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The Grass-Roots Development and Institutional Embedding of the Tutoring Management System Co-Tutor

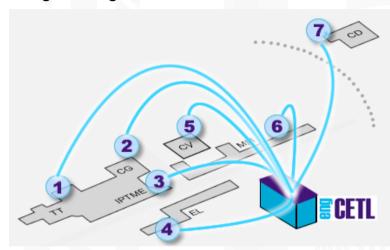
Melanie King and Paul Newman



Loughborough University, UK

engCETL

Engineering Centre for Excellence in Teaching & Learning



- 1. Aeronautical & Automotive Engineering
- 2. Chemical Engineering
- 3. Materials
- 4. Electronic & Electrical Engineering
- 5. Civil & Building Engineering
- 6. Mechanical & Manufacturing Engineering
- 7. Design & Technology

The engCETL builds on Loughborough University's established excellence in industry focused engineering education and in the provision of learning support to academics through its previous Engineering Education Centre. It aims to spread innovations and effective practice across the University.

Seconded academics, developers, technologists and researchers work together on teaching and learning related projects. All projects are proposed by staff within the engCETL departments who bid for the time and expertise of the staff.



Loughborough University, Uk

"I use Co-Tutor to communicate with, manage and keep records on all the students I need to supervise, tutor or teach. This could be more than 200 students! Co-tutor is the most efficient and effective way of doing this!"

Established since 1999 and contains details of pastoral care and academic performance on over 19,000 current students.

PhD students

Project students

Personal tutees

Students on Industrial Placement

Taught students

Used by more than 600 staff in 18 departments.

Highlighted by the UK Quality Assurance Agency to be of significant benefit to departments at Loughborough University in the support of pastoral care.



Email groups



Add comments

Organise groups



Access course marks



Schedule meetings



View attendance records



View personal information



Upload related files











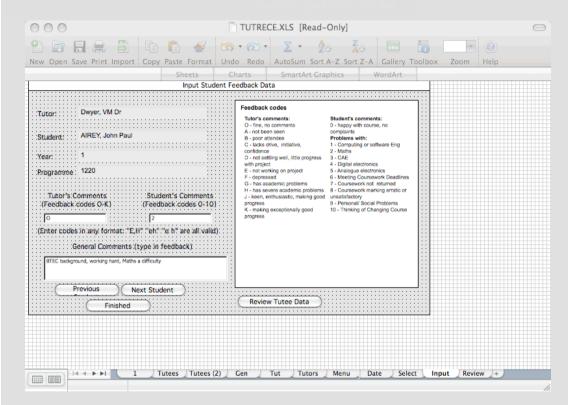






History of Development

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Version 1 was a Microsoft Excel Spreadsheet with Visual Basic Macros to help enter all the data and organise the content for pastoral care and monitoring. The spreadsheet was located on each tutor's local PC.



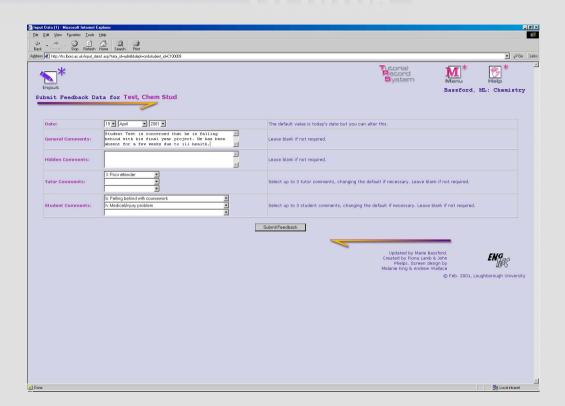
June 1999 Tutorial Support Database (MS Excel) Version 1

A project was proposed by Dr Bill Forsythe in Electronic & Electrical Engineering in March 1998 for an electronic replacement of a paper-based system he had been using to record personal tutorial meetings.



History of Development

Loughborough University, Uk

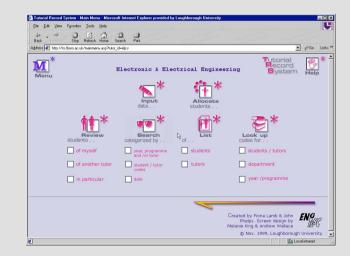


Version 2 was a web based ASP application with a Microsoft Access Database. All student data had to be manually entered in to the database. The database and application was located on a department server.



