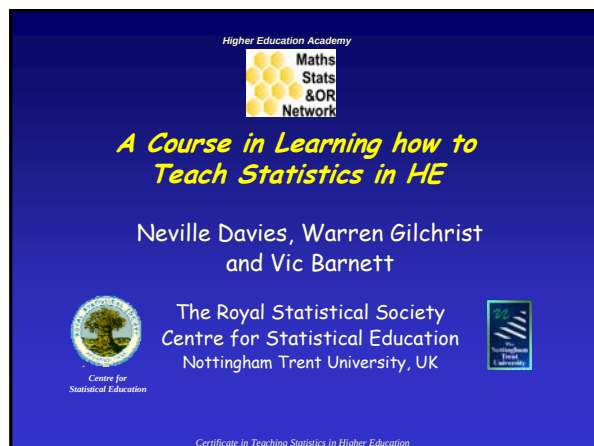






Development of the Course

- 2000 Government White Paper on Higher Education
 - And developments for promoting Learning & Teaching in HE
- How the course started
 - Information gathering, workshops
- The Writing
 - Independent reviews
 - The Course
- Accreditation
- Publicity
 - Running the course
- Reflections and Feedback
- Future

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2000 White Paper on HE, requirement by 2005:

- All new staff to receive proper training in teaching (induction);
- All teaching staff to undertake Continuing Professional Development (CPD) in teaching;
- *Expectation* in most universities, and the subjects, that the material would be generic (non-subject-specific);
- *Expected* to be carried out by educational or staff development groups.

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Developments for promoting teaching and learning in HE in the UK

- In 2000 the government created a Learning and Teaching Support Network (LTSN) comprising 24 subject centres
- The Maths, Stats & OR Network was one
- Also the Institute for Learning and Teaching in HE was set up to establish a UK professional body of teachers in UK HE
- In May 2004 these two bodies became the UK Higher Education Academy (HEA)
- Subject Centres still exist, but are part of HEA

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How the course started

- Info-gathering/needs analysis workshops for stats & OR activists
 - article in *MSOR Connections*, May 2000
- Feedback from workshops (Oct - Nov 2000) in Feb 2001
 - clear subject-specific request for statistics learning & teaching development
- FDTL funding for *subject-specific learning and teaching development*, Aug 2001 - July 2002...

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FDTL funded workshops (Fund for Development of Teaching and Learning)

- MSOR Connections advert, Nov 2001
 - Invitation to the statistics community to get involved in induction workshops for new teachers
- Five regional workshops Nov 01 - Jun 02 'Teaching Statistics in Higher Education: A day of learning and sharing experiences'
 - Coventry, London, Newcastle, Sheffield, Bristol,
 - Warren Gilchrist, Neville Davies, Neville Hunt, Peter Holmes, Margaret Rangecroft,

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Methodology for, and Delivery of Professional Development Material

- Stats team at LTSN MSOR started to develop a **subject-specific** programme, from the workshop material and feedback, for the support of induction and of CPD in teaching for HE staff teaching statistics
- It would be a *Distance Learning* programme to be delivered nationally (internationally)
- Materials designed so they could be adapted by HE institutions to fit their own training policies

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Writing (June 02 - July 03)

- Warren Gilchrist, Neville Davies, Peter Holmes
 - From remaining FDTL funds and core LTSN funds
- Very, very time consuming...
 - Main difficulty was transferring the output from the five regional workshops, coupled with trying to filter over 100 years of HE statistics teaching experience!
- Faults and gaps still remain of course to be ironed out as we progress...

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Independent reviews

- Commissioned reviews
 - Professor Helen Macgillivray, Queensland University of Technology (2003), who also attended one of the five workshops in 2002
 - Professor Trevor Spedding, University of Greenwich (2003)
- These have been absolutely crucial!

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Broad Description of the Course

The Certificate material comprises:

- Six distance learning units (five paper-based, one e-delivery/learning based)
- A Reader of Articles and Recommended Course Texts
- A Blackboard-based VLE (provided by Sheffield Hallam University) with support material, web links, conferencing, bulletin boards, group e-mail etc
- Tutorial support by phone and e-mail

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The Course - content in more detail (<http://science.ntu.ac.uk/rsscse/activities/distanceLearning.htm>)

- **I An Overview of Statistics in HE**
 - Helps particularly the new teacher to see his or her work in the national and international context and to become aware of the variety of support mechanisms that exist
- **II Learning Statistics**
 - Gives a study of those elements of learning theory that have an immediate impact on the teaching of statistics, and contains many illustrations
- **III Teaching Statistics - General**
 - Covers a broad study of issues faced by the statistics teacher, including many aspects of teaching methods for statistics and of the choices of method facing the teacher

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The Course - content

- **IV Teaching Statistics - Specifics**
 - Enables teachers of statistics to look at specific topics that they do or may teach, and at the contexts in which this teaching can occur.
- **V Assessment and Feedback in Statistics**
 - Provides a study of the specific methods appropriate to the development and assessment of student's understanding and skills in statistics.
- **VI Computer Supported Statistics Teaching**
 - Explores the use of calculators, statistical and educational software, Computer Aided Learning (CAL) and of the Internet in the teaching of statistics. It uses the e-delivery system, Blackboard, for support.

