Memories of Simon Goodchild

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Abstract: Paul Ernest's recollections of Simon Goodchild.

Keyword: Simon Goodchild

I first met Simon Goodchild in the early 1990s when an earnest young man from the College of St Mark and St John. Plymouth (known as Marjons) approached me. He said he wanted to study for a Ph.D. in mathematics education. We chatted and I learned that he was a mathematics lecturer and teacher trainer in mathematics at what had formerly been a teachers college but had now expanded its mission to be a junior all round college or university. He had been teaching there for some years and before his appointment at Marjons Simon had worked several years as a mathematics teacher in both England and Malawi.

When I met him, Simon was the lead member of staff working on a contract with African universities, from The Gambia and other places, and groups of students would come and spend six months on a specially tailored course to develop their knowledge and skills.

Later when I knew him better and he was midway through his PhD, for which I was the main supervisor, I drove to London in a minivan driven by Simon packed with his African students. It was the college's van and they all drove up from Plymouth, picking me up at Exeter, to attend a Saturday Conference at the Institute of Education for British Society for Research into Learning Mathematics. Simon wanted to let the students under his charge experience a research session, with presentations by various researchers. BSRLM was informal enough in those days for PhD and even Masters students in mathematics education to present their work in progress to get feedback and suggestions from other students and researchers. Simon wanted his group of students to see that mathematics education is more than mathematics content, mathematics pedagogy, and

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even psychology of students learning mathematics. He wanted them to see that there is research and higher level questioning in mathematics education, that it is an active field of inquiry which can fully and openly engage your intellect and questioning powers. This is what drove him and indeed was his rationale for the rest of his career. This, together with his ceaseless instinct for, and love of, helping others. Simon was at his happiest when he was teaching, guiding, supporting and helping others, be they students or peers and colleagues. Simon did not have a selfish bone in his body.

So Simon approached me to supervise his PhD. Marjons had a special relationship with the University of Exeter whereby their staff could study with us at no charge. So I did in fact get no teaching credit for supervising Simon. But my teaching load was not excessive and I was privileged to be able to follow my interests and work with who I chose. Simon was always grateful for this, although I pointed out that it was my choice based on interest and no sacrifice. What I can say was that Simon certainly did pay this forward, with the ceaseless and unrestricted help he offered to students and colleagues.

The biggest problem Simon and I faced in his doctoral studies was nailing down his research question. In Britain at that time, if you applied to study for a PhD at a University you applied to the institution, indicating the disciplinary area of interest, and perhaps a scholar you wanted to work with, usually after informal approaches to them. When accepted you were assigned a main supervisor, this was me in the case of Simon, and a subsidiary supervisor who would play a much smaller role, but represented backup, in case of problems. They could also be a secondary source of research guidance and reading.

Students might have written a one page outline for the project which was often made up of vague ideas, too big in scope, unfeasible in practice, and needing much work to refine and shape into a feasible doctoral project. My supervisory strategy was to work as a midwife, to help students birth their own idea, while working with them to shape the clay they were working with, to mix metaphors. I used to say that to complete a PhD was to solve two problems. First there is the problem of formulating the question to investigate. The second problem is to answer that question. My policy was to help them uncover what they really wanted to investigate, rather than assigning

them my own projects. For many persons the PhD study is the biggest and hardest project they will ever undertake, Certainly it was in my own case, and writing a single authored book later seems a far easier task than that first PhD project.

As I recall, Simon arrived with the idea of finding out what students were doing when learning mathematics in the classroom. He was drawn to the psychology of mathematics education a la Richard Skemp, and others, also to radical constructivist learning theory, to social constructivism, and to Activity Theory. He was especially interested in what was known about what actually went on in students minds. He was drawn to the qualitative research paradigm as he wanted in depth knowledge of individuals, but he was not opposed to using statistical data to make his work multi-dimensional and using mixed methods.

Simon followed up very thoroughly every reading suggestion I gave him, from Fleck's study said to anticipate Kuhn's, to Lave and Wenger on peripheral participation and Stieg Mellin-Olsen's *Politics of Mathematics Education* and many, many more. Although not uncritical of Stieg's interpretation of Activity Theory, he was taken with Mellin Olsen's distinction between relational and instrumental rationales for study. This is the social interpretation of the relational/instrumental division rather than Skemp's psychological interpretation of the distinction which the two authors had co-invented.

Simon started his research and. Goodchild (1994) is an early account of his work in progress. On the basis of examining student goals, his study began to take shape. In gathering his data he attended every mathematics class of a group of 15 year olds in a nearby school for one year. His method was ethnographic, to go around the classroom asking the children what they were doing and why, recording all the conversations and paperwork. The students were following the School Mathematics Project individualized study materials (SMP 11-16) and solving a series of problems. After a year he found that the majority had in fact a third rationale beyond relational/instrumental. This was busy work, just doing the problems without intrinsic (relational) or even extrinsic (instrumental) motivation. He called it the production rationale.

