


APPENDICES 3.1 – 3.2

APPENDIX 3.1 – Example of a Teacher Survey Questionnaire (Science)



**The SiMERR National
Secondary Science Teacher Survey**
Survey Code

Please fill in circles like this: ● Please use a pencil or black/blue pen

Section A: Teacher Profile

- What is your age?

Under 25	25-30	31-35	36-40	41-45	46-50	51-55	Over 55
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- What is your sex? Male Female
- The school system in which you teach is:

Government	Catholic systemic	Independent
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- What position do you hold on the staff?
 Principal
 Deputy Principal/Assistant Principal
 Subject Coordinator/Head of Department
 Classroom Teacher
- On what basis are you employed?
 Full time permanent
 Part time permanent
 Casual/relief teacher
 Temporary/short term contract
- Which **best** describes your highest academic qualification?
 2 year Teacher Certificate or similar
 3 year Diploma in Teaching or similar
 3 or 4 year Bachelor degree without teacher education
 3 or 4 year Bachelor of Education degree
 3 or 4 year Bachelor degree and postgraduate teaching diploma or similar
 3 or 4 year Bachelor degree and 2 or 3 year undergraduate diploma or similar
 Postgraduate degree and diploma/postgraduate teaching diploma
 Postgraduate degree without teacher education
 Other (please specify) _____
- How many years have you been teaching science? (include casual and temporary employment)

Less than 1 year	1-3 years	4-7 years	8-12 years	13-25 years	More than 25 years
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The SiMERR National Secondary Science Teacher Survey 1

- How long have you been teaching at this school?

Less than 1 year	1-3 years	4-7 years	8-12 years	13-25 years	More than 25 years
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Where was the school in which you did **most** of your high school study?

Metropolitan centre (pop. > 100 000)	Provincial city (50 000 - 99 999)	Regional centre (25 000 - 49 999)	Rural centre (10 000 - 24 999)	Small rural centre (< 10 000)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Where did you **live** while undertaking your initial teacher education?

Metropolitan centre (pop. > 100 000)	Provincial city (50 000 - 99 999)	Regional centre (25 000 - 49 999)	Rural centre (10 000 - 24 999)	Small rural centre (< 10 000)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- How well do you feel your teacher education prepared you for:

	Not at all prepared	Somewhat prepared	Moderately prepared	Well prepared	Extremely well prepared
(a) teaching science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) teaching in rural and regional schools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) managing student behaviour	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) teaching Indigenous students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(e) teaching Non English Speaking Background (NESB) students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(f) teaching gifted and talented students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(g) teaching special needs students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(h) using ICT across the curriculum	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Which science courses are you **formally qualified** to teach? (you may indicate more than one)

Junior science	Senior physics	Senior chemistry	Senior biology	Senior multi-strand	Other (please specify)	None
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Which science courses have you **actually taught** in the last three years? (you may indicate more than one)

Junior science	Senior physics	Senior chemistry	Senior biology	Senior multi-strand	Other (please specify)
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments.

The SiMERR National Secondary Science Teacher Survey 2

If you have ever taught in a rural or regional centre (population less than 50 000), complete the next 3 questions. For other teachers the survey continues at Question 17 on page 4.

- How influential were the following on your **initial** decision to teach in a rural or regional school?

	Not influential	Somewhat influential	Very influential	Extremely influential
Education authority placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Previously lived in the same or similar location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family connections in the location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rural or remote area allowance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rent subsidy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordable housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lifestyle change	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bond/contract with educational provider	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse's/partner's employment situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Job availability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments.

- How influential are the following on your decision to **continue** teaching in a rural or regional school?

	Not influential	Somewhat influential	Very influential	Extremely influential
Smaller class sizes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity for promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with Indigenous students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Enjoyment of lifestyle	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family connections in the location	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rural or remote area allowance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidisation of rent	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordability of housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Community spirit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expense of moving to the city	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse's/partner's employment situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments.

The SiMERR National Secondary Science Teacher Survey 3

If you moved from a school in a rural or regional centre to a metropolitan centre (population greater than 50 000) answer question 16. For other teachers the survey continues at Question 17 below.

- If you left a rural or regional school for a metropolitan school, how influential were the following?

	Not influential	Somewhat influential	Very influential	Extremely influential
Opportunity for promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Educational opportunities for your own children	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of professional isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of social isolation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduced cost of travelling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problems within the school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problems in the community	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spouse's/partner's employment situation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Education authority placement	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Limited essential services	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comments.

The two questions below are for teachers who have not taught in a rural or regional school at some point in their careers. For other teachers the survey continues at Section B on page 5.

- How influential would the following be in motivating you to take up a position in a rural or regional school?

	Not influential	Somewhat influential	Very influential	Extremely influential
Improved opportunities for promotion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smaller class sizes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Opportunity to work with Indigenous students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rural or remote area allowance (e.g. \$5000 p.a.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidisation of housing (e.g. 50% rent subsidy)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Affordability of housing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Smaller school staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More holidays (e.g. 1 week p.a.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Travel subsidy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Preference for future transfers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- If you are presently teaching in a metropolitan area school, is there a compelling reason why you would not teach in a rural or regional school?