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The Course - modes of study

- **One-semester, or one-year, Certificate**
 - distance-learning Certificate in Teaching Statistics in HE
- **Unit in a university PgCert or Diploma in Learning and Teaching**
 - it has built-in activities for assessment and is equivalent to approximately 20 M-level credits.
- **Individual study**
 - ad-hoc distance-learning programme with components of study chosen to suit individual needs

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Accreditation

- **Royal Statistical Society**
 - PG M-level *Certificate in Teaching Statistics in HE* submitted to RSS Professional Affairs Committee for possible accreditation, March 03
 - Agreement reached, subject to refereeing, June 03
 - Dr Judy Goldfinch, Napier Univ, appointed RSS reviewer, June 03
 - Many changes suggested, final accreditation from RSS in Dec 03
- **Higher Education Academy (formerly the ILTHE)**
 - On 1 May 2004 the ILTHE and the LTSNs merged to become the Higher Education Academy (HEA)
 - Accreditation meeting, end of January
 - Accreditation awarded from 2003 - 2005

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Publicity for the course

Pilot Year 2003-2004 (charge £100 per participant)

- RSS NEWS article (Nov 03) about the new course, *Certificate in Teaching Statistics in HE*
- Widespread personal contact with Staff development units
- Jan 04 - formal advert for the Certificate
- Advert in RSS NEWS (Joint ad of RSS Centre & LTSN Maths, Stats & OR Network)
- Input from this year's participants will help to improve next...charge will be £250-£400

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Running the course in the Pilot Year- 22 paying participants (03/04)

- Course leader - Professor Vic Barnett
- University staff Development Units (2)
 - Reading & Warwick Universities
- Royal Statistical Society Certificate (16)
 - Tropical Medicine, Public Health, Psychology (Liverpool); Dentistry (Manchester); Maths/Comp Science (UWIC); Pharmacology (BARTS); Meteorology (Reading); Mathematics (York); Maths (Lagos); Univ of West Indies; Okanagan Univ, Brit Columbia; Univ of Wales College of Medicine (3).
- Self study (4)
 - Management (Buckingham); Mercy College (USA); United Arab Emirates; Private (Stoke Newington)
- Other expressions of interest (18)
 - 15 from the UK; West Indies; Namibia; South Africa

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Early reflections

- Estimated time to produce the course 00 - 04:
 - Total of 10 people involved over 4 years
 - At least 1-2 person years - cost £40k-£80k?
- Key factors for HEA Maths, Stats & OR Network
 - Backing of the Royal Statistical Society, an academic and professional statistical organisation that has existed for 170 years, awarding statistical qualifications for 50 years
 - HEA accreditation makes it clear where the course fits into the UK teaching and learning scene
- Still much room for improvement and expansion in the course as it progresses

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Feedback

- Course material content greatly appreciated
- Blackboard rather under-used by participants
- Little sense of community in course in pilot year
- Some confusion over *personal learning objectives* and measuring them
- Assessment by one long portfolio needs to be monitored

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Plans for 2004 -2005

- Revisions of all sections
- Extensive advertising worldwide: UK; USA; Australia; New Zealand
- Can we franchise different versions elsewhere?
- Presentation at ISI55 in Sydney, April 05
- Expectations of even larger numbers this year 04 - 05

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Reminder of some other projects at the RSS Centre: the Commercial Break!

- School level activities
 - *CensusAtSchool; ExperimentsAtSchool; SurveysAtSchool; Stats4schools*
 - Advice to Dept for Education & Skills (DfES) and Qualifications and Curriculum Authority (QCA) on implementing post-14 Maths Inquiry recommendations
 - Continuing Professional Development for school teachers
- Higher Education
 - Learning and Assessment in OR (Coventry University)
 - Advice to Centres for Excellence in Teaching and Learning (CETL)
 - University of Lancaster, CETL - PG Course in Statistics
 - Nottingham Trent University, CETL - Science Teaching Centre
- Workplace
 - Advice to the *Techno-mathematical Literacies in the Workplace* project at the Institute of Education, London

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End of Talk

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