

**Findings from
Year 7-13 Technology Teacher
Professional Support and Supply
Questionnaire**

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Technology Teacher Professional Support and Supply, Year 7-13 Questionnaire Findings report as requested by the Education Science Select Committee March 2007, from the Ministry of Education.

Introduction

The following report presents the findings from an analysis of the Year 7-13 Questionnaires – see Appendix A. The questionnaire was sent to 608 schools registered on the Ministry of Education database as providing programmes in technology to students ranging across Year 7-13. The questionnaires were sent out 15th November 2007. The return date was given as 3rd December 2007 although returns up until early January were accepted for analysis.

A total of 245 schools responded to the questionnaire, showing an overall return rate of 40%. The school type and return rates are provided in Table 1.

Table 1: School Type and Return Rates

School Type	Number Sent	Number Returned	School Type Return Rate	Percentage of Total Returns
State Intermediate/Technology Centre	121	65	53.7%	26.5%
State Secondary	247	112	45.3%	45.7%
State Middle	4	1	25%	0.4%
State Composite	75	19	25.3%	7.8%
Integrated Intermediate	0	0	0	0
Integrated Secondary	69	33	47.8%	13.5%
Integrated Composite	22	3	13.6%	1.2%
Private Intermediate	2	0	0	0
Private Secondary	19	7	36.8%	2.9%
Private Composite	49	5	10.2%	2.0%
Total	608	245	Overall Questionnaire Return Rate 40%	

As can be calculated from the figures in Table 1, the majority of schools that returned questionnaires were state schools - a total of 197 or 80.4% of total returns. State schools also had the highest return rate at 53%. Thirty six of the total returns (14.7%) were from state-integrated schools with a return rate of 39.6%. The remaining 12 responses (4.9% of the total returns) were from fully private schools showing a return rate of 17%.

A total of 65 intermediate schools/technology centres sent in responses showing the highest overall return rate of 52.8% for school type, although only accounting for 26.5% of the total questionnaires received. Secondary schools returned the highest number of questionnaires (152 or 62.1% of questionnaires received). However, their return rate at 45.4% was lower than that of the intermediate/technology centres. Twenty seven composite schools returned responses accounting for 11% of questionnaires received with a return rate of 18.5%. The remaining response was from a middle school accounting for 0.4% of the questionnaires received, but showing a 25% return rate for this school type.

The questionnaires returned provided data on a total of 1192 teachers. A breakdown of this data is presented under Question 2 below.

Findings

Question 1: School Demographics

1a) How many schools offer technology to students from other schools?

Of these 245 schools, nearly two thirds (149 or 61.1%) did not offer programmes to external students. Ninety six schools (39.2%) did offer technology education to students from other schools. One school provided no data in response to this question.

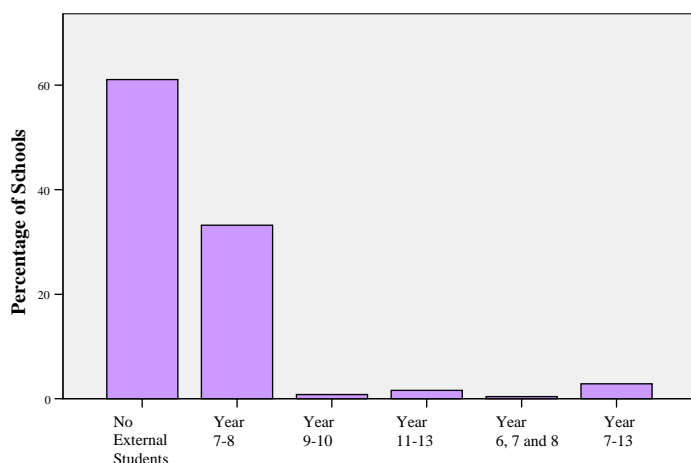
1b) How many students receive technology from an external provider?

There are 29471 external students being provided with technology programmes from these 96 schools.

1c) What year group do these external students come from?

The majority of schools (81 or 84.4%) providing technology to external students, offered programmes at year 7/8 only. The remaining 15 schools offered programmes to a small number of students ranging from year 6 to 13. In some cases (for example technology centres and some intermediate schools), the majority of students involved in technology programmes were external to the school. Graph 1 provides a summary of schools providing technology programmes to external students.