The SiMERR National Secondary Science Teacher Survey 4

In the following section, please rate each item according to:

- (a) its **importance** for teaching and learning science at your school, and
 (b) its **availability** at your school

C. TEACHING AND LEARNING SCIENCE	Importance					Availability			
	Not at all important	Slightly important	Important	Very important	Extremely important	Never available	Seldom available	Usually available	Always available
1. Opportunities for students to visit science related educational sites (e.g. museums, zoos, science centres, industry etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2. Student participation in external science competitions and activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Teachers qualified to teach the science courses offered in your school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Having the full range of senior science courses available in your school	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Having the total indicative hours allocated to face-to-face teaching	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Alternative or extension activities in science teaching programmes for:									
(a) Indigenous students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) NESB students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) gifted and talented students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(d) special needs students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please comment on the attitudes of students in your school to learning science.

Section D: Your Reflections

1. What do you consider to be the greatest strengths of your school/department in terms of helping students achieve in science?

2. What do you consider to be the greatest obstacles to student learning in science in your school?


3. What practices or programmes does your school implement to improve student learning in science?

4. If you could make one recommendation to school systems that you believe would improve student outcomes in science in your school, what would you recommend?



Thank you for taking the time to complete this important survey

APPENDIX 3.2 –Parent/Caregiver Questionnaire



The SiMERR National Parent/Caregiver Survey

Survey Code

Please fill in circles like this: ● Please use a pencil or black/blue pen

Section A: About You and Your Child

- Please write your comments about your *eldest* child at this school.
- If you have children at more than one school, you may complete a separate form for each school. Additional forms are available from the School Principal or on the SiMERR website www.simerr.unsw.edu.au/.

1. What is your sex? Male Female
2. How many children do you have attending this school?

1	2	3	4	more than 4
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3. Your *eldest* child at this school is in:

kindergarten or lower primary	upper primary	junior secondary	senior secondary
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4. Your child is a:

day student	boarding student	distance education student only
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. If your child is a day student, how long does it take him/her to travel to this school?

less than half an hour	between half an hour and one hour	between one and two hours	more than two hours
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. How important is it to you that your child:

	Not at all important	Somewhat important	Important	Very important	Extremely important
Completes Year 10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Completes Year 12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Completes a TAFE course	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Completes a university degree	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The SiMERR National Parent/Caregiver Survey 1

Section B: Teaching and Learning Science, Mathematics and ICT

For the following questions, please indicate how strongly you agree or disagree with each statement.

	Strongly disagree	Disagree	Agree	Strongly agree
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1. There is a good relationship between teachers in this school and parents/caregivers
2. There is a good relationship between teachers in this school and the wider community

Question 3 refers to primary schools only.

3. This school is able to attract and keep suitably qualified primary teachers

Question 4 refers to secondary schools only.

4. This school is able to attract and keep suitably qualified teachers of:

(a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) Information and Communication Technology (ICT)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5. Teachers in this school encourage students to achieve to their potential in:

(a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) ICT (secondary only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6. Students achieve to a high standard in:

(a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) ICT (secondary only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7. My child's teachers care if my child is not doing as well as he/she can in:

(a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) ICT (secondary only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8. My child's teachers are enthusiastic in their approaches to teaching:

(a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) ICT (secondary only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

The SiMERR National Parent/Caregiver Survey 2

For the next 3 questions, please indicate:

	Importance					Availability			
	Not at all important	Somewhat important	Important	Very important	Extremely important	Never available	Seldom available	Usually available	Always available
9. Suitable textbooks or workbooks for learning: (a) science	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) mathematics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) ICT (secondary only)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10. Suitable computing resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11. Support teachers for: (a) Indigenous students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(b) Non English Speaking Background students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
(c) special needs students	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Section C: Your Ideas and Concerns

1. What do you consider to be the greatest strengths of this school in terms of helping your child to achieve his/her potential in science, mathematics or ICT?

2. What do you consider to be the greatest obstacles to improving your child's learning in science, mathematics or ICT?

The SiMERR National Parent/Caregiver Survey 3

3. Are there any initiatives that have been successful in improving your child's learning in science, mathematics or ICT? If so, please describe these initiatives.

4. If you could make one recommendation to school systems that you believe would improve student learning in science, mathematics or ICT, what would you recommend?

5. Other comments about science, mathematics and ICT education at this school.

☺ Thank you for taking the time to complete this important survey.

The SiMERR National Parent/Caregiver Survey 4

APPENDICES 4.1 - 7.4

Appendices 4.1 - 7.4 summarise the results of principal components analyses of various collections of thematically-related common items from the national primary and secondary school staff surveys. Each summary reports pattern coefficients for relating items on components (only substantive values, greater than .30, are shown) as well as the correlations between components. Items are considered to define that component on which they 'load' the highest (meaning the component with the highest pattern coefficient for an item). The number of components, for each analysis, was determined by the 'eigenvalue greater than 1.0' rule coupled with component interpretability. Items are taken to define the component on which they 'load' the highest (i.e., on which they have the highest pattern coefficient, shown in boldface type).

