

# Who's Teaching Science In Our Classrooms?

By Frankie Einarson

**Recent findings by the Flinders Centre for Science Education have paid credit to concerns long held by parents about the qualifications of their children's teachers. While the study only covered high school science teachers in SA, industry experts agree that should the study be extended, the results would be much the same.**

After surveying 600 South Australian teachers, researchers found that more than a quarter of senior secondary science teachers are not fully qualified to teach in their current subjects. The problem is most prominent in physics, where 42% of teachers teaching year 11 or 12 physics do not hold a university degree in the subject. Amongst chemistry teachers, 28% lack university qualifications and similarly, 25% of biology teachers. For general science teachers in years eight to ten, 16% are considered by the University to be insufficiently qualified.

The trend is higher amongst younger teachers, which may suggest a decline in the popularity of science subjects as a university major in recent years. Regardless of the reason, the numbers presented in this report are perturbing.

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The results released by Flinders University reiterate the current focus on teacher quality. It is established that teacher quality is the most important factor in student results, and teachers' subject knowledge is directly linked to student performance. It follows that teacher quality cannot be significantly improved without some form of mandatory subject-specific qualifications for teachers.

The Flinders University report suggests a number of measures to maintain the balance between educational and subject-specific expertise:

- Enabling teachers to extend their qualifications through custom science courses.
- Making a minimum amount of science mandatory in primary teacher education.
- Requiring new teaching graduates to be formally qualified to teach science, and phasing in the same requirement for existing teachers.
- Linking a record of individual teachers' subject-specific qualifications to the teacher registration process in South Australia.

The Education Department has responded by claiming that strategies are being designed for the professional development of secondary maths and science teachers. It has also since been announced by the SACE Board that science teachers are receiving training to deliver the new SACE - however, the training seems to focus on teachers' assessment skills and the application of science in day to day life, rather than on improving subject knowledge. There will be no extra professional education provided, but teachers will supposedly add to their subject knowledge through 'industry partnerships' and school visits by scientists.

As both federal and local government's continue to focus on improving teacher quality as the cornerstone of the Education Revolution, teacher training and placement is evidently an issue which needs to be addressed in South Australia, and across the nation. ■

Distribution of senior Physics teachers across age in SA 2009

