CETL-MSOR Conference 2009

Open University in Milton Keynes
7th – 8th September

Conference Proceedings Edited by David Green

www.mathstore.ac.uk









COLMSCT
Centre for Open Learning of Mathematics,
Science, Computing and Technology



Acknowledgements

CETL-MSOR 2009 would not have been possible without the hard work of the organising committee: Tony Croft, Neville Davies, Diane Ford, Brian Francis, Michael Grove, Bob Lambourne, Gillian Lancaster, Duncan Lawson, Catherine Reuben and Steve Swithenby. Thanks are also due to Janet Nuttall for the administrative support she provided to the conference, Chantal Jackson for the production of the conference promotional materials and proceedings, and finally David Green for editing and collating these proceedings.

Published by The Maths, Stats & OR Network

August 2010

© 2010 The Maths, Stats & OR Network

www.mathstore.ac.uk

ISBN 978-0-9555914-7-1

Production Editing: David Green. Design & Layout: Chantal Jackson

Printed by Iulu.com.

Contents

Index of Authors		5
Editor's Notes	D Green	7-9
Refereed Proceedings Section		11-64
How do we identify students who require support in mathematics?	M Birch & NR Walet	13-18
Assessment and Development of Core Skills in Engineering Mathema	atics M Carr & E Ní Fhloinn	19-24
Comparing undergraduates' conceptions of mathematics with their attitudes and approaches to developing numeracy skills	N Durrani & VN Tariq	25-30
Using the Rasch Analysis fit-statistic to identify uncharacteristic responses to undergraduate tasks	A Edwards	31-36
Using electronic voting systems to increase engagement in the teaching of engineering mathematics at university	J Goodband	37-42
What do on campus students do with mathematics lecture screencasts at a dual-mode Australian university?	B Loch	43-47
What type of student avails of mathematics support and why?	C Mac an Bhaird & A O'Shea	48-51
Giving Useful Feedback to Students in Statistics Courses	K Paterson & JH McColl	52-58
The role of traditional assessment in mathematics higher education: the case study of an analysis question	G Scataglini Belghitar	59-64
Presented Reports Section		67-132
Developments to DEWIS - a Computer Aided Assessment system for Mathematics and Statistics	DR Gwynllyw & KL Henderson	69-74
Design and Development of Training Resources to Promote the use of GeoGebra within Higher Education in Ireland	P Johnson	75-78
A Strategy to Support Effective Learning in a First Year Engineering Mathematics Module	C McCartan & J McCartney	79-85
Open Educational Resources in Practice – A Workshop using MathAssess Tools for e-Assessment in Mathematics	S Milne, S Ahmed & L Fletcher	86-93
The Role of Student Feedback in Evaluating Mathematics Support Ce	entres E Ní Fhloinn	94-98
Student Engagement and Non-engagement with Mathematics and Statistics Support	C Patel & A Rossiter	99-104
Using approaches to studying to measure individual differences in the effectiveness of mathematics support	C Patel & P Samuels	105-110
Employing students to promote mathematics support at Loughborough and Coventry Universities	M Petrie & G Perkin	111-116
An illustration oriented approach in Statistics Education	N Ramesh	117-122
The Development of Mathematical Concepts through the use of LEGO NXT and LEGO NXTG	E Russell, R Bhakta & S Joiner	123-129
Using peer support to enhance the first year undergraduate experien	nce L Walker	130-132