

## **Response to questions on notice from Australian Mathematical Sciences Institute**

**Senator WRIGHT:**

...I want to take you back to a South Australian example—South Australia is my home state—in terms of the effect of curriculum and policy on what is occurring. In South Australia, with the SACE now, there are basically four set subjects that students do, and there is a research project. The research project is student centred. The student chooses the research that they are going to do, and I think there are suggestions that it is of dubious outcome, depending on the research and the ability of the student to do that—sometimes excellent, sometimes not so. One of the effects of that, anecdotally—the student subject choices are restricted to four rather than five subjects—is that as a result there are some subjects that are being taken less now: music, art and those sorts of add-on, perhaps luxury, subjects, at the end of it. But I am also interested in whether you are aware of any effect on the willingness of students to take what traditionally might have been the two higher level maths subjects and their perhaps dropping maths or going to one of the more generalised maths. Do you have any information about whether there has been a flow-on effect of that?

**Prof. Prince:** We do not.

**Ms McIntosh:** Not in South Australia, no.

**Prof. Prince:** Not in South Australia.

**Ms McIntosh:** It is not coming through from our members, and they would be the first people to let us know if they were worried about that.

**Senator WRIGHT:** I would be interested in pursuing that a bit and understanding if that is the case.

**Prof. Prince:** We can inquire with our members and let you know.

## **ANSWER**

**From Nigel Bean, Director of Research, School of Mathematical Sciences, The University of Adelaide:**

"The consequence of the Research Project, is that students now only take 4 courses at Year 12, instead of the customary 5. This makes taking both Mathematical Studies and Specialist Mathematics (the 2 highest-level maths courses in SA, which are required for entry to most Engineering degree programs and the specialist mathematical sciences degree programs) quite difficult as many students are looking for more breadth than just double maths, physics and chemistry, for example.

Some preliminary investigations in the first year of the NewSACE suggested that the typical "last choice" courses, for example Geography and Specialist Mathematics, had a quite steep decline, presumably due to this change. Of course, the total number of courses taken by students is almost certain to drop by 20%, so there have to be significant declines somewhere. A statistical analysis would easily be able to show whether this was uniform, or focussed on certain courses."

**From Will Morony, CEO of the Australian Association of Mathematics Teachers:**

"The Senator was almost undoubtedly referring to the 'research project' that has been added to the general SACE requirements. This is (loosely) based on the similar project in the International Baccalaureate program. It is meant to be a substantial piece of work; and is part of the reasoning behind students now needing to do only 4 subjects at yr 12, rather than the previous 5 in order to get their certificate...

...It is the decrease in requirement, associated with the research project that is likely to be putting further pressure on numbers in mathematics. Although it would be fair to say that the research project is unpopular for many more reasons than this."