

Research Report: The Wireless Writing Program 2004-2006

**Prepared for:
Peace River North (SD 60)**

by:

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Highlights

Students in the WWP are sustaining the improved achievement levels they have demonstrated since the beginning of the project.

- On provincial writing assessments at grade 7 (FSA), students from Peace River North have improved dramatically, relative to the rest of the province, in the three years since full implementation of the WWP. These results were sustained in 2006.
- The grade 7 literacy results (reading and writing) are now consistently closer to the provincial average than grade 7 numeracy or grade 4 results.
- Random samples of students are being tracked over time on district writing assessments. Results indicate:
 - Grade 6 students who are in the program for the first year, like their counterparts in previous years, on average, improved their achievement approximately .5 achievement level during the school year
 - Grade 7 students who are in the second year in the program continue to perform well, although their achievement results are slightly lower than for previous grade 7 groups, and slightly lower than their grade 6 results.

The achievement of male students and Aboriginal students continues to be encouraging.

- Provincial assessment results indicate that grade 7 male students in Peace River North have consistently performed at the provincial level since full implementation of the program. This represents a dramatic change from pre-WWP results.
- Internal data show that an equal percent of boys and girls meet or exceed expectations at all grades; however, girls at grades 7 and 8 received slightly higher scores overall; at grade 6 there is virtually no difference.
- Aboriginal students also continue to perform relatively well, with results similar over the last three years.

Grade 8 students who participated in the WWP during grades 6-7 have sustained the improvements they demonstrated in elementary school.

- Results of a writing assessment for a random sample of grade 8 students, tracked since grade 6, indicate that they are sustaining the gains they demonstrated during the WWP, even though they are no longer in the program.

Students, teachers, and parents, continue to be positive about the WWP and its impact on student learning.

- Students, particularly those in grade 6, continue to be very positive about their experiences in the WWP and the improvement in their achievement. Most also believe the WWP has improved their attitudes.
- Teachers in 2006 continue to be positive about the WWP, but they are much less enthusiastic than teachers were in 2003-2005. Their attitudes toward the WWP and perceptions of student growth are substantially lower than in previous years.
- Parents continue to support the WWP, for both grades 6/7 and for high school students; they believe that it benefits their children.

1. Writing Achievement

1.1 Provincial Assessment (FSA)

Overall

Grade 7 students continue to perform well on the provincial writing assessment (FSA.) Results have been consistent since full implementation of the WWP.

- 85% met or exceeded expectations in 2006, compared with 87% for the Province
- Results have decreased slightly since 2005 (2%); across BC, results decreased by 3%.
- Both the difference between results in 2005 and 2006 and differences between PRN and BC are within the margin of error.
- When the pattern of PRN results for all FSA tests is compared to the rest of BC, performance is strongest in grade 7 writing. (Note: all differences favour BC)
 - Over the last 3 years, the difference between PRN grade 7 writing results and BC writing results averages 1-2%; for grade 7 reading, the difference averages 3-4%; for grade 7 numeracy, 4% (reaching 7% in 2006.) While these are not large difference, the pattern is consistent over time.
 - At grade 4, the average difference over 3 years has been 5-6% for writing; 4-5% for reading; 3% for numeracy.

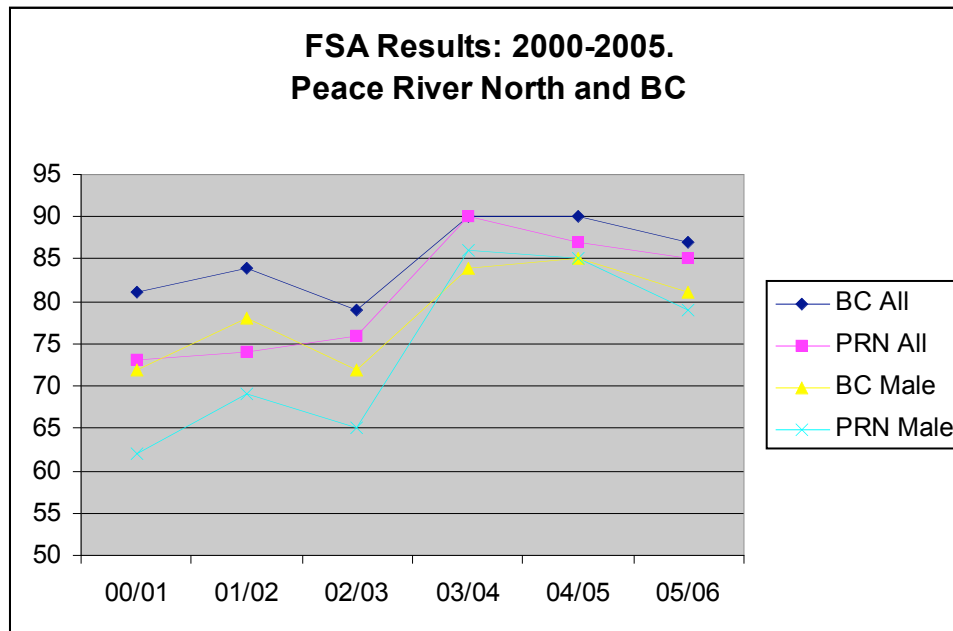


Table 1: Percent of Students Meeting or Exceeding Expectations for Writing: 2001-2006. District and Provincial (FSA) Trends.

	2000/01	2001/02	2002/02	2003/04	2004/05	2005/06
All students:						
- PRN	73%	74%	76%	90%	87%	85%
- BC	81%	84%	79%	90%	90%	87%
Comparisons						
- prev year	n/a	=	=	+	=	=
- province	below	below	=	=	=	=
Male						
- PRN	62%	69%	65%	86%	82%	79%
- BC	72%	78%	72%	84%	85%	81%
Comparisons						
- prev year	n/a	below	=	+	=	=
- province	below	below	below	=	=	=
Female						
- PRN	83%	80%	86%	94%	93%	90%
- BC	90%	91%	87%	95%	95%	93%
Comparisons						
- prev year	n/a	=	+	+		=
- province	below	below	=	=		=
Aboriginal						
- PRN	54%	70%	59%	85%	72%	84%
- BC	61%	66%	61%	75%	75%	73%
Comparisons						
- prev year	n/a/	+	below	+	=	=
- province	=	=	=	+	=	+
French Immersion						
- PRN	85%	71%	79%	97%	100%	97%
- BC	88%	91%	88%	96%	96%	94%
Comparisons						
- prev year	n/a	=	=	+	=	=
- province	=	below	=	=	=	=

Table 2: Context: District and Provincial Summary for Grade 4 and 7: 2001-2006 FSA Results for Writing, Reading, and Numeracy

	2000/01	2001/02	2002/02	2003/04	2004/05	2005/06
Writing Gr. 7						
PRN	73% (-8%)	74% (-10%)	76% (-3%)	90% (=)	87% (-3%)	85% (-2%)
BC	81%	84%	79%	90%	90%	87%
Reading Gr. 7						
PRN		73% (-3%)	71% (-6%)	77% (-3%)	72% (-5%)	70% (-3%)
BC		76%	77%	80%	77%	73%
Numeracy Gr.7						
PRN		74% (-8%)	83% (-1%)	80% (-3%)	81% (-2%)	77% (-7%)
BC		82%	84%	83%	83%	84%
Writing Gr. 4						
PRN		90% (-4%)	93% (-1%)	85% (-6%)	90% (-3%)	83% (-7%)
BC		94%	94%	91%	93%	90%
Reading Gr. 4						
PRN		71% (-9%)	72% (-5%)	78% (-2%)	74% (-5%)	74% (-6%)
BC		80%	77%	80%	79%	80%
Numeracy Gr.4						
PRN		81% (-4%)	84% (-3%)	87% (-1%)	82% (-5%)	83% (-3%)
BC		85%	87%	88%	87%	86%

Table 3: Context: District and Provincial Summary for Grade 4 and 7: 2001-2006 FSA Results for Writing, Reading and Numeracy: Male Students

	2000/01	2001/02	2002/02	2003/04	2004/05	2005/06
Writing Gr. 7						
PRN	n/a	69% (-9%)	65% (-7%)	86% (+2%)	82% (-3%)	79% (-2%)
BC		78%	72%	84%	85%	81%
Reading Gr. 7						
PRN	n/a	73% (-1%)	72% (-1%)	77% (+1%)	72% (-1%)	70% (+1%)
BC		74%	73%	76%	73%	69%
Numeracy Gr.7						
PRN	n/a	77% (-6%)	80% (-4%)	78% (-6%)	80% (-4%)	76% (-8%)
BC		83%	84%	84%	84%	84%
Writing Gr. 4						
PRN	n/a	83% (-8%)	91% (=)	78% (-9%)	86% (-4%)	73% (-13%)
BC		91%	91%	87%	90%	86%
Reading Gr. 4						
PRN	n/a	71% (-6%)	72% (-3%)	78% (=)	74% (-4%)	74% (-3%)
BC		77%	75%	78%	78%	77%
Numeracy Gr.4						
PRN	n/a	81% (-5%)	83% (-5%)	88% (-1%)	83% (-5%)	81% (-7%)
BC		86%	88%	89%	88%	88%

Male Students

Male students in grade 7 are sustaining the gains they made in previous years. For the third year in a row, their performance is similar to the overall BC results. Up until 2003, results for PRN male students were consistently below those of male students across the province.

- 79% of male grade 7 met or exceeded expectations on the FSA writing assessment, compared with 81% for the province
- There was a slight decline (2%) since 2005; this is slightly less than the decrease at the provincial level (3%)
- There is still a difference of approximately 10% favouring female students; this has not changed over the last three years. (Prior to 2003, the difference was approximately 20%)
- When the pattern of results for PRN male students, relative to the rest of BC, is considered, performance is strongest for reading and writing at grade 7 over the last 3 years.
 - Over the last 3 years, for grade 7 writing, the difference between PRN male students and the rest of BC averages 1% (in favour of overall BC scores); in reading, the difference is negligible (less than 1% favouring PRN male students.)
 - In contrast, in numeracy, the difference between PRN boys and BC at grade 7 has averaged 6% (BC is higher); for grade 4 writing, the difference averages 9%; for grade 4 reading, 2-3%; for numeracy, 4-5%.

Aboriginal Students

In 2006, 84% of Aboriginal students in PRN met or exceeded provincial expectations in writing compared with 73% across the province.

- Aboriginal students at grade 7 are sustaining and increasing the gains they have made since the inception of the WWP.
- While results for writing achievement continue to increase, the performance of the same group of students in reading and numeracy declined, with 48% of grade 7 students meeting or exceeding expectations in reading, and 59% in numeracy.
- Results are based on a relatively small number of students (64-67.)