Graph 1: Technology Provision for External Students



Question 2: Technology Teacher Demographics

2a) What is the ‘highest subject qualification’ profile of technology teachers?

Data pertaining to 1156 teachers (97% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 36 teachers (3%) did not have this data completed. However, much of the data provided was not related to subject qualifications, but rather related to education qualifications. Due to this, the data has been coded for the highest educational qualification *if* subject qualification data was not provided. Due to the high interest in the Diploma of Specialist Subjects – this has been coded separately. The data coded as Bachelors Degree and Honours/PG

Diploma/Masters was difficult to differentiate into education and subject related categories as this detail was often not given. Therefore these categories include a mix of subject, education and unknown degrees and postgraduate qualifications. This data is presented in Table 2 below.

Table 2: Highest Qualification

Qualification Type	Frequency	Percentage
Holds No Qualification/LAT	10	0.8%
Subject Certificate (Industry Qual)	168	14.5%
Diploma of Specialist Subjects	146	12.5%
Subject Diploma	141	12.2%
Teaching Certificate	70	6.1%
Teaching Diploma	112	9.7%
Bachelors Degree	353	30.6%
Honours/PG Diploma/Masters	154	13.3%
Doctorate (Subject)	3	0.3%
Total	1157	100%

The most common qualification held by these teachers of technology is a Bachelors Degree of some type – held by 353 teachers - 30.6% of those for whom this data was provided. The next most common qualification is a subject related diploma (287 or 24.7%) with over half of these being the Diploma of Specialist Subjects (12.5% of the total responses).

Teaching related qualifications were provided as the highest qualification for 182 (15.8%) teachers, with almost two thirds of these being a Diploma of Teaching (112 or 9.7% of the total responses) and the remaining being a certificate of teaching (70 or 6.1% of the total responses). Industry qualifications were given as the highest subject related qualification for 168 teachers (14.5%) and the majority of these were New Zealand Advanced Trade Certificates. Postgraduate qualifications were provided for a total of 157 teachers (13.6%) with the 98% of these being at Honours/Postgraduate Diploma or Masters level (154 or 13.3 of the total responses). Only 3 teachers (0.3% of total responses) gave a Doctorate as their highest qualification and in all cases this was a subject related qualification.

2b) How many teachers were initially trained as specialist technology teachers?

Data pertaining to 1185 teachers (99.4% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 7 teachers (0.6%) did not have this data completed. There was some confusion noted however in responding to this question, whereby some data reflected specialist training in another area – for example music. When this was recorded the data was modified accordingly - that is, the ‘yes’ response was changed to a ‘no’ in terms of training as a specialist *technology* teacher. It should be noted however, this adjustment could only be made in cases where details were provided rather than simply a yes/no response.

In addition, some responses indicated teachers were unsure what constituted ‘specialist technology training’. It is noted this confusion is warranted in terms of this question where it was not made clear in the questionnaire what such training does constitute. For example, some teachers now teaching food technology trained as home economics teachers – and therefore were unclear as to whether they should say yes or no to this question. The data is therefore reflective of the individual teacher’s perceptions of themselves as having had specialist training relevant to technology – rather than a more objective and consistent measure in this regard. The responses provided were very evenly split with 589 teachers (49.7%) having had initial specialist technology training and 596 teachers (50.3%) not having had so.

2c) What subjects were teachers offering in 2007?