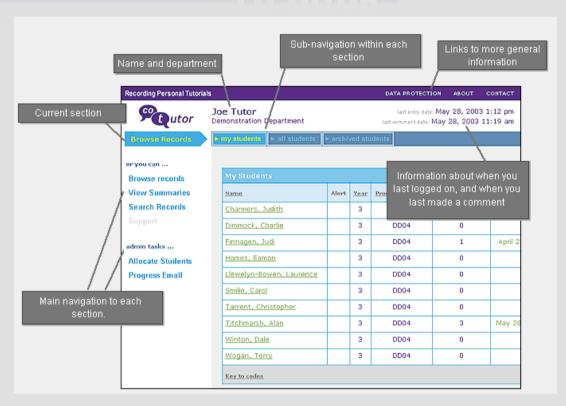
October 1999 Tutorial Record System Version 2

A further project was proposed by an additional two academics from another department in July 1999. This proposal was to further update the system and create a more generic version which could be used by other departments.



History of Development

Loughborough University, Uk



September 2003 Co-Tutor Version 3

A further project was proposed and with the addition of a small amount of University central funding a further update was made. This development allowed for the automation of much of the data entry from the central university database and also enabled email support and the ability to create groups of project students as well as personal tutees.

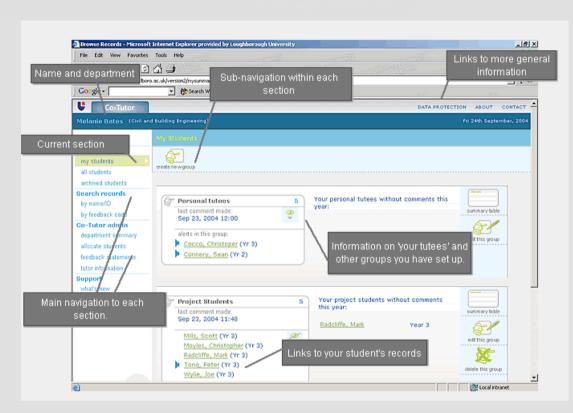
Version 3 was a web based PHP application with a MySQL Database. All student data was automatically read in from a Central database using nightly CRON routines. The database and application was located on a Faculty server.





History of Development

Loughborough University, Uk



Version 4 was a web based PHP application with a MySQL Database. All student data was automatically read in from a Central database using nightly CRON routines.

January 2005 Co-Tutor Version 4

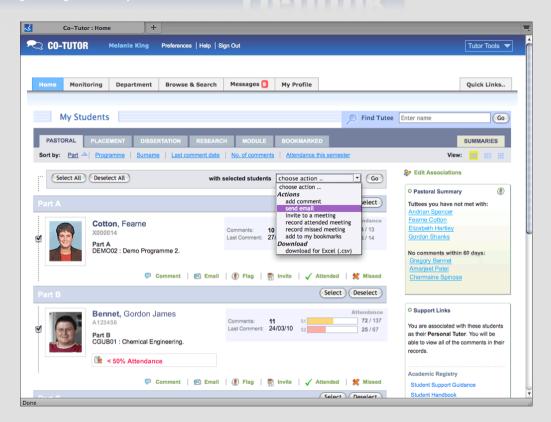
A further project was proposed which was the result of a University wide survey of all users asking what functionality they required and what issues they had with the current system.

This development allowed for creating groups of project students as well as personal tutees and also included the ability to send group emails. Attendance information was also available in this version read from a sister Attendance monitoring system.



History of Development

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Version 5 is a web based PHP application with a MySQL Database. It utitises nightly CRON's and an API infrastructure to pass information between central and sister systems. The database and application is located on a Faculty server.



