Toronto District School Board

Research Report

THE GRADE 9 COHORT OF FALL 2004

Robert S. Brown
Research Co-ordinator

09/10-15

June 2010

Issued by the Organizational Development Department,
Research and Information Services

The Grade 9 Cohort of Fall 2004
Robert S. Brown

Organizational Development/
Research and Information Services
Toronto District School Board
1 Civic Centre Court, Lower Level
Etobicoke, ON M9C 2B3

Tel.: 416-394-4929
Fax: 416-394-4946

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

This cohort study follows the progress of students who started Grade 9 in Fall 2004. By Fall 2009, after removing the students who transferred out of the Toronto District School Board (TDSB), 76% of the cohort graduated, 17% dropped out, and 7% returned to the TDSB for an additional, sixth school year. Compared to the first TDSB cohort study 5 years earlier, the five-year graduation rate increased 7%. This increase of slightly over 1% per year is consistent with long-term Toronto improvement for the past two decades.

Graduation and post-secondary access have slowly changed from being the experience of a small proportion of students, to the experience of the majority. That being said, students are less likely to graduate and go to post-secondary if they took a majority of their Grade 9 courses outside the Academic program of study; had a mark of less than 60 in the compulsory Grade 9 courses of English, Geography, Mathematics, or Science; achieved fewer than 7 credits by the end of Grade 9 and fewer than 15 credits by the end of Grade 10; resided in lower income neighbourhoods; were older than 14 when they started secondary school; were born in the English-speaking Caribbean; spoke Portuguese, Spanish, or Somali at home; had high Grade 9 absenteeism; were deferred or absent from writing the Grade 10 Literacy test; or were male. The variable with the strongest relationship to university confirmation is Grade 9 absenteeism.

At the same time, there are grounds for optimism. The graduation rate of almost all key subgroups has increased over the 5 years of the cohort studies, and key gaps have been reduced, including gender, language groups, Grade 9 Programs of Study, student age, and neighbourhood income. Large gaps still remain and progress in a few cases has been limited, for example, the graduation rate of students born in the English-speaking Caribbean.

Post-secondary Confirmations

Almost two thirds (61%) of students in the cohort confirmed an offer of admission from an Ontario post-secondary institution over the course of the study; the majority of the students who did not apply to post-secondary dropped out of school.

Post-secondary access and graduation rates are converging, and it is probable that in the future graduation itself will become a less important measure of accountability than will post-secondary access. There are a number of differences between the graduation rate and post-secondary access that deserve further study. For example, the majority of students taking Applied courses

in Grade 9 now graduate but do not go to post-secondary (students taking Academic courses in Grade 9 account for the majority of University and College confirmations). We therefore have in practice a post-secondary stream (students taking Academic courses in Grade 9) and a workplace stream (students taking other Programs of Study in Grade 9).

Special Needs

The majority of students with Special Needs in Grade 9 will graduate but most will not go onto post-secondary education. Special Needs status needs greater study. Very few students in the cohort received new Special Needs status after Grade 9, and a comparatively small number of students entering the TDSB after Grade 9 received Special Needs status. There was a limited difference between the different non-Gifted Special Needs - those with identified exceptionalities, those 'non-identified' students receiving programming from the Special Education department, and those with an Individual Education Plan (IEP) but without Special Education assistance. The one exception was students with a Behavioral exceptionality, most of these students dropped out and only a few went to post-secondary.

The distinction between full-time Special Education and part-time Special Education students disappears over time - while 8 out of 10 were in full-time Special Education in Grade 8, a little over a quarter of these students were in full-time Special Education by the end of the cohort study. Given the changes in the Ontario secondary education over the past number of years, it may be useful to re-examine the structure and function of the current Special Education system, which is still for the most part based on the 1980 legislation.

Limitations of a Short-term Cohort Study

The relatively short-term analysis seen in a five-year cohort study does not provide the full picture of post-secondary access. We know that the more challenged and resilient students will take up to 8 years to graduate, and they will also take several years to gain access to the post-secondary system. As well, we have found that close to a fifth of the Grade 12 students were not in the Grade 9 cohort - they entered the TDSB from other countries or boards. The TDSB is looking at further ways to examine long-term student progress.

INTRODUCTION

This report is the latest in a series of Toronto cohort studies that started with the Grade 9 cohort of Fall 1959 (Wright, 1967). This is the fifth successive Toronto District School Board (TDSB) Grade 9 cohort study. Generally, five cases (in this case, cohort studies) is the minimum considered acceptable for trend analysis, and we are now able to provide trend information with confidence. In this study, we followed 13 to 15 year olds who started Grade 9 in Fall 2004. They were followed for 5 years, until Fall 2009.

METHODOLOGY

It should be noted that the terms 'dropout' and 'graduation' are quite elastic and can mean many things. The methodology used here can be traced to the original 1959 cohort study, with updates resulting from a provincial committee on tracking secondary students from the mid 1990's (Brown, Turner, Chan, Chaikoff, Handscombe, 1996). The methodology is consistent to enable comparisons over time; we are thus able to compare these dropout and graduation rates to the 1987 and 1991 Toronto and Scarborough Grade 9 cohorts (Brown, 1997; Turner, 1997). However, one should be cautious in comparing this information to other cohorts, which may use quite different methodologies and hence may not be validly comparable. A detailed description of the methodology can be found in Appendix A.

FOCUS ON GRADUATION RATHER THAN DROPOUT

At the end of a five-year cohort study there are three outcomes: graduation; returning to the TDSB for an additional school year; and students who drop out. This report looks at all three outcomes though when discussing trends and patterns, the focus is on graduation.

The term ‘dropout’ was more relevant in secondary school systems in the 1970’s and 1980’s, when students would leave school early and go directly into the workplace. Today’s educational system is more complex. As the graduation rate and post-secondary access has increased, students who drop out are much more likely to re-enter the education system, and so ‘dropout’ is often a temporary status. We also had data quality issues around the ‘exit code’ information used to determine dropping out. For these reasons, in the modern school system the graduation rate is a more consistent and accurate measure of educational progress than the ‘dropout’ rate.

FINDINGS

1. Overall Outcomes

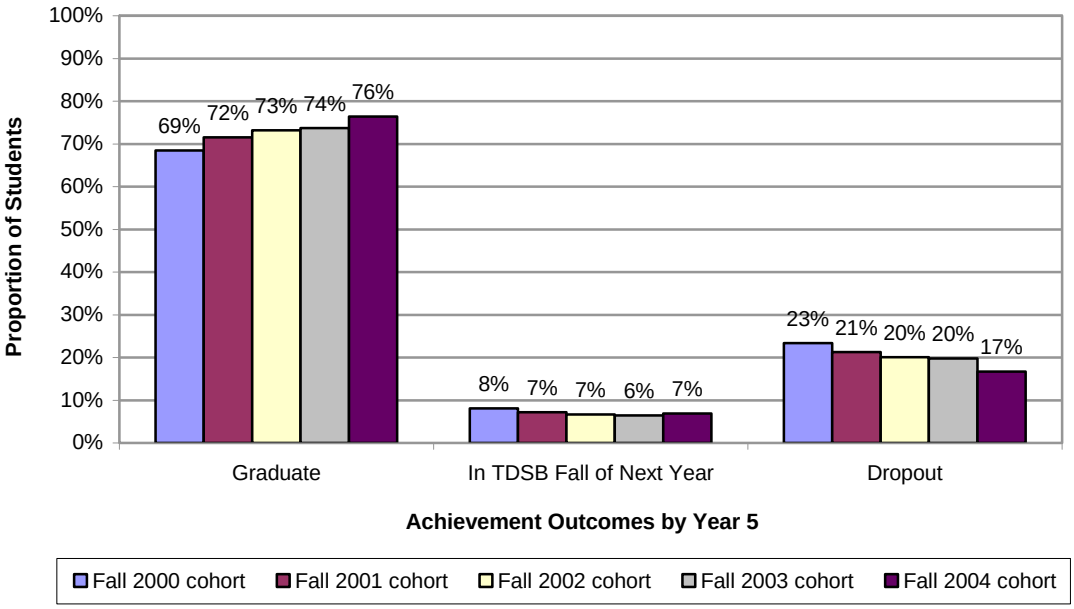
There were 17,823 students in the initial Fall 2004 Grade 9 cohort. However, by the end of 5 years (October 31, 2009) 1,813 students had transferred outside the TDSB to another educational system. Since we cannot say what will be the outcomes of these students, they were removed from the study, leaving a base of 16,010.

