

EI 1/20/3 AA 1/12

1 February 2011

Allan Peachey
Chair, Education and Science Select Committee
Parliament Buildings
WELLINGTON

Dear Allan

You may recall that in 2007 the Education and Science Select Committee, then under the chairmanship of Hon Brian Donnelly, conducted a hearing into the state of Technology delivery in New Zealand secondary schools. As part of that investigation the Committee interviewed the Ministry of Education which acknowledged there were problems with the curriculum and made some proposals on how these problems might be addressed.

Their suggestions included the following:

- Continue to work with Waikato University to develop a specialist qualification for technology teachers;
- Re-examine the amount of money in the technology subject scholarships;
- Commission a teacher quality practice evaluation;
- Continue to spread the lesson from the Beacon Practice schools;
- Develop a ten-year strategy for technology teacher supply.

PPTA is writing to you now to ask that the Select Committee invite the Ministry of Education to outline what progress there has been on these goals.

From PPTA's perspective progress has been limited and has come about largely as a result of industry, schools' and practitioners' efforts not as an outcome of ministry leadership. More specifically:

1. Teacher Supply

1.1 Technology shortages

It remains the case that technology is an area of serious teacher shortage. According to Ministry figures only English has a greater percentage of vacancies.

Technology made up 13.7% of vacancies in 2010 which was a drop of only .7% from 2009 in spite of assumptions that the financial situation would encourage more people to return to secondary teaching. The figures also show that there are a further 3.1% of vacancies in the Foods area which for these purposes we include under the technology umbrella.

1.2 Waikato University Course

New Zealand is fortunate that Waikato University has been prepared to develop a specialised two-year course which enables applicants with industry-based qualifications to achieve a graduate diploma of teaching and a graduate diploma in either engineering or tourism and hospitality. That has been the only path into teaching for New Zealand for career changers with trades experience. It has been a successful source of teachers for technology and foods but may not be as successful in the future, firstly because the number of career change scholarships has been reduced from 30 to 15, and secondly and more critically, graduates from the course, particularly those with backgrounds in hospitality, have found that the ministry will not give them salary credit for their many years of trade experience. The reason for this is that the work experience credits are normally dependent on the teacher having held a vocational qualification at Level 5 or above and such qualifications were not always available in the past. The result is that these teachers are expected to spend two years training then to take a pay cut of over \$20,000 in order to be teachers.

As two disappointed graduates put it:

"We were enticed to apply for these scholarships because of our industry experience, surely they did not expect us to take a \$10-20k pay cut as a result. I am passionate about teaching and can't wait to get stuck in."

"I am really disappointed at this assessment. The government wants us for our experience (in some cases 13-25 years) to teach Technology in the new curriculum, but are not willing to pay for it. I would really like to move this along and work at this for other cohorts who have been disappointed as we are."

There are a number of solutions to this problem including the power of the Secretary for Education to exercise her discretion with respect to placement on the salary scale but after two years of discussion, the ministry has shown little interest in seriously addressing the problem.

1.3 Overseas recruitment

For years, the main source of technology teachers in New Zealand has been overseas recruitment. From 2008 to 2009 almost 300 teachers² were recruited from overseas and although the Ministry data doesn't break the numbers down by subject we can assume that a sizeable number were specifically recruited to teach technology subjects. Unfortunately, they are also affected by the same problem that the graduates from Waikato have, their work experience is not always able to be credited because their vocational qualifications may not meet NZQA's level 5 test. In addition their qualifications are often not recognised in New Zealand. This can leave them feeling they have been recruited under false pretences.

Even for those teachers who do have recognised qualifications and experience, the time delay in getting them on the correct salary step is immensely discouraging for new migrants. There is nothing on the ministry's recruitment website

² To put this in context, that number equates to roughly one third of all new entrants into secondary teaching

¹ Otago Polytechnic is offering a Bachelor of Culinary Arts from 2010

<u>www.TeachNZ.govt.nz</u> warning applicants that they may face interminable delays and perhaps intractable problems with the process of getting their qualifications recognised and with placement on the correct salary step should they decide to teach in New Zealand.

1.4 Summary

While acknowledging that there has been a change of government and that New Zealand is now in a completely different financial context, PPTA remains of the view that the country cannot progress economically in the absence of an effective and coherent strategy for effective technology delivery in secondary schools. It may be laudable to set up options such as trades academies and tertiary high schools but to some extent this is addressing the problem at the wrong end. It would be better to ensure that there is effective delivery of technology and food subjects from year 7 rather than spending money trying belatedly to catch up.

Technology teachers are a scare resource and as with much of the secondary teaching service, many are now of an age as to be contemplating retirement. The development of trades academies and the financial incentives provided by the youth guarantee for tertiary organisations to offer trades courses, will exacerbate the shortage by drawing trained teachers out of secondary schools into jobs that are easier and seemingly more valued. PPTA sees no evidence that the ministry is grappling with the problem of shortages or that it has made any attempt to develop the ten-year strategy for technology teacher supply it promised to the Select Committee.