APPENDIX 4.1 PRINCIPAL COMPONENTS ANALYSIS OF THE ITEMS RELATING TO TEACHERS’ INITIAL DECISIONS TO TEACH IN A RURAL OR REGIONAL SCHOOL (REFERS TO TABLE 4.8)

In Table A4.1, the first component was straightforwardly interpretable as grouping together items dealing with Financial and Advancement Incentives that might have attracted staff to teach in a regional or rural school. The second component was clearly defined by items dealing with family-related considerations (Family Links). The third component grouped together items dealing with job or career-related requirements (Job/Career Requirements). Interestingly, the lifestyle change item loaded negatively on the third component. This meant that the influence of lifestyle change was inversely related to the other items in the component; that is, when placement, bond/contract or job availability considerations were influential, lifestyle change tended not to be influential at the same time. The lifestyle change item was reverse-scored prior to combining it with the other items in the component to produce the Job/Career Requirement component score.

Table A4.1. Principal components analysis of ‘Initial Decision’ items

Pattern Matrix

	Component		
	Financial & Advancement Incentives	Family Links	Job/Career Requirements
Initial decision_rent_subsidy	.86		
Initial decision_afford_house	.77		
Initial decision_allowance	.77		
Initial decision_promo	.40		
Initial decision_fam_connect		.87	
Initial decision_prev_lived		.80	
Initial decision_spouse_sit		.51	
Initial decision_placement			.75
Initial decision_contract			.71
Initial decision_lifestyle_chng	.40		-.48
Initial decision_job_avail			.33

Component Correlation Matrix

Component	1	2	3
1 Financial & Advancement Incentives	1.00	-.01	-.01
2 Family Links	-.01	1.00	-.10
3 Job/Career Requirements	-.01	-.10	1.00

APPENDIX 4.2 Principal components analysis of the items relating to teachers’ decisions to continue teaching in a rural or regional school (refers to Table 4.10)

In Table A4.2, the first component was clearly interpretable as grouping together items relating to the costs of living in a rural or regional area, along with the costs of moving back to the city (Living Costs). The second component was straightforwardly defined by three items dealing with work-related factors (Work Context). The third component grouped together two items dealing with the Lifestyle associated with living in a rural or regional area. Finally, the fourth component grouped together items related to family considerations in continuing to teach in a rural or regional area (Family).

Table A4.2. Principal components analysis of the ‘Decision to continue teaching in a rural or regional school’ items

Pattern Matrix

	Component			
	Living Costs	Work Context	Lifestyle	Family
Decision to continue_afford_house	.86			
Decision to continue_exp_mov_city	.76			
Decision to continue_rent_subsidy	.66			
Decision to continue_allowance	.54	.32	-.31	
Decision to continue_small_class		.71		
Decision to continue_promo_opp		.69		
Decision to continue_work_indig		.68		
Decision to continue_enj_lifestyle			.84	
Decision to continue_commun_spirit			.76	
Decision to continue_fam_connect				.83
Decision to continue_spouse_sit				.81

Component Correlation Matrix

Component	1	2	3	4
1 Living Costs	1.00	.47	-.04	.05
2 Work Context	.47	1.00	-.11	-.03
3 Lifestyle	-.04	-.11	1.00	.24
4 Family	.05	-.03	.24	1.00

APPENDIX 4.3 Principal components analysis of the items relating to ‘Decisions to leave a rural or regional school for a metropolitan school’ (refers to Table 4.12)

In Table A4.3, the first component was generally defined by a group of items related to the respondents’ work and professional context, including considerations related to isolation, job changes and costs (Work and Professional Context). The second component grouped together items dealing with Problems in the school or community as being reasons for leaving a rural or regional school for a metropolitan school. Finally, the third component grouped together items dealing with changes in the respondent’s family situation, including pursuing better educational opportunities for the respondent’s own children (Family Situation).

Table A4.3 Principal components analysis of ‘Decision to leave’ items

Pattern Matrix

	Component		
	Work & Professional Context	Problems	Family Situation
Decision to leave_social_isolat	.82		
Decision to leave_prof_isolat	.77		
Decision to leave_limit_serv	.73		
Decision to leave_cost_travel	.70		
Decision to leave_placement	.35		
Decision to leave_promo	.29		.21
Decision to leave_probs_school		.95	
Decision to leave_probs_commun		.92	
Decision to leave_spouse_sit			.81
Decision to leave_ed_opps_child	.24		.68

Component Correlation Matrix

Component	1	2	3
1 Work & Professional Context	1.00	.46	.15
2 Problems	.46	1.00	.15
3 Family Situation	.15	.15	1.00

APPENDIX 4.4 Principal components analysis of the items relating to ‘Motivation for moving from a metropolitan school to a rural or regional school (refers to Table 4.14)

In Table A4.4, the first component was generally defined by items relating to Financial and Advancement Incentives which might attract respondents to take up a position in a rural or regional school sometime in the future. The second component grouped together items relating to potentially desirable working conditions in rural or regional schools (Work Conditions).

