
Early career *Connections* with MSOR

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First steps

When the MSOR Network was formed in 2000 I was a first year undergraduate student of mathematics at the University of Nottingham with, typically, no idea what I wanted to do afterwards. After graduating in 2002 I was recruited by Stephen Hibberd and Cliff Litton at Nottingham to develop their Virtual Learning Environment for service mathematics called MELEES. This appointment was for four months before I started a Masters degree in computing and was my first experience of HE mathematics from the point of view of the teacher. The first published article with my name on it anywhere was an account of the implementation of MELEES in *MSOR Connections* in 2003 [1].

Later that year Pam Bishop published a report I wrote on the state of MathML implementation in current web browsers on the MSOR Network website [2]. Encouraged by this, in 2004 I submitted an account of my MSc dissertation [3], on e-assessment in mathematics, to Cliff Beevers' *Maths-CAA Series* which was published online by the MSOR Network from 2001-6.

Disability

My interest in MathML led me to issues of accessibility. My first solo article in *MSOR Connections* [4], submitted with confidence gained from my earlier publishing experiences, was a short piece in 2004 about a new version of MathPlayer which could convert MathML to speech. This was an entry in the 'Have you seen this...?' series, which offered a quick publishing route for short items that might not warrant an in depth article but were worth bringing to wider attention. It was also listed as 'DDA Update', a series which provided disability-related updates in response to new legislation.

In 2006 my now-wife Emma and I re-launched the 'DDA update' series of articles [5], re-titling this partly to reflect changes to the legislation but mostly to move the focus from the negative – legislative necessity – to focus on 'supporting disabled students'. In 2008, following an invitation from Michael Grove, I formed a working group 'Accessing Maths, Stats and OR' (AccessMSOR) to take an interest in disability matters. We sent a general invitation for interested people to come to Nottingham Trent University for a wide-ranging discussion on disability and MSOR. This initial meeting was reported, of course, in *MSOR Connections* [6].

Around this time Emma and I, with Michael Whapples, received funding through the MSOR Network mini-projects scheme to investigate visual impairment and particularly the use of Braille to communicate mathematics. We took a paper based on this project to the CETL-MSOR Conference 2008 and this was published in *MSOR Connections* [7].

My final act as Chair of the working group was to run a one-day workshop giving the findings of our project and others doing similar work. Afterwards, we published contributions from speakers through *MSOR Connections* [8].

Technology

Given my interest in MathML and related technologies, I initiated a new series of articles in *MSOR Connections* in 2005 on MathML and XML technologies [9]. I wrote other articles about different technologies, graphics [10], blogging [11] and video [12], in 2007 and 2008. These contributions are descriptive, written from the point of view of the uncritical enthusiast. They basically assume that you might want to use these technologies and offer a guide of how to do so.

In 2008 I started travelling around the UK for the Institute of Mathematics and its Applications (IMA). This exposed me to different approaches taken at many institutions and led to many tearoom chats with mathematics lecturers about their practice. Some had read an article I had written in *Connections* and were interested to learn more, others were interested in how departments I had visited approached the issues they were having. In 2009 I started working again for the University of Nottingham, this time in a more general role supporting lecturers in their teaching through technology.

Exposure to different approaches and the need to answer questions such as 'why would I want to introduce this technology into my teaching?' led me to lose some of my wide-eyed enthusiasm and take an interest in questions of why we might use technology in education. The first evidence of this change in print came with an article in *MSOR Connections* in 2010 about response system use [13]. This took a sceptical look at the technology and asked when, and indeed if, this technology could be used effectively. Interest in this led to a study at Nottingham of student reaction to response system use, presented at the CETL-MSOR Conference 2010 and published in its proceedings [14]. A later contribution to *MSOR Connections* took a similar approach to lecture capture technology [15].

Now and next

Later in 2010 I started working for the MSOR Network on a project in Mathematical Sciences HE Curriculum Innovation as part of the National HE STEM Programme, reported regularly through *MSOR Connections* [16]. In 2011, as part of this, I was lucky enough to edit a special issue with contributions from some of the work we are supporting [17].

My interest in higher education mathematics is quite practical – I hope to improve my own practice and help others develop theirs. I think it is extremely valuable for our community to have somewhere to place practitioner articles that might not be suitable for a full research journal. In *Connections*, people could present the implementation of ideas in development, as we did with MELEES, or provide quick pointers to items of note, as I did with MathPlayer.

Articles could be published giving simple examples of use of technologies, such as the ones I wrote on graphics, blogging and video, or attempts to read around a topic, as with the articles on response systems and lecture capture. *MSOR Connections* also saw interesting opinion pieces by established expert practitioners, grounded in experience rather than research literature but interesting to reflect on and learn from nonetheless.

It is interesting, too, to look back and reflect on the wider impact of work that started in *MSOR Connections*. The gathering of the AccessMSOR community (still going strong under new Chair Emma Cliffe) and the research project into the experiences of students with visual impairments would likely not have occurred, thematically and practically, without us first publishing articles on disability through *Connections*. Writing those early naive articles on technology implementation led to interesting discussions and drew me to a point in my career where I would begin to question the effectiveness of such technologies in a way I hope is useful. Critically evaluating response systems in *Connections* led to a research investigation and a CETL-MSOR conference paper.

Many times, writing an article for *Connections* has driven me to think about a topic in depth and genuinely learn and develop myself. (And I haven't even mentioned reading articles!) While the MSOR Network has existed, I have gone from undergraduate student to be involved with delivering teaching, from uncritical technology enthusiast to take a broader interest in higher education mathematics and how technology and other aspects can work together to improve learning and the student experience. It now seems almost certain I will be with the MSOR Network at the end. The work of the Network will continue through the HEA Discipline Lead and I am delighted to hear that *MSOR Connections* will continue too. Where I go from here, professionally, is quite uncertain but I feel positive that I go there very much the better for my experience interacting with the MSOR Network and its *Connections*.

References

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HEA Discipline Workshops and Seminars

The HEA is currently inviting subscribing institutions in the UK delivering higher education to participate as part of the discipline workshop and seminar series for 2012-13. Grants of £750 are being offered to institutions wishing to host and deliver a workshop or seminar on teaching and learning in the Mathematics, Statistics and Operational Research discipline and to produce an associated report for the sector. In order to participate in the scheme a proposal form needs to be submitted to seminarseries@heacademy.ac.uk by 28 September 2012. The proposal form is available at <http://www.heacademy.ac.uk/seminar-series>, where more detailed information about the scheme can also be found.



HEA Teaching Development Grants

The next call for HEA teaching development grants opens on Tuesday 28 August. The call will be for departmental grants of up to £30,000, with a submission deadline on Thursday 27 September. 75% of the funding will be for projects in the areas of (i) assessment and feedback and (ii) flexible learning. The remaining 25% will be allocated to an open call for innovative pedagogic work. Details of the scheme can be found at <http://www.heacademy.ac.uk/tdg>.

A further call for collaborative teaching development grants will open in January 2013.