As of October 31 2009:

- Seventy-six percent (76% or 12,229 students) had graduated (defined here as received an Ontario Secondary School Diploma or OSSD, or successfully completed 30 or more credits);
- Seven percent (7% or 1,111 students) had not graduated but returned to the TDSB in Fall 2009 for a sixth year of high school, while
- Seventeen percent (17% or 2,670 students) dropped out, that is left high school without graduating.

Figure 1 shows the graduation rate over time. Since the first baseline cohort of Fall 2000, the five-year graduation rate of TDSB students has increased from 69% to 76%, while the dropout rate has declined from 23% to 17%. This is a continuation of a long-term trend: the current five-year dropout rate is half that of the 33% dropout rate of the Toronto cohort of Fall 1987 (see Appendix B).

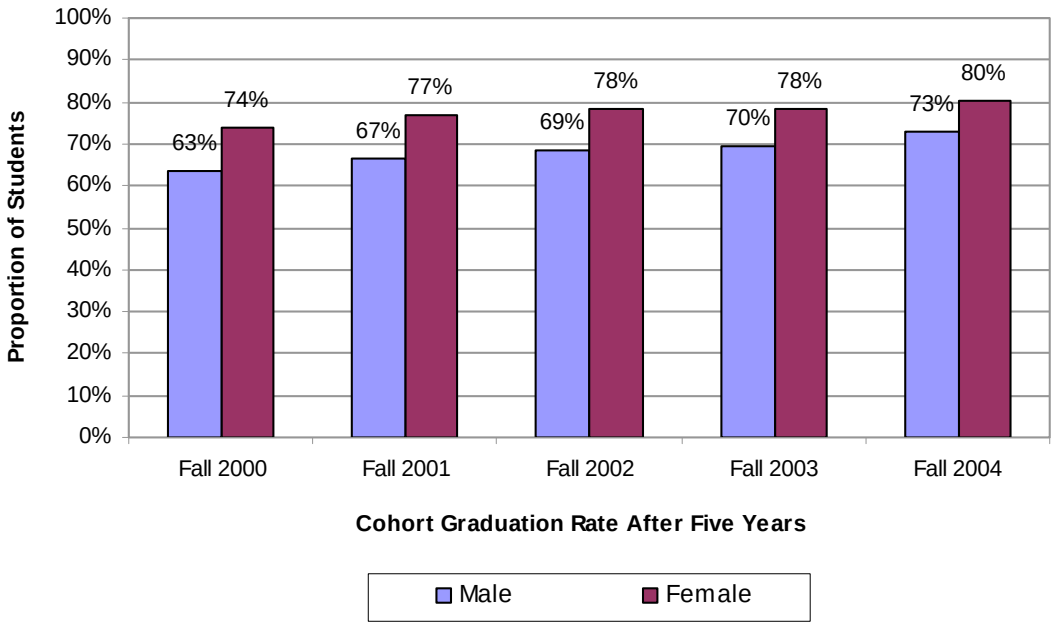
Figure 1: Grade 9 Cohorts of Fall 2000- Fall 2004
Outcomes at the End of Five Years of Secondary School



2. Gender

Figure 2 shows a noticeable gender gap in graduation, with 73% of males graduating compared to 80% of females. This gap has been observed for at least a quarter century (Cheng, Tsuiji, Yau, & Ziegler, 1987). There are some signs of progress: the gap has declined from 11% as seen in the Fall 2000 cohort, to 7% in the Fall 2004 cohort.

Figure 2: Grade 9 Cohorts of Fall 2000 - Fall 2004
Gender and Graduation by Year 5



3. Age

Students in this cohort were between the ages of 13 (born in 1991) and 15 (born in 1989) although the 19 out of 20 students were 14 (born in 1990). The graduation rate is strongly related to age: 88% of 13 year olds, 77% of 14 year olds, and 56% of 15 year olds graduated 5 years later (see Table 1). That being said, the graduation rate of all three ages is higher compared to the baseline of the Fall 2000 cohort, where 75% of 13 year olds, 71% of 14 year olds and only 37% of 15 year olds graduated 5 years later. The 21% increase in the graduation rate of older students is particularly noteworthy.

Table 1: Age of Student and Achievement to Year 5 (Fall 2009)

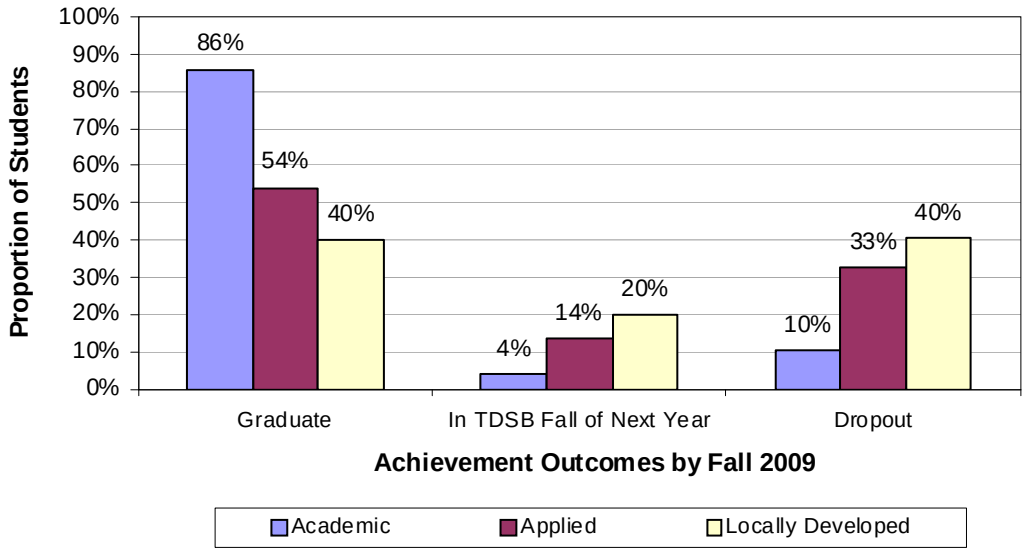
Age	Outcomes to Year 5 (#, %)						TOTAL
	Graduate		Still in TDSB		Dropout		
	Number of Students	Percentage	Number of Students	Percentage	Number of Students	Percentage	
15 Years Old	355	**55.6%**	69	**10.8%**	215	**33.6%**	639
14 Years Old	11,770	**77.2%**	1,039	**6.8%**	2,444	**16.0%**	15,253
13 Years Old	104	**88.1%**	3	**2.5%**	11	**9.3%**	118
TOTAL	12,229	**76.4%**	1,111	**6.9%**	2,670	**16.7%**	16,010

4. Programs of Study - Grade 9

In theory, streaming was eliminated in Ontario with the introduction of the OSS curriculum in 1999. In form and function, however, the streams of the earlier OS:IS curriculum were replicated through the types of courses taken in Grade 9. Characteristics of students taking a majority of Academic courses (73% of the cohort) are similar to those in the old Advanced stream; characteristics of students taking Applied courses (23% of the cohort) are similar to those in the old General program; while students taking Locally Developed (Essentials) programs (4% of the cohort) are similar to those in the old Basic program.