July 2009 Co-Tutor Plus Version 5

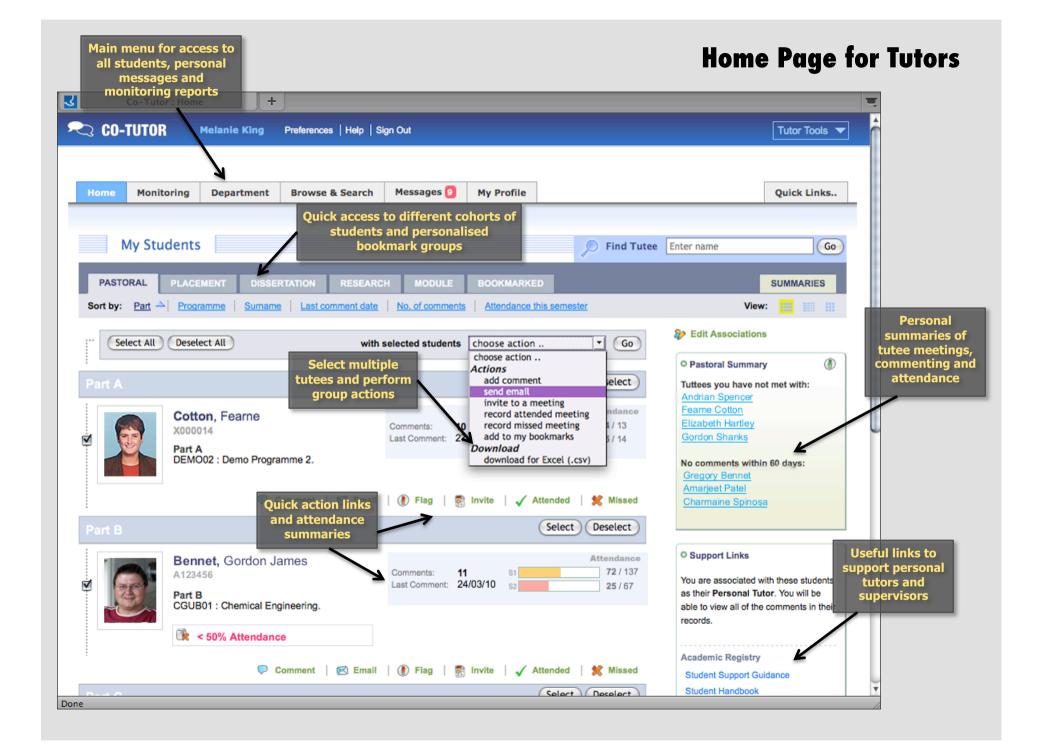
The most recent project proposal from a department administrator, academic and developers. This significant update enabled more types of tutoring and supervision, greater integration with central student database, enhanced usability and increased automations and notifications.

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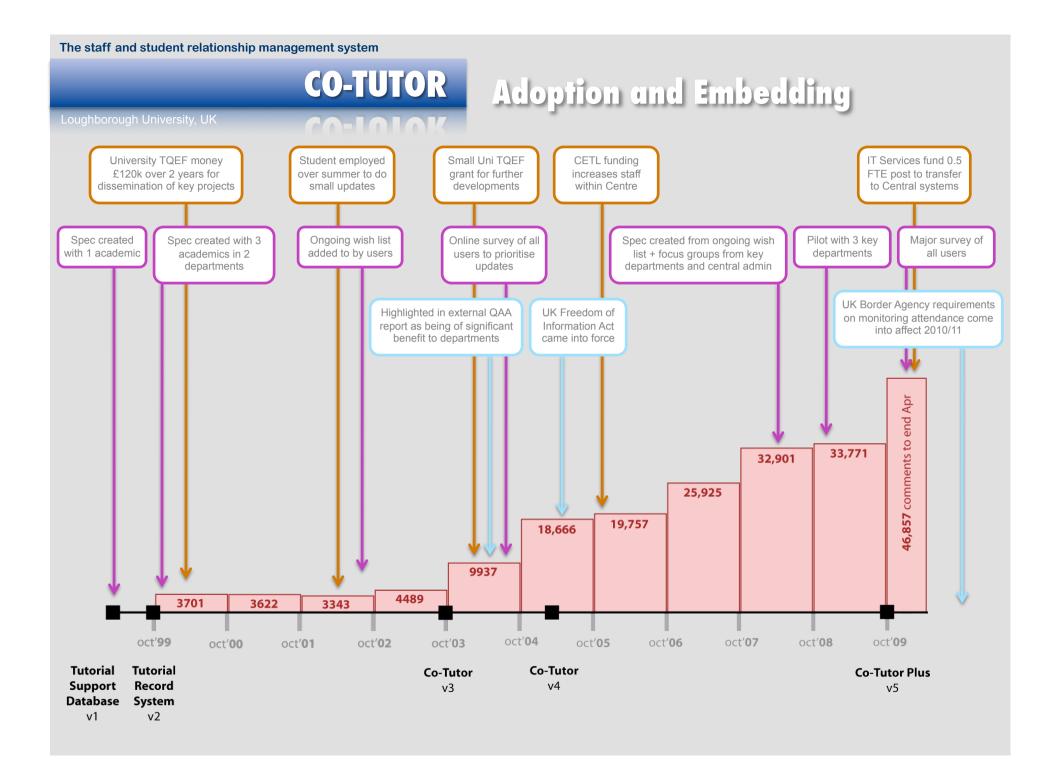
FLEXIBILITY & CONTINUITY: Supporting a learner's journey





