

Attitudes and motivation

The national monitoring assessment programme recognises the impact of attitudinal and motivational factors on student achievement in individual assessment tasks. Students’ attitudes, interests and liking for a subject have a strong bearing on progress and learning outcomes. Students are influenced and shaped by the

quality and style of curriculum delivery, the choice of content and the suitability of resources. Other important factors influencing students’ achievements are the expectations and support of significant people in their lives, the opportunities and experiences they have in and out of school, and the extent to which they have feelings of personal success and capability.

INFORMATION SKILLS — PUKENGA MŌHIOHIO

The Information Skills survey sought information from students about their strategies for, involvement in, and enjoyment of information gathering activities. The survey was administered to the students in an independent tasks session (four students working individually on tasks, supported by a teacher).

The survey included seven questions which invited students to record a rating response by circling their choice, two questions which used a yes/no response format, and two questions which invited students to tick up to three options from a list (including an “other” option where students could describe an additional response).

Finding information and seeking assistance

One item asked students to indicate where they usually go when trying to find information. They could tick up to three options. Their responses are shown here, in order of popularity for Māori students in general education.

WHERE STUDENTS USUALLY FIND INFORMATION		% responses	
		GE	MI
Source:	internet	63	41
	library	58	20
	parent	37	61
	books at home	33	27
	town library	29	17
	friend	26	61
	teacher	25	56
	CD-ROM	12	10
	other (written in)	0	0

Compared to Māori students in general education, the students in Māori immersion settings were much less likely to try to find information in a library and somewhat less likely to search on the Internet. Conversely, they were much more likely to ask a friend, teacher or parent.

Another item asked students to indicate what they do when they can’t find information they need. They could tick up to three options. Their responses are shown following, in order of popularity for Māori students in general education.

WHEN STUDENTS CAN’T FIND INFORMATION	% responses	
	GE	MI
Strategy:		
ask the teacher	62	74
ask a parent	56	47
keep looking	48	81
ask a friend	44	47
ask a librarian	33	21
give up	16	16
other (written in)	7	0

Compared to Māori students in general education, students in Māori immersion settings were much more likely to keep looking (without specific help) and a little more likely to ask the teacher, but less likely to ask a librarian.

Using library catalogues

A pair of questions (questions 10 and 11) asked students if they had used library card or computer catalogues.

LIBRARY CATALOGUES	% responses	
	GE	MI
library card catalogue	47	52
library computer catalogue	68	42

Students in Māori immersion settings were substantially less likely to have used a computer catalogue. This probably reflects the limited availability of fiction and non-fiction books in Māori, and the correspondingly small collections in school libraries for these students. The earlier survey questions have also indicated less reliance on use of libraries.

Rating items

The remaining seven items used a rating format. The percentages of students choosing each response to these five questions are shown in the table on the following page.

INFORMATION SKILLS SURVEY									
		Percentages: General Education				Māori Immersion			
		heaps		quite a lot		sometimes		never	
		😊		😐		😞		😡	
1.	How often do you have to find information for a study (research topic/project)?	17	4	41	48	40	48	2	0
2.	How often do you have a really interesting study for which you have to find information?	7	27	25	42	63	31	5	0
3.	How often do you look for information because you want to, not because you've been told to?	10	12	15	40	50	44	25	4
4.	How much do you like hunting for information?	14	31	52	65	27	4	7	0
5.	How good do you think you are at hunting for information?	18	35	51	63	25	2	6	0
6.	How much do you like sharing with others the information you find?	40	62	38	19	17	17	5	2
7.	How much do you like writing down what you find out?	29	46	31	29	32	21	8	4

Compared to Māori students in general education, students in Māori immersion settings indicated that they more frequently had really interesting studies to find information for, were more positive about hunting for information and their ability to do so, and also were

more positive about sharing their information with others or writing it down. More than half indicated that they voluntarily looked for information “heaps” or “quite a lot”, whereas only 25 percent of Māori students in general education chose these options.

SOCIAL STUDIES — TIKANGA-Ā-IWI



Students' attitudes, interests and liking for a subject have a strong bearing on their achievement. The Social Studies survey sought information from students about their curriculum preferences and perceptions of their own achievement. The survey was administered to the students in an independent session (four students working individually on tasks, supported by a teacher).

The survey included twenty-one items which asked students to record a rating response by circling their choice, and two items which invited students to write comments. The results of the latter two items are not reported here.

Favourite subjects

The students were first asked to select their three favourite school subjects from a list of twelve subjects. The results are shown adjacent.

PERCENTAGES OF STUDENTS RATING SUBJECTS AMONG THEIR THREE FAVOURITES		% responses	
		GE	MI
Subject:	Physical Education	69	68
	Art	53	43
	Technology	40	26
	Mathematics	26	47
	Music	26	13
	Māori	20	28
	Science	18	17
	Social Studies	13	13
	Reading	10	13
	Writing	7	13
	Speaking	6	9
	Health	1	2

Physical education was the most popular subject for both groups. For Māori students in general education, art came next, followed fairly closely by technology and more distantly by mathematics and music, then Māori and science. Students in Māori immersion settings placed mathematics much higher, just ahead of art, with only Māori and technology among the other subjects showing substantial popularity. Social studies came lower on both lists, but this may be misleading because social studies is often embedded in theme work and not easily identified as social studies.