As seen in Figure 3, the vast majority (86%) of students taking Academic programs in Grade 9 graduated from high school in 5 years, while a little over half (54%) of the students taking Applied courses graduated, and slightly more than a third (40%) of the students taking Locally Developed (Essentials) courses graduated.

Figure 3: Grade 9 Cohort of Fall 2004:
Programs of Study Grade 9 and Achievement by Fall 2009



Note: Programs of Study defined here by the majority of courses taken.

The graduation rate of all of these Programs/Streams has increased compared to the baseline of the Fall 2000 cohort. The gap between Academic, Applied, and Locally Developed (Essentials), while still wide, has narrowed:

- The graduation rate of students taking Academic courses increased **4%** (from 82% in the baseline of the Fall 2000 cohort to 86%).
- The graduation rate of students taking Applied courses increased **13%** (from 41% to 54%).
- The graduation rate of students taking Locally Developed (Essentials) courses increased **12%** (from 28% to 40%).

5. Transition from Grade 9/10 to Grade 11/12 Courses

Courses in Grades 11 to 12 have different Programs of Study from the courses in Grades 9 to 10: University, Mixed (College-University), College, and Workplace.

In general, the relationship between Grades 9 to 10 Academic Programs of Study and the University pathway is strongest: 94% of students taking University courses in Grades 11 and 12 had taken Academic courses earlier (8,681 of the 9,241 students). That being said, in the baseline of the Fall 2000 cohort, 97% of students taking University courses had taken Academic courses earlier. The proportion of Applied students from Grade 9 going into University programs has doubled, accounting for 6% of the students in the Fall 2004 cohort and increase from the 3% of University program students in the Fall 2000 cohort.

What is happening is a small, but noticeable, increase in the proportion of students taking Applied courses and completing the secondary school curriculum taking University or Mixed courses. Thus, as seen in Table 2, of the students who start taking a majority of their courses in the Applied program, 52% were taking College courses in their senior grades, while 17% were taking University, and 18% were taking Mixed courses. This compares to the baseline of Fall 2000 (Brown, 1996, Table 11, p. 36) when 56% were taking a majority of College courses, 8% were taking University courses, and 14% were taking Mixed courses. Therefore, it would appear that slightly more students taking Applied courses in Grades 9 to 10, have changed their pathways to allow the possibility of university entrance.

Table 2: Programs of Study Grades 9/10 Compared to Grades 11/12

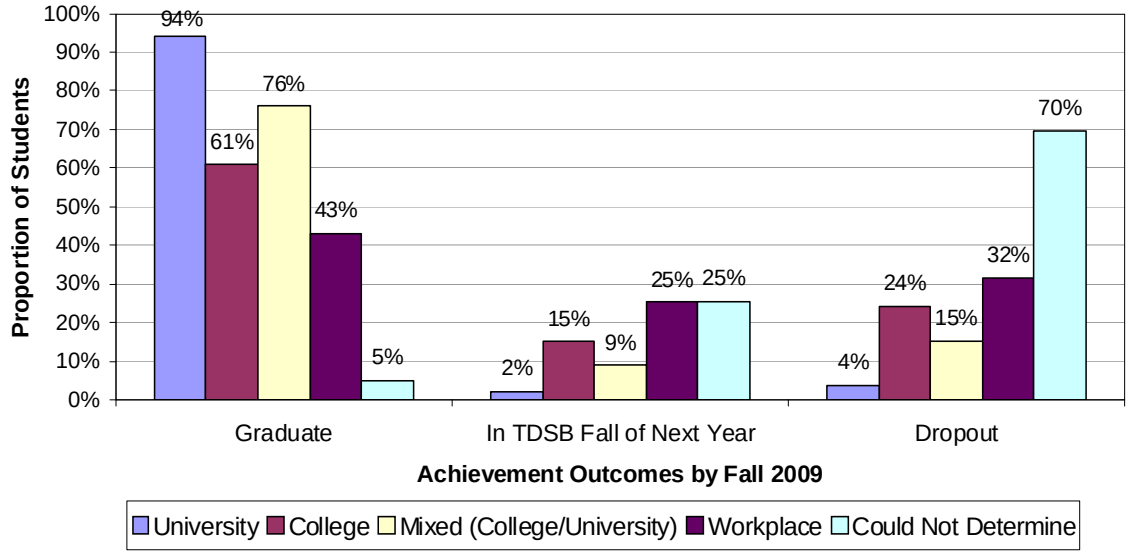
Grades 9/10 Program of Study	Grades 11/12 Program of Study (#, %)										TOTAL
	University		College		Mixed		Workplace		Could not Define		
Academic	8,681	77.8%	905	8.1%	1,409	12.6%	115	1.0%	47	0.4%	11,157
Applied	543	17.1%	1,646	52.0%	564	17.8%	315	9.9%	99	3.1%	3,167
Locally Developed	17	3.6%	132	27.7%	25	5.2%	270	56.6%	33	6.9%	477
TOTAL	9,241	62.4%	2,683	18.1%	1,998	13.5%	700	4.7%	179	1.2%	14,801

Note: Programs of Study defined here by the majority of courses taken.

6. Programs of Study - Grades 11/12

As seen in Figure 4, the graduation rate of all Grade 11 and 12 Programs of Study improved between the baseline of the Fall 2000 and the Fall 2004 cohort, although very large gaps remain between the Grade 11/12 Programs of Study. By Year 5, almost all (94%) of students taking University courses graduated (a very small increase from 93% of the Fall 2000 cohort). This compares to 76% of students taking Mixed courses (an increase from 70% in the Fall 2000 cohort), 61% of students taking College courses (an increase from 57%), and 43% of students taking Workplace courses (an increase from 39%).

Figure 4: Grade 9 Cohort of Fall 2004:
Programs of Study Grades 11/12 and Achievement
by Year 5 (Fall 2009)



Note: Programs of Study defined here by the majority of courses taken.

7. Applications to Post-secondary

We looked at post-secondary applications over the 2008 and 2009 applications cycle (that is, Years 4 and 5 of the cohort). This is not the full picture of post-secondary. From previous cohort studies, we know that many students will apply in the 2010 and 2011 cycles, and others will enter the post-secondary system as adult students in the 'Indirect Transition'. Indeed, more TDSB students apply to college, later in life, as adults than as high school students.

In this 'Direct Transition' 46% confirmed an offer of admission from an Ontario university, while 15% confirmed an offer from an Ontario college, for a total of 61% of the cohort. An additional 10% applied but did not confirm an offer (many of these students will gain post-secondary entry in future years).

Table 3: Confirmations in 2008 and 2009

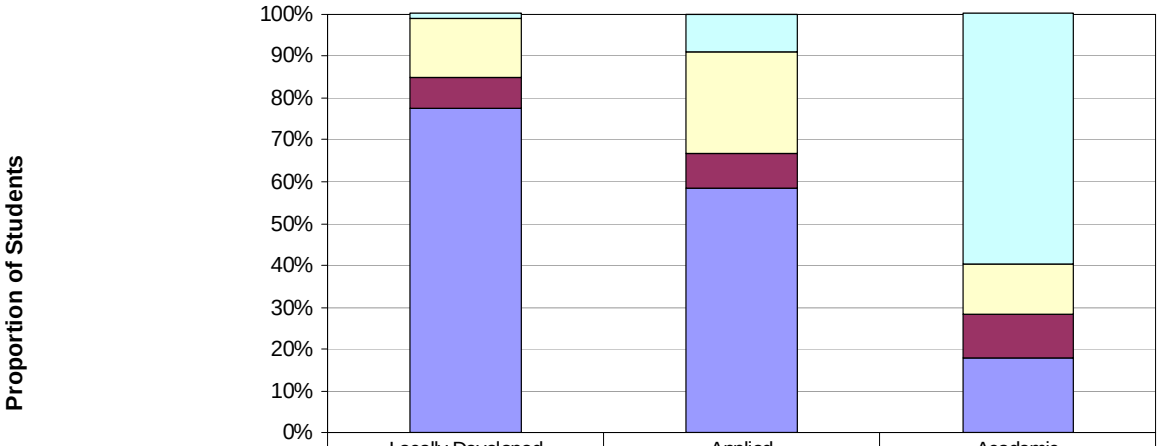
	Frequency	Percent	Valid Percent	Cumulative Percent
Confirm University in Ontario	7,326	45.8%	45.8%	45.8%
Confirm College in Ontario	2,355	14.7%	14.7%	60.5%
Apply to post-secondary in Ontario	1,559	9.7%	9.7%	70.2%
Did not apply to post-secondary	4,770	29.8%	29.8%	100.0%
Total	16,010	100.0%	100.0%	