Table A4.4. Principal components analysis of the items dealing with potential motivating factors for taking up a rural or regional position

Pattern Matrix

	Component	
	Financial & Advancement Incentives	Work Conditions
Motivation to move_rent_subsidy	.96	
Motivation to move_trav_subsidy	.92	
Motivation to move_allowance	.91	
Motivation to move_future_trans	.87	
Motivation to move_holidays	.83	
Motivation to move_afford_house	.78	
Motivation to move_promo	.46	
Motivation to move_indig_stud		.93
Motivation to move_small_staff		.59
Motivation to move_small_class	.40	.50

Component Correlation Matrix

Component	1	2
1 Financial & Advancement Incentives	1.00	.60
2 Work Conditions	.60	1.00

APPENDIX 4.5 Principal components analysis of the primary teacher preparation items (refers to Table 4.16)

In Table A4.5, the first component clearly groups together those items dealing with specific types of teaching or specific curriculum-based activities, hence the label: Specific Teaching Skills Preparation. The second component groups together those items dealing with more general preparation to teach in the science and mathematics subject areas, teach in rural or regional schools and manage student behaviour (General Teaching Preparation).

Table A4.5. Two correlated components summarising the primary teacher education preparation items

Pattern Matrix

	Component	
	Specific Teaching Skills Preparation	General Teaching Preparation
Primary prep._tch_NESB	.85	
Primary prep._tch_indig_stud	.76	
Primary prep._use_ICT_curric	.75	
Primary prep._tch_spec_need	.75	
Primary prep._tch_gift_tal	.62	
Primary prep._tch_sci		.85
Primary prep._tch_math		.85
Primary prep._tch_rur_reg		.73
Primary prep._man_stud_beh	.32	.50

Component Correlation Matrix

Component	1	2
1 Specific Teaching Skills Preparation	1.00	.53
2 General Teaching Preparation	.53	1.00

APPENDIX 4.6 Principal components analysis of the secondary teacher preparation items (refers to Table 4.18)

In Table A4.6, the first component clearly groups together those items dealing with specific types of teaching or specific curriculum-based activities, hence the label: Specific Teaching Skills Preparation. The second component groups together those items dealing with more general preparation to teach in the subject area, teach in rural or regional schools and manage student behaviour (General Teaching Preparation).

Table A4.6. Two correlated components summarising the secondary teacher education preparation items

Pattern Matrix

	Component	
	Specific Teaching Skills Preparation	General Teaching Preparation
Secondary_prep_tch_NESB	.86	
Secondary_prep_tch_spec_need	.82	
Secondary_prep_tch_indig_stud	.81	
Secondary_prep_tch_gift_tal	.62	
Secondary_use_ICT_curric	.60	
Secondary_prep_tch_subj_area		.90
Secondary_prep_tch_rur_reg		.80
Secondary_prep_man_stud_beh		.53

Component Correlation Matrix

Component	1	2
1 Specific Teaching Skills Preparation	1.00	.51
2 General Teaching Preparation	.51	1.00

APPENDIX 5.1 Principal components analysis of the professional development ‘need’ items for primary respondents (refers to Table 5.2)

In Table A5.1, the first component was straightforwardly defined by ‘needs’ dealing with classroom resources suitable for teaching primary to students from various targeted groups (Development for Teaching to Targeted Groups). The second component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of in-service and conference activities and support teachers (In-Service Development). The third component grouped together ‘needs’ dealing with more general Personal Professional Development, including involvement in syllabus development in both science and mathematics. The last component comprised items dealing with the development of professional relationships, including mentoring and collaborating with colleagues (Professional Relationships Development).

Table A5.1. Principal components analysis of primary respondents’ ‘need’ scores for the Opportunities for Professional Interaction and Development items

Pattern Matrix

	Component			
	Development for Teaching to Targeted Groups	In-Service Development	General Personal Professional Development	Professional Relationships Development
Primary PD_teach_NESB	.94			
Primary PD_teach_indig	.92			
Primary PD_teach_spec_need	.85			
Primary PD_teach_gift_tal	.84			
Primary PD_attend_in_serv_math		.96		
Primary PD_attend_in_serv_sci		.94		
Primary PD_\$supp_in_serv		.81		
Primary PD_inv_syl_res_math			1.02	
Primary PD_inv_syl_res_sci			.99	
Primary PD_commun_auth			.41	
Primary PD_devel_ICT_sk			.39	
Primary PD_coll_tch_sch				.92
Primary PD_rel_f_to_f_tch				.77
Primary PD_mentor_new_st				.77

