

Research Report: The Wireless Writing Program 2004-2007

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

by:

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November 2007

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Highlights

After four years of relative stability in implementation and results, the Wireless Writing Program saw a number of changes in 2006-2007 including:

- teaching staff and administration have changed substantially in several WWP schools, continuing a two-year trend.
- grade 7 writing achievement scores on provincial FSA tests have decreased, relative to previous years for all students and to the provincial results
- improvement at grade 6 from fall to spring writing samples is slightly lower than in previous years
- teachers and students reported less use of the BC Performance Standards than in previous years
- teachers indicate less frequent use of the laptops for distributing and collecting student work and for homework assignments, along with decreased use of the server for saving student work.

At the same time, results for many key aspects were similar to previous years:

- students' and teachers' attitudes toward the Program continue to be strongly positive
- the percent of students meeting and fully meeting expectations on a district assessment continues to increase substantially from fall to spring at grade 6 (although slightly less than in previous years)
- students' and teachers' believe that student writing has improved substantially and that the WWP has played an important role in that improvement
- students report more positive attitudes toward writing, and more frequent use of revision and editing strategies than before the WWP
- teachers and students express high levels of confidence in using technology

Results suggest that there may be increasing inconsistencies in implementation at the school and classroom level. For example, results have not declined in schools where the grade 6-7 staff has been relatively stable since initial implementation of the WWP.

Recommendations focus on two major areas:

- renewed focus on in-service and support, especially for teachers who are new to the profession, the district and/or to the WWP
- revision to the district assessment and evaluation plan, so that all students in every second cohort are tracked through their two years in the program (rather than taking a random sample of each cohort.)

1. Background

1.1 Initiation and purpose

In September, 2003, Peace River North (SD 60) implemented the Wireless Writing Program (WWP), providing iBooks on a 1:1 basis to all grades 6 and 7 students. Implementation involved 1150 students, and 37 teachers in 17 schools, and followed a successful 18-month pilot project.

The Wireless Writing Program (WWP) is designed to improve student achievement and engagement, with a primary focus on writing achievement. Use of the BC Performance Standards for Writing for descriptive feedback and student self-assessment is an integral part of the program. Initially, implementation of the WWP included regular in-service sessions for teachers where they explored the integration of technology with writing instruction, and participated in action research. Mentor teachers—teachers who had participated in the pilot phases of the WWP—provided in-class support to their colleagues, on request. The program demonstrated strongly positive results on both district and provincial measures from the outset.

1.2 Implementation support

From 2003-2005 regular inservice sessions continued, facilitated by experts in writing instruction and technology integration. These incorporated hands-on practice with integration of technology focused on writing (e.g., Inspiration for pre-writing; use of performance standards templates; revising and editing strategies; multimedia presentations); individual teacher action research and inquiry; along with presentations by individual teachers, who shared projects and learning activities they were implementing. Assessment **for** learning continued to be the major focus – using criteria, providing feedback, student self-assessment and metacognition, adjusting teaching based on observations.

From 2005-2007, mentor teachers continued to provide in-class support, particularly to new teachers. District inservice sessions were largely discontinued for a number of reasons including few available teachers-on-call to provide release for teachers, and, for part of 2006, provincial job-action.

From 2003 to 2005, the population of teachers involved in the WWP at grades 6-7 was relatively stable (except in rural schools), with some movement from one school to another, or one grade to another within the program. Starting in 2005, however, there were an increasing number of changes, and by fall 2006, only 14 of the original cohort of 37 teachers continued with the program. For the 2006-07 school year, 22 of the total of 42 WWP teachers were new to the program. While in previous years, the rural schools experienced a great deal of turnover, in 2006-2007, changes impacted the town schools as

well, with 16/36 new teachers; in the rural schools, 6/7 were new to the WWP (and most often, to the district as well.)

These changes reflect the increased mobility and opportunities open to teachers in recent years, as a consequence of the large number of teachers and administrators across Western Canada who are retiring. Teachers who left grade 7 positions in the WWP in 2006 became high school teachers or administrators; moved to other districts (often less remote), or changed grade levels within a school, as well as those who retired. At the same time, there were several changes in administrators for similar reasons.

Providing appropriate in-service and mentoring support became more complex as the district tried to adjust to new realities about the number of teachers who could be released from their classes at any one time, and a growing diversity of needs. In 2005-2006, an inservice plan based on team inquiry was not implemented; in 2006-2007, some voluntary sessions were provided. However, resources were stretched as there was a growing need for inservice re: technology integration in the junior high schools, combined with a severe shortage of teachers-on-call.

1.3 Research

Since the inception of the WWP, achievement data have been collected in both October and June; a random sample of student writing was selected for intensive analysis of changes over time. Provincial test data from the Foundations Skills Assessment (FSA) of writing and reading at grade 7 were also analyzed. This information is summarized in *Section 2: Writing Achievement*.

From 2003-2007, students and teachers have responded to surveys about their attitudes and perceptions of the WWP, as well as self-reports about their use of technology, and, in the case of teachers, their instructional strategies. This information provides trend data as well as a snapshot of the most school year. It is summarized in *Section 3: Student Engagement: Attitude and Motivation*, and *Section 4: Instructional Practices*.

2. Writing Achievement

2.1 District Writing Assessment: Random Sample

Beginning in the school year 2003-2004, all grades 6 and 7 students in the WWP completed writing tasks in fall and spring. Randomly selected papers were scored in district marking sessions, 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.) The same sample of students in each year was selected for tracking over time. For the current data collection, this process resulted in four cohorts:

2006 Cohort. These students completed their first year in the WWP in spring 2007. A random sample of 120 students was selected for analysis; of these, complete data were available for 82 students (i.e., their teachers submitted both fall and spring samples.) Results address two questions:

- To what extent did their writing improve during the first year in the WWP?
- How does their change in achievement compare to that from previous years?

2005 Cohort. These students entered the WWP as grade 6 students in fall 2005. They completed grade 5 in spring 2006. Of the original random sample of 120 students, validated scores are available for 70 students from both fall 2005 and spring 2006. Results address two questions:

- To what extent has their writing improved since entering the WWP?
- Have their gains in grade 6 been sustained in grade 7?
- How does their change in achievement compare to that from previous years?

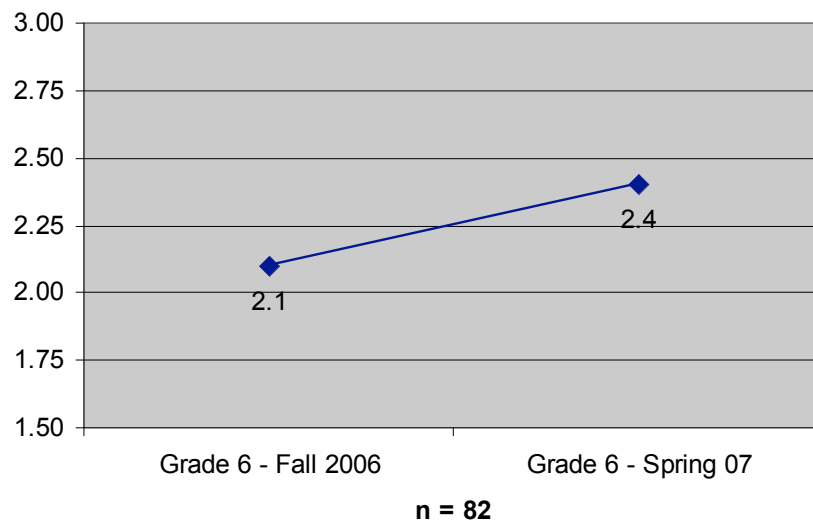
2003 and 2004 Cohorts. These students entered the WWP as grade 6 students in fall 2003 (completing grade 9 in 2007) and fall 2004 (completing grade 8 in 2004). Writing samples were collected from this group in 2007. Attrition over time has resulted in very small samples: 24 students at grade 8 and 33 students at grade 9. In addition, these students have had extremely varied experiences and access to technology through grades 8 and 9. Results are presented in Appendix C: 2003 and 2004 Cohort Tracking, but are not included here.

2006 Cohort: (Grade 6 Students 2006-2007)

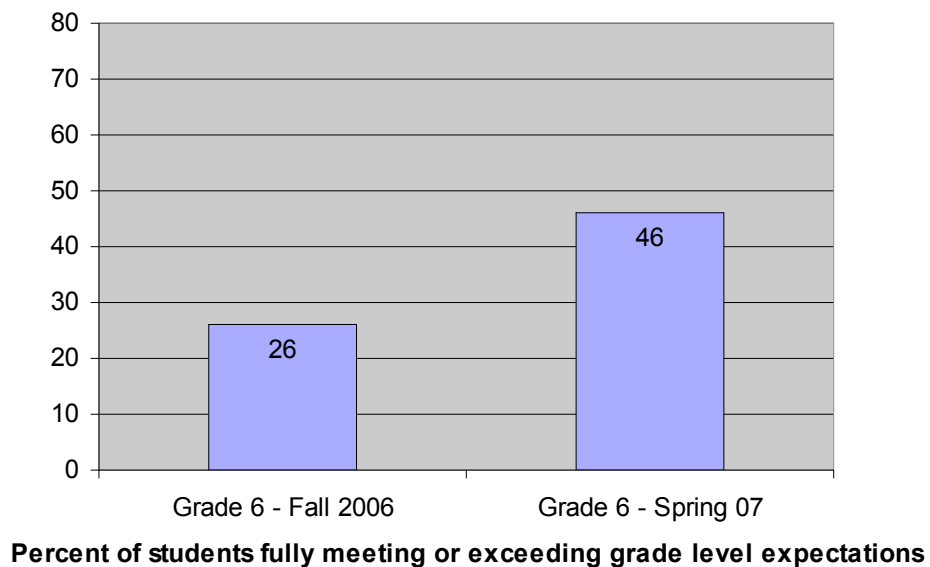
Analysis of student writing samples from the beginning and end of grade 6 indicate that:

- Overall, student writing improved approximately .3 of a scale point. This is a positive result, but slightly less so than previous cohorts where the gain has ranged from .4 to .6.
- There was substantial improvement in the percent of students who achieved the grade-level standard of ‘fully meeting’ or ‘exceeding’ expectations. After one year in the program, 20% more of students achieved at this level than at entry. Again, this gain is somewhat lower than previous cohorts.