The vast majority of students who did not apply to post-secondary could not apply since they were dropouts. Almost all graduates (89%) applied to post-secondary over the 2008 and 2009 application cycle, and over three quarters (78%) confirmed an offer of admission from an Ontario college or university. Given the students who confirm an offer to a college or University outside Ontario, and students who will apply over the 2010 and 2011 application cycle, this proportion should rise to approximately 85%.

In general, since the post-secondary confirmation rate is closely related to the graduation rate, the same predictors for graduation also are predictors of post-secondary access. For example, as seen in Figure 5, the Programs of Study taken in Grade 9 courses is an especially strong predictor of post-secondary success, in the same way it is a very strong predictor of graduation. Comparatively few students taking Locally Developed (Essentials) courses confirmed post-secondary. Only a third of those taking Applied courses confirmed a post-secondary offer and they are most likely to do so to a college. In contrast, the vast majority of students taking Academic courses confirmed an offer of admission from college or university (72%).

Approximately three quarters of students took a majority of their courses in the Academic program of study and those students made up the majority (59%) of students who confirmed a college offer. Therefore, students taking Academic courses in Grades 9 and 10 should be thought of as taking the university and college pathway, given that they provide the vast majority of both university and college confirmations; students taking Applied courses as well as Locally Developed (Essentials) courses should be thought of as taking a workplace rather than college pathway.

Figure 5: Grade 9 Cohort of Fall 2004:
Post-secondary Confirmations by Programs of Study Grades 9/10



8. Achievement in the Four Compulsory Grade 9 Courses (English, Geography, Mathematics, and Science)

Tables 4-7 show the relationship between achievement in compulsory courses in Grade 9, and outcomes by the end of five years:

- Students at Level R (failed or dropped the course), between an eighth and a quarter of the students graduated by the end of 5 years;
- Students at Level 1 (average of 50-59%), over half (56-67%) of the students graduated;
- Students at Level 2 (average of 60-69%), over three quarters (75-80%) of the students graduated;
- Students at Level 3 (average of 70-79%) 87-88% of the students graduated; and
- Students at Level 4 (average of 80% or more) almost all (94-95%) of the students graduated at the end of five years.

Thus, with all four courses, only a small proportion of those who did not complete the course graduated, while nearly all of those with a mark of 80 or more graduated.

It is interesting that Geography is a slightly stronger predictor of future achievement than Mathematics (although the differences are minor). This is important to note because current educational practice emphasizes Literacy and Numeracy outcomes, and these are often translated as English and Mathematics. Geography and Science also have Literacy and Numeracy elements that are part of integrated curriculum. Their strength in predicting future achievement shows the importance of examining a *broad range* of subjects (a reason for the importance of credit accumulation, for example), and the potential limitations of focusing on a *narrow range* such as English and Mathematics only.

Table 4: Mathematics Achievement in Grade 9 (2004-05) and Outcomes to Year 5 Secondary (Fall 2009)

Overall Mathematics Levels Grade 9 2004/5	Outcomes to Year 5 (#, %)						TOTAL
	Graduate		Still in TDSB		Dropped Out		
Level R	513	**27.0%**	438	**23.0%**	950	**50.0%**	1,901
Level 1	2,280	**67.0%**	339	**10.0%**	786	**23.1%**	3,405
Level 2	2,453	**80.0%**	174	**5.7%**	439	**14.3%**	3,066
Level 3	2,796	**87.6%**	113	**3.5%**	281	**8.8%**	3,190
Level 4	4,185	**94.2%**	47	**1.1%**	210	**4.7%**	4,442
TOTAL	12,227	**76.4%**	1,111	**6.9%**	2,666	**16.7%**	16,004

Table 5: English Achievement in Grade 9 (2004-05) and Outcomes to Year 5 Secondary (Fall 2009)

Overall English Levels Grade 9 2004/5	Outcomes to Year 5 (#, %)						TOTAL
	Graduate		Still in TDSB		Dropped Out		
Level R	182	**15.9%**	285	**24.9%**	677	**59.2%**	1,144
Level 1	1,357	**56.8%**	322	**13.5%**	708	**29.7%**	2,387
Level 2	2,366	**75.2%**	245	**7.8%**	535	**17.0%**	3,146
Level 3	3,625	**86.7%**	144	**3.4%**	410	**9.8%**	4,179
Level 4	4,075	**94.8%**	49	**1.1%**	173	**4.0%**	4,297
TOTAL	11,605	**76.6%**	1,045	**6.9%**	2,503	**16.5%**	15,153

Table 6: Science Achievement in Grade 9 (2004-05) and Outcomes to Year 5 Secondary (Fall 2009)

Overall Science Levels Grade 9 2004/5	Outcomes to Year 5 (#, %)						TOTAL
	Graduate		Still in TDSB		Dropped Out		
Level R	312	**20.7%**	353	**23.5%**	840	**55.8%**	1,505
Level 1	1,888	**62.0%**	375	**12.3%**	782	**25.7%**	3,045
Level 2	2,596	**78.1%**	220	**6.6%**	506	**15.2%**	3,322
Level 3	3,248	**87.3%**	121	**3.3%**	351	**9.4%**	3,720
Level 4	4,185	**94.7%**	42	**1.0%**	191	**4.3%**	4,418
TOTAL	12,229	**76.4%**	1,111	**6.9%**	2,670	**16.7%**	16,010

Table 7: Social Science (Geography) Achievement in Grade 9 (2004-05) and Outcomes to Year 5 Secondary (Fall 2009)