Component Correlation Matrix

Component	1	2	3	4
1 Development for Teaching to Targeted Groups	1.00	.53	.58	.47
2 In-Service Development	.53	1.00	.56	.59
3 General Personal Professional Development	.58	.56	1.00	.50
4 Professional Relationships Development	.47	.59	.50	1.00

APPENDIX 5.2 Principal components analysis of the professional development ‘need’ items for secondary science respondents (refers to Table 5.4)

In Table A5.2, the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of General Personal Professional Development for teachers, including in-service provision, teaching relief, skill development and involvement in professional activities beyond the school. The second component was straightforwardly defined by ‘needs’ dealing with classroom resources suitable for teaching science to students from various targeted groups (Development for Teaching to Targeted Groups). Finally, the third component grouped together ‘needs’ dealing with the development of professional relationships (Professional Relationships Development), including mentoring and collaborating with colleagues.

Table A5.2. Principal components analysis of science respondents’ ‘need’ scores for the Opportunities for Professional Interaction and Development items

Pattern Matrix

	Component		
	General Personal Professional Development	Development for Teaching to Targeted Groups	Professional Relationships Development
Science_\$_supp_in_serv	.89		
Science_attend_in_serv	.82		
Science_inv_syl_res	.77		
Science_commun_auth	.74		
Science_devel_ICT_sk	.53		
Science_rel_f_to_f_tch	.48		.34
Science_mark_ext_ass	.40	.33	
Sciencea_teach_indig		.91	
Science_teach_NESB		.88	
Science_tch_spec_ne		.84	
Science_tch_gift_tal		.81	
Science_coll_tch_sch			.94
Science_mentor_new_st			.72
Science_coll_tch_oth			.56

Component Correlation Matrix

Component	1	2	3
1 General Personal Prof Development	1.00	.56	.54
2 Development Teaching Targeted Groups	.56	1.00	.42
3 Professional Relationships Development	.54	.42	1.00

APPENDIX 5.3 Principal components analysis of the professional development ‘need’ items for secondary ICT respondents (refers to Table 5.6)

In Table A5.3, the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of General Personal Professional Development for teachers, including in-service provision, teaching relief, skill development and involvement in professional activities beyond the school. The second component was straightforwardly defined by ‘needs’ dealing classroom resources suitable for teaching ICT to students from various targeted groups (Development for Teaching to Targeted Groups). Finally, the third component grouped together ‘needs’ dealing with the development of professional relationships (Professional Relationships Development), including mentoring and collaborating with colleagues.

Table A5.3. Principal components analysis of ICT respondents’ ‘need’ scores for the Opportunities for Professional Interaction and Development items

Pattern Matrix

	Component		
	Development for Teaching to Targeted Groups	General Personal Professional Development	Professional Relationships Development
ICT_teach_indig	.93		
ICT_teach_NESB	.87		
ICT_tch_spec_ne	.86		
ICT_tch_gift_tal	.79		
ICT_mark_ext_ass		.91	-.31
ICT_inv_syl_res		.81	
ICT_\$_supp_in_serv		.69	
ICT_attend_in_serv		.68	.32
ICT_commun_auth		.36	
ICT_coll_tch_sch			.91
ICT_coll_tch_oth			.82
ICT_rel_f_to_f_tch		.47	.56
ICT_mentor_new_st			.53

Component Correlation Matrix

Component	1	2	3
1 Development for Teaching Targeted Groups	1.00	.55	.48
2 Gen Personal Professional Development	.55	1.00	.57
3 Development of Professional Relationships	.48	.57	1.00

APPENDIX 5.4 Principal components analysis of the professional development ‘need’ items for secondary mathematics respondents (refers to Table 5.8)

In Table A5.4, the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of subject-specific Mathematics Teaching Professional Development. The second component was defined by items focusing on more general aspects of professional development; hence the label, General Professional Development. The third component was straightforwardly defined by ‘needs’ dealing classroom resources suitable for teaching mathematics to students from various targeted groups (Development for Teaching to Targeted Groups). Finally, the fourth component grouped together ‘needs’ dealing with the development of professional relationships (Professional Relationships Development), including mentoring and collaborating with colleagues.

Table A5.4. Principal components analysis of mathematics respondents’ ‘need’ scores for the Opportunities for Professional Interaction and Development items

Pattern Matrix

	Component			
	Mathematics Teaching Professional Development	General Professional Development	Development for Teaching Targeted Groups	Professional Relationships Development
Math_tch_hi_order	.86			
Math_alt_tch_meth	.83			
Math_stand_tch	.83			
Math_group_teach	.81			
Math_int_tech_less	.79			
Math_class_mgmt	.70			
Math_graph_calc	.65			
Math_attend_in_serv		.95		
Math_\$_supp_in_serv		.94		
Math_inv_syl_res		.68		
Math_commun_auth		.60		
Math_rel_f_to_f_tch		.56		
Math_mark_ext_ass		.52		
Math_devel_ICT_sk	.31	.47		
Math_teach_NESB			1.02	
Math_teach_indig			.91	
Math_tch_spec_ne	.33		.63	
Math_tch_gift_tal	.38		.50	
Math_coll_tch_sch				.94
Math_coll_tch_oth				.67
Math_mentor_new_st				.65
Math_obs_coll				.56