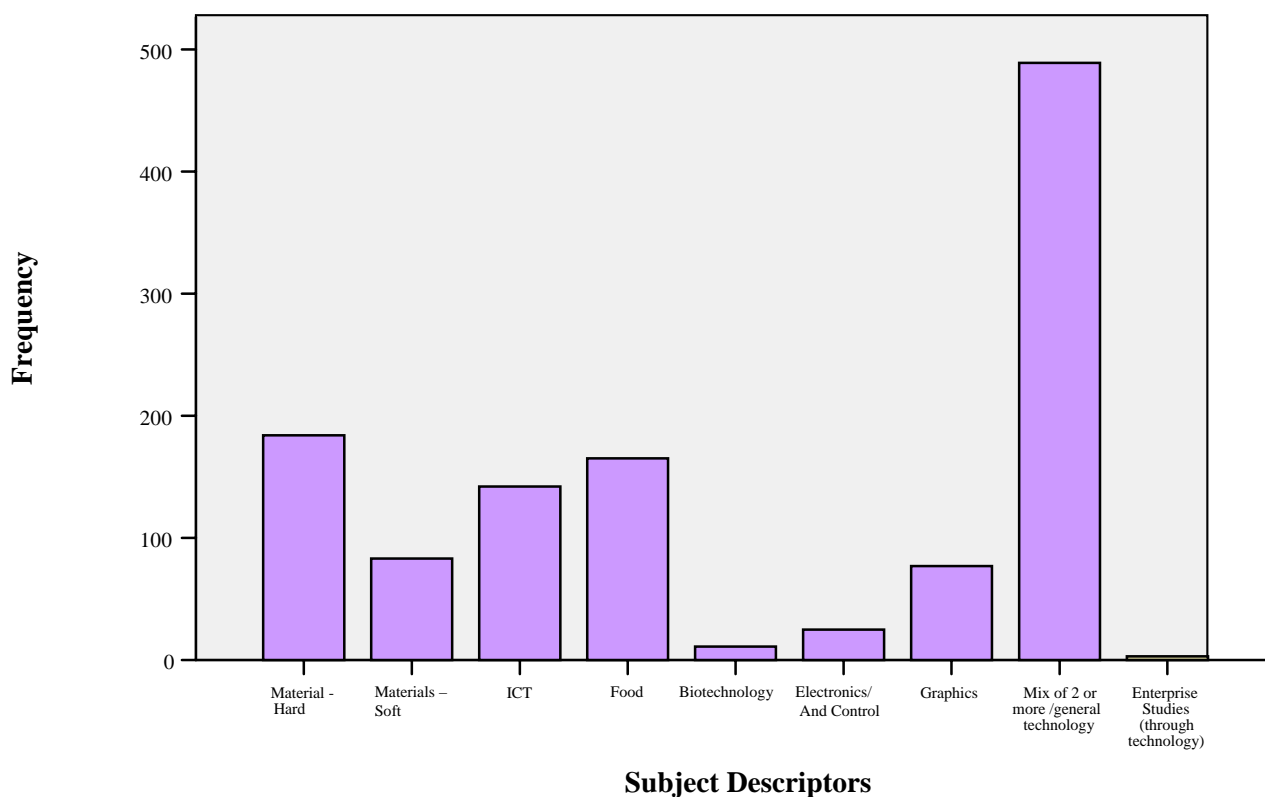
Data pertaining to 1179 teachers (98.9% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 13 teachers (1.1%) did not have this data completed. It should be noted that once again this data is based on teacher, or more accurately the curriculum leader or in some cases, principals, perception of the subjects taught as making up technology programmes. No attempt was made to verify or confirm the ‘technological nature’ of the subjects described¹. Rather each was simply categorised in terms of commonly used technology programme descriptors. If the data indicated teachers provided programmes related to more than one descriptor – they were coded as providing general technology. For example, if food or ICT was indicated – it is possible the nature of the programme may have reflected home economics or computing rather than food technology and ICT as a technological area. However, due to the nature of the questionnaire, the data was ‘accepted’ as technology related.

Table 3 provides the details of the ‘subject’ coverage provided by these teachers and Graph 2 provides for a more visual presentation of this data.

Table 3: Subjects Taught

Subject Descriptor	Frequency	Percentage
General Technology (2 or more areas)	489	41.5%
Materials - Hard	184	15.6%
Food Technology	165	14%
ICT	142	12%
Materials - Soft	83	7%
Graphics	77	6.5%
Electronics/Control	25	2.1%
Biotechnology	11	0.9%
Enterprise Studies (through technology)	3	0.3%
Total	1179	100%

Graph 2: Subjects Taught



As can be seen from above, 489 or 41.5% of the teachers in this sample provided technology programmes that related to 2 or more of these ‘subject’ areas.