1.2 District Writing Assessment: Random Sample

All grades 6 and 7 students in the WWP completed writing tasks in both Fall and Spring, beginning in 2003. In 2004, a random sample of Fall samples and all Spring samples were scored in a district marking session, using the appropriate writing performance standards for each grade. Scores were validated by two or more markers. (See previous WWP reports for details of scoring procedures.) Beginning in 2004, a random sample of students in each year was selected for tracking over time. This process resulted in three cohorts whose achievement results are reported here:

2003 Cohort. These students entered the WWP as grade 6 students in Fall 2003. They completed grade 8 in Spring 2006.

2004 Cohort. These students entered the WWP as grade 6 students in Fall 2004. They completed grade 7 in Spring 2006. The sample includes 55 randomly selected students with validated scores from both Spring 2005 (grade 6) and Spring 2006 (grade 7). Results were also analyzed for a subset of 38 students for whom Fall 2004 were also available. Results for this group address two main questions:

- What is the pattern results for students who experience two full years in the WWP (grade 6 and 7)?
- How does their achievement compare to previous years?

2005 Cohort. These students entered the WWP as grade 6 students in Fall 2004. They completed grade 5 in Spring 2006. The sample includes 106 randomly selected students with validated scores from both Fall 2005 and Spring 2006. Results address two questions:

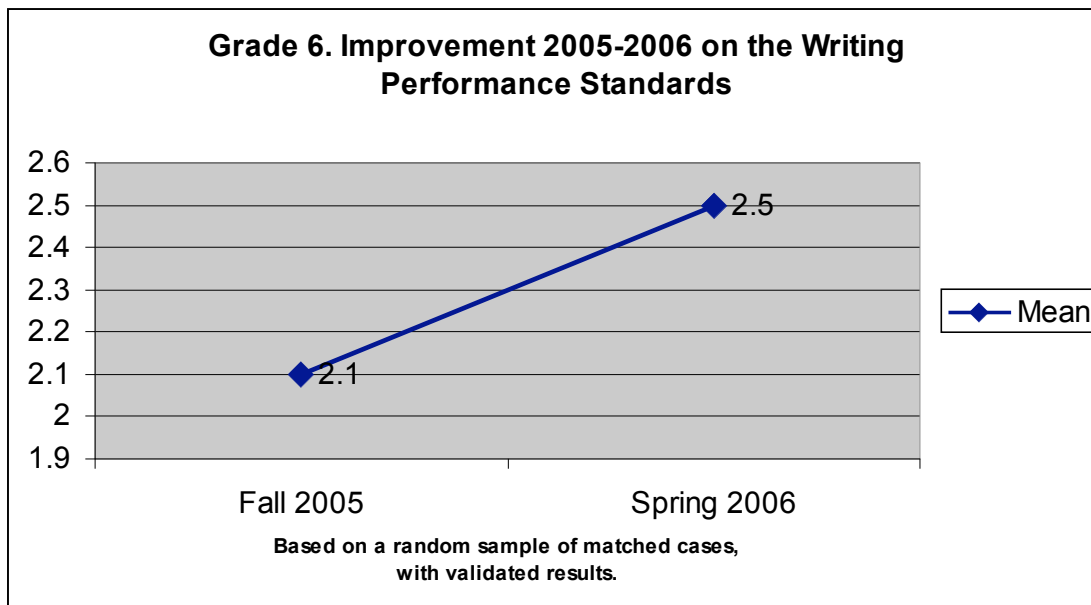
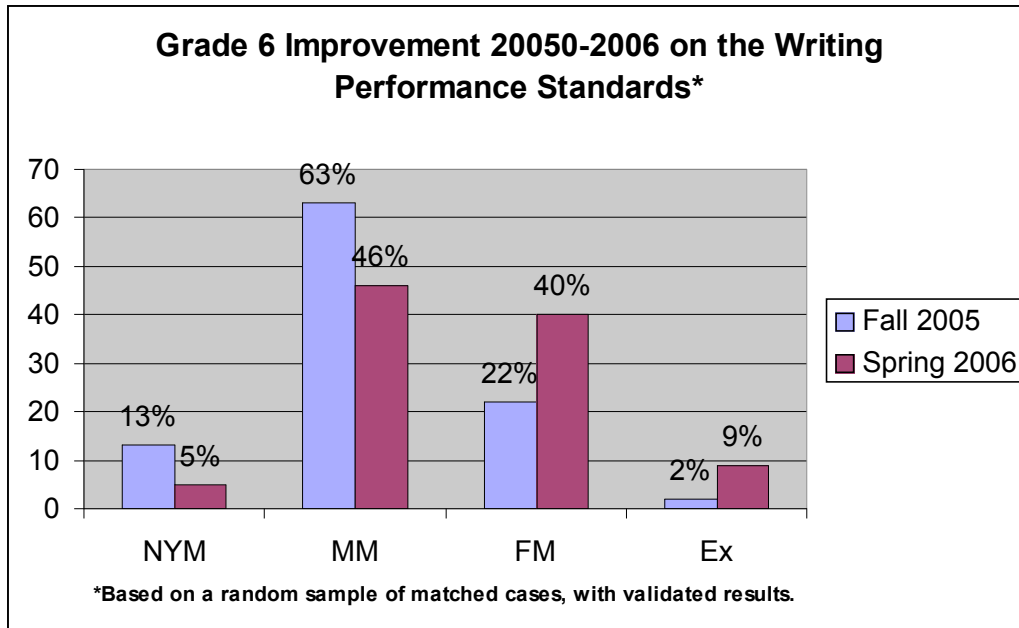
- How much has the writing of current students improved during their first year (grade 6) in the WWP?
- How does their change in achievement compare to that from previous years?

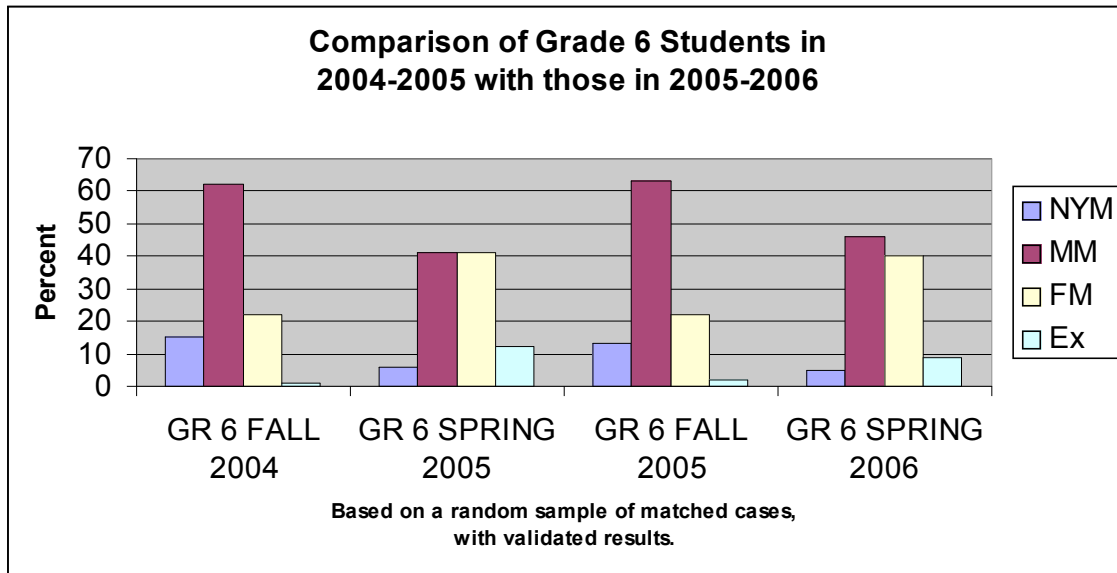
2005-2006 Change in Achievement: Grade 6's

As in previous years, grade 6 students showed substantial improvement during their first year in the WWP. Results, based on a random sample of 106 students who were tracked from Fall to Spring indicated:

- Writing performance improved, on average, approximately one-half scale-point during the 2005-2006 school year.
- The percent meeting expectations increased from 87% to 95%
- The percent with results in the top half of the scale (i.e., Fully Meeting or Exceeding Expectations) more than doubled, from 24% in Fall 2005 to 50% in Spring 2006.
- As in previous years, results for *meaning* and *style* showed the greatest improvement.
- There is no gap between boys and girls; the mean score for both groups is 2.5; 94% of boys and 96% girls met or exceeded expectations; 49% of girls and 48% of boys scored in the top half of the scale (fully meeting or exceeding.) At the beginning of the year (Fall 2005), the difference between boys and girls was slightly, but not significantly, greater than after one year in the WWP.

When compared to the previous cohort (grade 6 students in 2004-2005), the grade 6 students in 2005-2006 showed similar growth to their counterparts in 2004-2005. (Although results are slightly lower, they are within the margin of error.)

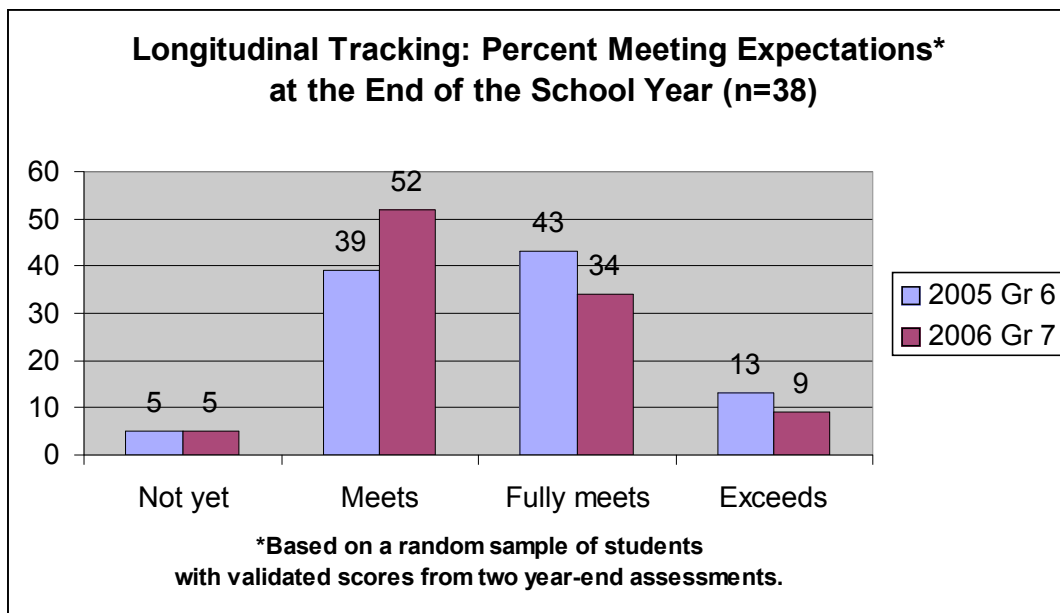
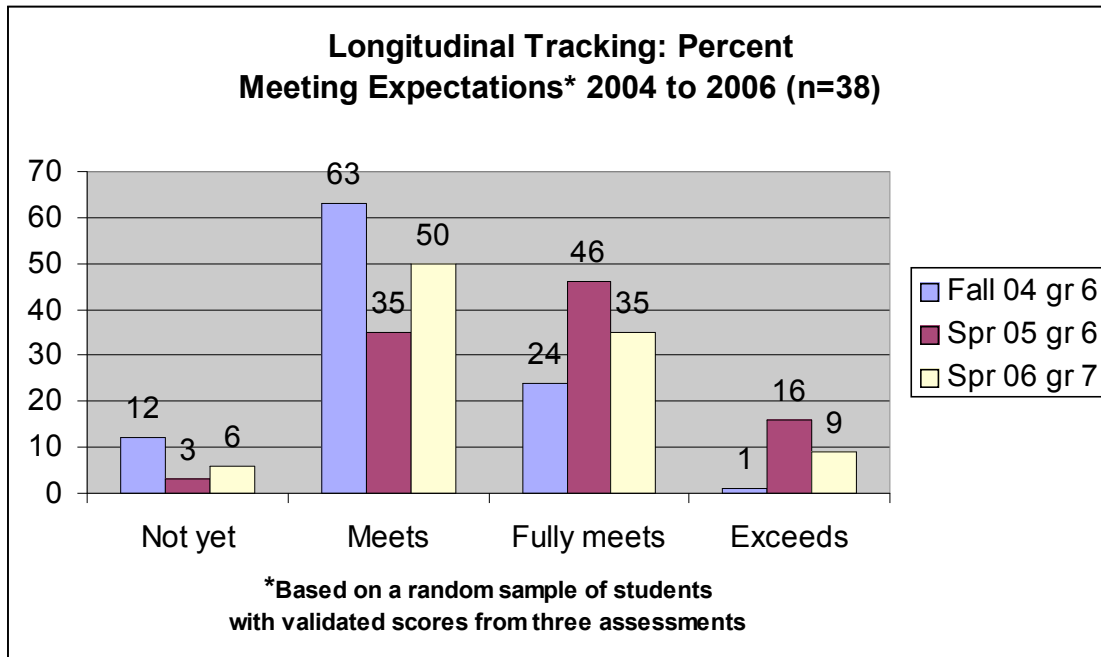