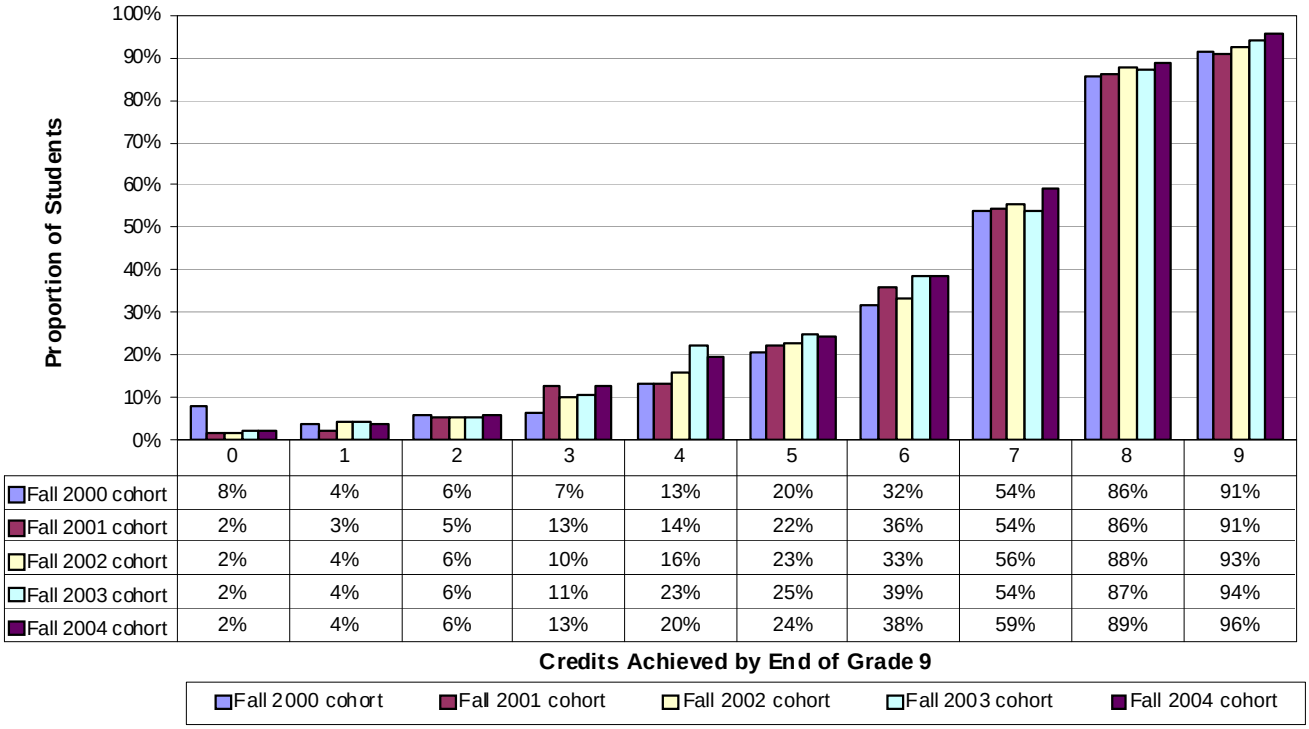
Overall Social Science (Geography) Levels Grade 9 2004/5	Outcomes to Year 5 (#, %)						TOTAL
	Graduate		Still in TDSB		Dropout		
Level R	344	**22.0%**	370	**23.7%**	849	**54.3%**	1,563
Level 1	1,450	**56.4%**	379	**14.7%**	743	**28.9%**	2,572
Level 2	2,276	**75.3%**	220	**7.3%**	526	**17.4%**	3,022
Level 3	3,358	**88.1%**	95	**2.5%**	360	**9.4%**	3,813
Level 4	4,801	**95.3%**	47	**0.9%**	192	**3.8%**	5,040
TOTAL	12,229	**76.4%**	1,111	**6.9%**	2,670	**16.7%**	16,010

9. Credit Accumulation - Grade 9

For nearly twenty years, TDSB research has repeatedly documented the clear relationship between credit accumulation in the early years of high school, and future academic achievement (Brown, 1993; Turner, 1997). Figure 6 demonstrates this pattern in looking at Grade 9 credit accumulation and graduation rates of the five TDSB cohort studies. Nearly all students who completed 8 credits (86-89%) or 9 credits (91-96%) in Grade 9 graduated at the end of five years. Slightly more than half (54-59%) of the students completing 7 credits graduated at the end of 5 years. For students who completed 6 or fewer credits by the end of Grade 9, the chances of graduation by the end of five years remained remote.

While the pattern of credit success has remained generally unchanged over the past generation, there are cautious grounds for optimism. Over the past few years, the graduation rate of the moderately at-risk students have somewhat increased: the graduate rate of those with 3 to 7 credits has increased 4-7%, a greater increase than the 3% increase in those with 8 credits (see Figure 6). This may be due to the influence of a number of intervention programs that, over the past number of years, have focused on credit recovery for students in the first years of high school.

Figure 6: Graduation Rate of Grade 9 Students Based on Credit Accumulation
Graduation Rate after Five Years of Secondary School (Four Years After End of Grade 9)



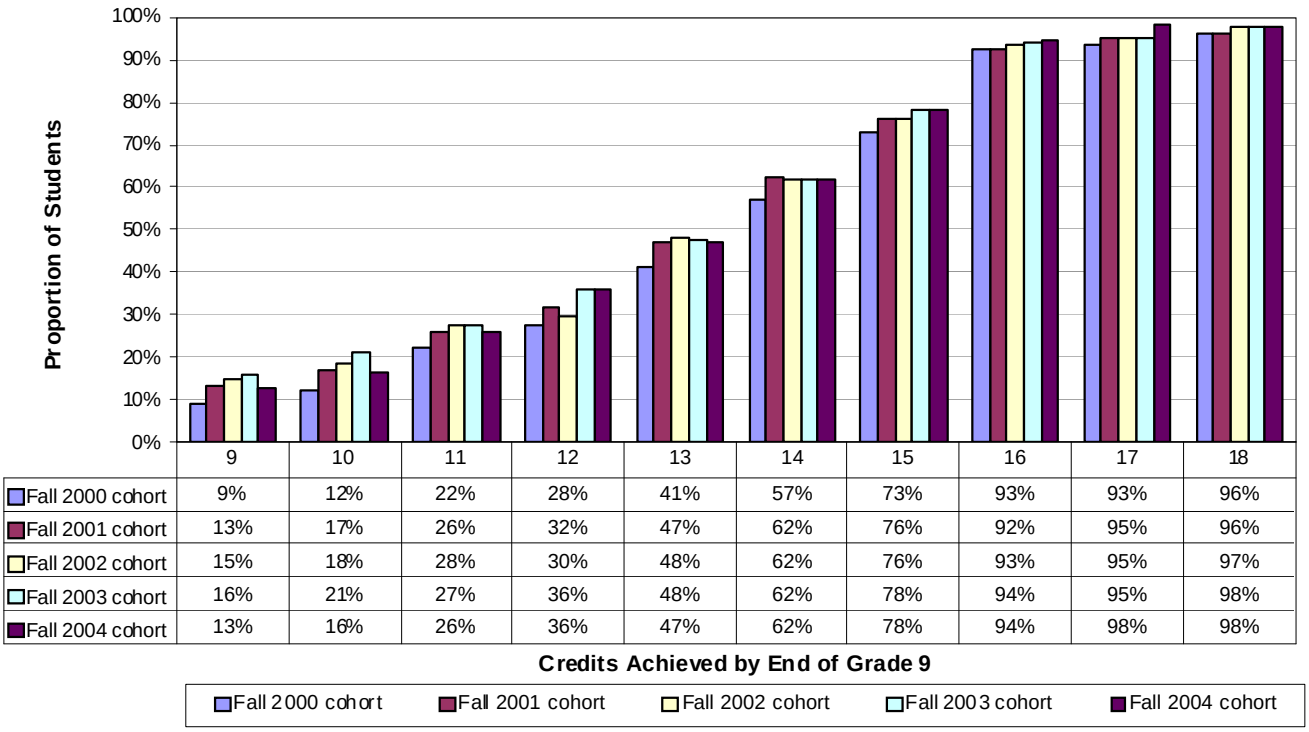
	0	1	2	3	4	5	6	7	8	9
Fall 2000 cohort	8%	4%	6%	7%	13%	20%	32%	54%	86%	91%
Fall 2001 cohort	2%	3%	5%	13%	14%	22%	36%	54%	86%	91%
Fall 2002 cohort	2%	4%	6%	10%	16%	23%	33%	56%	88%	93%
Fall 2003 cohort	2%	4%	6%	11%	23%	25%	39%	54%	87%	94%
Fall 2004 cohort	2%	4%	6%	13%	20%	24%	38%	59%	89%	96%

10. Credit Accumulation - Grade 10

As with Grade 9 credit accumulation, the strong relationship of Grade 10 credit accumulation and graduation was clearly documented two decades ago, and the same general patterns continue to hold. Thus, students with 16-18 credits by the end of Grade 10 will graduate by the end of five years of high school short of some sort of unexpected change. Three quarters of students with 15 credits will likewise graduate; the proportion of students with 14 credits declines to less than two thirds. For most students with 13 or fewer credits by the end of Grade 10, five-year graduation remains an elusive goal.