Hard Materials (184 or 15.6%), Food (165 or 14%) and ICT (142 or 12%) were the three most common single ‘subjects’ provided by teachers. Soft Materials (83 or 7%) and Graphics (77 or 6.5%) being the next most common single ‘subjects’. Electronics and Control were taught exclusively by 25 (2.1%) of these teachers and Biotechnology by only 11 teachers (0.9%).

Because of the general concern in the sector surrounding biotechnology, notes were also made as to any time that biotechnology was part of the ‘2 or more’ categorisation. This was the case in eight instances.

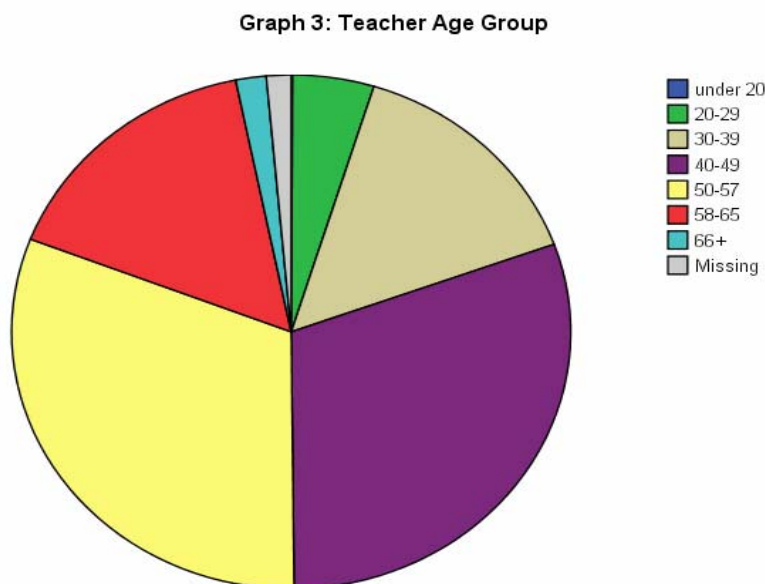
Therefore, out of these 1179 teachers, only 19 teachers (1.6%) appeared to be offering biotechnology-related technology programmes. Three teachers (0.3%) described their technology as being related to Enterprise Studies and all these three teachers were from the same school.

2d) What is the ‘years of teaching’ profile of technology teachers?

Data pertaining to 1159 teachers (97.2% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 33 teachers (2.7%) did not have this data completed. The years of teaching ranged from those in their first year (34 or 2.9%) to one person (0.1%) who was in their 47th year of teaching. The mean is 17.46 years with a (large) standard deviation of 10.88. The mode was 20 years representing 79 or 6.6% of these teachers. Over 50% of this sample of teachers had been teaching for 17 years or more.

2e) What is the age profile of technology teachers?

Data pertaining to 1175 teachers (98.6% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 17 teachers (1.4%) did not have this data completed.



As can be seen in Graph 3, almost two thirds of the teachers fell between 40-57 years of age with 732 or 62.3% within this range. Of these 732, just over half 370 (31.5%) were in the upper range of 50-57, with 362 (30.8%) falling between 40 and 49. A total of 232 (19.7%) of the teachers were under 40, with 175 (14.9%) of these being between 30 and 39. A total of 211 (18%) of the teachers were over 58, with 21 (1.8%) of these being over 66. Overall, 943 or 80.3% of this teacher cohort is over 40 with just under half (49.4%) being over 50.

2f) What percentage of technology teachers hold fulltime positions?

Data pertaining to 1177 teachers (98.7% of all teachers in this sample) was provided from the 245 questionnaire responses. Only 15 teachers (1.3%) did not have this data completed. The majority of teachers teaching technology (1023 or 86.9%), are full-time employees. This may or may not show that they are teaching full time in the area of technology however, as some questionnaire responses indicated that some teachers were teaching in other areas such as science, art, computing etc.

Question 3: Vacancies

3a) How many technology assistant teacher positions were advertised and filled over the last 12 months?