Grade 6: 2006-2007



Grade 6: 2006-2007



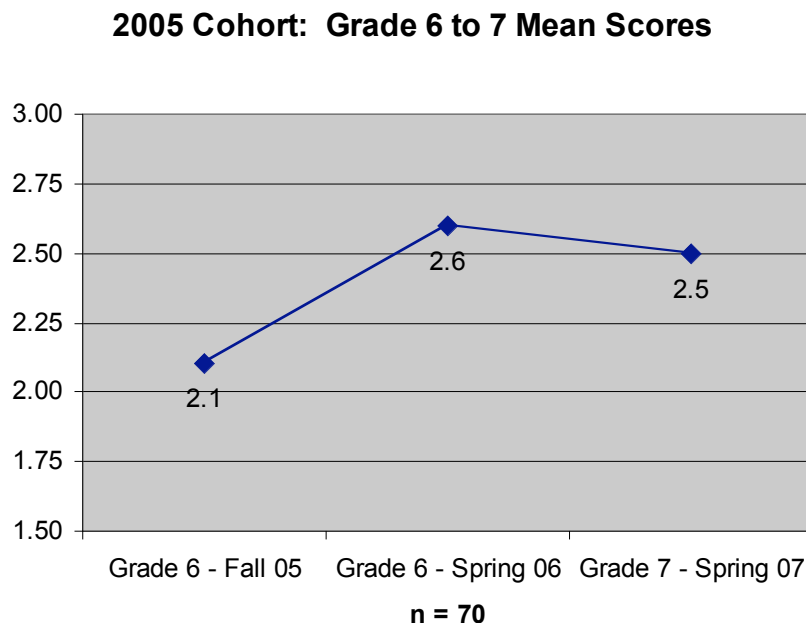
2005 Cohort (Grade 7 students in 2006-2007)

Writing samples were collected from a random sample of students who entered the WWP in fall 2005 at three points: fall 2005, spring 2006, and spring 2007. These were marked

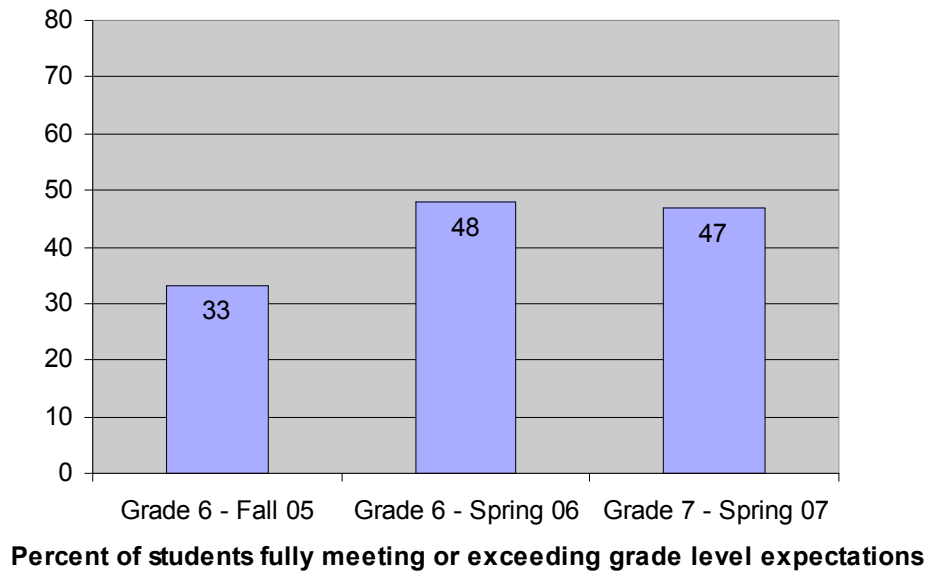
against grade-level standards (i.e., fall 2005 and spring 2006 writing was evaluated using grade 6 standards; spring 2007 writing was evaluated using grade 7 standards.) This means that students who have similar scores in spring of 2006 (grade 6) and spring of 2007 (grade 7), have, in fact, improved their writing by one grade level in that time. Complete data were available for 70 students.

As the graphs for these students show:

- Students improved substantially during grade 6 (the first year in the program), both in terms of mean score and in the percent fully meeting or exceeding the grade level standards.
- Students in grade 7 extended the gains they made in grade 6 and achieved the grade 7 standard (one year more rigorous) at the same level as they had achieved by the end of grade 6. In both cases, close to 50% of students are fully meeting expectations. This is a substantial increase from pre-program where approximately one-third were achieving at this level.



2005 Cohort: Grade 6 to 7



2.2 Provincial Assessment (FSA)

Overall

Grade 7 students did not perform as well on the provincial writing assessment (FSA) as they have for the past four years. Results declined from 2006, both relative to provincial results, and to previous Peace River North results, and are the lowest they have been since full implementation of the WWP.

- 78% met or exceeded expectations in 2006, compared with 86% for the Province
- Results have decreased since 2006 (7%) compared with a provincial decrease of 1% (87% to 86%).
- These differences are no longer within the margin of error.
- The difference between Peace River North and BC scores at grade 7 is similar across subjects. For reading, writing, and numeracy, approximately 6-8% fewer grade 7 students are meeting expectations than their provincial counterparts. In previous years, Peace River North results were stronger for writing; in 2007, they were not.

Male Students

As shown in Table 1, and in the graph below, results for male students for 2007 are significantly lower than in previous years of the WWP. For the first time, they have not sustained the gains they made in previous years. Their results are no longer similar to overall BC results.

- 69% of male grade 7 met or exceeded expectations on the FSA writing assessment, compared with 77% for the province.
- There was a substantially decline of 10% in the number of male students who meet or exceed grade level expectations. This is higher than the decrease of 2% at the provincial level.
- The difference favouring female students increased to 17% in 2007, in a similar range to that for all BC (16%). The sharp increase in this gap for both Peace River North and the province, suggests that there may have been systematic bias favouring female students in one or both writing topics.

Aboriginal Students

In 2006, 68% of Aboriginal students in PRN met or exceeded provincial expectations in writing compared with 72% across the province. This difference is within the margin of error. As shown in Table 1, there is a great deal of variation in results for Aboriginal students from one year to another; in reality, this most likely reflects small variations as fewer than 70 Aboriginal students wrote the FSA in 2007. It is, however, interesting to note that the results for this group in Peace River North are consistently lower in years when they are asked to write an imaginative story.

FSA Results: 2000-2007
Peace River North and BC

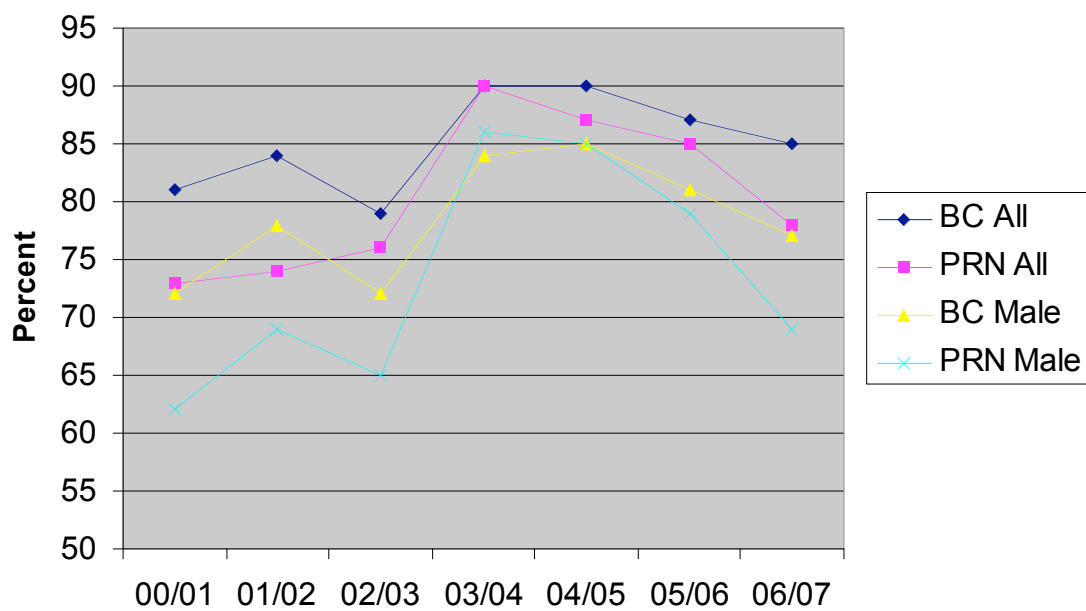


Table 1. FSA results for grade 7 writing across time.