Rating items

Five of the twenty-one rating items were previously used in the 1997 Social Studies survey. Responses to these five items are presented below.

Compared to Māori students in general education, students in Māori immersion settings were much more positive about doing social studies at school, doing more social studies at school, and learning or doing more social studies as they got older. There was not as much difference on questions 3 and 5, looking at the amount learned and how often the class did “really good things in social studies”.

SOCIAL STUDIES SURVEY				
Percentages: General Education Māori Immersion				
1. How much do you like doing social studies at school?				
😊	😊	😐	😞	
14	49	47	42	25 7 14 2
2. How much do you think you learn in social studies at school?				
heaps	quite a lot	some	very little	
20	24	46	61	31 12 3 3
3. Would you like to do more, the same or less in social studies at school?				
more	about the same	less		
16	40	60	55	24 5
4. How often does your class do really good things in social studies?				
heaps	quite a lot	sometimes	never	
3	14	35	38	50 46 12 2
5. How do you feel about learning or doing more social studies as you get older?				
😊	😊	😐	😞	
23	51	47	32	20 15 10 2

The remaining 16 questions were really two parallel sets of eight questions. The first set asked about student enjoyment of eight aspects of social studies, while the second set asked about the frequency with which school programmes focused on these eight aspects. The results are presented in the table on the following page.

Students showed very positive attitudes to learning in most of the listed aspects. Māori students in general education were particularly interested to learn about “living in the future”, with 67 percent choosing the highest rating, but four other aspects had more than 30 percent of students choosing the highest rating. Students in Māori immersion settings were even more positive, with more than 30 percent of students choosing the highest rating on six of the eight aspects. Compared to Māori students in general education, students in Māori immersion settings were substantially more positive about two aspects (the way people work together and do things in groups, and the work people do and how they make a living), and substantially less positive about one aspect (how people lived in the olden days).

Students were then asked to rate how often they learned about each aspect in social studies at school. In general, students in Māori immersion settings gave higher ratings, with seven of the eight aspects having more than 50 percent of students using the ratings “heaps” and “quite a lot” (compared to just two aspects for Māori students in general education). Students in Māori immersion settings gave much higher ratings for two aspects (the work people do and how they make a living, and living in the future), and slightly lower ratings for just one aspect (what is happening now - in New Zealand and other countries).

SOCIAL STUDIES SURVEY						
		Percentages: General Education		Māori Immersion		
How much do you like learning about these things in social studies ?			How often do you learn about these things in social studies at school?			
			<i>heaps</i> <i>quite a lot</i> <i>sometimes</i> <i>never</i>			
6. The way people work together and do things in groups.			14. The way people work together and do things in groups.			
28	46	50	49	13	28	
19	3	42	31	34	39	
3	2	11	2	43	35	
7. Other places in the world, and how people live there.			15. Other places in the world, and how people live there.			
35	48	17	19	34	37	
40	34	43	35	6	9	
22	16	3	2	16. Other places in New Zealand, and how people live there.		
8. Other places in New Zealand, and how people live there.			17. The work people do and how they make a living.			
48	53	7	7	7	28	
32	40	12	0	31	44	
17	7	52	23	10	5	
3	0	18. Why people have different ideas.				
9. The work people do and how they make a living.			19. What is happening now - in New Zealand and other countries.			
28	52	16	14	18	10	
39	34	20	37	48	44	
21	14	40	42	27	39	
12	0	24	7	7	7	
10. Why people have different ideas.			20. How people lived in the olden days.			
22	24	13	12	20	35	
39	59	52	30	52	30	
32	15	15	23	15	23	
7	2	21. Living in the future.				
11. What is happening now - in New Zealand and other countries.			12. How people lived in the olden days.			
39	35	17	31	17	28	
34	43	10	15	32	22	
18	17	34	14	34	14	
9	5	13. Living in the future.				
12. How people lived in the olden days.			13. Living in the future.			
37	22	14. The way people work together and do things in groups.				
36	32	15. Other places in the world, and how people live there.				
17	31	16. Other places in New Zealand, and how people live there.				
10	15	17. The work people do and how they make a living.				
13. Living in the future.			18. Why people have different ideas.			
67	54	19. What is happening now - in New Zealand and other countries.				
21	39	20. How people lived in the olden days.				
9	7	21. Living in the future.				
3	0	14. The way people work together and do things in groups.				

MATHEMATICS — PĀNGARAU

Students’ attitudes, interests and liking for a subject have a strong bearing on their achievement. The Mathematics survey sought information from students about their curriculum preferences and perceptions of their own achievement. The survey was administered to the students in an independent session (four students working individually on tasks, supported by a teacher).

The survey included eleven items which asked students to record a rating response by circling their choice, two items which asked them to select three preferences from a list, one item which asked them to nominate up to six activities, and three items which invited them to write comments.