Just under half (109 or 44.8%) of the schools responding to this questionnaire did not advertise any assistant teacher positions in technology during the last 12 months. Of the schools that did, 134 advertised a total of 211 assistant teacher positions. The majority of these schools advertised for one assistant teacher (84 or 62.7%). Thirty four schools (25.4%) advertised two positions, eight (5.9%) advertised three positions, five (3.8%) advertised four positions and three schools (2.2%) advertised for five assistant teacher positions over the last 12 months. Of the 211 assistant teacher

positions advertised, a total of 163 positions were filled. This represents a 77.2% success rate in filling vacancies at assistant teacher level.

3b) How many technology management positions were advertised and filled over the last 12 months?

Over three quarters (192 or 79%) of the schools responding to this questionnaire did not advertise any management positions in technology during the last 12 months. Of the schools that did, 51 advertised for a total of 59 management positions. The majority of these schools (45 or 76.3%) advertised for a single person – usually that of a technology curriculum leader (e.g. HoD/HoF). However, five schools (8.5%) advertised two management positions, and one school (1.7%) sought four people to hold management roles. Of the 59 management positions advertised, a total of 50 positions were filled. This represents an 84.8% success rate in filling vacancies at management level.

3c) What percentage of technology positions were filled by NZ trained teachers?

The total number of positions successfully filled by these schools over the last 12 months (both assistant and management positions combined) was 213. Of these positions, 141 (66.2%) were filled by New Zealand trained teachers, and 67 (31.4%) of these positions were stated as being filled by teachers trained overseas. No data was provided in terms of training for the remaining 5 positions.

Therefore, from the responses of this group of schools a total of 270 jobs were advertised and 208 (77%) resulted in a successful appointment. Of the 270 positions advertised, 141 (52%) were filled by New Zealand trained teachers and 67 (25%) by overseas trained teachers. The remaining 62 (23%) positions remained unfilled.

3d) Skill/knowledge Shortages (as related to unfilled positions)

A total of 50 schools (20.4%) provided comments in relation to skill and knowledge shortages. While there were a range of skills and knowledge described in these responses, the majority of appeared to focus primarily on a shortage of skill and knowledge in the area of Hard Materials. This was the case for a total of 27 schools (54% of those making comments). Of these 27, 14 sought a person with Hard Material skills and knowledge exclusively. These positions were often linked to trades courses and unit standard delivery.

Food was the second most common area of need identified in this data, with eight schools (16%) finding they were unable to fill food related positions. Three schools (6%) could not find a teacher with appropriate ICT skills/knowledge. One school (2%) stated Electronics, and another one school (2%) stated Soft Materials, as areas they could not fill. A total of ten schools (20%) described generic technology skill and knowledge to varying degrees – often with specific reference to the technology curriculum, specific teaching approaches and/or assessment understandings.

3e) Dealing with Staff Shortages

A total of 55 schools (22.4%) provided comments in relation to dealing with the issue of staff shortages. The responses to this question showed a variety of ways of dealing with the issue– from overloading current staff to employing people known to be unsuitable. Eleven schools (20%) stated they were continuing to advertise, often approaching different agencies for help and four schools have employed a reliever in the interim. Two schools (3.6%) that had successfully filled their positions talked about the need to extend their advertising mechanisms. Four schools (7.3%) described a situation where they addressed the issue by using either a combination of relief staff and existing, or by increasing the work load of existing teachers. Seven Schools (12.7%) described how

they addressed the issue by employing generalist teachers and provided support for developing specialist skills. Eight schools (14.5%) talked about appointing people from the community – either retired technology teachers or people perceived to have the required skills, but who were not trained teachers. These people were employed by being granted a Limited Authority to Teach (LAT). An additional school (1.8%) talked about finding a suitable person and waiting for them to train. Eight schools (14.5%) either employed specialist teachers from other disciplines (most commonly art) or made use of other teachers already in the school teaching in other areas. Two schools (3.6%) sought staff from other institutions to fill the gaps in their programmes. Four schools (7.3%) described situations where they had appointed people to the job who they knew were unsuitable. Eight schools (14.5%) described how they had responded or were going to respond to staff shortages by making permanent reductions in courses and so ‘resolving’ the need for more staff.