A Student's Record







SUPPORTS STAFF: Improves communication

- Embedded in academic workflow and institutional systems.
- No training required.
- Helps to support new staff in their roles.
- Automated reminders of who to meet with and comment on.
- Audit trail of pastoral care, e.g. student not turning up to meetings.
- Efficient and affective at dealing with large cohorts.
- Targeted support links for staff, e.g. Finance office, Additional Needs Units.
- Supports staff adherence to the UK's Freedom of Information Act and Data Protection Act.





PROVIDES IMPORTANT METRICS: Enhances student experience

- Provides numerous monitoring reports that make the frequency and quality of support, provided by staff to students, completely transparent to senior colleagues and departmental managers.
- Attendance information used to view trends.
- Provides audit trails and accountability for the quality of care provided to students.
- Reports include;



- Staff online activity
- Total number of comments per student
- Total number of student/staff meetings both missed and attended
- Distribution of alert flags
- Frequency of comments, meetings and emails
- % attendance across programme of module, year group or level of study
- Reports specific to tutoring type.











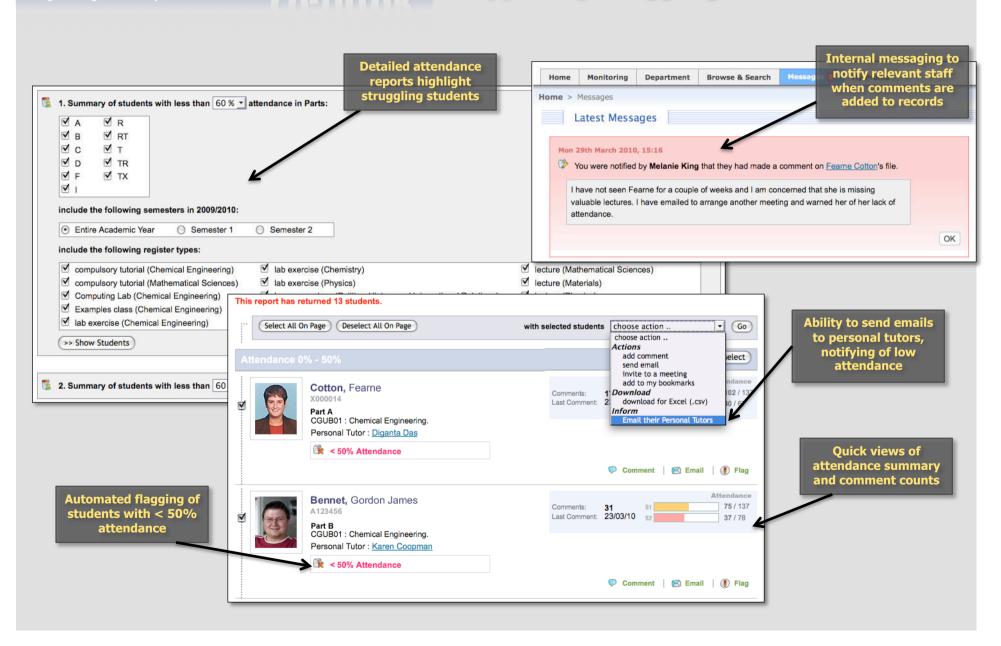


The staff and student relationship management system

CO-TUTOR

Loughborough University, UK

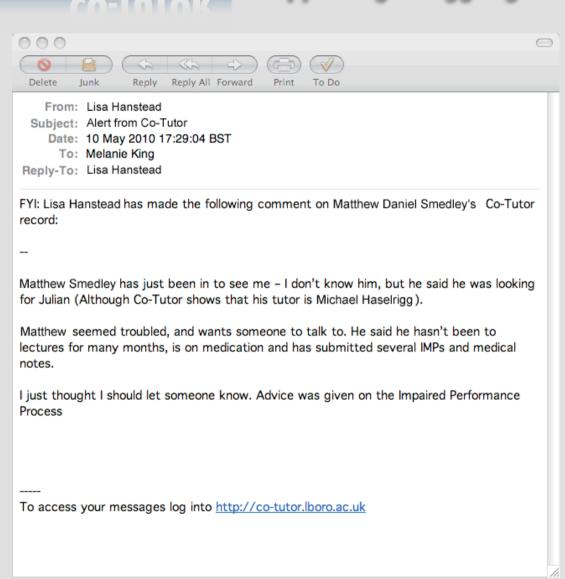
IDENTIFICATION & MONITORING: Supporting struggling students