2004 2006 Change in Achievement: Grade 6-7

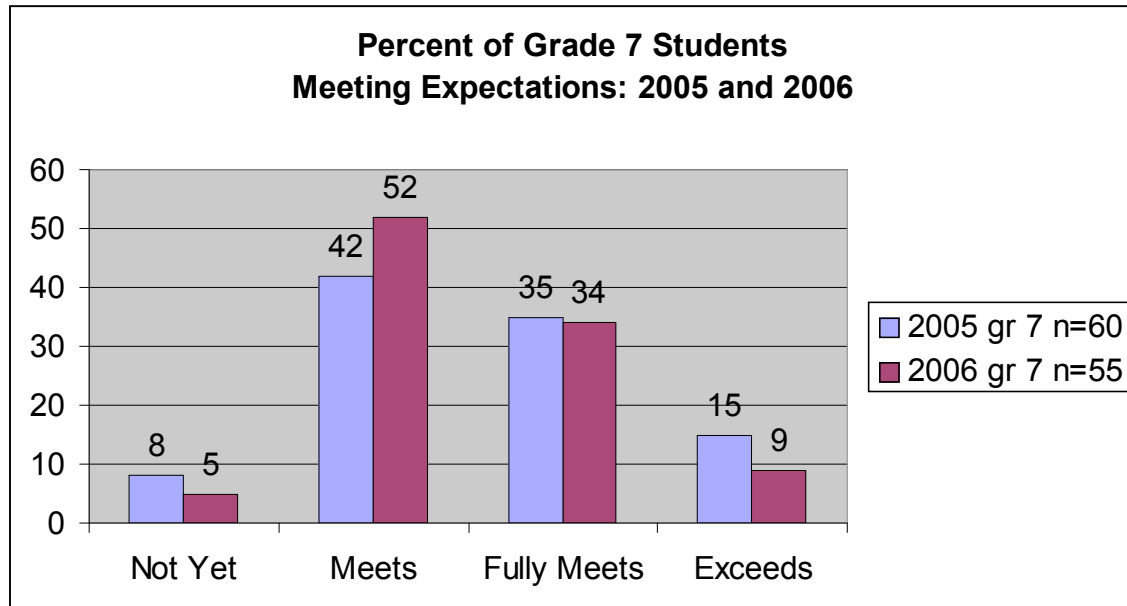
Students in the 2004 cohort have completed two full years in the WWP. A sample of 38 students has been tracked since the beginning of grade 6. Results indicate strong improvement in the first year in the program, with substantially more students meeting expectations at the end of grade 6 than at the beginning. Most students continued to improve in the second year, and at the end of the year, were able to meet the more demanding standards required for grade 7. However, a substantial percent who showed strong achievement at the end of grade 6, fully meeting or exceeding expectations, received lower scores at the end of grade 7 (62% versus 44%.) Because of the small sample, this is within the margin of error.

A slightly larger sample of 55 students was tracked from Spring 2005 to Spring 2006. Again, most students improved during grade 7, while some who fully met or exceeded expectations at the end of grade 6, achieved a lower standard at the end of grade 7 (56% versus 43% -- given the small sample, this is within the margin of error.)



When the 2005-2006 grade 7 students were compared to their counterparts from one year previous, results are very similar, and any differences are within the margin of error. Both in 2005 and 2006, over 90% of grade 7 met or exceeded expectations, with close to half of them in the top half of the scale (50% in 2005; 43% in 2006 fully meeting or exceeding expectations.) The slight decline in 2006 is within the margin of error.

However, combined with the decrease shown from grade 6 to grade 7 for this cohort, it is concerning, and needs to be carefully monitored.



2003 2006: Tracking Through Grade 8

The WWP was fully implemented in 2003-2004, and the first cohort completed grade 8 in 2006. These students were in the WWP for two full years; their writing achievement was tracked through grade 8 to explore the extent to which the gains they achieved while they were in the WWP were sustained as they left the WWP and entered high school. The random sample of students whose writing was assessed at the end of grade 7 participated in a special grade 8 assessment in Spring 2006. Students were bused to the District Resource Centre, and the assessment task was administered by the Director of instruction. Sixty students who had been part of the grade 7 random sample in 2005 were included; of these, 47 also had validated scores available from the end of grade 6 (Spring 2004.)

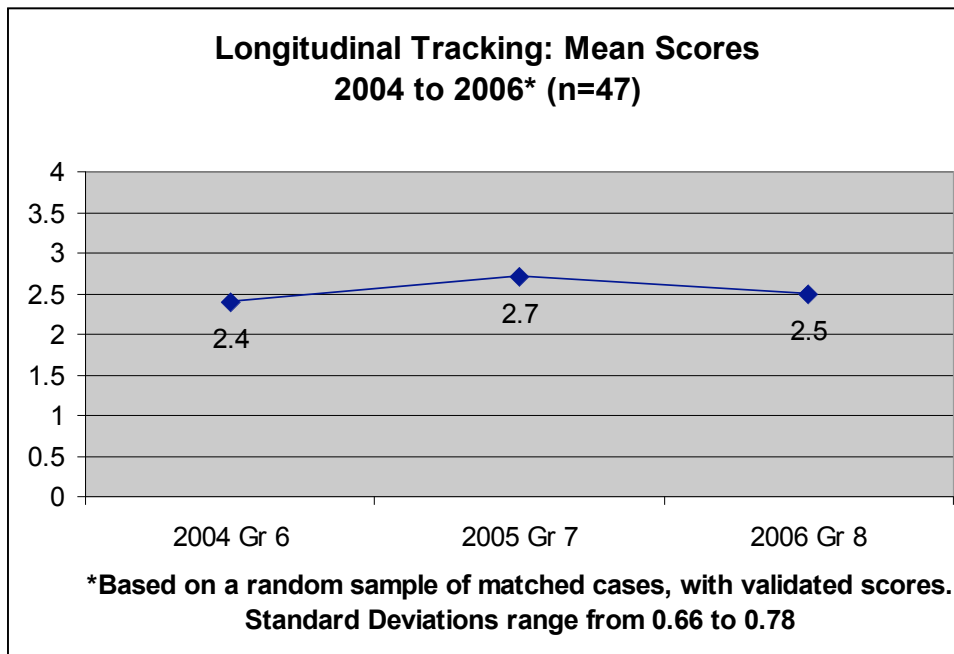
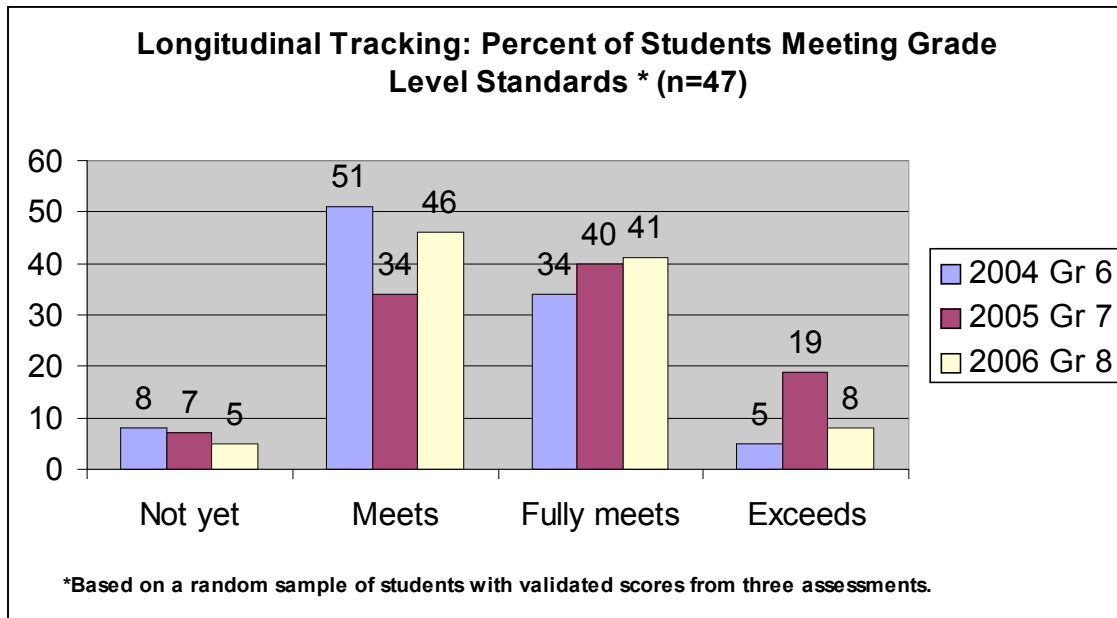
Because the BC Performance Standards are based on grade-level expectations, students who achieve the same level in successive years are actually showing substantial improvement. Since one goal of the WWP was to improve students' chances of success in high school, the question of whether or not WWP gains 'stick' when students are no longer in the program is an important one.

Results indicate that:

- For the sample of students who participated in both grade 7 and grade 8 assessment, results are very similar. The relatively strong performance students demonstrated in

grade 7, after two years in the WWP, was sustained as they moved into high school, and were no longer in the WWP.

- For the sample of students who participated in all three assessments – grade 6, grade 7, and grade 8 – results were again very similar across grades, and within the margin of error, although students did perform slightly better in grade 7 than in grade 6 or 8.



