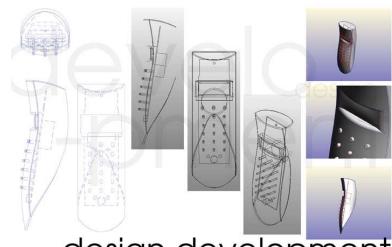






### issues surrounding the teaching of design

- rotation systems
- passion for 'design'
- make first design, then do rest of folder
- lack of emphasis on designing
- jumping through hoops
- lack of development
- appropriate / desirable projects
- little structure to designing



design development





### national strategy

- first form of professional development to help teachers teach 'design'
- provides creative approaches to designing
- looks at assessment and progression





## design process

- students really need to understand the process of designing?
- they need to know how the different elements fit together?
- and they need to understand the 'big picture'?

Evaluation & The Need & **Testing** Situation Compare Industrial Consideration of product to both the design Practice need and the **Design Brief** Describe how yourshow opinions intended design is suitable & changes user/users Design brief with reference to batch Plan of marketing Production Task Analysis A step-by-step plan of making, giving materials/ Look at your design brief equipment & timings. Explain and ask; who, what, where and how? quality control Research **Presentation Drawing** Include at least, existing Presentation drawing with products, survey, target reasons, a detailed drawing Develop your bes you have learnt idea by exploring a Variety of 8 range of styles. This from your research. ideas, with priorities needs to be in detail, Use it to write your good and bad that you specification Model it in 3D points relating Development **Findings** to your from your specification research Generating Specification Ideas







## product analysis (cafe que)

- Cost
- **a**esthetics
- **f**unction
- **e**rgonomics
- quality
- **u**ser
- **e**nvironment











## design history

art nouveau





art deco



arts and crafts



bauhaus

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memphis



# d

### National context - industry issues



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## **Design** Council

## issues facing the design industry

- design industry generates £11billion to the UK economy
- UK seen as a global leader in design industry
- BUT ..... what's on the horizon?
- China!
- Design Council Government agency promoting benefits of design







#### **GOOD DESIGN PRACTICE**

### design council

### higher skills for higher value

3 recommendations

- develop a 'design mark' for outstanding design delivery
- create regional centres of excellence
- provide database of designers willing to work with schools









The Design Mark aims to **identify and reward** primary and secondary **schools** that are **delivering high quality design education** to their students.





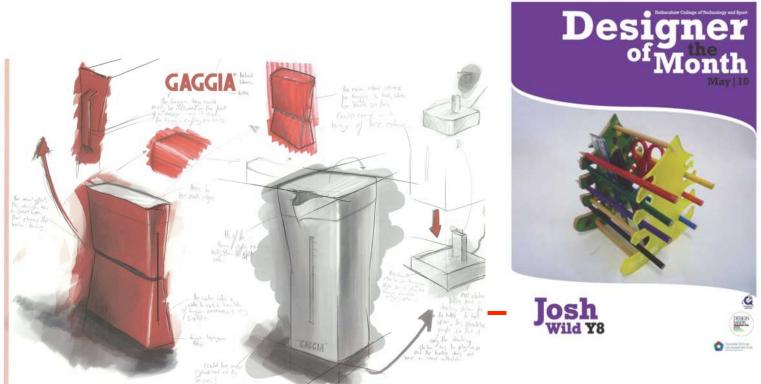






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### National context - 'new' curriculum



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### national curriculum vision statement

In design and technology pupils combine practical and technological skills with creative thinking to design and make products and systems that meet human needs. They learn to use current technologies and consider the impact of future technological developments. They learn to think creatively and intervene to improve the quality of life, solving problems as individuals and members of a team.

Working in stimulating contexts that provide a range of opportunities and draw on the local ethos, community and wider world, pupils identify needs and opportunities. They respond with ideas, products and systems, challenging expectations where appropriate. They combine practical and intellectual skills with an understanding of aesthetic, technical, cultural, health, social, emotional, economic, industrial and environmental issues. As they do so, they evaluate present and past design and technology, and its uses and effects. Through design and technology pupils develop confidence in using practical skills and become discriminating users of products. They apply their creative thinking and learn to innovate

**Design and Technology – The National Curriculum for England, DCSF/QCA** 





## KS3 design and technology

### **Curriculum for Key Stage 3**

The importance of design and technology

- Key concepts
- Key processes
- Range and content
- Curriculum opportunities





### QCDA intentions of the re-write

- Aimed to provide greater flexibility for teachers
- Less content
- common format across subject areas
- Whole school approach to teaching and learning
- Systems and control and RMT (plus one from food and textiles)
- Whole department planning requirement
- Assessment key to the planning process





### problems with implementation

- Takes time and discussion to get your head around the whole document
- Might require different curriculum models not necessarily traditional rotation system
- Requires a very different approach to planning your curriculum





#### assessment

- Assessing Pupil Progress
- new Government has prevented national distribution



# e<sub>l</sub>o

### National context - Specialist status



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### specialist dimension

- Technology and Engineering Colleges (approx 700 secondary schools in England, 25%)
- greater ethos towards 'design' and 'technology'
- commitment to sharing practice with partner schools (4 feeder, 1 secondary)
- impacting on whole school improvement



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### National context - Youth technologies



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## 'youth technologies'

- social networking
- text messaging
- skype
- email









## 'youth' technologies



early learning through 'new technologies'

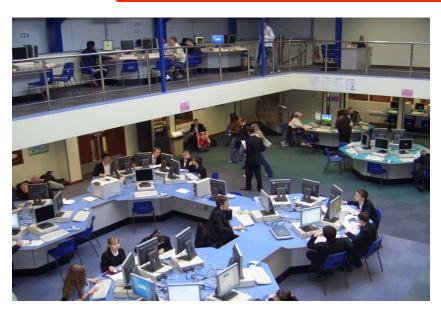


high skill levels in 'youth' technologies





# 'youth' technologies



innovate not replicate

### new learning pedagogy!

young people learning on games see learning as a different mindset.