Question 4: Teacher Professional Development

4a) What do technology curriculum leaders perceive to be effective in-school professional support they can provide for their technology teachers?

A significant number of school responses (161 or 65.7%) did not complete this question or answered in terms of professional support provided by outside people – mostly School Support Services. This may reflect a lack of understanding of the question or that these curriculum leaders do not consider they provide their staff with effective professional support.

Table 4: Effective In-school Professional Support

Support Type	Frequency	Percentage
No Response	161	65.7%
Regular Meetings/PD Days	46	18.8%
Peer/1-1 support	11	4.5%
Mix	27	11%
Total	245	100%

Of the 84 responses that did provide and answer to this question (34.3% of total), just over half (46 or 54.8% of responses answering this question and 18.8% of all questionnaires received) described in-school support exclusively by way of regular department meetings and/or professional development days. An additional 11 of these responses (13.1% of responses answering this question and 4.5% of all questionnaires received) described in-school support only in terms of classroom observations and/or 1-1 peer support. Twenty seven (32.1% of responses answering this question and 11% of all questionnaires received) responses described a mix of activities including regular meetings/professional development days, classroom observations and/or 1-1 peer support, provision of professional readings and/or teaching resources.

4b) What professional development opportunities are technology teachers involved in?

In contrast to above, the majority of school responses (212 or 86.5%) addressed this question. Only 33 (13.5%) did not complete this section.

Table 5: Professional Development Accessed

Type of PD	Frequency	Percentage
No Response	33	13.5%
One day courses/visits	80	32.6%
Ongoing courses/cluster meetings	62	25.3%
Conferences	13	5.3%
Qualification upgrade	9	3.7%
Mix (excluding qualification upgrade)	35	14.3%
Mix (including qualification upgrade)	13	5.3%
Total	245	100%

Of the 212 responses that answered this question, just over a third (80 or 37.7% of responses answering this question and 32.6% of all questionnaires received) accessed professional development exclusively in the form of one off courses and/or visits. An additional 62 of these responses (29.2% of responses answering this question and 25.3% of all questionnaires received) described professional development in terms of ongoing cluster meetings and/or non qualifications related courses. Thirteen (6.1% of responses answering this question and 5.3% of all questionnaires received) responses stated professional development opportunities were focused on conference attendance. Nine (4.2% of responses answering this question and 3.7% of all questionnaires received) responses stated professional development through qualification based courses.

Thirty five (16.5% of responses answering this question and 14.3% of all questionnaires received) responses described a mix of the above professional development opportunities – excluding qualifications based course, with the remaining 13 responses (6.1% of responses answering this question and 5.3% of all questionnaires received) describing a mix of professional development including qualifications based courses.

Therefore, only 22 schools (10.3% of responses answering this question and 9% of all questionnaires received) have had staff engaged in qualification based course over the last 12 months.

4c) Who is providing the professional development support to technology teachers?

As with above, the majority of school responses (212 or 86.5%) addressed this question, with 33 (13.5%) not doing so.

Table 6: Professional Development Providers

Providers	Frequency	Percentage
No Response	33	13.5%
SSS	86	35.1%
Professional Bodies	40	16.3%
Other Schools	36	14.7%
Tertiary Institutions	11	4.5%
Industry Groups	2	0.8%
Mix	37	15.1%
Total	245	100%

Of the 212 responses that answered this question, over a third (86 or 40.6% of responses answering this question and 35.1% of all questionnaires received) accessed professional development exclusively from their regional School Support Services (SSS). An additional 40 of these responses (18.9% of responses answering this question and 16.3% of all questionnaires received) accessed professional development only from professional bodies (such TENZ/HETTENZ/GATTA etc). Thirty six schools stated they sought professional development opportunities exclusively by visiting/liaising with other schools (17% of responses answering this question and 14.7% of all questionnaires received). Eleven (5.2% of responses answering this question and 4.5% of all questionnaires received) responses named tertiary providers (exclusive of SSS for the purposes of this analysis) as their sole professional development provider. Two schools stated that professional development opportunities were accessed through one day or ongoing non-qualification courses provided by industry groups such as ETITO/BCITO etc.