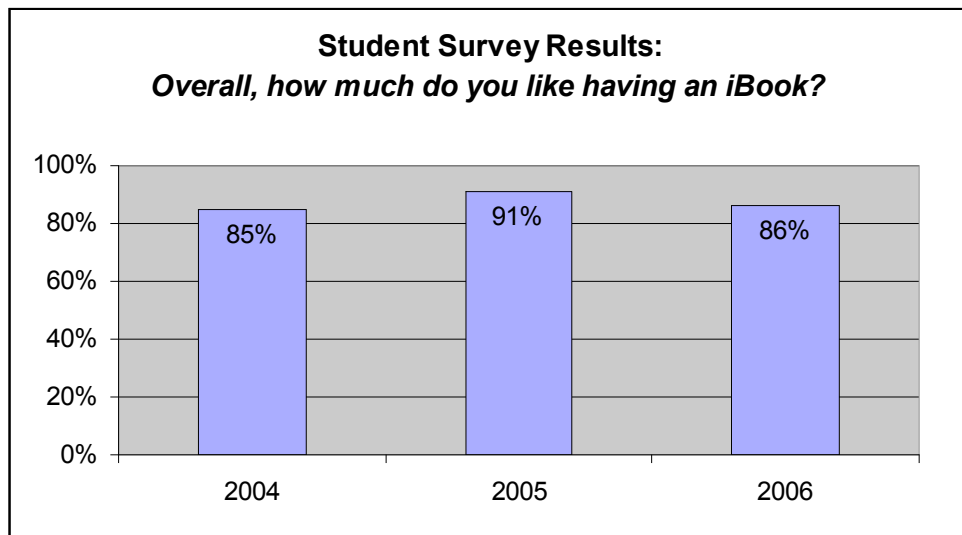
2. STUDENT ATTITUDES AND PERCEPTIONS

Note: detailed survey results and comparisons across time are included in Appendix B.

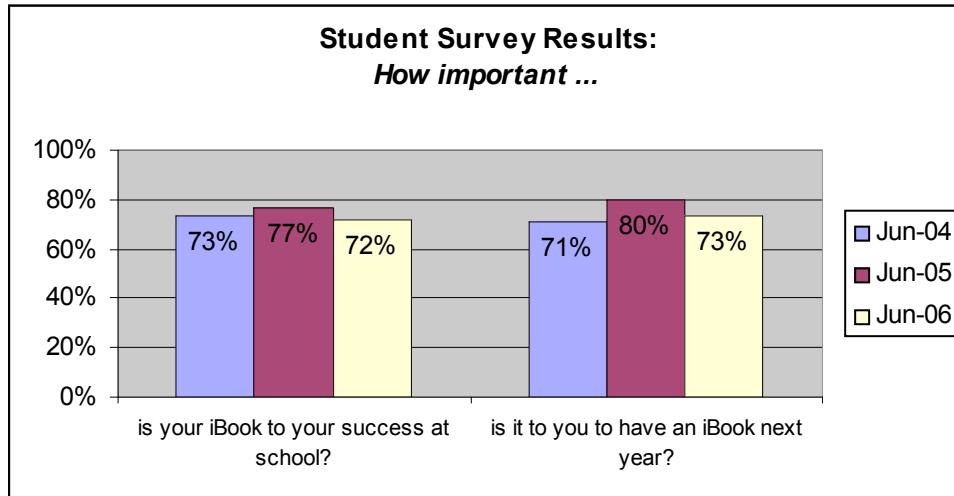
2.1 Overall support for WWP

Students responded to a series of attitude and perception questions, using a four-point scale. Results are similar to previous years. In 2006, the percent of students who chose the top two scale points (*quite a bit* and *a lot*) indicated:

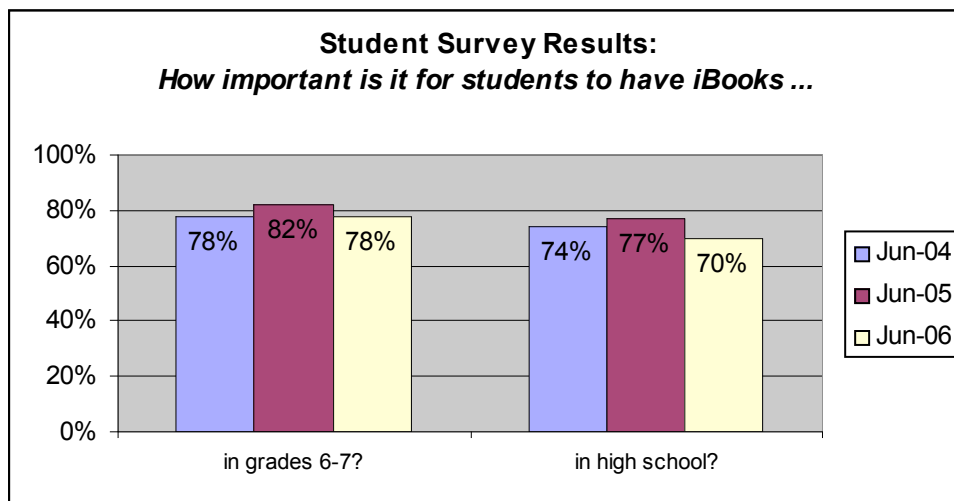
- A very high percent like having iBooks (86%)
- Most believe that their iBooks are important to their success in school (72%)
- They consider having an iBook important to success in the coming year (73%)
- They strongly endorse the use of iBooks in both grades 6/7 (78%) and in high school (70%).



*Percent of responses *QUITE A BIT* and *A LOT* combined



*Percent of responses *QUITE A BIT* and *A LOT* combined

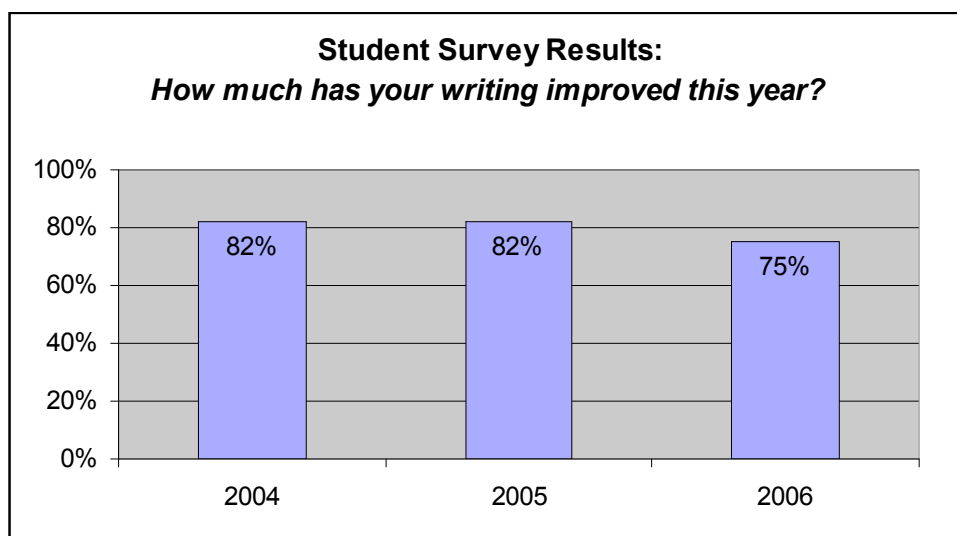


*Percent of responses *QUITE A BIT* and *A LOT* combined

2.2 Changes in own achievement

Results for survey questions about students' own writing achievement indicated that most students believe that their writing has improved substantially (75% -- a decrease from 82% in previous years.)

When asked to identify the extent to which various aspects of their writing had improved, students assigned highest ratings to *organization*, with 74% indicating that this aspect of their writing had improved *quite a bit* or *a lot*. *Style* also received high ratings (69% chose *quite a bit* or *a lot*), followed by *meaning* (62%) and *conventions* (59%). This pattern is similar to previous years, although results are slightly lower for all aspects.



*Percent of responses *QUITE A BIT* and *A LOT* combined

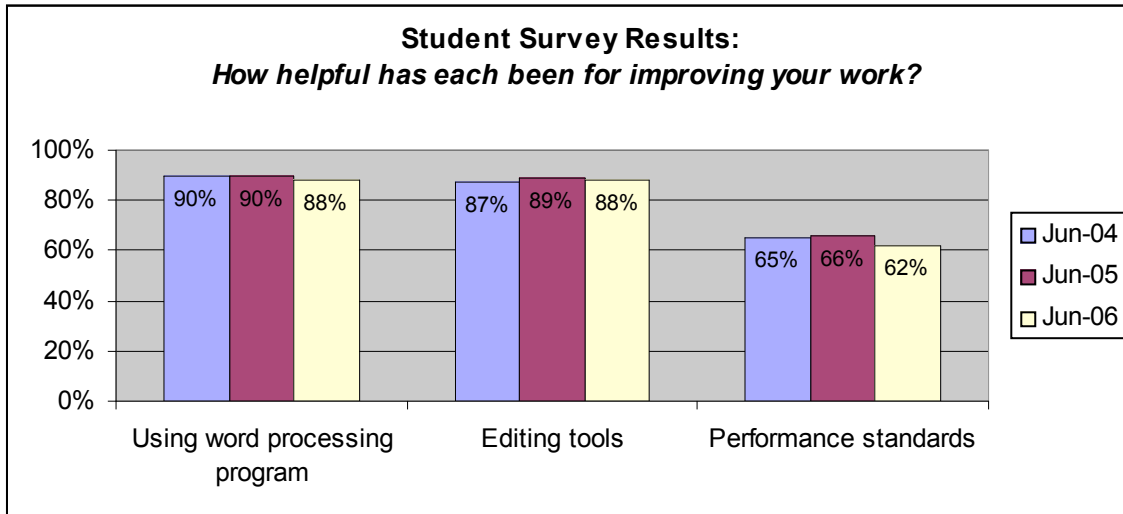
2.3 Benefits of technology integration

Students were also asked how helpful their iBooks are for various stages and processes of writing; results were similar to previous years. Almost all students indicated that their laptops helped *quite a bit* or *a lot* for finding information (92%). Results were also extremely positive for:

- keeping work organized (86%)
- editing and revising (82%)
- drafting their writing (76%)
- planning writing and other assignments (75%)

When asked how much various programs, tools, and resources helped to improve their work, students were most likely to assign high ratings to *the Internet* (91%), *word processing programs* (88%), and *editing tools* (88%). Most students also reported that *PowerPoint* (69%) and the Performance Standards criteria and rating scales for writing (62%) were helpful (62%). These results are very similar to previous years.