	2000/01	2001/02	2002/02	2003/04	2004/05	2005/06	2006/2007
All students:							
- PRN	73%	74%	76%	90%	87%	85%	78%
- BC	81%	84%	79%	90%	90%	87%	86%
Comparisons							
- prev year	n/a	=	=	+	=	=	-
- province	below	below	=	=	=	=	-
Male							
- PRN	62%	69%	65%	86%	82%	79%	69%
- BC	72%	78%	72%	84%	85%	81%	77%
Comparisons							
- prev year	n/a	below	=	+	=	=	-
- province	below	below	below	=	=	=	=
Female							
- PRN	83%	80%	86%	94%	93%	90%	86%
- BC	90%	91%	87%	95%	95%	93%	93%
Comparisons							
- prev year	n/a	=	+	+		=	=
- province	below	below	=	=		=	=
Aboriginal							
- PRN	54%	70%	59%	85%	72%	84%	68%
- BC	61%	66%	61%	75%	75%	73%	72%
Comparisons							
- prev year	n/a/	+	below	+	=	=	-
- province	=	=	=	+	=	+	=
Fr. immersion							
- PRN	85%	71%	79%	97%	100%	97%	79%
- BC	88%	91%	88%	96%	96%	94%	93%
Comparisons							
- prev year	n/a	=	=	+	=	=	-
- province	=	below	=	=	=	=	-

For Peace River North, numbers of students involved change slightly from year to year: results for all students are typically based on approximately 400 participants; male/female subgroups on approximately 200 each; Aboriginal students approximately 70; French Immersion, approximately 30.

3. Student Engagement: Attitude and Motivation

3.1 Attitude to Writing

Since 2003 (before implementation of the WWP), students have responded to an annual survey of attitudes toward writing. Detailed, year-by-year results, based on responses from approximately 700 students each year, are provided in Appendix B.

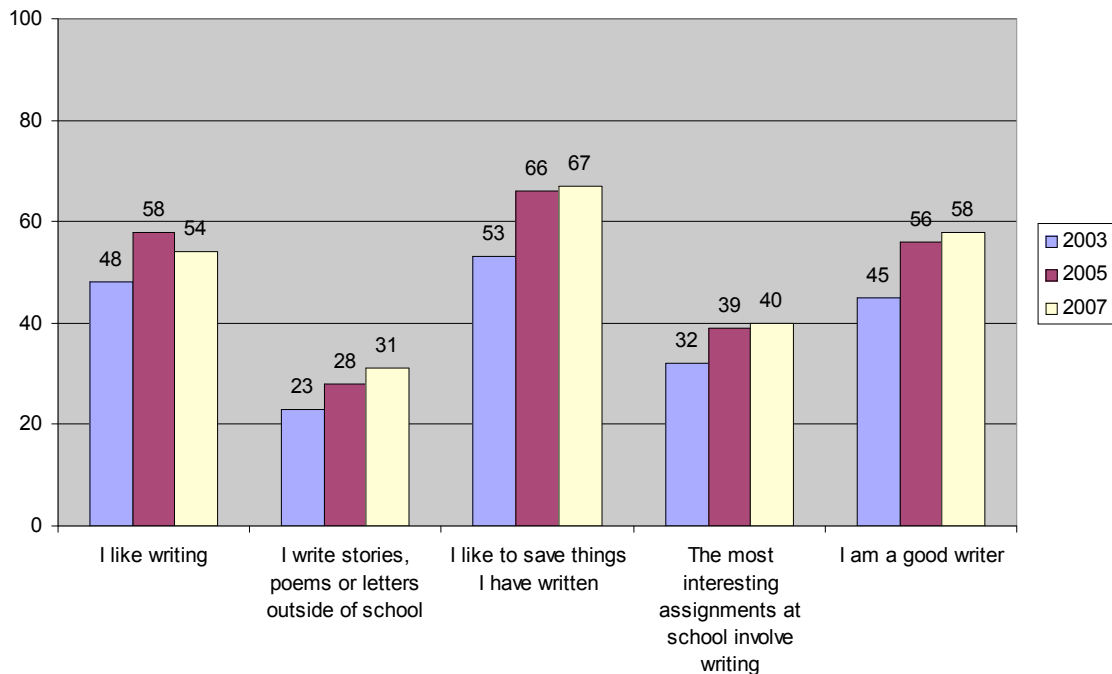
In addition, in spring 2007, a small sample of grades 8 and 9 students responded to a short survey. These results are reported in Appendix C, but because of the small number of responses (less than 5% of students), they are not included in the main report.

Overall, students have responded more positively since the inception of the WWP; results have been relatively stable since 2005. The graph below summarizes results for selected questions over 5 years, displaying the percent of students who selected the top two scale points on a four-point scale (*often* and *most of the time*.)

While all responses are more positive, the greatest gains relate to students' pride and sense of competence:

- At the beginning of the WWP, approximately half of students indicated that they liked to save things they had written; by 2005, that had changed to approximately two-thirds, and it remains at that level in 2007.
- Results were similar, but slightly lower, for "I am a good writer: increasing from 45% before the WWP, to 56% in 2005, and 58% in 2007.

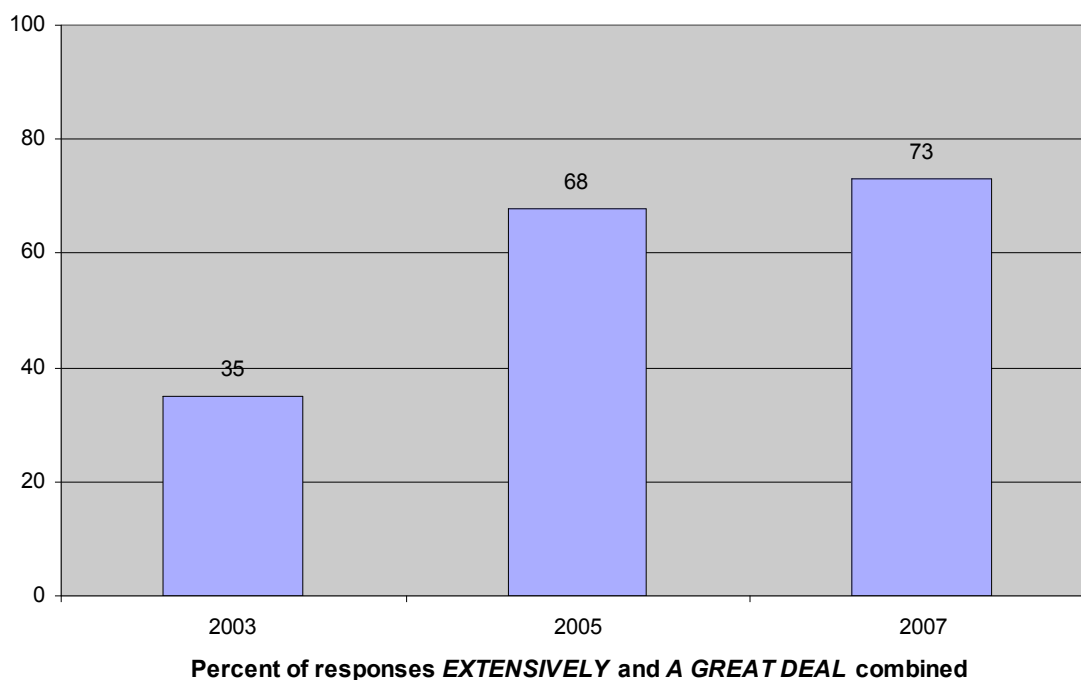
Student Survey: Grades 6 and 7 Comparison of 2003-2005-2007 Results



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

Since 2003, teachers have also reported on student attitude to writing. Results, shown below, indicate a dramatic increase with the implementation of the WWP. In 2007, close to three-quarters of teachers surveyed choose the top two scale-points on a five-point scale, “extensively” and “a great deal” to describe the extent to which their students enjoy writing. It is interesting to note that they perceive more dramatic gains than are indicated in the student survey.

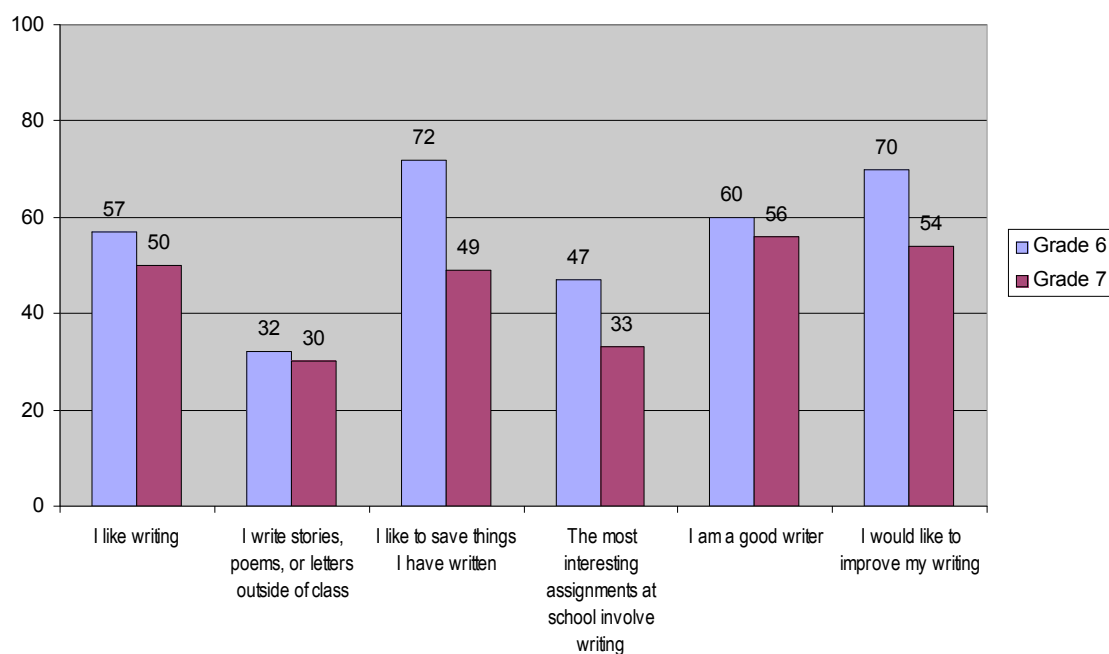
Teacher Survey Students enjoy writing



Results were also examined by grade level, indicating that students expressed much more positive attitudes about writing in grade 6 than grade 7. The differences between grade 6 and 7 students, are especially interesting, in light of the fact that most of these students are actually in combined 6/7 classes—that is, they have the same teachers, both groups have laptops, they are participating in similar activities.