At the same time, as with Grade 9 credit accumulation, there appears to be some mediating process amongst the moderately at-risk students. The graduation rate of students with 12 credits increased 8% (from 28% in the first cohort to 36% in the most recent cohort) while students with 13 credits had an increased graduation rate of 6%, from 41 to 47% (see Figure 7).

Figure 7: Graduation Rate of Grade 10 Students Based on Credit Accumulation
Graduation Rate after Five Years of Secondary School (Four Years After End of Grade 9)



	9	10	11	12	13	14	15	16	17	18
Fall 2000 cohort	9%	12%	22%	28%	41%	57%	73%	93%	93%	96%
Fall 2001 cohort	13%	17%	26%	32%	47%	62%	76%	92%	95%	96%
Fall 2002 cohort	15%	18%	28%	30%	48%	62%	76%	93%	95%	97%
Fall 2003 cohort	16%	21%	27%	36%	48%	62%	78%	94%	95%	98%
Fall 2004 cohort	13%	16%	26%	36%	47%	62%	78%	94%	98%	98%

11. Special Needs as of Grade 9

The TDSB's Research and Information Services department worked with the Special Education and IT departments to receive information on the Special Needs of students (Brown, 2008). One challenge has been that different groups can interpret Special Needs differently. Thus, the Special Education department looks at students who have current exceptionalities (Identification, Placement, and Review Committee [IPRC]) and those who have Special Education programming ('Non-identified') though not other students with Individual Education Plans (IEP's). The first comprehensive 'snapshot' of Special Needs was taken as of October 31, 2004. Of the students in the cohort in Grade 9, 16% were Special Needs:

- One percent (1.49%) of the students (or 239 students) had a *Gifted* exceptionality and were in *full-time* Special Education classes;
- One percent (1%) of the students (or 111 students) had a *Gifted* exceptionality and were in *regular* classes;
- Four percent (4%) of the students (or 660 students) had a *non-Gifted exceptionality* (mostly Behavioral, Learning Disability, and Mild Intellectual Disability) and were in *full-time* Special Education classes;
- Five percent (5%) of the students (or 777 students) had a *non-Gifted exceptionality* and were in *regular* classes;
- Four percent (4%) of the students (or 570 students) were students with *Non-identified Special Needs*; and
- Two percent (2%) of the students (or 241 students) were students who had a *Local IEP* - that is, they had an IEP, but no Special Education programming in that year.

This left 84% (13,410) students with no record of Special Needs.

a. Demographic Differences

Special Needs students have demographics somewhat different from the rest of the TDSB population:

- Sixty-four percent (64%) of Special Needs students were male, compared to 49% of students without Special Needs status;

- Seventy-nine percent (79%) of Special Needs students were born in Canada, compared to 63% of students without Special Needs Status; and
- Sixty-eight percent (68%) of Special Needs students spoke English at home, compared to 47% of students without Special Needs status.

There were no obvious differences in the income level of student neighborhoods, when Special Needs and students without Special Needs status are compared. However, there is *a pronounced difference* when *Gifted* students are examined. Half (50%) of the Gifted students came from high-income neighborhoods (defined as the top 20%), while only 4% came from the lowest income neighborhoods.

b. Changes Over Time (Grades 9 to 12)

Previous research has found noticeable changes in the Special Needs status of students. For example, the administration of the pilot Early Developmental Indicators (EDI) in Senior Kindergarten (Spring 2000) excluded students with Special Education status; however, between a fifth and a quarter of the group had some sort of Special Needs status by the time they were in Grade 9 (TDSB and McMaster University, ongoing research project). At the same time, records of new IPRC and IEP have shown very few being awarded after Grade 8 (Brown, 2008). This cohort was the first time that the status of the same students was followed; that is, from when they started Grade 9 in Fall 2004, until the started Grade 12 in Fall 2007. We noticed:

- Students without Special Needs status had little change in their status. In Grade 9, of the 12,547 students without Special Needs status, 98% (or 12,245 students) were still students without Special Needs status in Grade 12. A small number acquired Exceptionalities (11 Gifted and 69 Non-Gifted) while most (222 students) acquired an IEP or Non-identified status.
- Out of the 339 Gifted students in Grade 9, 317 were still Gifted in Grade 12, although some students in Special Education classes had switched to Regular classes while a few students in Regular classes had switched to Special Education classes. While 22 students no longer had a Gifted exceptionality, 26 Regular or Special Needs students from Grade 9 had a Gifted exceptionality in Grade 12; therefore, the Gifted program ended up with slightly more students in the cohort than it started off with.

- Out of 1,277 students with non-Gifted exceptionalities in Grade 9, 87% (or 1,111 students) still had a non-Gifted exceptionality in Grade 12. The largest shift was outside of Special Needs status (8% or 100 students) while 5% (or 61 students) still had an IEP or Non-identified status.

  However, a less noticeable, yet important, shift was the change in these non-Gifted exceptionalities out of full-time Special Education programming. In the elementary panel, the vast majority of elementary students with exceptionalities are in full-time Special Education classes; for example, of the Grade 8 students with non-Gifted exceptionalities in the 2008-09 school year, 82% were in full-time Special Education classes. By comparison, only 45% of the Grade 9 students with non-Gifted exceptionalities were in full-time Special Education classes, and only 348 of the 1,277 students (or 27%) were in full-time Special Education classes by Grade 12.

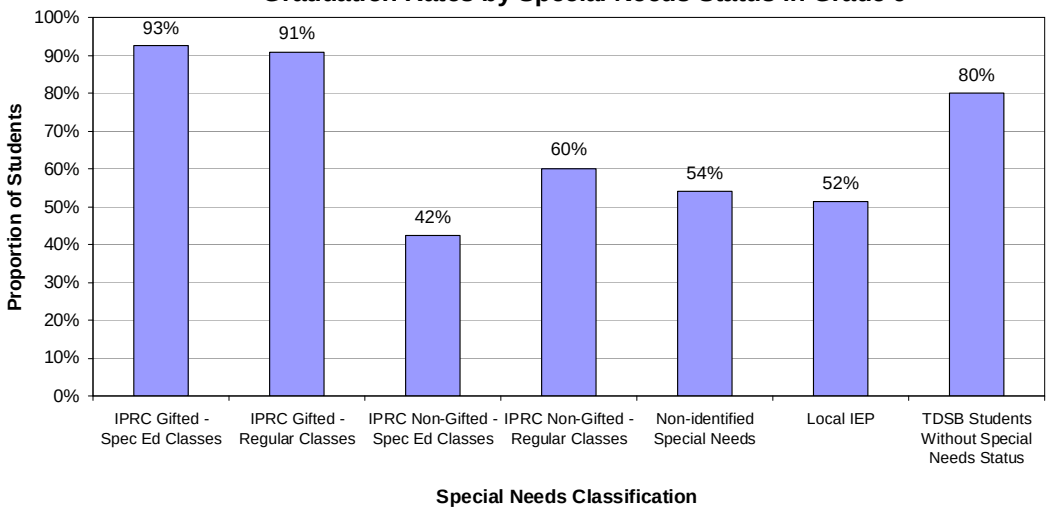
- The Non-identified and Local IEP students appear to be much the same group, when one examines them over time. Thus, out of the 712 students who were either Non-identified or had a Local IEP in Grade 9, 64% (or 459 students) were in one or the other in Grade 12 though 93 Non-identified Grade 9 students had a Local IEP in Grade 12, while 41 Local IEP Grade 9 students were Non-identified in Grade 12. Additionally, 83 students had picked up a non-Gifted exceptionality status by Grade 12, while 160 students lost all Special Needs status.