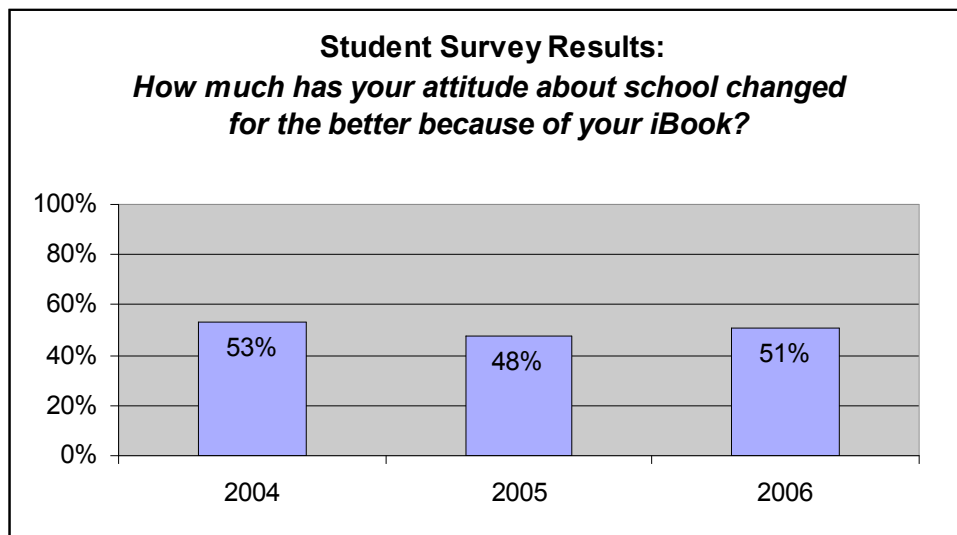
Close to half of the students who responded to the 2006 survey indicated that *Inspiration* (46%) helped their work *quite a bit* or *a lot* (46%); results were slightly lower for *iMovie* and *iPhoto* (42%).



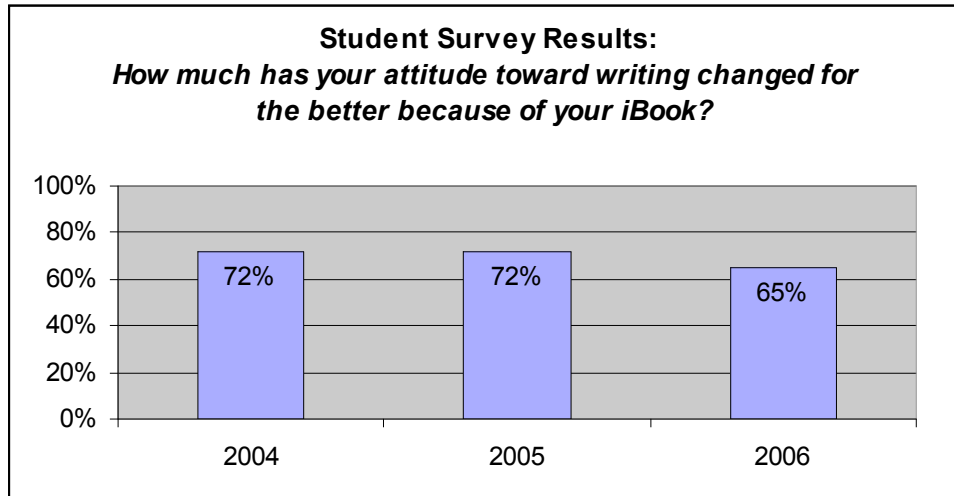
*Percent of responses *QUITE A BIT* and *A LOT* combined

2.4 Improved attitudes

As in previous years, approximately half of students credit their iBooks with improvements in their attitudes toward school (51%), while close to 2/3 indicate their laptops have improved their attitudes to writing (65%.) This is approximately 7% lower than in previous years.



*Percent of responses *QUITE A BIT* and *A LOT* combined

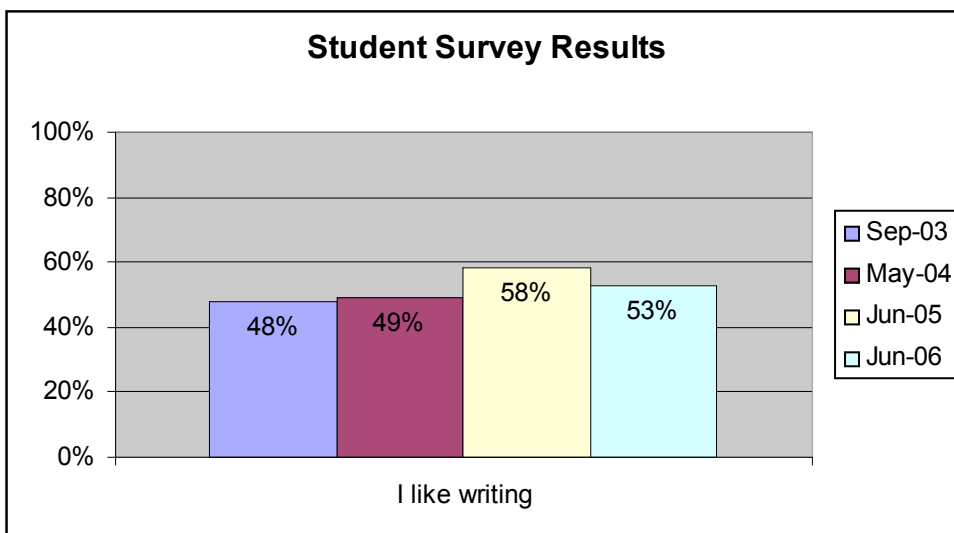


*Percent of responses *QUITE A BIT* and *A LOT* combined

2.5 Annual attitude survey

Since 2003, before the implementation of the Wireless Writing Program, students have been surveyed annually about their attitudes toward writing, and the strategies they use. The response scale for this survey includes 5 response options: never, once in a while, sometimes, often, and most of the time. The results reported here are based on those students who offered clearly positive responses: “often” or “most of the time.”

Approximately half of the students involved reported that they like writing (53%); this is somewhat higher than at the beginning of the WWP, but slightly lower than in 2005. The percent of students who believe that they are good writers is identical (also 53%), and again, higher than before the WWP began, but lower than in 2005.



*Percent of responses *OFTEN* and *MOST OF THE TIME* combined

2.6 Use of writing processes and strategies

Overall, students' reported use of editing strategies has increased since initial implementation of the WWP; although results are very slightly lower than in 2005. When data for 2003 and 2006 are compared, there are increases in all four aspects of editing:

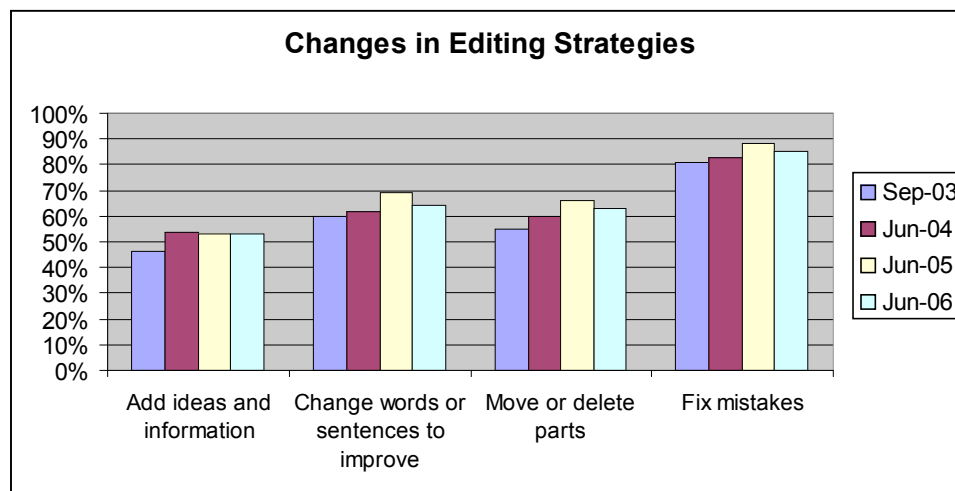
- adding ideas and information (46% to 53%)
- moving or deleting parts (55% to 63%)
- changing words or sentences (60% to 64%)
- fixing mistakes (81% to 85%)

Students report relatively low levels of prewriting collaboration, and these have not changed appreciably from baseline results in 2003. Approximately one-third report that they *often or most of time*:

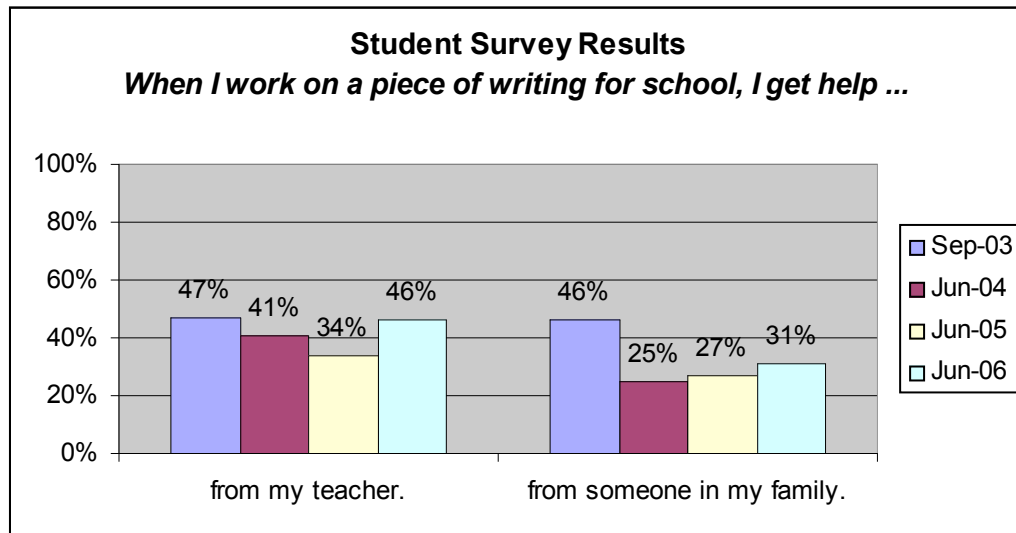
- make a list, web or outline (30% in 2003; 35% in 2006)
- get help and ideas from other students (36% in 2003; 34% in 2006)

The percent of students who report that they consider their audience when they are working on a piece of writing is relatively unchanged since 2003 (41% in 2003; 43% in 2006.)

A similar percent of students report frequently getting help from their teachers as did in 2003, reversing a trend that appeared in 2004 and 2005 (47% in 2003; 41% in 2004; 34% in 2005; 43% in 2006.) On the other hand, a decreasing number report getting help from family members (46% in 2003; 31% in 2006)



*Percent of responses *OFTEN* and *MOST OF THE TIME* combined



* Percent of responses *OFTEN* and *MOST OF THE TIME* combined

2.7 Effect of number of years in the WWWP

When results for 2005 and 2006 are compared according to years in the WWP, an interesting pattern emerges. As illustrated in Table 4, results for those in the program for one year are similar in 2005 and 2006 (these are mostly grade 6 students); further, for 2005, there is little difference between results for those in the program for 1 year (mostly grade 6) and two years (mostly grade 7.) In fact, in some cases, results are more positive for the students with two years experiences (e.g., for editing.)

