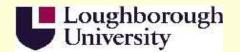
# DART: Assisting Academic Tutors to meet the Needs of Disabled Students within the Engineering Disciplines



Alan Maddocks
John Dickens
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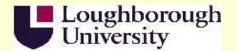
Engineering Education Centre, Loughborough University



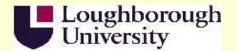
- DDA (1995): HE exemption
- SENDA (2001): HE exemption removed
- HEI response:
  - Reasonable Adjustment
  - Anticipatory Action
    - to ensure access to all aspects of the curriculum



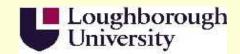
- HEFCE: £5.4m to fund project work to improve provision (2003-5)
- 24 Large Scale projects: focus upon an accessible curriculum
  - Staff Development materials
  - Auditing Tools
  - Resources (Case Studies)



- DART (Disabilities: Academic Resource Tool) Project
  - Engineering
  - Student experience
  - Case Studies
  - Web-based Auditing & Diagnostic Tool
    - Searchable data-base
    - Bespoke guidance



- Student Case Studies
  - Aim: capture student experience
  - Methodology: Qualitative survey
    - Student interviews
    - Staff interviews (academic + support)
    - Observation
  - 30 Case Studies
  - 6 HEIs



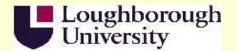
# Initial Case Study Findings

- Generic Issues
  - Communication
    - What advice can a disabled student offer you?
  - Good Practice Procedure
    - An advantage for all students!
  - Anticipatory Action
    - Do you know who your disabled students are?
  - Sharing Information
    - Are you aware of your colleagues' good practice?



# Initial Case Study Findings

- Specific Issues
  - Transition
  - Time
  - Physical effort
  - Availability of reference material
  - Accessibility of written material
  - Technological assistance
  - Information retention



## DART Auditing & Diagnostic Tool:

- Designed for use by academics seeking SENDA compliance
- Scheduled for initial piloting in October 2004
- Web-based
- Searchable Data-Base
- Case Studies / Existing Resources
- General & Specific advice
- Means of recording activity



# DART Auditing & Diagnostic Tool: Searchable data-base

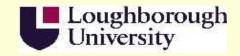
- Search options
  - Barriers (e.g. inaccessible material)
  - Context (e.g. lectures, laboratory work)
  - Disability (e.g. hearing-impaired)
- Minimum 8 criteria per search option



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DART: Design Framework / Matrix: Searchable Data-Base		
<b>Search Options:</b> Ma×imum 2 from 3	Stage 1 Interaction (Based on the use of 1 search option)	Stage 2 Interaction (Based on the use of 2 search options)
BARRIERS: 'Social' Criteria (e.g. inaccessible teaching materials, inappropriate teaching methods etc.)	General Advice + relevant web links + related Case Studies + remaining search options	Specific Advice + relevant web links + related Case Studies
CONTEXT: 'Educational' Criteria (e.g. lectures, group work, laboratory work, assessment etc.)	General Advice + relevant web links + related Case Studies + remaining search options	Specific Advice + relevant web links + related Case Studies
<b>DISABILITY:</b> 'Medical' Criteria (e.g. hearing impaired, dyslexia etc.)	General Advice + relevant web links + related Case Studies + remaining search options	Specific Advice + relevant web links + related Case Studies

TABLE I
DART AUDITING AND DIAGNOSTIC TOOL: DESIGN FRAMEWORK / MATRIX



#### Interaction 1 - Search Option

To enter the DART data-base you can:

\* Select ONE criteria from ONE of the search options offered below e.g. you may choose 'hearing-impaired' from the DISABILITY option

This will provide you with general advice (relating to your choice of criteria), access to related websites and Case Studies, and the option to refine your search further.

\* Select ONE criteria from TWO of the search options offered below

e.g. you may choose 'hearing-impaired' from the DISABILITY option **and** 'lectures' from the CONTEXT option

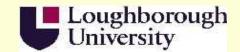
This will provide you with specific advice (relating to your choice of criteria), and access to related web-sites and Case Studies.

Three selectable options (with a range of criteria per search option):

BARRIERS CONTEXT DISABILITY

#### TABLE II

DART AUDITING AND DIAGNOSTIC TOOL: INTERACTION 1 - SEARCH OPTION



### International Conference on Engineering Education:

#### Interaction 2 - Response to Search

For general advice on  $\times YZ$  (option / criteria selected) please use the following link: Web-link to 'General' advice on  $\times YZ$ 

For information on XYZ from other sources, please use the following links:

Web-link to related website A

Web-link to related website B

Web-link to related website C etc.

To view Student Case Studies relating to XYZ, please use the following links:

Web-link to related Case Study 1

Web-link to related Case Study 2

Web-link to related Case Study 3 etc.

To refine your search further choose ONE criteria from ONE of the following options:

Remaining 2 option buttons presented vertically (with a drop down menu of criteria per search option):

(2 from)

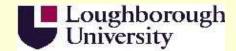
BARRIERS

CONTEXT

DISABILITY

#### TABLE III

DART AUDITING AND DIAGNOSTIC TOOL: INTERACTION 2 - RESPONSE TO SEARCH



 DART (Disabilities: Academic Resource Tool) Project

http://dart.lboro.ac.uk/

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