The staff and student relationship management system

CO-TUTOR

IDENTIFICATION & MONITORING: Supporting struggling students



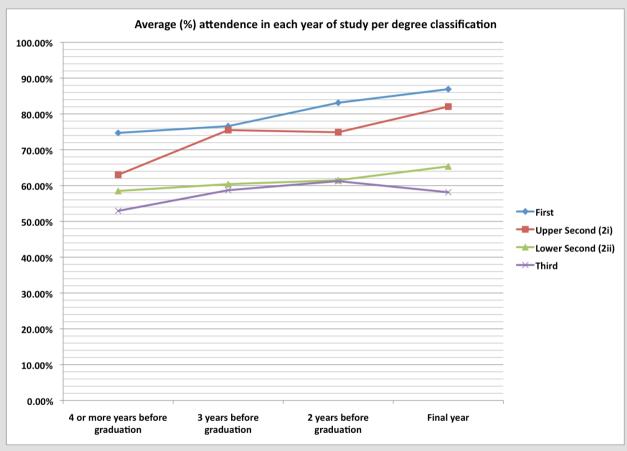


ATTENDANCE DATA ANALYSIS: 2004 - 2009

| | 2004/5 | 2005/6 | 2006/7 | 2007/8 | 2008/9 |
|-------------------------|--------|--------|--------|---------|---------|
| Total marked present | 25,372 | 37,899 | 62,017 | 79,428 | 116,335 |
| Total number of records | 38,715 | 56,395 | 89,930 | 117,062 | 166,027 |
| Average attendance (%) | 65.54 | 67.20 | 68.96 | 67.85 | 70.07 |
| Diff (pp) | | +1.66 | +1.76 | -1.11 | +2.22 |
| Number modules | 62 | 121 | 214 | 229 | 260 |

ATTENDANCE DATA ANALYSIS: 2004 - 2009

Averages for 4221 students graduating between 2004 and 2009 who have had attendance recorded on at least 10 registers per year of study.



1st 78.80% 2.i 73.26% 2.ii 61.19%

3rd 58.36%



SIGNIFICANT LEARNER IMPACT: Evidence of success

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* Data from a survey of users (110 respondents, March 2010) who expressed a preference.

Provides flexibility & continuity supporting a student's learning journey.

86% reported a positive effect on the continuity of care from a student's previous tutors. 6% reported a dramatic improvement.

Helps the identification of struggling students to aid retention and improve performance.

89% reported a positive effect on aiding intervention and early recognition of struggling students. 13% reported a dramatic improvement.

Assists staff in their responsibilities and improves communication.

85% reported a positive effect on communication between various tutors and administrators. 10% reported a dramatic improvement. 84% agreed or strongly agreed it helps new members of staff in their tutoring roles.

Provides important metrics to help enhance the student experience.

77% either agreed or strongly agreed that it helped to provide consistent pastoral care and industrial supervision across the department.

Supportive and inclusive development process based on academic need.

77% either agreed or strongly agreed that the method of developers working closely with staff created a more useful, flexible and innovative system.





RECOMMENDATIONS: Challenges to address

- 1. Frustration at increased workload can manifest itself in frustration with using the system.
- 2. "I now feel that I have to meet in my office rather than a café or neutral space".
- 3. There is a danger of raising expectations if you can't implement a solution.
- 4. Seamless integration with email clients.
- 5. Implementing a distributed methodology, using API's or common interfaces, relies on a common University wide approach.
- 6. The balance of automation versus human intervention.





RECOMMENDATIONS: Things that work

- 1. Spread of adoption top 3 reasons why people were motivated to use it:
 - i. Obliged to use it by my department (61%)
 - ii. I thought it would save me time (35%)
 - iii. It was recommended by a colleague (32%)
- 2. Talk to as many people as possible during the development process.
- 3. Respond positively to feedback.
- 4. Early prototyping and piloting with key groups.
- 5. Have the time and resource to implement suggestions if asking a user's opinions.
- 6. Tailor as much as possible to individual and department needs.
- 7. Devolve administration and first line of enquiries to nominated 'super-users' in department.
- 8. Automate as much as possible.



A staff and student relationship management system



CO-TUTOR

More info:

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Email m.r.n.king@lboro.ac.uk, p.m.newman@lboro.ac.uk