Decreases from grade 6 to grade 7 are most dramatic for “I like to save things I have written” (72% to 49%), and “I would like to improve my writing” (70% to 54%). Responses to “I am a good writer” and “I write stories, poems or letters outside of school” are similar for the two grades.

Student Survey Attitude Toward Writing by Grade Level

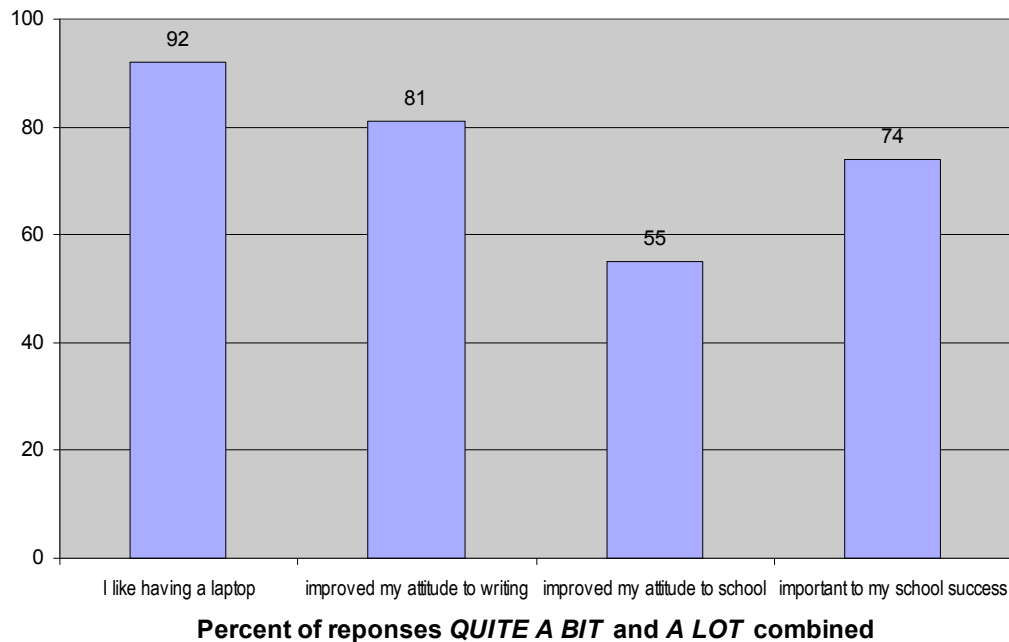


Percent of responses **OFTEN** and **MOST OF THE TIME** Combined

3.2 Perceptions about the WWP

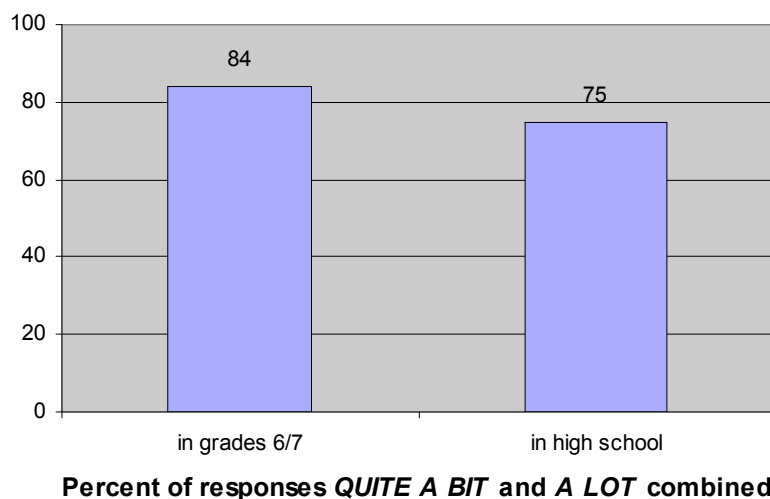
Students and teachers also responded to questions about the impact of the WWP their attitudes and achievement. Over 90% of current grade 6 and 7 students reported that they liked having a laptop; over 80% attitudes improvements in attitude to writing, and 55% to improved attitude to school.

**Student Survey: Grades 6 and 7
Benefits of having a laptop**



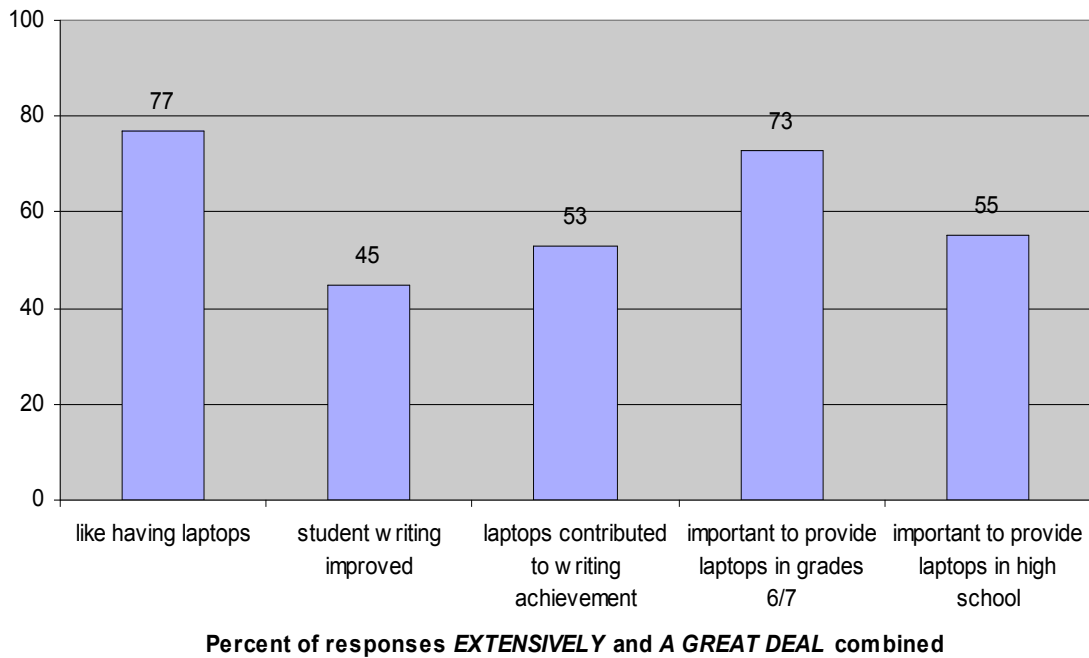
As shown in the graph below, most students currently in the WWP strongly endorse the use of laptops, with 84% choosing the top two scale points (*quite a bit*, and *a lot*). They are also positive about the importance of laptops for high school students.

Student Survey: Grades 6 and 7
It is important for students to have laptops...



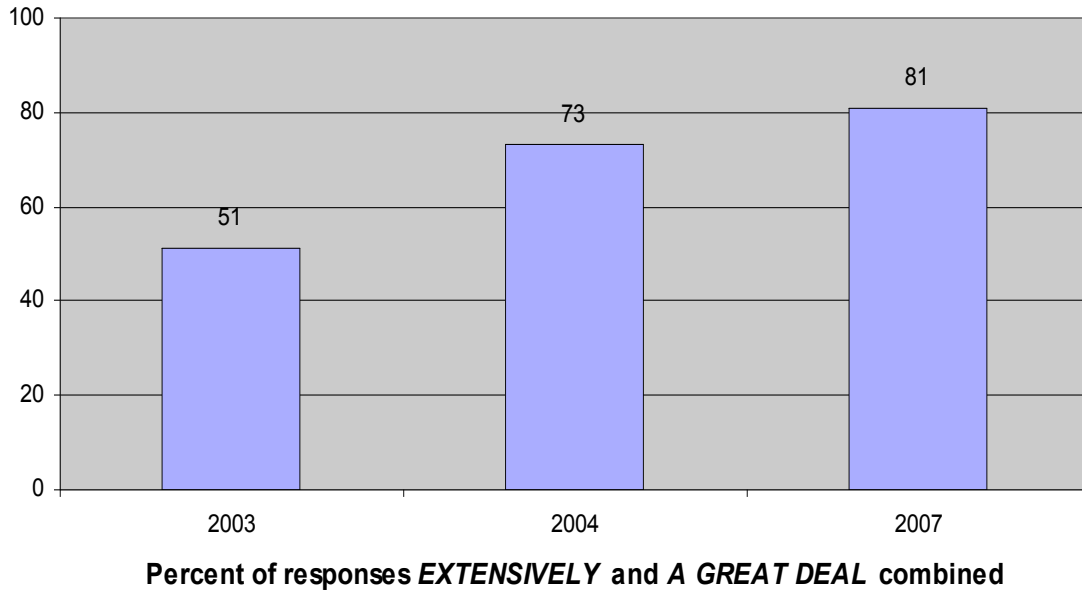
Grades 6 and 7 teachers responded to a series of similar questions about the value of the WWP, although they used a different response scale (a five-point scale, where the top two scale-points were “extensively” and “a great deal.” Results in 2007 were similar to previous years (see Appendix B for year-by-year results.) Most teachers reported that they liked having laptops in their classrooms, and that it is important to provide laptops for grades 6 and 7 students. More than half believed that the laptops had contributed strongly to student writing achievement; slightly fewer described the improvement in student writing as ‘extensive’ or ‘a great deal.’