Preferred maths activities

Students were presented with a list of nine mathematics activities and asked to nominate up to three that they liked doing at school. The responses are shown below, in percentage order for Māori students in general education.



There are some remarkable differences between the two groups. Compared to Māori students in general education, students in Māori immersion settings were much more enthusiastic about doing maths tests, taking parts in maths competitions, and working in their maths book, but dramatically less enthusiastic about working on maths problems and puzzles.

MATHS ACTIVITIES STUDENTS LIKE DOING AT SCHOOL:	% responses	
	GE	MI
Maths problems and puzzles	45	11
Work in my maths book	31	50
Using equipment	30	28
Doing maths work sheets	25	31
Using a calculator	20	33
Maths competitions	18	44
Using maths textbooks	17	28
Maths tests	14	42
Something else	15	14

Activities important to learning maths

An open-ended question asked students to nominate what they considered to be some very important things a person needs to learn or do to be good at maths. They were asked to try to think of three things. Their responses were coded into nine categories and the results shown in the table at the top of the adjacent column are percentage totals from the sets of three ideas. Because some students nominated two or three things that were coded into the same category (e.g. practising addition, subtraction and multiplication) the percentage could exceed 100. Basic facts and tables were seen by both groups of students



to be most important, but this in part will have arisen because some students referred separately to two or more of addition, subtraction, multiplication and division facts.

IMPORTANT FOR LEARNING AND BEING GOOD AT MATHS <i>(activities nominated by students as being very important for learning maths or for being very good at maths)</i>	% responses	
	GE	MI
Basic facts and tables	78	106
Classroom behaviours <i>(seeking help, discussing with others, paying attention)</i>	37	24
Work skills <i>(practise, study, revision, homework)</i>	30	18
Personal attributes <i>(good attitudes, concentration, focus, enjoyment)</i>	30	33
Maths knowledge <i>(algebra, money, percentages, use of calculators, etc.)</i>	24	27
Intelligence <i>(thinking, being brainy, being smart, being able to understand)</i>	24	30
Skills and abilities in related subjects <i>(reading, writing)</i>	6	21
Problem solving skills	4	0
Other factors	5	3

Maths in own time

A second open-ended question asked students "What are some interesting maths things you do in your own time?" Their responses were coded into seven categories, and the results shown in the table below are percentage totals, out of those students who responded. Students in Māori immersion settings placed much more emphasis on basic facts and tables, while Māori students in general education made more diverse choices.

MATHS ACTIVITIES STUDENTS DO IN THEIR OWN TIME.	% responses	
	GE	MI
Basic facts and tables	23	66
Puzzles, quizzes and games	21	7
Maths homework	9	2
Math skills <i>(excluding basic facts)</i>	21	5
Life skills maths <i>(counting money, banking, calculating animal feed, fencing for paddocks, etc.)</i>	11	16
None	20	18
Other	10	5

Strategies

The third open-ended question asked “If you have something really hard to do in maths, what do you do?” Students’ responses were coded into seven categories, and the results shown in the table below are percentage totals, out of those students who responded. Students in Māori immersion settings were somewhat more likely to stop trying or to guess.

STRATEGIES STUDENTS USE WHEN THEY HAVE SOMETHING IN MATHS THAT IS VERY HARD TO DO.	% responses	
	GE	MI
Ask a teacher	43	50
Ask family/friends for help	27	35
Ask for help - no specific people indicated	24	7
Try harder; persevere	17	20
Quit/nothing	5	11
Guess	0	13
Other	7	2

Rating items

Responses to the eleven rating items are presented in the adjacent table. Compared to Māori students in general education, the students in Māori immersion settings were much keener to do increased amounts of maths at school, and expressed markedly greater enjoyment of doing maths at school. They also were more positive about their own capabilities in maths, and about how good their teacher and their parents thought they were at maths. They were much more positive about doing maths on their own, and somewhat more positive about helping other with their maths.



MATHEMATICS SURVEY						
Percentages: General Education Māori Immersion						
1. Would you like to do more, the same or less maths at school?						
more	about the same	less				
12 51	61 45	27 4				
😊	😊	😐	😞			don't know
2. How much do you like doing maths at school?						
23 44	41 37	24 11	12 8			
3. How good do you think you are at maths?						
12 28	61 50	22 18	5 4			
4. How good does your teacher think you are at maths?						
15 28	44 46	8 2	3 2	30 22		
5. How good does your Mum or Dad think you are at maths?						
30 52	30 26	7 5	2 2	31 15		
6. How much do you like doing maths on your own?						
19 55	42 24	22 12	17 9			
7. How much do you like doing maths with others?						
53 60	28 29	13 5	6 6			
8. How much do you like helping others with their maths?						
28 42	39 35	20 19	13 4			
9. How do you feel about doing things in maths you haven't tried before?						
30 35	37 30	23 23	10 12			
10. How much do you like doing maths in your own time (not at school)?						
13 19	25 28	25 23	37 30			
11. Do you want to keep learning maths when you grow up?						
yes	maybe / not sure	no				
43 49	49 40	8 11				