On the other hand, in 2006, students in their second year in the program report substantially more negative attitudes and less effective use of writing strategies than all other groups:

- they are much less positive as a group than they were in 2005 (note: those in the WWP for 1 year in 2005 are largely the same students as those in the program for 2 years in 2006)
- they are much less positive than the students from 2005 who were in their second year (i.e., than grade 7 students from one year earlier), in spite of the fact that they have, for the most part, the same teachers as their counterparts from a year ago
- there is a substantial difference between their responses and those in the program for one year in 2005 (mostly grade 6), in spite of the fact that they are often in the same classrooms with the same teachers (combined 6/7 classrooms)

Table 4
Selected Attitude Results by Number of Years in the WWP: 2005 and 2006

Selected items	June 2005		June 2006	
	1 y in WW P	2 y in WW P	1y in WW P	2y in WW P
Overall, how much do you like having an iBook?	93	88	93	80
How much has your attitude or feeling about school changed for the better because of your iBook?	44	49	58	43
How much has your writing improved this year?	81	82	81	70
How much has your attitude toward writing (e.g., stories, reports, poems) changed for the better because of your iBook?	73	70	71	58
How important is your iBook to your success at school?	77	75	79	62
How important is it for students to have iBooks in grades 6-7?	81	83	88	67
How important is it for students to have iBooks in high school?	77	77	77	63
Feelings and opinions about writing				
1. I like writing	62	55	56	51
2. The most interesting assignments at school involve writing	40	37	41	32
3. I am a good writer	57	54	57	48
4. I would like to improve my writing	68	69	66	58
5. I write e-mail to my family or friends	40	39	39	50
6. Using a computer can help people be better writers	69	70	67	57
When I work on a piece of writing for school				
7. I make a list, web, or outline to get ideas and organize them	34	37	39	28
8. I get help from my teacher	36	31	51	42
9. I use a computer to do my writing	86	87	84	76
After I have written a first draft				
10. I add new ideas and information	51	67	58	47
11. I change words or sentences to improve them	66	71	68	58
12. I move or delete parts	60	72	64	61
13. I fix mistakes	89	89	85	86

- Results are % of students who chose the top two scale points: for some items; *quite a bit* and *a lot*; for other items, *often* or *most of the time*.
- Only selected items are presented here; Appendix B includes data for all items by years in the WWP

3. TEACHER ATTITUDES AND PERCEPTIONS

The results presented in this section are affected by two factors that make comparisons to previous years difficult:

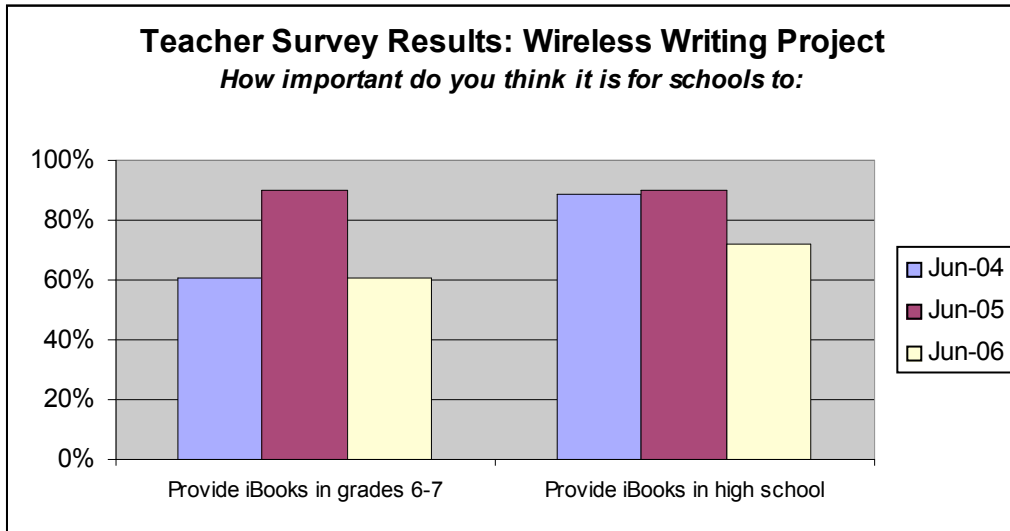
- For the first time, data were collected electronically rather than at inservice or marking sessions. The number of teachers responding declined dramatically. Only twenty teachers (approximately 50%) completed surveys; for most surveys, only 15-18 teachers provided valid responses; further, most of these currently teach grade 7; grade 6 teachers are thus under-represented in the sample.
- For some items, the electronic surveys used the incorrect response format, providing teachers with 4 responses rather than 5 as in previous years. Changing the number of response options invalidates comparisons across time.

Note: Detailed survey results are provided in Appendix B.

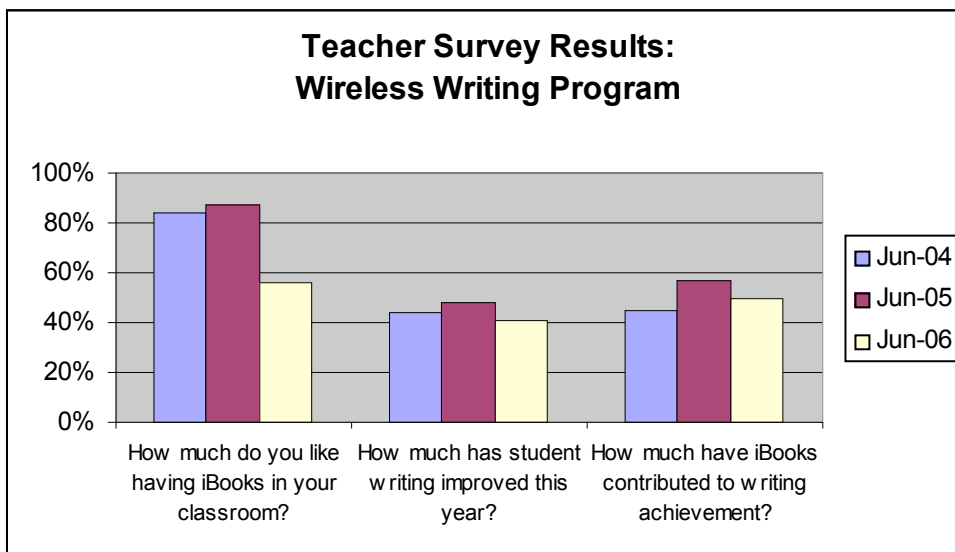
3.1 Overall attitude

Most teachers continue to endorse one-to-one technology integration for students in grades 6/7, and in high school, although results are somewhat lower than in previous years. On a five point-scale, approximately 60% described the importance of providing iBooks to grades 6/7 students as *extensively* or *a great deal*. This result is similar to 2004, but substantially below 2005. A slightly higher percent of teachers (72%) indicated that it is important to provide iBooks to high school students; again, this is a substantial decrease of approximately 20% from previous years when close to 90% of teachers strongly endorsed iBooks for high school students.

Although teachers who responded to the survey continue to be positive about participating in the WWP, results are substantial lower than in previous years: in 2004 and 2005, over 80% of teachers chose the top two scale points on a five-point scale to describe how much they liked having iBooks; in 2006, this dropped to 58%.



*n=20; results are percent of teachers who chose *extensively* or *a great deal*



*n=20; results are percent of teachers who chose *extensively* or *a great deal*

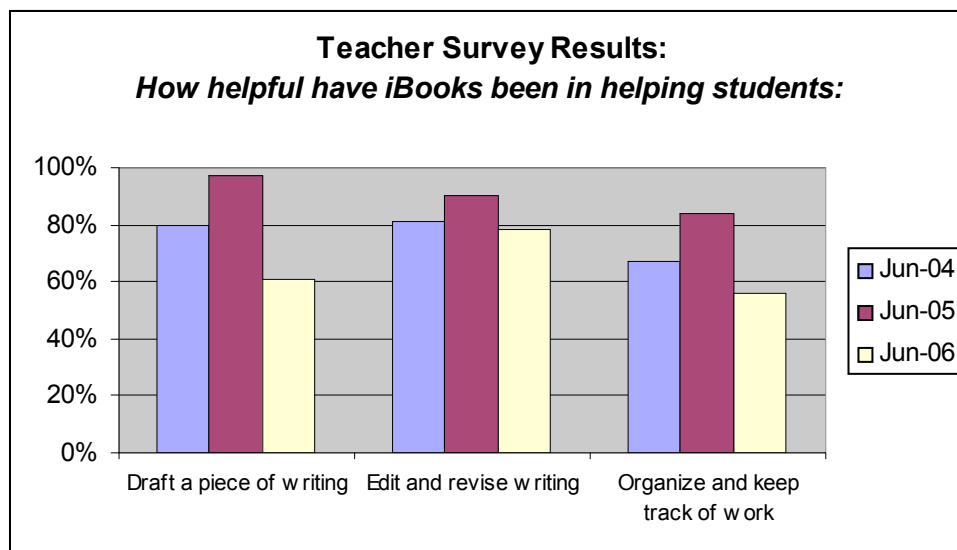
3.2 Perceived impact on student writing

As in previous years, over 40% of teachers see substantial improvement in their students' writing; approximately half of the teachers who responded to the survey indicated that iBooks had contributed *extensively* or *a great deal* to these improvements.

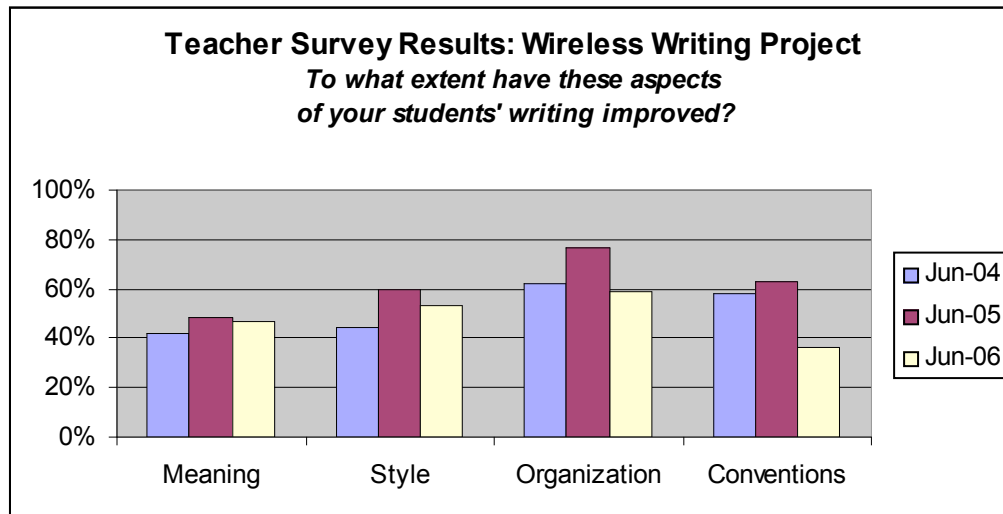
When asked about how helpful iBooks have been at various stages of writing, while teachers continued to report positive results, the teachers in 2006 were less enthusiastic than those in 2004 or 2005, particularly in terms of drafting.

Teachers were also asked about improvements in specific aspects of writing. Results in 2006 were slightly higher than those for 2004 and slightly lower than 2005 for *meaning* and *style*. However, for *organization* and *convention*, the results were lower in 2006 than in previous years; for *conventions* the difference was substantial, falling from 63% who chose *extensively* or *a great deal* in 2005, to 36% in 2006. Teachers were also less positive in 2006 about the quantity and presentation of students' work.

Note: key results are summarized in the graphs that follow. Detailed results appear in Appendix B.