In summary, if a student did not have Special Needs status at the start of Grade 9, it is unlikely that the student will acquire Special Needs status over the rest of his/her secondary school career. However, within the umbrella of Special Needs categories, there were noticeable shifts over time. In particular, students with non-Gifted exceptionalities in Grade 9 will change status from full-time Special Education classes to regular classes; or from having a valid exceptionality to IEP status; or will leave Special Needs status altogether. As well, the boundary is porous (or perhaps artificial) between Special Education's 'Non-identified' status, and 'Local IEP students', that is, students with IEP status but no Special Education programming.

c. Special Needs Achievement - Graduation

Graduation rates are closely related to Special Needs status (see Figure 8). Students without Special Needs status had a five-year graduation rate of 80%, slightly above the overall rate of 76%. Almost all Gifted students (91-93%) had graduated. In contrast, 42% of IPRC Non-gifted students in Special Education classes, 60% of IPRC Non-gifted students in regular classes, 54% of students with Non-identified Special Needs, and 52% of students with Local IEP's had graduated. *The reality is that there is little difference between the broad categories of non-Gifted Special Needs*. That is, when both Special Education and regular classes are combined, the overall graduation rate of students with non-Gifted exceptionalities is 52%, roughly the same as those with Non-identified Special Needs and Local IEP.

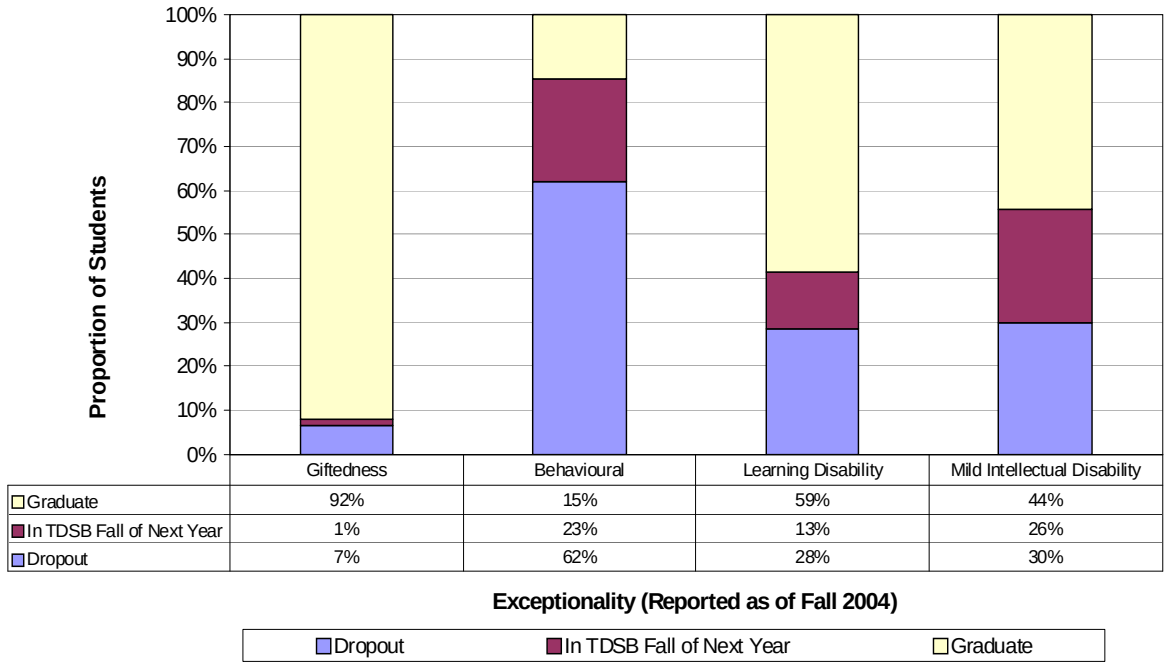
Figure 8: Grade 9 Cohorts of Fall 2004:
Graduation Rates by Special Needs Status in Grade 9



There was one key difference – the *Behavioral Exceptionality*. While the Ministry recognizes 14 Exceptionalities, almost all (94%) of the IPRC'd students in this cohort came from four: Gifted (350 students), which was already discussed, Behavioral (103 students), Learning Disability (LD) (873 students), and Mild Intellectual Disability (MID) (349 students). As seen in Figure 9, most or 59% of LD students graduated; 44% of MID students graduated (with an additional 26% returning for an additional sixth school year). By comparison, only 15% of students with Behavioral exceptionalities had graduated – and almost two-thirds (62%) dropped out.

In summary, most Special Needs students appear to be able to complete their secondary school requirements given enough time and support. In general, differences are muted between students with non-Gifted exceptionalities, the Non-identified students, and students with Local IEP's. The outcomes of Behavioral students are sufficiently below the norm to raise concern.

Figure 9: Grade 9 Cohorts of Fall 2004:
Five-year Outcomes by Exceptionality



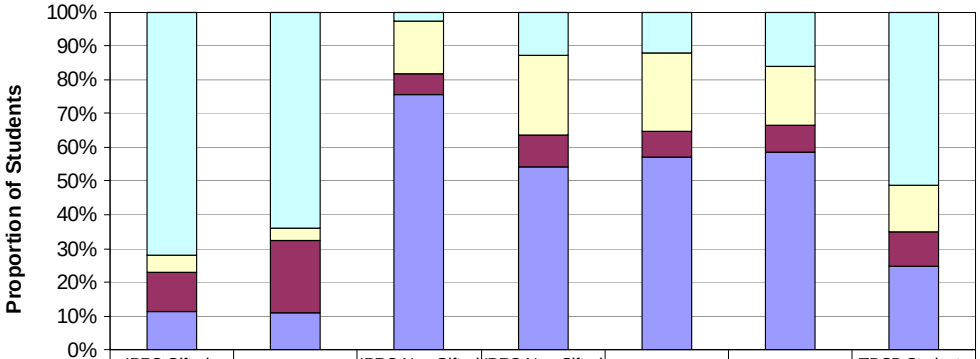
	Giftedness	Behavioural	Learning Disability	Mild Intellectual Disability
Graduate	92%	15%	59%	44%
In TDSB Fall of Next Year	1%	23%	13%	26%
Dropout	7%	62%	28%	30%

d. Special Needs Achievement - Post-secondary Access

As seen in Section 7, post-secondary enrolment directly from high school has become the pattern for the majority of students in our Grade 9 cohort studies. There is a noticeable difference around post-secondary achievement between students with non-Gifted Special Needs and students without. As seen in Figure 10, three quarters of students without Special Needs status applied to post-secondary and two thirds confirmed an offer of admission from an Ontario university or college (51% from university and 14% from college). For Gifted students, the vast majority applied to university, while 72% of Gifted students taking full-time Special Education courses, and 64% of Gifted students taking Regular courses confirmed an offer of admission[1].

For non-Gifted Special Needs students the situation is entirely different: *the direct transition into post-secondary is not an option for most of these students*. Over three quarters of non-Gifted students in full-time Special Education classes did not apply to post-secondary at all. Fifty-four percent (54%) of non-Gifted students in Regular classes, 57% of Non-identified students, and 59% of Local IEP students did not apply to post-secondary.