2 Curriculum and Assessment Issues

2.1 Curriculum support

The Ministry's reliance on Beacon Practice was perhaps making a virtue of necessity but nevertheless, technology teachers report that the case studies and resources deriving from the project and now available on the Techlink site http://www.techlink.org.nz/index.htm are a very important source of support. This site is operated by the Ministry in partnership with the Institution of Professional Engineers New Zealand (IPENZ). Teachers appreciate the leadership role that IPENZ has taken but it does raise questions of how appropriate it is for the delivery of the national curriculum in New Zealand secondary schools to be so reliant on resources provided by outside organisations. In other subjects, the ministry takes full responsibility for preparation of materials.

The other organisations that have been essential to the delivery of some aspects of the Technology curriculum are the Industry Training Organisations (ITOs) which have provided the bulk of unit standard assessment resources for secondary schools. The ITOs, however, are themselves under financial pressure now and are consequently increasing their charges to schools. Competenz for example, which has provided sterling support to schools through its Tools4Work, has been forced to increase its charges by up to \$65 per unit standard. It is very difficult to see how secondary schools will be able to cope with these increases during a period when they will be suffering estimated cuts to operational funding of \$19 million as a result of the change to quarterly funding. Unfortunately, there are indications that Competenz may be forced to withdraw further from its role with schools in order to work with trades academies and youth guarantee places. Not only does this show the risk of an approach the leaves schools dependent on external bodies for curriculum and assessment resources but also begs the question of what is to be achieved if new policies result in resources being withdrawn from young people at secondary school to be reallocated to learners who have left school.

2.2 Professional Support

PPTA's research in the state of technology in schools *Technology: Theory without practice* noted that such a dramatic change in a curriculum required far more professional development support than the teachers were ever provided with. That situation improved briefly in with the appointment of senior subject advisors in technology in 2007 but that initiative was abandoned in 2008 leaving the subject rudderless once again. There has been consistent but limited support provided through the technology advisors employed through School Support Service. The number of advisors, 6.5 was hardly sufficient for the whole country and even that resource is likely to be lost as a result of the recent reorganisation of the School Support Service.

2.3 Assessment

In the revision of achievement standards to align them with the revised curriculum, Technology has lagged behind all other subjects at every point, with a final registered Level 1 standards for use in 2011 not published until a month and a half after all the other subjects. The resources to support those revised standards in 2011 are also seriously lagging behind. These delays are largely caused by difficulties in gaining consensus among the various specialist areas that comprise the Learning Area, essentially an artificial construct imposed on the profession in the early 1990's. The tensions within the Learning Area have also been exacerbated by the Ministry's insistence that the new and strategically very important Digital Technologies standards must be part of Technology rather than being given their own Learning Area (see below). This has added a further group with whom consensus has to be developed.

But there has also been a failure by the Ministry to apply to the problem sufficient capacity and time. The delays have left technology teachers feeling frustrated and insecure because they have not had the preparation time required to successfully implement the revised standards this year.

2.4 Digital Technologies

The ministry's reluctance to develop achievement standards for computing has not assisted New Zealand in developing a workforce skilled and ready for jobs in the IT industry. The existing Technology Achievement Standards were not suitable for some aspects of computing such as programming, and without suitable achievement standards there was no incentive for able students to do courses that were entirely comprised of unit standards for which they could not get merit or excellence.³ The fact that achievement standards in Digital Technologies are being developed is entirely due to the lobbying efforts of computing teachers, the New Zealand Computing Society, (NZCS) the New Zealand Information and Communication Technology group (NZIST) and PPTA. development is seen by computing teachers as proceeding at a snail's pace, given that the Ministry is insisting that the introduction of these new standards follow the timeframe set for the standards revised to align to the new curriculum, rather than a faster timeframe. This means that while Level 1 digital technologies achievement standards will finally be available this year, level 2 will not be till next vear and level 3 will not be available until 2013.

³ For details on this see: http://img2.scoop.co.nz/media/pdfs/0805/NZCS Evaluation of Achievement Standards.pdf

2.5 Summary

In the relentlessly positive language of teachers, we might say that the ministry has "made progress" with respect to developing a coherent strategy for the delivery of technology in schools. New Zealanders, however, cannot be satisfied when a curriculum area so essential to the economic prosperity of New Zealand in the 21st century is so haphazardly catered for. Without sound national leadership in this area, New Zealand will continue to be bedevilled by skills shortages and will miss out on the innovations and wealth that is engendered in technologically-savvy countries.

PPTA is asking that the Education and Science Select Committee assume some responsibility for providing this leadership.

Yours sincerely

ROBIN DUFF PRESIDENT

cc:

Hon Anne Tolley, Catherine Delahunty, Jo Goodhew, Colin King, Trevor Mallard, Sue Moroney, Heather Roy, David Shearer, Louise Upston