*n=20; results are percent of teachers who chose *extensively* or *a great deal*

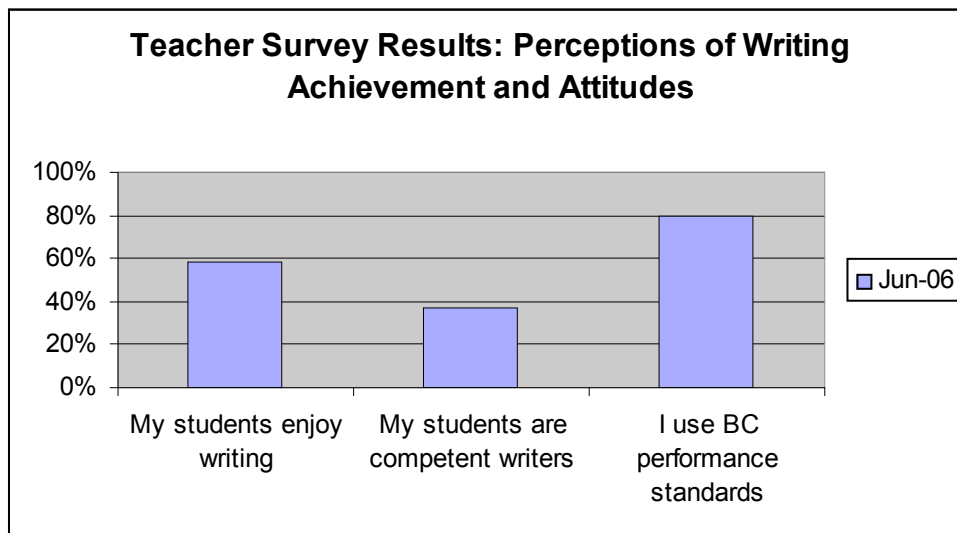


*n=20; results are percent of teachers who chose *extensively* or *a great deal*

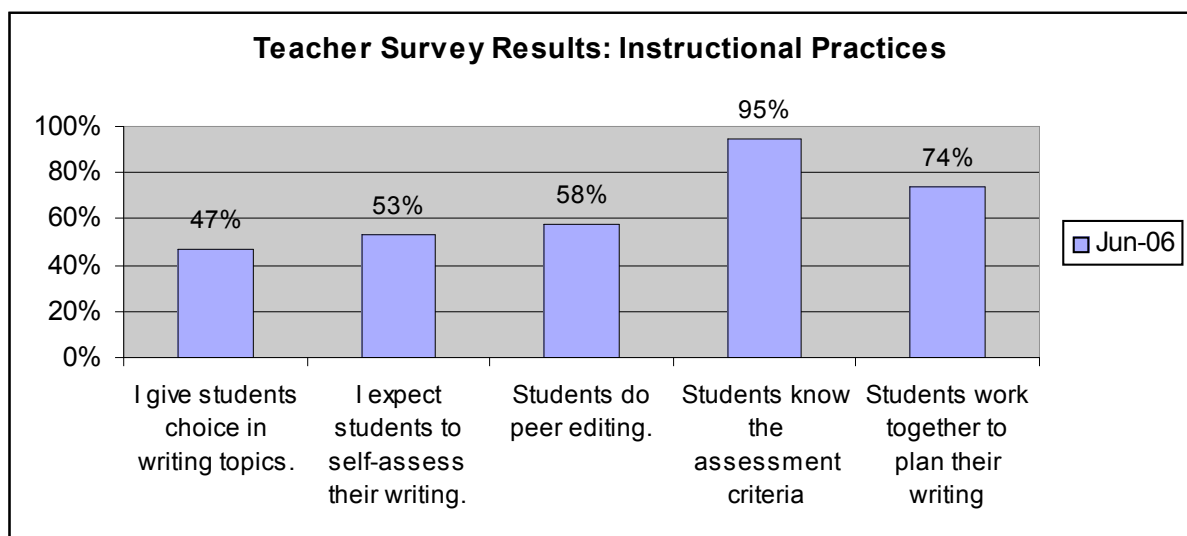
3.3 Instructional Practices

Teachers were also asked a series of questions about their students' overall competence and enjoyment of writing, and about their own instructional practices. Highlights of the results are shown in the graphs below, and indicate that:

- Most teachers believe that their students enjoy writing; however, less than half believe that their students are competent writers
- Almost all teachers ensure that students know the assessment criteria before they begin a writing assignment and approximately 80% use the BC Performance Standards *quite a bit* or *a lot*. However, only 37% have their students use the Performance Standards templates.
- A similar high proportion (85%) report that they change their writing instruction based on assessment results.
- Students frequently work together to plan their writing (74%) and use their iBooks for writing across the curriculum (79%)
- Most teachers (74%) indicated that students use their iBooks *quite a bit*, or *a lot* for writing *lot* or *a great deal* for their writing assignments including those in the content areas. On the other hand, one teacher chose *not at all* in response to this question, and a number of teachers (37%) chose *a little/some*.
- Approximately half of teachers frequently have students engage in self-assessment and peer editing, and encourage students to choose their own writing topics.
- Few teachers have students use their iBooks to communicate with each other or with others outside of the classroom.



*n=20; results cannot be validly compared to previous years because of a change in the scale
Results are percent of teachers who chose *quite a bit* or *a lot*.



*n=20; results cannot be validly compared to previous years because of a change in the scale
Results are percent of teachers who chose *quite a bit* or *a lot*.

3.4 Professional use of technology

Teachers reported high levels of computer use in connection with instructional planning and preparation, with 84% indicating that they do this *quite a bit* or *a lot*. Over 76% report using e-mail to communicate with colleagues. Approximately half frequently use their iBooks to distribute work to students and have students store their work on the vault; slightly fewer collect student work electronically. use their iBooks to collect work. (See Appendix B for more detailed results.)

4. PARENT ATTITUDE AND PERCEPTIONS

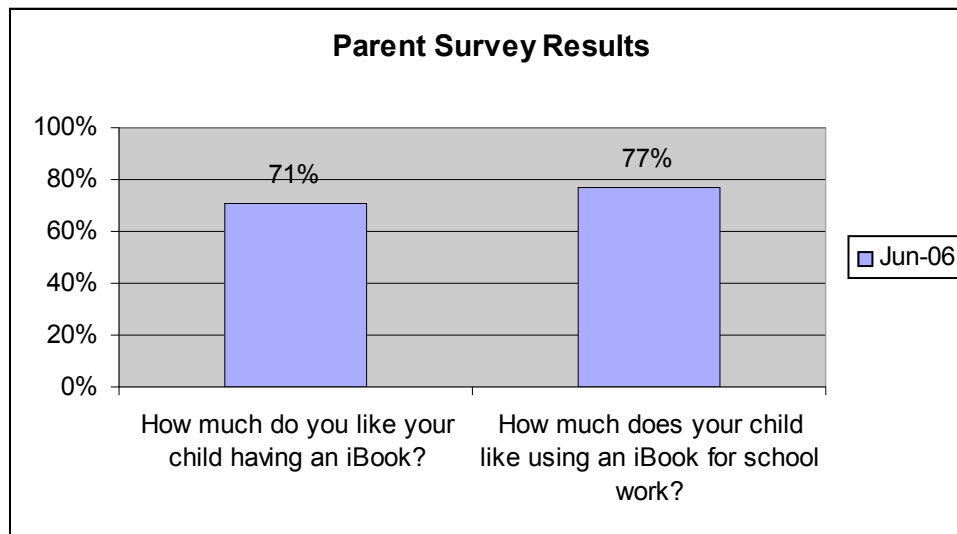
The results presented in this section are affected by two factors that make comparisons to previous years difficult:

- For the first time, data were collected electronically rather than at inservice or marking sessions. The number of parents responding declined dramatically, with only 87 responses received -- less than 10% of those eligible.
- The electronic surveys used the incorrect response format, providing parents with 4 responses rather than 5 as in previous years. Changing the number of response options invalidates comparisons across time.

Note: detailed survey results are provided in Appendix B.

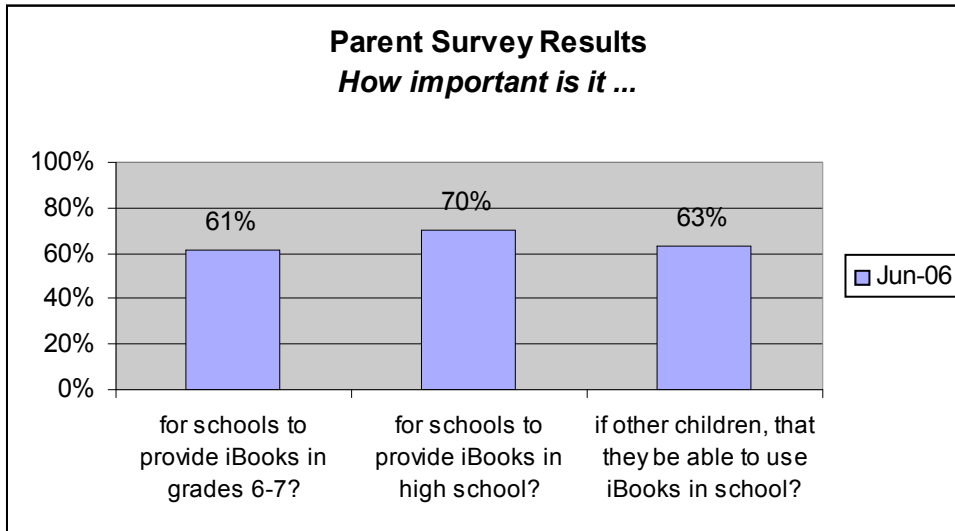
4.1 Overall Perceptions

Parents are very positive about their children's participation in the WWP, with over 70% reporting that choosing "quite a bit" or "a lot" to describe how much they like having their children participate in the WWP. Slightly more (77%) report that their children like using an iBook for schoolwork, "quite a bit" or "a lot."



*n=87. Results are percent who chose the top two scale points: *quite a bit* and *a lot*

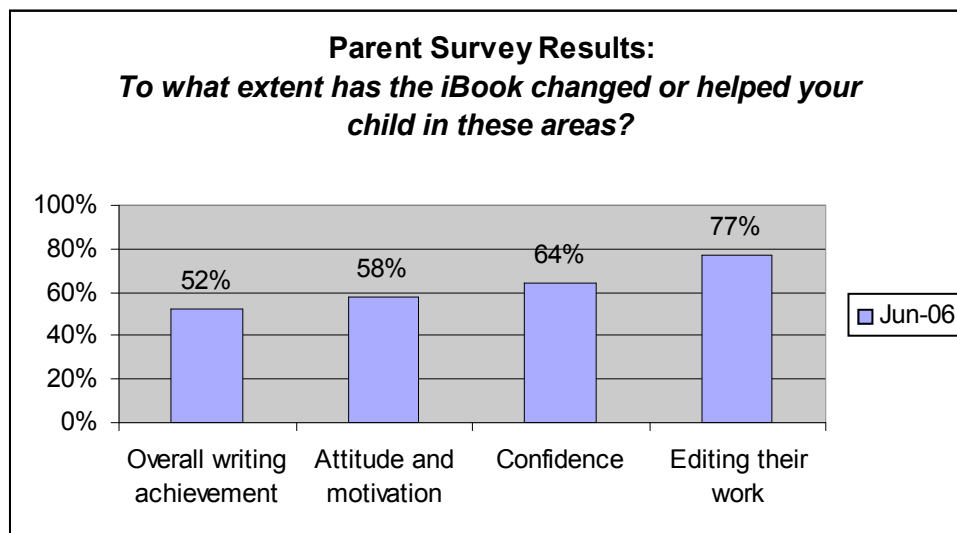
Most parents who responded to the survey believe that it is important for schools to provide iBooks for students. They endorse students having iBooks in grades 6/7 and in high school, and those who have younger children want them to be able to use iBooks in school.