Component Correlation Matrix

Component	1	2	3	4
1 Math Teaching Professional Development	1.00	.59	.57	.47
2 General Professional Development	.59	1.00	.47	.57
3 Development for Teaching Targeted Groups	.57	.47	1.00	.34
4 Professional Relationships Development	.47	.57	.34	1.00

APPENDIX 6.1 Principal components analysis of the material resources and support personnel ‘need’ items for primary respondents (refers to Table 6.2)

In Table A6.1, the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of ICT Resources and Support, including not only physical resources but also personnel support of specific types (particularly ICT-related). The second component clearly comprised items linked to teaching resources in general as well as specific to the teaching of science and mathematics (Teaching Resources). The third component was defined by ‘needs’ dealing with classroom resources suitable for teaching primary to students from various targeted groups (Teaching Resources for Targeted Groups). This component also included the ‘need’ dealing with Indigenous education assistants (item ‘Primary_ICT _supp’) as well as learning support assistants (item ‘Primary_supp_asst’). Finally, the fourth component grouped together ‘needs’ dealing with worksheets for teaching science and for teaching mathematics.

Table A6.1. Principal components analysis of primary respondents’ ‘need’ scores for the Material Resources and Support Personnel that Enhance Primary Teaching and Learning items

Pattern Matrix

	Component			
	ICT Resources & Support	Teaching Resources	Resources for Teaching Targeted Groups	Worksheet Resources
Primary_internet_res	.82			
Primary_internet_con	.81			
Primary_comp_hard	.79			
Primary_comp_teach	.75			
Primary_comp_stud	.74			
Primary_ICT_supp	.68			
Primary_asst_ICT_cl	.67			
Primary_soft_TL	.62			
Primary_consum_math		.86		
Primary equip_tch_sci		.85		
Primary_consum_sci		.85		
Primary equip_tch_math		.76		
Primary_suit_lib_sci		.55		
Primary_suit_lib_math		.54		
Primary_main_rep		.42		
Primary_AV_equip	.36	.41		
Primary_indig			.94	
Primary_NESB			.92	
Primary_spec_need			.79	
Primary_gift_tal			.73	
Primary_ind_ed_asst			.67	
Primary_supp_asst			.35	
Primary_worksheets_math				.91
Primary_worksheets_sci				.88

Component Correlation Matrix

Component	1	2	3	4
1 ICT Resources & Support	1.00	.55	.48	.24
2 Teaching Resources	.55	1.00	.56	.33
3 Resources for Teaching Targeted Groups	.48	.56	1.00	.24
4 Worksheet Resources	.24	.33	.24	1.00

APPENDIX 6.2 Principal components analysis of the material resources and support personnel ‘need’ items for secondary science respondents (refers to Table 6.4)

In Table A6.2, the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of ICT Resources. As the ‘need’ dealing with an assistant to help with integration of ICT in the classroom (item ‘Science_asst_ICT_cl’) loaded marginally higher on this first component, it was considered to define that component (the table shows the loadings as equal due to rounding error). The second component was clearly defined by ‘needs’ dealing with classroom resources suitable for teaching science to students from various targeted groups (Teaching Resources for Targeted Groups). This component also included the ‘need’ dealing with Indigenous education assistants (item ‘Science_ind_ed_asst’). The third component grouped together ‘needs’ dealing with various aspects of more General Teaching Resources, including worksheets, equipment, books, consumables and laboratories. Finally, the fourth component grouped together ‘needs’ dealing with various aspects of more General Teaching Support, including assistants of various kinds as well as maintenance and repair of teaching equipment.

Table A6.2. Principal components analysis of science respondents’ ‘need’ scores for the Material Resources and Support Personnel that Enhance Science Teaching and Learning items

Pattern Matrix

	Component			
	ICT Resources	Teaching Resources for Targeted Groups	General Teaching Resources	General Teaching Support
Science_internet_res	.92			
Science_internet_conn	.88			
Science_comp_stud	.81			
Science_comp_teach	.73			
Science_soft_sci_TL	.70			
Science_comp_hard	.69			
Science_asst_ICT_cl	.47			.47
Science_NESB		.97		
Science_indig		.90		
Science_spec_need		.76		
Science_gift_tal		.65		
Science_ind_ed_asst		.49		
Science_worksheets			.72	
Science_suit_texts			.62	
Science_lab_consum			.59	.40
Science_AV_equip			.53	
Science_sci_lab			.50	
Science_suit_lib			.49	
Science_lab_asst				.90
Science_supp_asst				.60
Science_main_rep				.57
Science_ICT_supp				.54

Component Correlation Matrix

Component	1	2	3	4
1 ICT Resources	1.00	.49	.49	.60
2 Teaching Resources Targeted Groups	.49	1.00	.39	.52
3 General Teaching Resources	.49	.39	1.00	.45
4 General Teaching Support	.60	.52	.45	1.00