This findings revealed a major weakness in the scheme, because it meant that the work was not educational, it was in fact pointless. Simon also analyzed what mathematical concepts and skills the students employed throughout the year. The answer was basic elementary arithmetic they learned years ago, plus a few additional but still simple mathematical skills and concepts. Since the aim of mathematics education is not that of solving the particular examples the teacher or scheme presents you with. The problems themselves have no value. The aim is that you develop a new set of concepts, skills and capacities that are applicable and transferable to new unfamiliar problems, and it is intended, to other domains of application. But none of that was being achieved. This finding was not a critique of the perfectly competent teacher. The intended goals of the class teacher and the SMP 11-16 are perfectly respectable. But in studying the goals of learners Simon found that often learners are just 'doing' mathematics, with little idea of these goals or what they 'should' be learning.

This was a devastating critique if the mathematics scheme. Furthermore it shows the danger of using any scheme without attending to what the students are actually learning, as Erlwanger (1973) had done years earlier in the USA. It shows the dangers of a huge gap between the planned and taught curriculum, on one side of a chasm and the learned curriculum, on the other side. Students need specific directed help from the teacher to make this crossing.

It was a fine piece of research, if recounted rather thinly from my memory here. It was a sophisticated piece of work because he analyzed the project and results through the lenses of three different learning theories. The PhD was finished and awarded in 1997 at the University of Exeter, an Ethnographic year-long study of a Year 10 mathematics classes class taught using SMP 11-16. (Goodchild 1997). The PhD was further developed in book form and published as Goodchild (2001). It was very well reviewed by Christine Keitel, and also by Anne Teppo.

Armed with his PhD and a growing list of publications Simon, now Dr. Goodchild, was appointed to a lectureship in mathematics education at the University of Agder (UiA) in Norway in 2004, perhaps the leading national centre for research in mathematics education. It was not many years before Simon's work was recognized as excellent and he was promoted to full professor.

He was a brilliant appointment, not only because of his research excellence, but because of his research leadership. He obtained grants to further the work of the department, brought on junior colleagues and peers through encouragement and collaborative work. Research gate lists ten of his top co-authors and I do not know how many more there are, but it is plenty, illustrating his commitment to collaboration.

Simon saw a growing number of doctoral students through their studies to completion. He fostered inter-university collaboration and was a major force in setting up a Nordic doctoral school working with many other Nordic Universities. He invited many international scholars to come and teach on the doctoral courses at UiA and at Doctoral Schools such as one I contributed to in Tallinn.

He invited me several times to come and lecture and to help with doctoral students who needed a little outsider influence to shape of put the final touched to their doctoral studies. He also invited me or put me forward to the authorities to examine PhDs and to serve on new staff selection boards. He kindly arranged a mini-conference in Agder to celebrate my 65th birthday and official retirement in 2009, and co-edited a festschrift for me with our mutual friend Bharath Sriraman (Sriraman and Goodchild 2009) . All the while Simon was researching and publishing at a prodigious rate

One set of records available through UiA, Agder's website shows that by 2013 he had published his m**onograph on** *students' goals. In addition, five edited collections including :* The First Sourcebook on Nordic Research in Mathematics Education (Sriraman, et al, 2010), as well as:

43 Peer-reviewed articles,,

11 Other scientific articles,

12 Other scientific works.

Further records show many more publications from 2020 until 2024, and I have yet to find records of his doubtless numerous publications in the period 2013-2020. This gappy record shows up another of Simon's virtues. He was very modest man, perhaps too self-effacing, without a shred of vanity. He had not curated any profile on Google Scholar or indeed anywhere in the public domain. His publication listed at UiA are simply there because scholars must report their outputs to the University.

As a person, Simon was a most loyal and caring friend. He disclosed little personal about himself even though he was social, talkative and a fascinating dinner and conversation companion. I learned indirectly of his deep Christian devotion, and I know it was a very powerful sustaining commitment and force in his life, but he never advertised it. I knew little about his intimate personal life but was pleased to learn that he found love in Norway and had a deep and long lasting relationship. He talked occasionally about has partner as a friend without revealing any details of his intimacy with her. He was a man of quiet and deep personal commitments and private joys who gave so much of himself to friends, colleagues and students.

He was very loyal to and caring about his friends, and would always go the extra mile for them. I recall joking that because he was now a master of his trade, professor of mathematics education, that made me a grandmaster. This amused him, in a warm and caring way. His early demise is a loss to us all, all his friends, colleagues, and the field of mathematics education. Dear Simon, I will miss your good humor, intelligence and friendship. Rest in peace, dear friend.

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