Thirty seven (17.5% of responses answering this question and 15.1% of all questionnaires received) responses described a mix of the above professional development providers – with the majority

including cluster meetings or ongoing support from SSS. Therefore, approximately 50% of responses answering this question have accessed professional development opportunities provided by SSS over the last 12 months. Other comments provided included specific suggestions/requests for increasing professional development support.

Question 5: What is the nature of programmes being offered under ‘technology’ in the school curriculum?

5a) What factors do departments/schools currently consider the most important when designing technology programmes?

Of the questionnaires received, 236 schools (96.3%) provided an answer to this question.

Table 7: Important Factors

Factors	Frequency	Percentage
Combination of student and community needs/interests/desires, school resources, skill development and technology curriculum requirements.	86	36.4%
Combination of student and community needs/interests/desires, school resources and skill development.	42	17.8%
Student and community needs/interests/desires	39	16.5%
School resources	34	14.4%
Skill development	26	11%
Technology curriculum requirements	4	1.7%
Total	236	100%

As can be seen in Table 7 above, just over a third (86 or 36.4%) of the responses indicated that a combination of factors including student and community needs/interests/desires, school resources, skill development and technology curriculum requirements were all important when designing a school technology programme. A further 42 responses (17.8%) felt a combination of all the above factors excepting the technology curriculum requirements, were important. Almost as many responses (39 or 16.5%) indicated that student and community needs/interests/desires alone was the most important factor. A further 34 schools (14.4%) identified school resources as the most important single factor to be considered.

Providing opportunity for students to develop skills was identified as the most important single factor by 26 schools (11%), while four schools (1.7%) identified meeting the technology curriculum requirements as the single most important factor.

5b) What do technology programmes focus on?

Of the questionnaires received, 221 schools (86.5%) provided an answer to this question.

Table 8: Programme Focus

Focus	Frequency	Percentage
Technology curriculum (stated - no evidence provided)	154	72.6%
Skills	54	25.5%
Other Curricula/syllabi	1	0.5%
Combination of Skills/Other curriculum	3	1.4%
Total	212	100%

As can be seen in Table 8 above, over half the responses (154 or 72.6%) provided data that indicated their technology programmes were linked to the technology curriculum.

A quarter of the schools (54 or 25.5%) indicated the primary focus of their technology programmes was that of skill development. Seven schools (3.3%) indicated other curricula/syllabi were a part of their technology focus, with four of these indicating this was instead of the New Zealand technology curriculum.

5c) What tools are currently employed to assess student learning in technology?

Of the questionnaires received, only 186 schools (75.9%) provided an answer to this question, meaning almost a quarter (59 or 24.1%) of the schools did not. This may reflect some confusion around the question whereby assessment tools were perceived by some intermediate schools to be those linked to qualifications only and therefore thought to be not applicable. This misunderstanding was also noted in the secondary school returned questionnaires where qualification linked tools tended to dominate the responses.

Table 9: Assessment Tools

Tools	Frequency	Percentage
Mix of Technology Achievement Standards and Unit Standards	64	34.4%
Mix of Technology Achievement Standards, Unit Standards and Achievement Objectives	34	18.3%
Technology Achievement Objectives	24	12.9%
Unit Standards	24	12.9%
Mix of Technology Achievement Standards, Unit Standards and Achievement Objectives and CoP Indicators of Progression	16	8.6%
Achievement Objectives and CoP Indicators of Progression	12	6.5%
Essential Skills/Key Competencies	7	3.8%
Technology Achievement Standards	5	2.6%
Total	186	100%

As can be seen in Table 9 and mentioned above, qualification based assessment tools dominated the responses with these being mentioned by 143 schools (76.8%). Within these responses, 64 schools indicated they used a mix of technology achievement standards and unit standards (34.4%) tools to assess students, 24 schools (12.9%) only used unit standards, and five schools (2.6%) only used technology achievement standards.

The achievement objectives of the technology curriculum were mentioned as assessment tools in just under half of the schools (86 or 46.2%). A total of 28 schools (15.1%) provided evidence of using indicators of progression for the components of technological practice as additional assessment tools. Essential skills and/or key competencies were mentioned as the sole assessment tools used for technology in seven schools (3.8%).