APPENDIX 6.3 Principal components analysis of the material resources and support personnel ‘need’ items for secondary ICT respondents (refers to Table 6.6)

Table A6.3 shows that the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of physical ICT Resources. The second component was evidently defined by ‘needs’ dealing with classroom resources suitable for teaching ICT to students from various targeted groups (Resources for Teaching to Targeted Groups). This component also included the ‘need’ dealing with Indigenous education assistants (ICT_ind_ed_asst). The third component grouped together ‘needs’ dealing with various aspects of more specific ICT Teaching Resources and Support, including the ‘need’ for skilled ICT resource management personnel. Finally, the fourth component grouped together ‘needs’ dealing with various aspects of more General Teaching Resources, including textbooks, worksheets and library.

Table A6.3. Principal components analysis of ICT respondents’ ‘need’ scores for the Material Resources and Support Personnel items

Pattern Matrix

	Component			
	ICT Resources	Resources for Teaching to Targeted Groups	ICT Teaching Resources & Support	General Teaching Resources
ICT ICT_space	.87			
ICT_comp_stud	.87			
ICT_internet_con	.67			
ICT_comp_hard	.65			
ICT_AV_equip	.61			.33
ICT ICT_res_tch	.59			.31
ICT_soft ICT_TL	.58			
ICT_indig		.95		
ICT_NESB		.93		
ICT_spec_need		.87		
ICT_gift_tal		.78		
ICT_ind_ed_asst		.58		
ICT ICT_res_mgmt			.88	
ICT_asst ICT_curr			.88	
ICT_main_rep	.39		.54	
ICT_supp_asst			.44	
ICT_worksheets				.83
ICT_suit_texts				.83
ICT_suit_lib				.76

Component Correlation Matrix

Component	1	2	3	4
1 ICT Resources	1.00	.44	.47	.39
2 Resources for Teaching to Targeted Groups	.44	1.00	.41	.43
3 ICT Teaching Resources & Support	.47	.41	1.00	.31
4 General Teaching Resources	.39	.43	.31	1.00

APPENDIX 6.4 Principal components analysis of the material resources and support personnel ‘need’ items for secondary mathematics respondents (refers to Table 6.9)

Table A6.4 shows that the first component was clearly interpretable as grouping together ‘needs’ dealing with various aspects of ICT Resources and Support. The second component grouped together ‘needs’ dealing with various aspects of Mathematical Teaching Resources and Support. The third component was evidently defined by ‘needs’ dealing with classroom resources suitable for teaching mathematics to students from various targeted groups (Resources for Teaching to Targeted Groups). This component also included the ‘need’ dealing with Indigenous education assistants.

Table A6.4. Principal components analysis of mathematics respondents’ ‘need’ scores for the Material Resources and Support Personnel

Pattern Matrix

	Component		
	ICT Resources & Support	Mathematics Teaching Resources & Support	Resources for Teaching Targeted Groups
Math_comp_stud	.83		
Math_ict_supp	.77		
Math_comp_teach	.76		
Math_internet_con	.75		
Math_comp_hard	.74		
Math_asst_ict_cl	.73		
Math_internet_res	.73		
Math_soft_math_TL	.67		
Math_supp_asst	.38		.31
Math_graph_calc		.75	
Math_AV_equip		.73	
Math_mat_math		.72	
Math_suff_equip		.72	
Math_suit_lib		.70	
Math_stud_acc_calc		.63	
Math_worksheets		.57	
Math_suit_texts		.49	
Math_main_rep		.42	
Math_NESB			.93
Math_indig			.89
Math_ind_ed_asst			.72
Math_spec_need			.65
Math_gift_tal		.32	.57

Component Correlation Matrix

Component	1	2	3
1 ICT Resources & Support	1.00	.56	.47
2 Math Teaching Resources & Support	.56	1.00	.50
3 Resources for Teaching Targeted Groups	.47	.50	1.00

APPENDIX 7.1 Principal components analysis of the Student Learning Experience ‘need’ items for primary respondents (refers to Table 7.2)

In Table A7.1, the first component was clearly defined by ‘needs’ dealing alternative or extension activities in science and mathematics teaching programs for students from various targeted groups (Alternative/Extension Activities for Targeted Groups). The second component grouped together ‘needs’ dealing with student participation in external competitions and activities in the areas of science, mathematics and ICT. Finally, the third component grouped together ‘needs’ dealing with the time allocated by the school to fulfil the teaching requirements of the science and mathematics syllabi.