Teacher Survey



Grades 6 and 7 teachers, currently teaching in the WWP, also express high levels of confidence in using computers – much more so in 2007 than in 2003 when they were about to begin the program.

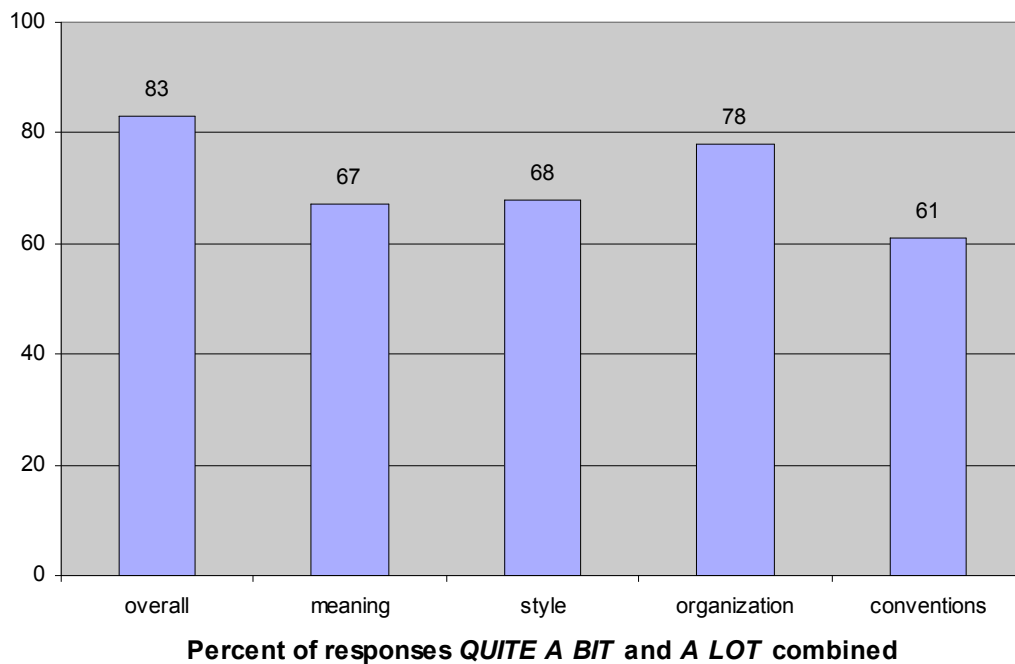
Teacher Survey
Confident about using computers



3.3 Perceived improvement in writing skills

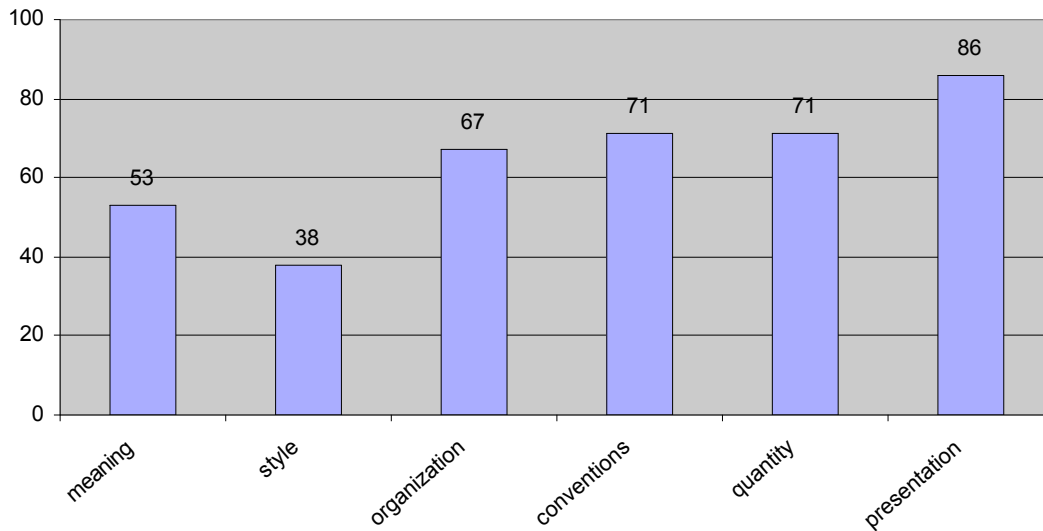
Both students and teachers continue to be extremely positive about the impact of the WWP on student writing skills. Over 80% percent of students indicated that their writing, overall, had improved “quite a bit” or “a lot.” They were most positive about changes in *organization*; followed by *meaning* and *style*; then *conventions*. These results are similar to results from previous years (see Appendix B for detailed, year-by-year results.)

Student Survey: Grades 6 and 7
How much have these aspects
of your writing improved this year ...



Most teachers also reported strong improvements in students’ writing, choosing the top two scale-points on a five-point scale (extensively and a great deal). They indicated a slightly different view of the nature of the improvements: of the four aspects of the Performance Standards, they saw the most improvement in organization and conventions; least in style. They also described strong improvement in presentation and quantity of writing (students were not asked about these aspects.)

Teacher Survey
To what extent have these aspects
of students' writing improved

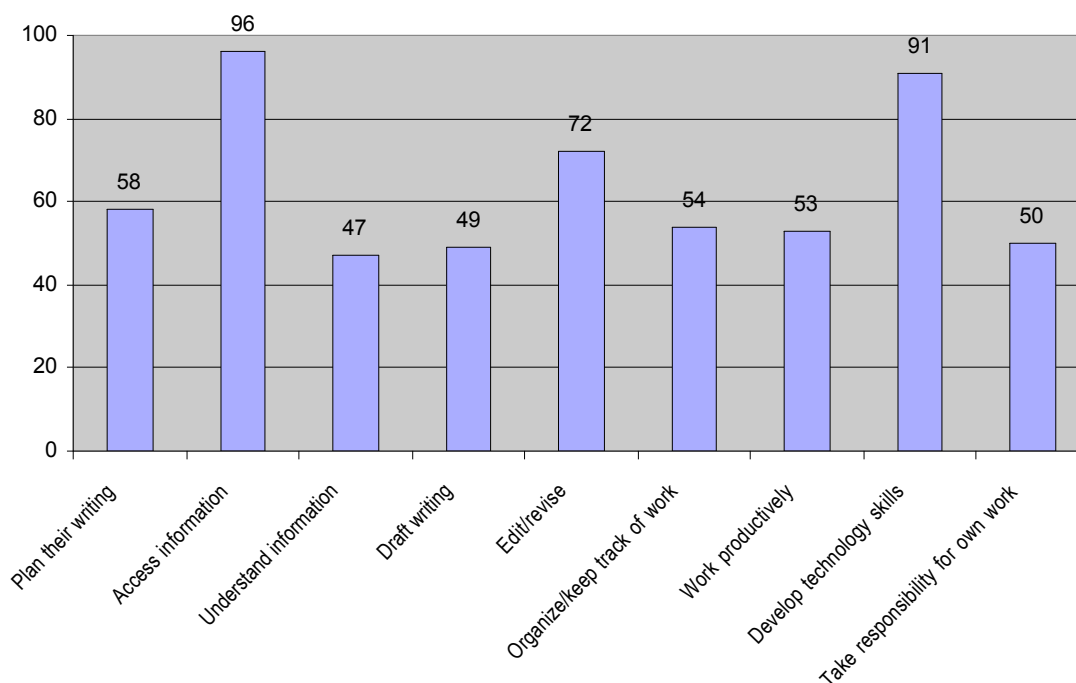


Percent of responses **EXTENSIVELY** and **A GREAT DEAL** combined

Teachers used a five-point scale to describe specific ways in which laptops have helped students. Results in 2007 were similar to previous years (see Appendix B for year-by-year comparisons.) Almost all teachers indicated that the laptops helped students access information, and develop technology skills 'extensively' or 'a great deal.' They also saw strong benefits for editing and revising.

Approximately half the teachers identified a strongly positive impact on learning skills (e.g., organization, working productively, and taking responsibility.)