Question 6: Career Education in Technology Programmes

6a) How many schools offer career education as part of their technology programmes?

Of the questionnaires received, 211 schools (86.1%) provided an answer to this question, and 34 (13.9%) of the questionnaires did not. The majority of schools who provided no data for this question were intermediate schools who often stated the question was not applicable to them.

Table 10: Careers Education Incorporated into Technology?

Incorporation of Careers Education	Frequency	Percentage
No Response	34	13.9%
Yes – related to a wide range of technologists	77	31.4%
Yes – trades related only	59	24.1%
No- careers not a focus in programme	41	16.7%
Indirectly – as dependent of individual teacher discussions	34	13.9%
Total	245	100%

As can be seen in Table 10, a total of 170 schools (72.2%) provided data suggesting they incorporate some level of careers education into their technology programmes. Of these, 136 schools (55.5%) stated that they saw linking to careers as a formal part of their technology programme. Of this group, while over half (77 of the 136 or 57%) described a wide variety of technology careers, the remaining 59 of the 136 schools (43%) focused on trade-related careers only. Thirty four schools (13.9%) stated they leave any careers links up to individual teachers.

Almost a fifth of the schools (41 or 24%) clearly stated they did incorporate career education in their technology programmes. However, the high number of non-responses could also be seen as falling into this category also. Therefore, this would suggest that closer to 75 schools (or 30.6% of all the schools sending a questionnaire response), would appear to not incorporate career education as part of their technology programmes.

Summary

These findings suggest that there is wide variability in the background of technology teachers and the nature of the technology programmes being offered in New Zealand schools. The high response rate (40%) suggests the focus of this questionnaire is of considerable interest to many schools, and the honesty and detail of the comments provided further supports this. In addition, 165 school responses (67.3%) indicated a willingness to be involved in any follow up to this questionnaire.

The issues surrounding teacher supply are clearly very school dependent. Comments provided by schools would suggest that the quality and quantity of applicants for jobs is a common concern, as are time issues and complications caused by appointing staff who are not adequately prepared for the New Zealand technology environment. These comments included concerns raised regarding overseas-trained appointments, particularly with regard to retention.

The age of the current technology teacher cohort was also raised as a concern by some schools and this would appear to be supported to some extent by the age demographics where 80.3% of this teacher cohort is over 40 with just under half (49.4%) being over 50. Also of relevance is the finding that over 50% of the teachers have been teaching for 17 years or more. Given that age and teaching experience are only two variables among many (e.g. work background, qualification background, initial teacher education, personal attitude, school environment etc), it would be very difficult to make any substantive links between age and years teaching and the nature of technology programme delivery from this data.

Teachers tend to teach across more than one 'subject' area in technology which suggests they may find the transition away from a technological area focus to a more generic technology focus, reasonably comfortable.

While schools would appear to be accessing external professional development opportunities, particularly those provided by SSS, many schools do not appear to undertake or see as effective, in-school professional support as led by technology curriculum leaders.

APPENDIX 1

The questionnaire sent to schools is attached as a downloadable on the web page.

APPENDIX 2

Brief report on the awarded technology scholarships for 2008 from the ministry

In 2007 TeachNZ introduced a new School Teacher Recruitment Scholarship. The scholarship replaced existing teacher recruitment scholarships and allowances and increased allowances for people from careers to retrain.

The total number of technology scholarships to allocate for study starting in semester one 2008 were:

- 30 Technology Career Changer Scholarships
- 50 Technology Graduate Scholarships
- 5 School leavers/undergraduate Scholarships.

The aim of the new Technology Teacher Recruitment Scholarships is to increase the number of technology teachers in secondary schools. As of 4 May 2008 the numbers awarded for 2008 in technology are:

- 59 Technology Career Changer Scholarships
- 32 Technology Graduate Scholarships
- 9 Technology School leavers/undergraduate scholarships

The number of technology scholarships awarded for 2008 exceeded the number available to award. The new teacher recruitment scholarship are flexible, therefore if we have a lower uptake in one category we can over allocate in another category.