Table A7.1. Principal components analysis of primary respondents’ ‘need’ scores for Student Learning Experience items

Pattern Matrix

	Component		
	Alternative/ Extension Activities for Targeted Groups	External Competitions & Activities for Students	Time Allocated to Teach Syllabus Requirements
Primary_exten_NESB	.90		
Primary_exten_indig	.89		
Primary_exten_spec_need	.88		
Primary_exten_gift_tal	.88		
Primary_visit_ed_sites	.35		
Primary_stud_ext_act_sci		.97	
Primary_stud_ext_act_math		.97	
Primary_stud_ext_act_ICT		.92	
Primary_hrs_alloc_math_syl			.96
Primary_hrs_alloc_sci_syl			.93

Component Correlation Matrix

Component	1	2	3
1 Alt/Extension Activities for Targeted Groups	1.00	.39	.37
2 External Competitions & Activities	.39	1.00	.24
3 Time Allocated to Teach Syllabus Requirements	.37	.24	1.00

APPENDIX 7.2 Principal components analysis of the Student Learning Experience ‘need’ items for secondary science respondents (refers to Table 7.4)

In Table A7.2, the first component was clearly defined by ‘needs’ dealing alternative or extension activities in science teaching programs for students from various targeted groups (Alternative/Extension Activities for Targeted Groups). The second component grouped together ‘needs’ dealing with various aspects of the general Teaching Context in the School, including teaching hours allocation, range of course offerings and having qualified teachers. Finally, the third component grouped together ‘needs’ dealing with external activity learning opportunities for students (Student Learning Opportunities), including site visits and external competitions and activities.

Table A7.2. Principal components analysis of science respondents’ ‘need’ scores for Student Learning Experience items

Pattern Matrix

	Component		
	Alternative/ Extension Activities for Targeted Groups	Teaching Context in School	Student Learning Opportunities
Science_exten_NESB	.94		
Science_exten_indig	.89		
Science_exten_spec_ne	.81		
Science_exten_gift_tal	.78		
Science_tch_alloc_hrs		.76	
Science_full_crse_range		.75	
Science_qual_teach		.71	
Science_stud_ext_act			.91
Science_visit_ed_sites			.73

Component Correlation Matrix

Component	1	2	3
1 Alt/Extension Activities Targeted Groups	1.00	.36	.39
2 Teaching Context in the School	.36	1.00	.30
3 Student Learning Opportunities	.39	.30	1.00

APPENDIX 7.3 Principal components analysis of the Student Learning Experience ‘need’ items for secondary ICT respondents (refers to Table 7.6)

In Table A7.3, the first component was clearly defined by ‘needs’ dealing alternative or extension activities in ICT teaching programs for students from various targeted groups (Alternative/Extension Activities for Targeted Groups). The second component grouped together ‘needs’ dealing with various aspects of the general Teaching Context in the School, including teaching hours allocation, range of course offerings and having qualified teachers. Finally, the third component grouped together ‘needs’ dealing with external activity learning opportunities for students (Student Learning Opportunities), including site visits and external competitions and activities.

Table A7.3. Principal components analysis of ICT respondents’ ‘need’ scores for Student Learning Experience items

Pattern Matrix

	Component		
	Alternative/ Extension Activities for Targeted Groups	Teaching Context in School	Student Learning Opportunities
ICT_exten_indig	.95		
ICT_exten_NESB	.94		
ICT_exten_spec_ne	.85		
ICT_exten_gift_tal	.75		
ICT_tch_alloc_hrs		.76	-.38
ICT_full_crse_range		.71	.34
ICT_qual_teach		.71	
ICT_stud_ext_act			.83
ICT_visit_ed_sites			.67

Component Correlation Matrix

Component	1	2	3
1 A/t/Extension Activities for Targeted Groups	1.00	.49	.49
2 Teaching Context in School	.49	1.00	.35
3 Student Learning Opportunities	.49	.35	1.00

APPENDIX 7.4 Principal components analysis of the Student Learning Experience ‘need’ items for secondary mathematics respondents (refers to Table 7.8)

In Table A7.4, the first component was clearly defined by ‘needs’ dealing alternative or extension activities in mathematics teaching programs for students from various targeted groups (Alternative/Extension Activities for Targeted Groups). The second component grouped together ‘needs’ dealing with various aspects of the general Teaching Context in the School, including teaching hours allocation, range of course offerings and having qualified teachers. Finally, the third component grouped together ‘needs’ dealing with external activity learning opportunities for students (Student Learning Opportunities), including site visits and external competitions and activities.

Table A7.4. Principal components analysis of mathematics respondents’ ‘need’ scores for Student Learning Experience items

Pattern Matrix

	Component		
	Alternative/ Extension Activities for Targeted Groups	Teaching Context in the School	Student Learning Opportunities
Math_exten_NESB	.93		
Math_exten_indig	.85		
Math_exten_spec_ne	.79		
Math_exten_gift_tal	.67		
Math_tch_alloc_hrs		.79	
Math_full_crse_range		.71	
Math_qual_teach		.57	
Math_stud_ext_act			.89
Math_visit_ed_sites			.68

Component Correlation Matrix

Component	1	2	3
1 Alt/Extension Activities for Targeted Groups	1.00	.31	.40
2 Teaching Context in the School	.31	1.00	.34
3 Student Learning Opportunities	.40	.34	1.00