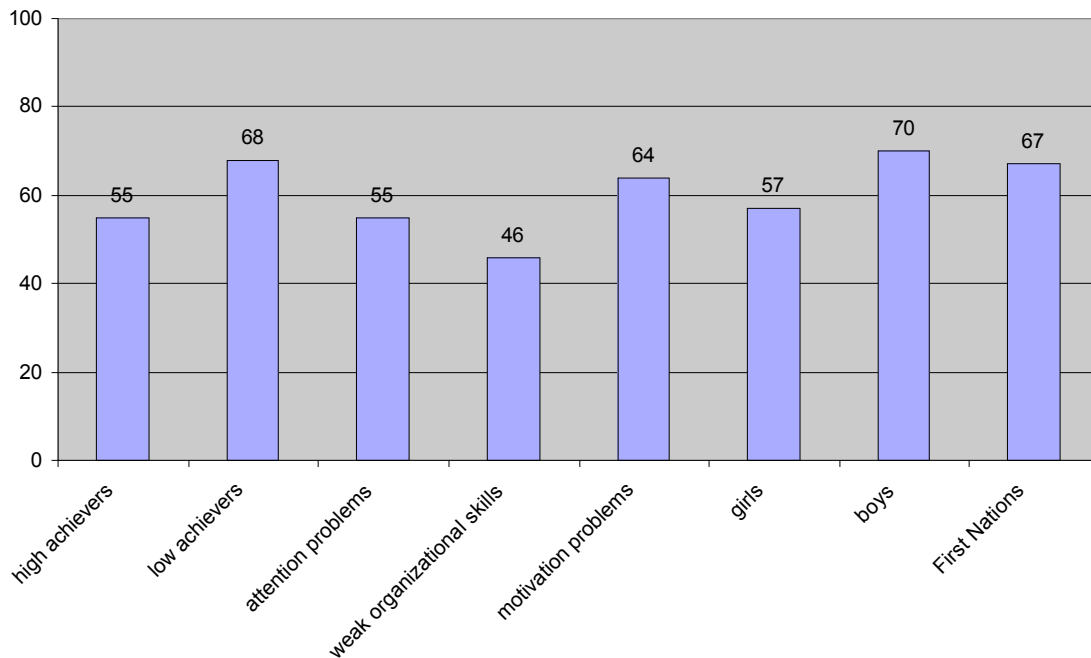
Teacher Survey How helpful have laptops been in helping students



Percent of responses **EXTENSIVELY** and **A GREAT DEAL** combined

Most teachers (55% to 70%) indicated that the WWP had benefited several specific groups of students. These results are similar to previous years, however, the teachers in 2007 were slightly more positive about the impact on boys and low achievers. Students with weak organizational skills were the only group where less than 60% chose ‘extensively’ or ‘a great deal’.

Teacher Survey Benefit to Specific Groups



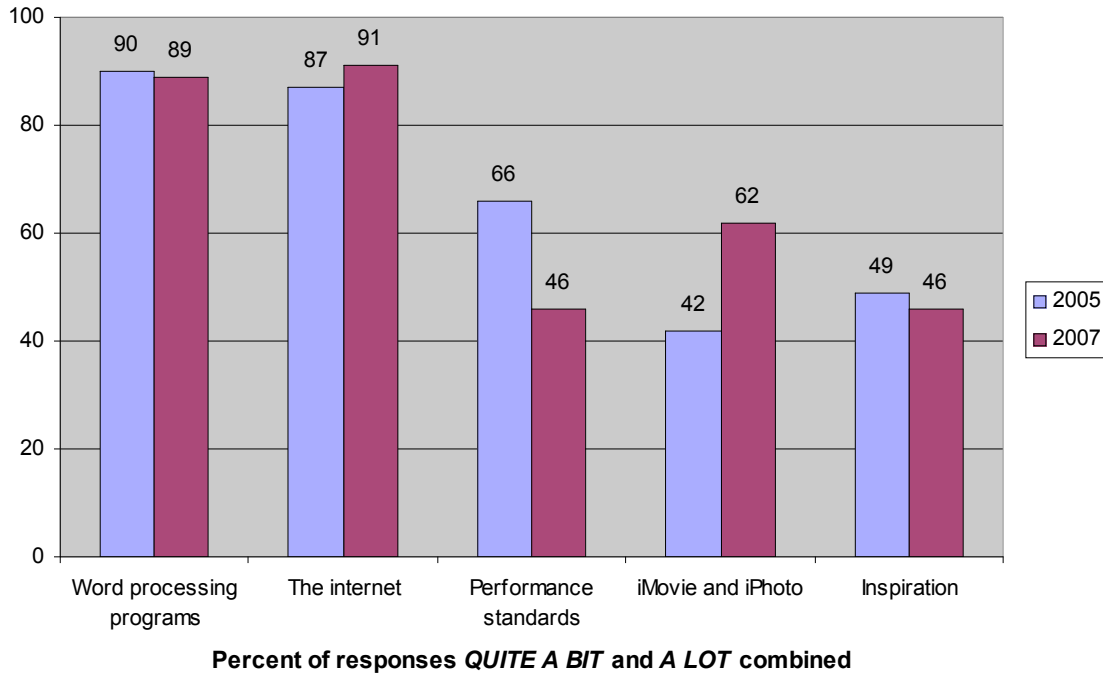
Percent of responses **EXTENSIVELY** and **A GREAT DEAL** combined

3.4 Student use of writing processes and strategies

Students were asked to indicate the importance of specific resources for improving their writing. Selected results are illustrated in the graph below, which shows results for both 2005 and 2007. In both years, students were overwhelmingly positive about the impact of word processing and the Internet, with approximately 90% choosing 'quite a bit' or 'a lot.' In both years, approximately half indicated that *Inspiration* (a mind mapping/graphic organizer program) was important. Responses for two resources changed substantially over the two years: students reported use/importance of the Performance Standards decreased by approximately 20%; on the other hand, their use/importance of iMovie and iPhoto increased by the same amount. In both cases, the result may reveal more about teachers' practice than students' choices.

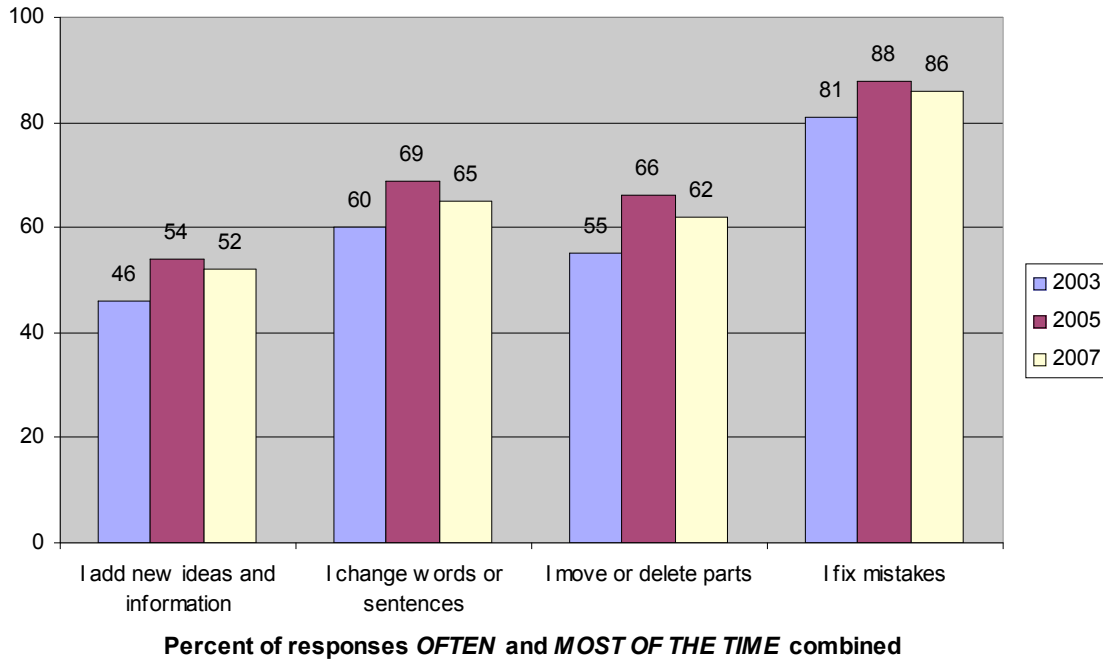
Student Survey

How helpful has each been for improving your writing?



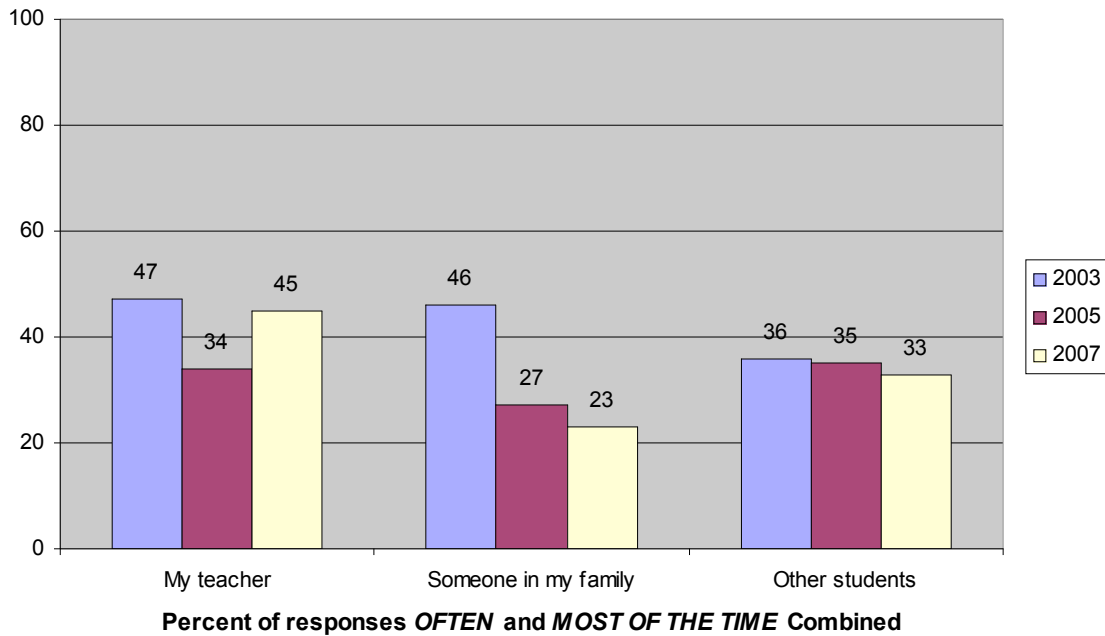
Each year, students respond to a series of questions about the extent to which they revise and edit and their work, using a 5-point scale. The graph below shows results for three years: 2003 (before implementation); 2005 (after two years of implementation); 2007. Overall, student reported frequency of revision and editing strategies has increased. Although it is slightly lower in 2007 than 2005, students who have participated in the WWP continue to report more frequent revisions than those who did not.