### SO.....

- standing still is not an option
- challenge your students and staff
- be creative in exploring the potential
- If teachers are not involved in innovative activity, they are not likely to understand how to create the conditions in which students learn how to be innovative...

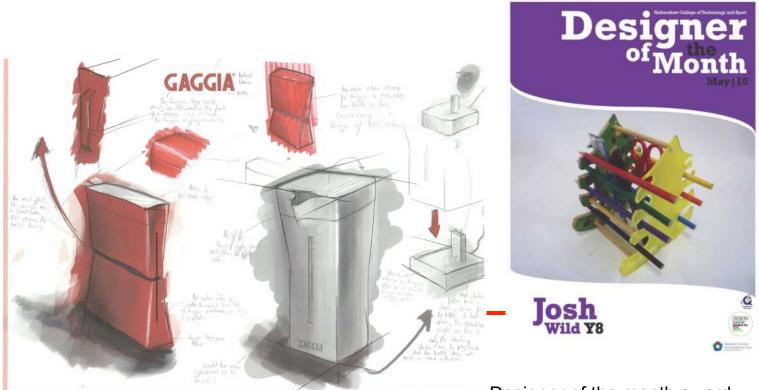
David Hargreaves, Chief Executive of the Qualifications and Curriculum Authority, defining 'innovation' at a CreativeNet conference, 22 November 2000





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### National context - STEM



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### the need for more UK STEM graduates

- Nearly a third of companies do not believe they will be able to recruit sufficient qualified staff this year and are even less confident looking four years into the future.
- There is an emerging expectations gap between the level of skills employers expect to see in new recruits and the skills output of the education system.
- There is a need to improve the image and profile of engineering and to improve education and in-school activities.

### IET skills demand report 2008







### what are schools doing?

STEM is the new Literacy!







 Science, Technology, Engineering and Maths Colleges have undoubtedly made strides to improve young peoples perceptions of STEM subjects



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## altering perceptions of engineering











# **IET** FARADAY

ENGINEERING THEMES | NEWS | TEACHERS RESOURCES | CAREERS | ABOUT US

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#### WELCOME TO IET FARADAY

An exciting year-long programme of resources, activities, competitions and events designed to inspire young people about science, technology, engineering and maths (STEM).

With a new theme every year, the website contains a wealth of resources, including teaching materials for KS3, KS4 and Engineering Diploma, specially made films and games, which bring the real world of engineering to life.

More about us...



#### CHALLENGE DAYS

Thank you to all schools that submitted a Challenge Day host school application. We received more than expected! Have a look at

#### TEACHERS RESOURCES

All the support material you need to use the IET Faraday themes in your own teaching environment.

Get the materials

#### MORE THEMES









### what's the future

- lots of initiatives in education
- D&T teachers need to be at the front of these initiatives
- D&T teaching must be dynamic and vibrant

 WE need to take control, making a case for our subject being at the heart of the curriculum





### Secondary D&T resources

### **Quick Step Guides**

A new series of booklets with all the essential information you need to help you in your professional work.





#### Making your case for...

 better funding, appropriate class sizes, adequate technician time, CPD, new technologies, broader option choices, curriculum equality, and raising the perceived status and value of D&T. It's about winning the argument before it happens.



Head of department survival guide – surviving your first few weeks and the longer term, and addressing such things as: leadership and management, communication, department meetings, people management, your team, planning, moving forward, supporting staff and celebrating your department.



Designing your new D&T
department – how to make
sure you get what is best for
you and how to gain funding,
steer the planning and design,
costs and functions of your
new department. Includes
H&S information, sources of
advice and information and
how to deal with architects
and the building trade.



Your department: Is it working? – how to conduct a review of your department and an honest assessment of how it inspires, supports and provides for students and staff; or not! It also looks at assessment and inspections and how to make yourself a truly effective HoD.









### DESIGN MUSEUM

# interested in a creative MA module in design and technology?

#### Developing creative approaches to teaching design and technology

A 60 credit Post Graduate Professional Development Module - Middlesex University

The aim of this module is to establish a range of 'practical' case studies focusing on the creative ways which enhance the designing skills of KS3/KS4/KS5 students

### Attainment Partnership

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Our objectives
What we offer
Key people
Key partners
MA education
Resources

Contact us

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# MA Education

Attainment Partnership lead the Design and Technology programme based upon the generic modules Developing Professional Practice, Action Enquiry and Dissertation. The Design and Technology projects have been major developments and innovations in the teaching of aspects of Design and Technology

"Just been thinking this will all be over very soon, I may even miss it...learning is sometimes challenging but it is lovely when you can come out the other side feeling different, like you have shifted your thinking, slightly, especially when you can apply it too, thoroughly recommend this to anyone."

Teacher on the course. 2010 MA Primary Day 1

MA Secondary Day 1

Appendix 2 Executive Summary

Executive Summary 2

Executive Summary 3

mary Executive Summary

Link to midwhebonline.org.uk





# thank you

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