

Mathematician's 30-year winning tangent

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KEN PEARSON

Software innovator

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It was back in the 1970s that La Trobe University mathematician Ken Pearson, along with colleague Arthur Jones, developed what became known as the La Trobe teaching strategy. Tutorial rooms were converted into "graffiti laboratories" in which students worked in small groups at blackboards covering every wall. This tutorial style spread from La Trobe and is the forerunner of the modern notion of a flipped classroom.

In his research role, Pearson concentrated on computer-aided solution of large equation systems. This provided the link to economics.

Pearson, who has died of cancer at 71, had graduated in mathematics with first-class honours at the University of Adelaide in 1963 and was awarded a PhD in maths at the same university in 1966.

Twelve years after Pearson joined La Trobe, a former student alerted him to work being done on computer modelling of economies at La Trobe's economics department by Peter Dixon and colleagues. Pearson learnt what they were doing and declared there were better ways to solve the equations they relied on. "Prove it," was Dixon's response. Pearson took up the challenge, leading eventually to a contribution of world-wide significance.

Dixon's group was working on the federal government's IMPACT Project, headed by Alan Powell at the University of Melbourne. The project's ORANI model of the Australian economy was gaining political traction and was used effectively at the Industries Assistance Commission in calculating the effects of lower tariffs. Pearson knew that IMPACT was keen to facilitate wider use of their economic model but this was inhibited by computational complexity. His insight was to see that dissemination could be achieved via efficient, easily transportable, user-friendly software.

Enthusiastically backed by Powell, Pearson set himself the assignment of creating the right software platform.

Large-scale, policy-relevant economic models contain many thousands of variables and non-linear equations and the task of making them computationally efficient and accessible must have seemed a monumental task. For Pearson, it required a break from his familiar world of mathematics at considerable risk to his burgeoning career. But he succeeded.

The outcome was the GEMPACK software, first unveiled at a 1984 training course on the ORANI model for public servants and academics. Over the next 30 years, Pearson continuously developed and improved the software, working with several collaborators, most notably Mark Horridge.

GEMPACK is now used in 600 sites including the World Bank, the International Monetary Fund, the Asian Development Bank, the OECD and government departments and universities in more than 90 countries.

In a recent computational comparison with the other major software platform for economic models (GAMS, developed at the World Bank), GEMPACK was the overwhelming winner.

Behind this spectacular international success was Pearson's superb technical prowess. Just as important was his personality: gregarious, intellectually honest, inquiring, unpretentious and always up for a challenge.

In 2006, Pearson was elected as a Fellow of the Academy of Social Sciences in Australia.

The nomination citation stated: "Ken Pearson is one of only a handful of Australian academics who have made a significant difference to the world of economics."

Pearson had friends and admirers in every part of the world.

He was a great participant in life. He was an adventurous tourist. He loved playing golf, tennis and bridge. He was a chorister with the Royal Melbourne Philharmonic.

He had a close-knit family and is survived by Helen, his wife of 50 years, four daughters and nine grandchildren.

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