Student Survey
After I have written a first draft...



Students also responded to questions about help and support from others: their teachers, family members, and peers. They reported the least frequent help from their teachers in the second year of the WWP; in 2007, results increased to pre-WWP levels. Support from peers has been steady over the five-year implementation period; however, reported help from family members has decreased steadily from nearly half in 2003, to less than one-quarter in 2007 choosing ‘often’ or ‘most of the time’ (top two scale points.)

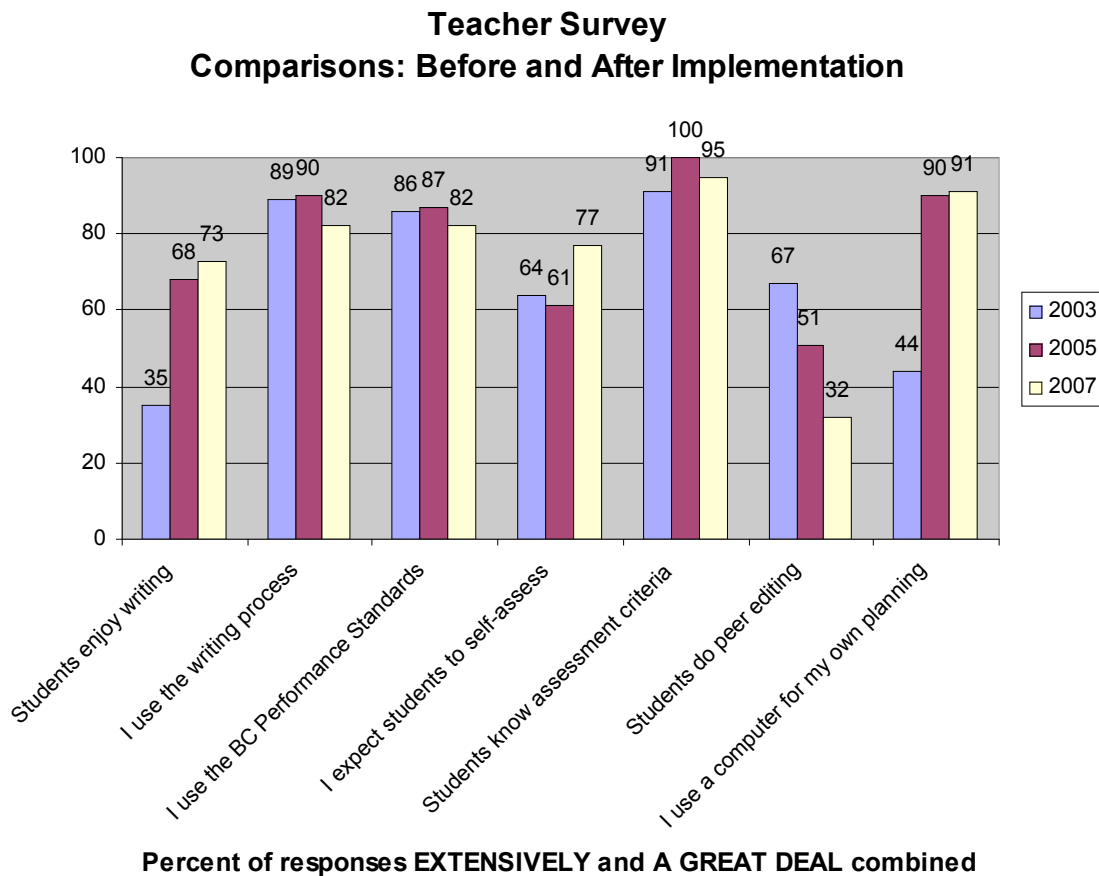
Student Survey
When I work on a piece of writing for school,
I get help from...



4. Instructional practices

4.1 Trends in Writing Instruction

Teachers have been surveyed about their instructional practices annually, beginning in 2003 (pre-WWP.) Since 2003, results indicate increased use of self-assessment; little change in use of assessment criteria, use of the Performance Standards and the writing process, and a continuing decrease in peer editing. Teachers also reported much higher use of computers in their own planning.

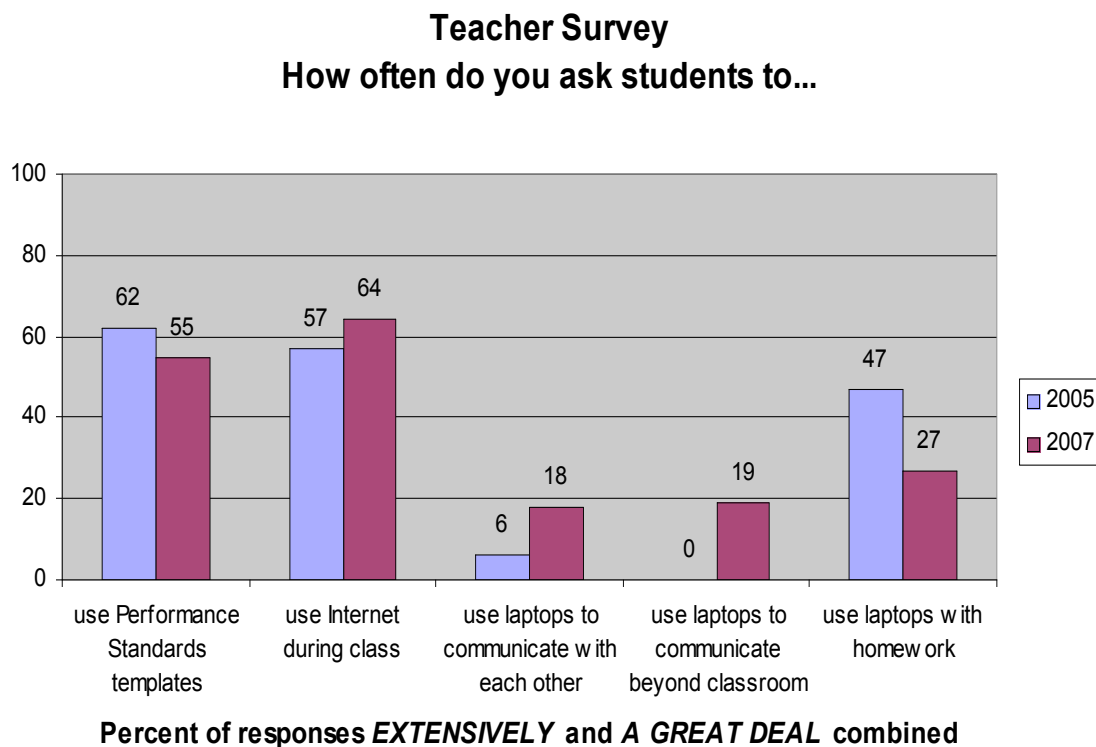


4.2 Integration of Technology

Teachers also indicated how often they used computers in various ways both in class and for homework assignments. Results for 2005 and 2007 are shown below. Teachers reported a slight decrease in use of the Performance Standards templates (electronic versions of the Performance Standards students can use to guide their revisions and assess their writing); however, they report much greater frequency of the templates than

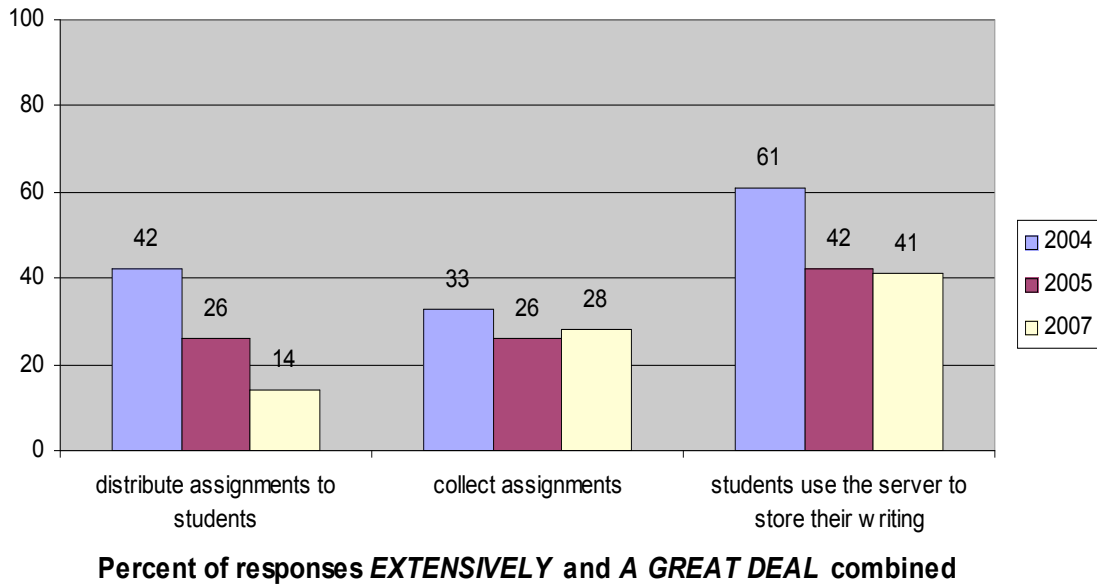
students did. Teachers also reported much less frequent use of computers as part of homework assignments in 2007 than their counterparts in 2005.