*n=87. Results are percent who chose the top two scale points: *quite a bit* and *a lot*

4.2 Perceived Benefits

Parents ascribed a variety of positive changes in their children's attitudes and achievement to the WWP. When the percent who chose the top two scale points (*quite a bit* and *a lot*) were combined, nearly 9 out of 10 indicated that the WWP has helped their children with computer skills; approximately 3 out of 4 indicated that the WWP has helped their children with editing and with presentation of their work; and nearly 2 out of 3 report improvement in their children's confidence. More than half of parents reported positive changes in attitude and motivation. Approximately half of parents chose *quite a bit* or *a lot* to describe changes in overall writing achievement, in organization, and in work habits. Selected results are shown in the graph below; detailed results appear in Appendix B.



*n=87. Results are percent who chose the top two scale points: *quite a bit* and *a lot*

When asked about specific applications that their children use at home, parents were most likely to identify word processing (60% chose *quite a bit* or *a lot*) and editing tools (69%). Approximately half (53%) indicated that their children use the Internet *quite a bit* or *a lot*. Parents also reported frequent use of *PowerPoint* (46%), *Inspiration* (40%); somewhat fewer – but still a substantial number – reported frequent use of the Performance Standards (33%) and iMovie or iPhoto (28%). The use of the Performance Standards (rating scales and standards for student work) is relatively high, given what might normally be expected for home use of assessment materials.

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The Wireless Writing Program continues to have a positive impact on students' writing achievement, writing strategies, attitudes, and their confidence in themselves as learners. However, there is some evidence that the WWP had less impact in 2005-06 than in previous years; this suggests renewed efforts to support implementation. The quality of teacher and parent survey data for 2006 is also in question, partly because of low response rates; procedures need to put in place in future years to ensure complete, high quality data that will support strong recommendations.

5.1 Writing achievement

Most PRN students who participated in the WWP meet grade level expectations in writing at the end of grade 6, grade 7, and grade 8. Improved writing achievement is evident across various measures and cohorts. Data collected locally, on district assessments of grades 6, 7 and 8 students, and data from provincial assessments of grade 7 FSA consistently demonstrate gains in achievement. While subject to minor fluctuations from year to year, the pattern of results is consistent over time.

On FSA results for grade 7, for example, the pattern shifted dramatically with results for the first cohort of students who had two years in the WWP. Their writing scores showed marked improvement, particularly in relation to their counterparts in other districts. Over the last three years, PRN students have sustained these gains. The change has been most dramatic for male students:

- Prior to 2003, students in PRN – particularly boys -- typically scored lower on both grade 4 and 7 provincial assessments than did BC students overall. For the last three years, PRN grade 7 students achieved results for writing very similar to their counterparts across the province.
- The results for boys are striking: at grade 7, their performance now equals their provincial peers for writing and for reading; for numeracy, their results are substantially lower when compared to provincial results.
- Similarly, results for Aboriginal students have shown sustained improvement over the last three years in both reading and writing.

While it is not possible to attribute all gains to the WWP, it is clear that PRN grade 7 students today consistently perform well in writing; five years ago they did not. Based on provincial testing and standards, writing performance of PRN grade 7 students has improved since full implementation of the WWP.

District assessments over the last three years have examined writing achievement for grades 6 and 7 students; in 2006, a sample of grade 8 students were assessed as well, to examine whether previous gains were sustained in the first year of high school. Results of these assessments and comparisons showed:

- substantial improvement during grade 6 for students who entered the WWP in Fall 2005, like their counterparts in previous years

- sustained improvement for those students who began the WWP in Fall 2004 and showed dramatic growth in their first year in the program. Students continue to meet grade level expectations in high numbers (94%), although the percent at the top two levels is slightly lower than the previous year
- continued success for students who entered the WWP in Fall 2004, and were in grade 8 during 2005-2006 (and thus no longer part of the WWP.) In the sample of students who were tracked over three years, most (95%) continued to meet grade level expectations a year after they participated in the WWP, although somewhat fewer scored in the top two scale points.

Most students, teachers, and parents also reported positive changes in student writing achievement and attributed the changes to the WWP. For the most part, their perceptions are supported by the achievement data; however, in some cases, the actual achievement data were actually more positive than teachers' perceptions.

5.2 Student attitudes

Like their counterparts in previous years, students in May 2006, are enthusiastic about the Wireless Writing Program. Most believe that participating in the WWP has improved both their achievement and their attitudes. Results for 2005-2006 are similar to those from 2003-2004; slightly lower than those for 2004-2005. In most cases, the differences among the three years are within the margin of chance.

When results were compared for students who had been in the WWP for one year (most often in grade 6 at the time of the survey), and those who had been in the program for two or three years (most often in grade 7 at the time of the survey), those in the WWP for one year were consistently more positive about their writing, their attitudes, and the processes and strategies they use.

Teachers and parents also reported positive changes in student attitudes both toward writing and toward school generally, although teachers were less positive than in previous years.

What caused the decrease in attitude and support among grade 7 students and teachers? There is no clear evidence to explain why both grade 7 students and many of their teachers less positive about the WWP than in previous years, or than grade 6 students and teachers. Most of the factors that may have affected results and responses are equally applicable to grade 6, for example:

- low response rates among teachers (especially at grade 6)
- changes in survey options for teachers
- job action and contract uncertainty

Further, the cohort currently in grade 7 demonstrated extremely positive responses as grade 6 students in 2005. Teachers -- most of whom are in the same teaching positions and schools -- were also much more positive one year ago; however, the low response rate in 2006 means that comparisons with 2005 for this group may be invalid.

5.3 Student writing strategies and behaviours

Since the beginning of the WWP, students have increased the extent and nature of the editing they do; results for 2006 are similar to the two previous years. However, the WWP appears to have had little impact on prewriting activities, or peer collaboration (although teachers report increased opportunities for peer editing, students do not.)

5.4 Impact on practices

Overall, teachers reported frequent use of assessment strategies that are generally associated with effective instruction: students know the criteria in advance; teachers use results to adjust instruction; and the BC Performance Standards play a key role in assessment. Teachers were less likely to provide for greater student involvement in assessment; approximately half indicated that they regularly engage students in peer or self-assessment, or to have students choose their own writing topics.

While most teachers indicated that they integrate writing and have students use their iBooks for writing across the curriculum, a small number do not; this is a result that needs to be followed up to determine the extent to which all teachers are actually using the iBooks.

5.5 Teacher and parent support

The teachers and parents surveyed expressed strong support for the WWP; however, only approximately half of the teachers responded to the survey questions, and less than one in ten parents completed the survey form. The large amount of missing data makes it impossible to make valid comparisons with previous years, or to generalize about the views of the total population of teachers and parents.

The teachers in 2006 expressed, overall, much less positive views than they and their colleagues had in the previous year. This finding should be investigated to determine whether it does reflect a change in the opinion of teachers generally, or whether the result was biased by changes in data collection procedures.

5.6 Summary of recommendations

Data collection

The large amount of missing data makes interpretation of the results extremely difficult, particularly for survey data from teachers and parents. To ensure high quality and uniformity of data collection for 2007:

- Return to paper-based teacher and parent surveys
- Administer the teacher survey at inservice and marking sessions where possible; keep a checklist of teachers who have completed the surveys and follow-up individually with those who have not
- Reduce the number of questions on all surveys to reduce the demands on teachers' and parents' time

- Ensure that writing samples are collected from all students who are part of the random sample, and follow-up in a timely way to ensure that the integrity of the sample is maintained over time – that sufficient students, representing all schools, are included to allow generalizations to the population and estimation of changes over time
- Encourage as many teachers as possible to participate in the Spring assessment session to ensure that results reflect the consensus of PRN grade 6, 7 and 8 teachers

Professional development and inservice

In 2005-06, for the first time, most teachers did not attend a systematic series of inservice sessions with colleagues from other schools. In previous years, these sessions enabled teachers to discuss their work in the WWP with their colleagues, and to engage in action research, as well as receiving inservice on aspects of technology and writing. The forced cancellation of these sessions also meant that the project team was less well-informed than in previous years regarding teachers' experiences, concerns and challenges, and thus, less able to plan and support effective implementation in response to teachers' needs.

While it is not possible to conclude that the lack of inservice meetings resulted in lower teacher satisfaction and participation in various aspects of the WWP, both research and experience suggest that focused opportunities to meet with other teachers, to talk about challenges and successes, and to identify areas where change is needed are often critical factors in implementation of educational programs.

At the same time, the fact that no central meetings occurred, may have contributed to a lack of focus in the mentoring sessions – mentor teachers, who continued to make an outstanding contribution to the program, were also unable to regularly meet with teachers as a group, and to plan follow-up to inservice sessions as in previous years.

From another perspective, it has been at least mildly confusing to hear about and observe SD 60 literacy initiatives, reports, and discussions that made no mention of the WWP, or where the WWP appeared to be regarded as distinct from 'literacy' in a more general sense. From its inception, the WWP was designed as a major literacy initiative; it has had a strong, positive impact on students' ability to communicate and express themselves. This potential and impact needs to be clearly recognized as part of district literacy initiatives, rather than as an isolated project.

The costs associated with ongoing inservice for all participating teachers, and the lack of TOCs presents extreme challenges for PRN; however, it is essential to sustain commitment to the WWP, to provide for continued growth in understanding of the integration of technology to improve achievement, and to offer an essential forum where project teachers can share their views and expertise:

- Ensure that all participating grades 6 and 7 teachers have opportunities to meet with colleagues from other schools, at least twice during the year

- Re-visit the possibility of including some cross-school inservice sessions for grade 8 teachers once they are comfortable with basic levels of technology integration in their classrooms
- Focus and support the work of mentor and support teachers on key aspects of using technology to improve writing
- Ensure that the WWP is included in all district discussions and initiatives related to literacy, particularly where grades 5-8 teachers are involved
- Conduct a focus group with a group of grade 6/7 teachers to explore some of the findings in this report, and gather suggestions for continuing to improve the WWP

Implementation

Within the survey data collected in 2006, there are indications that implementation continues to be uneven, with wide variations from one classroom to another in terms of the extent to which students use their laptops on a regular basis, and the kinds of opportunities they have. Variations where teachers use their professional judgment to choose the most appropriate approaches and activities for their particular students, from within a range of effective practices. However, it is also important to document these variations, both to provide suggestions for other teachers, and to ensure that decision about the impact of the WWP are based on actual implementation:

- Conduct a focus group with a group of grade 6/7 teachers to explore some of the findings in this report, and gather suggestions for continuing to improve the WWP
- Gather ongoing observational data to explore the extent and nature of classroom use of the iBooks