Most teachers do not ask students to use the computers to communicate with each other, or with others outside of the classroom, although there has been some increase since 2005.



Some aspects of computer use have decreased. Use of the laptops to distribute assignments has declined sharply since 2004, less than 15% chose 'extensively' or 'a great deal' in 2007, compared with 42% in 2004. Fewer than one in three teachers often collects student work electronically. While over 60% frequently used the server to store student work in 2004, that figure has since declined by 20%.

Teacher Survey Classroom use of technology



5. CONCLUSIONS AND RECOMMENDATIONS

The Wireless Writing Program continues to have a positive impact on students' writing strategies, attitudes, and their confidence in themselves as learners. However, for the first time since implementation in 2004, there is evidence that student writing has not improved to the extent anticipated. The grade 7 students of 2007 – especially the male students – did not perform to the level of previous cohorts. Results for grade 6 were somewhat more encouraging. Because of concern about achievement results, combined with changes to the provincial assessment program in 2008, significant changes in data collection procedures are recommended.

5.1 Writing achievement

As in previous years, most students who participated in the WWP met grade level expectations in writing at the end of grade 6 and grade 7. District data continue to show substantial gains from fall to spring in both grades, a similar pattern to previous years, although the gains are somewhat smaller. Provincial data indicate a more dramatic decrease, especially for male students. This suggests that this year's grade 7 students were unable to transfer improvements in their writing (perceived by themselves and their teachers) to an external assessment. For the first time, actual student achievement gains on district and provincial assessments are lower than those perceived by classroom teachers.

What factors have contributed to this change in student results? It is not possible to attribute cause based on one year's results, but this dramatic change in the pattern of results suggests the 2005 cohort, who entered the WWP as grade 6 students and completed grade 7 in 2007, have different achievement levels for writing than their predecessors.

- **Is this cohort different from previous grade 7 groups?** Examination of previous data and contextual information suggests that the 2007 grade 7 students do not have lower ability than other cohorts.
- **Are the differences in achievement due to difference in participation?** The participation rate on FSA increased over the previous year, by 3% -- because it is typically lower achieving students who are excluded from assessments, an increase in participation is often accompanied by a decrease in achievement. However, the 3% increase is not sufficient to explain the decline.
- **Were there differences in the measuring procedures?** District assessments used topics that have been previously used successfully, and followed the same marking and analysis procedures as previous years. Papers from previous years, along with the BC Performance Standards samples, were used as 'anchors' or 'references' to support consistency over previous years.

Regarding the provincial FSA test, conversations with Ministry personnel confirm that procedures did not change in 2007, except in terms of the topic which alternates

between personal writing and imaginative writing. In 2007 students responded to an imaginative topic which may have been more appealing, overall, to female students than to male students. However, this would not explain differences between Peace River North and the provincial results. (Note: Aboriginal students in Peace River North appear to have most difficulty in years when the topic requires an imaginative story, although this is not true across the province.)

- **Is implementation of the WWP consistent with previous years?** There are a number of indications that the nature of the WWP has changed over the last two years in some schools and classrooms. Teacher survey results have been less positive (see 2006 report, for example.) In addition, there has been a substantial change in the teaching population at grade 6-7 – and especially at grade 7 where, in 2006-2007, 14 teachers were new to the WWP.

When FSA results are examined by school, an interesting pattern appears: in two schools where there has been relative stability in teaching and administrative staff over the last 3-4 years, results are also stable. In schools where over half of the teachers are new to the WWP this year, results have declined dramatically this year. This pattern suggests that there may be large variations in delivery of the WWP across schools and classrooms.

- **Have instructional practices changed?** The teacher survey results indicate that there have been some key changes in instructional practices over the last three years, for example, a decrease in use of the writing process, the Performance Standards templates, peer editing, and the use of laptops for homework. At the same time, teachers reported increased use of self-assessment.
- **Is this a reflection of a previous novelty or experimental effect?** Finally, it is almost important to consider whether results in the first three years of the WWP reflected a novelty or experimental effect that has now worn off – that paying attention to writing, and especially writing with laptops, caused increased achievement on a temporary basis. This is a common pattern in educational innovations – an initial gain followed by stability and then a return to pre-innovation results. If achievement does not improve over the 2007-2008 school year, this will be a tenable hypothesis; however, at this point, it appears more likely that the results have been negatively affected by changes in implementation and instructional practice due to changes in teaching and administrative staff, and an increasing number of relatively inexperienced teachers.

Unfortunately, changes in FSA procedures mean that there will be no opportunity to examine these results as part of an ongoing trend. As of 2008 FSA will be written in February and a new baseline established; students will write the test when they have completed only half of grade 7 and results will no longer offer evidence of achievement at the end of the grade 6-7 program – any skills and gains students develop in the last half of grade 7 will not register on this assessment. Comparisons across years—especially in

writing—will be invalid. For this reason, combined with disappointing 2006-2007 results, new district assessment procedures are needed to continue tracking WWP results.

5.2 Student engagement

Students in Peace River North continue to be enthusiastic about the Wireless Writing Program. Most believe that participating in the WWP has improved both their achievement and their attitudes; their teachers also perceive improved attitudes and motivation. Results have been stable over the last four years. As in previous years, grade 6 students, who have been in the program for one year, are substantially more positive than grade 7 students who are finishing their second year. It is not possible to determine whether this reflects a slight loss of enthusiasm as use of the laptops becomes routine, whether it is due to developmental changes (i.e., students generally express less enthusiasm as they reach adolescence), or some combination.

5.3 Instructional practices

In 2006, teachers generally reported less positive attitudes and use of key instructional practices than in previous years. Results for 2007, however, rebounded in this aspect, and are more similar to 2004 and 2005, than 2006 for most questions. Overall, teachers continue to report 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. They reported somewhat higher student involvement through self-assessment than in previous years; on the other hand, peer editing continued to decrease.

Over one-quarter of teachers reported little or no use of the Performance Standards templates; at the same time, there has been a substantial decrease in the percent of students who describe the performance standards as helpful for improving their writing. Taken together, these results suggest that teachers are not incorporating the Performance Standards into their writing instruction to the extent they were in 2004-2006. On the other hand, teachers reported giving students more choice in their writing topics and assignments than in previous years.

5.4 Recommendations

Many of the recommendations from the 2005-2006 report have not been fully implemented, particularly those related to professional development and inservice. They continue to be relevant and should be reviewed as part of ongoing adjustments in the Wireless Writing Program.

Data collection

Data collection procedures for achievement need to be revised to address changes in the provincial FSA testing program, along with ongoing issues around collecting writing samples from random selections of students. The effort required to follow sub-groups at every grade is not producing the high-quality data needed to evaluate the impact of the

program. Missing data continues to be a major problem, and results in small sample sizes that cannot support the interpretations needed. Further, collecting and scoring a sample of papers at each grade does not provide schools and teachers with feedback they can use—so they put effort into collecting and submitting samples, without any direct benefit. At this point, it would be preferable to follow one complete cohort throughout the two years of the program, rather than tracking a sample of students from each year. This would simplify data collection and scoring and provide teachers and schools with results for all students.

- In **2007-2008**, provide topics and common procedures, and collect writing twice (fall and spring) from all **grade 6 students**. Score all of the writing in one common marking session in May and provide results to schools by the first week in June. This will enable comparisons from fall to spring.
- Continue to focus on this cohort, conducting a similar writing assessment in spring 2009, for all **grade 7 students**. This will enable pre/post comparisons over the two years of the WWP for this cohort of students.
- In **2009-2010**, repeat the process with the cohort entering grade 6.

This will result in analysis of every second group of students—that is, students beginning grade 6 in odd-numbered years will be the subject of research and analysis; those beginning in even years will not.

Professional development and inservice

Recommendations about professional development and inservice were not fully implemented last year. In view of further decreases in student writing achievement results, and increasing numbers of teachers new to the WWP (and thus who have not had the basic inservice sessions on writing and technology), these recommendations are becoming more urgent.

- provide and encourage attendance at a full series of WWP inservice sessions
- refocus attention on strategies for developing writing and on effective formative assessment practices
- support development of writing skills across the curriculum
- encourage increased use of the laptops as a means of communication with audiences both inside and out of the classrooms
- support teacher action research, inquiry and reflection related to the WWP
- provide structured opportunities for teachers to work together, and for those who have developed expertise in integrating technology to support colleagues who are less experienced
- ensure that the WWP is included in all district discussions and initiatives related to literacy, particularly where grades 5-8 teachers are involved
- seek advice from teachers who supported initial implementation of the WWP about effective strategies for supporting teachers who are just now entering the program
- gather ongoing observational data or self-report data (e.g., logs) to explore the extent and nature of classroom use of the iBooks