Figure 10: Grade 9 Cohorts of Fall 2004:
Post-secondary Confirmations by Special Needs Status in Grade 9



	IPRC Gifted - Spec Ed Classes	IPRC Gifted - Regular Classes	IPRC Non-Gifted - Spec Ed Classes	IPRC Non-Gifted - Regular Classes	Non-identified Special Needs	Local IEP but not selected	TDSB Students Without Special Needs Status
Confirmed University	72%	64%	3%	13%	12%	16%	51%
Confirmed College	5%	4%	16%	24%	23%	17%	14%
Applied to Post-secondary and Did Not Get In	12%	22%	6%	9%	8%	8%	10%
Did Not Apply	11%	11%	76%	54%	57%	59%	25%

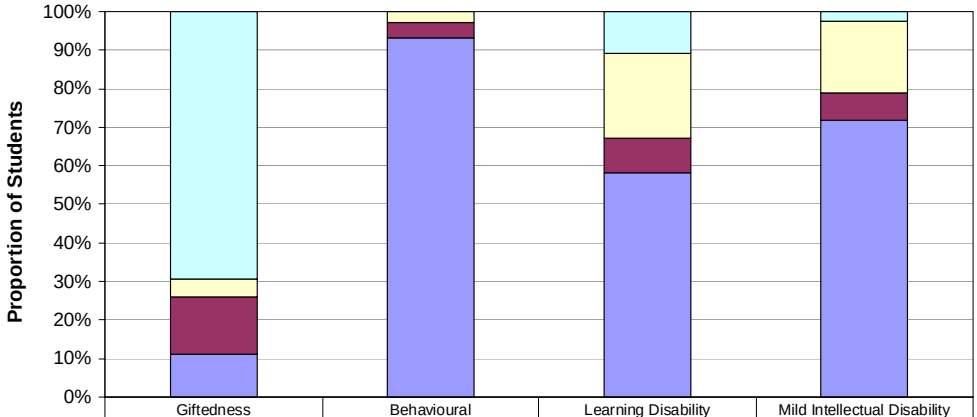
1 The true proportion is no doubt higher. OUAC no longer provides information on those applying out of province, but from earlier research we found that those who did were most likely to be from the highest-income areas which are over-represented in the Gifted program.

The post-secondary differences between students in full-time Special Education classes and the other non-Gifted Special Needs students are interesting. Less than a fifth of students taking full-time non-Gifted Special Education classes confirmed a post-secondary offer, while a third or more of other non-Gifted Special Needs student did so. University confirmations were minimal (3%) amongst students in full-time non-Gifted Special Education classes, though more common amongst other non-Gifted Special Needs students.

Figure 11 shows the post-secondary achievement of the key exceptionalities. Students with Learning Disabilities (LD) appear to have patterns similar to Special Needs students as a whole, that is, 11% confirmed university, 22% confirmed college, 9% applied but did not get in, while the majority, 58% did not apply at all. Students with a MID exceptionality had less success – 3% confirmed university, 19% confirmed college, 7% applied but did not get in, while 72% or almost three quarters did not apply at all. Post-secondary was not an option for almost all (93%) of the students with Behavioral exceptionalities. This was partly because the majority of students with Behavioural Exceptionalities dropped out of high school and thus had no opportunity for post-secondary.

These findings show the need for greater research on the relationship between Special Education and post-secondary access. The policy direction in education is shifting from graduation/dropout outcomes, to the need for opportunities for post-secondary access. These opportunities do not appear to be available to the majority of students with Special Needs, regardless of whether they have official exceptionalities or an Individual Education Plan (IEP) only. There are, at best, minimal post-secondary opportunities for students with Behavioral exceptionalities.

Figure 11: Grade 9 Cohorts of Fall 2004:
Post-secondary Confirmations by Exceptionality



	Giftedness	Behavioural	Learning Disability	Mild Intellectual Disability
Confirmed University	69%	0%	11%	3%
Confirmed College	5%	3%	22%	19%
Applied to Post-secondary and Did Not Get In	15%	4%	9%	7%
Did Not Apply	11%	93%	58%	72%

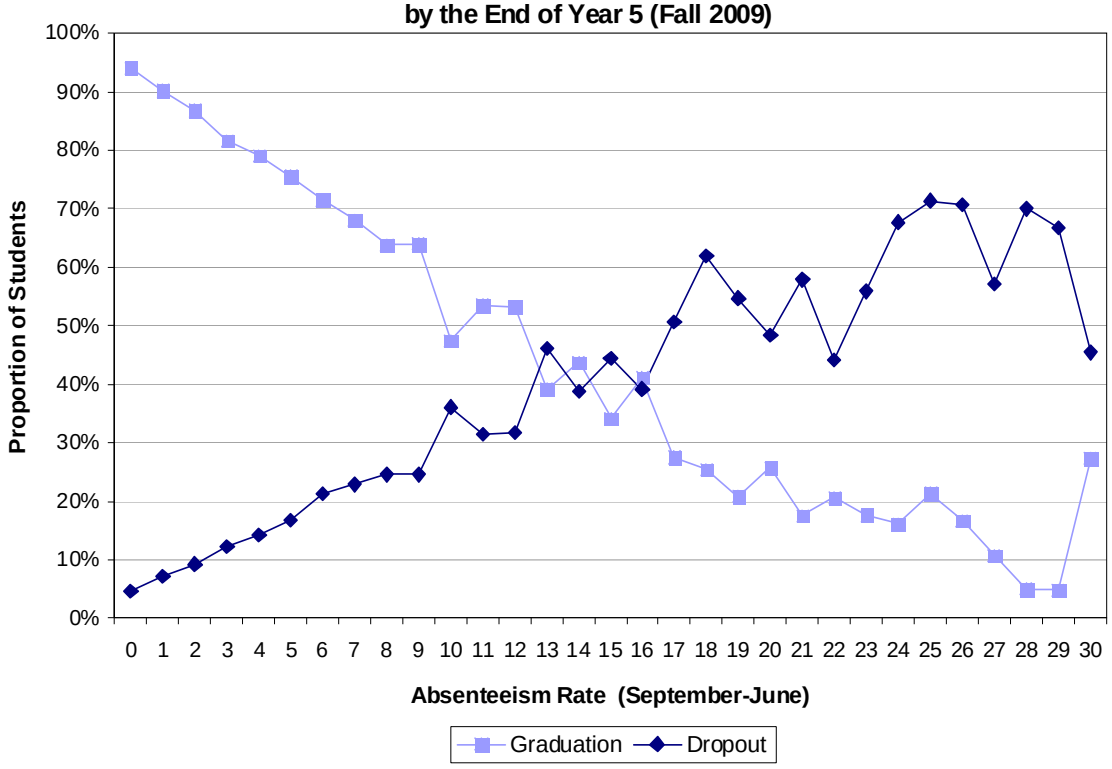
12. Grade 9 Absenteeism

a. Grade 9 Absenteeism and High School Graduation

Grade 9 absenteeism for all TDSB students is provided here for the first time (the baseline Fall 2000 study had Grade 9 absenteeism only for students from the Toronto legacy system). Figure 12 shows the annual absenteeism rate of the students: hence, if a student was present 190 days and absent in total 19 of those days, the absenteeism rate is 10%.

Results seen in Figure 12 clearly replicate earlier patterns showing a very strong relationship between Grade 9 absenteeism and graduation/dropout at the end of 5 years (Brown, 1997). In this cohort, almost all the students with very low absenteeism rates in Grade 9 (0-1%) had graduated by the end of 5 years. However, students with a Grade 9 absenteeism rate of over 10% (an average of half a day a week or more) were moderately at-risk, while students with a Grade 9 absenteeism rate of over 20% (an average of 1 day a week or more) were unlikely to have finished high school by the end of 5 years.

Figure 12: Grade 9 Absenteeism (September-June) and Graduation-Dropout by the End of Year 5 (Fall 2009)



b. Grade 9 Absenteeism and Access to Post-secondary

While the relationship between Grade 9 absenteeism and graduation in the TDSB is well documented, the relationship between Grade 9 absenteeism and post-secondary access has not been explored previously. The relationship of Grade 9 absenteeism to students' success in attaining access to post-secondary is much more strongly related; indeed, at least in this initial analysis, post-secondary pathways in Years 4 and 5 are extremely difficult to attain unless students had very low absenteeism in Grade 9. Thus, the majority of students who had an absenteeism rate of 7% or above did not confirm an offer of admission from an Ontario post-secondary institution over 2008 or 2009; the majority of students who had an absenteeism rate of 10% or above did not apply to post-secondary over the two years; for students with 20% absenteeism or more in Grade 9 (that is, missing a day or more a week in Grade 9) the chance of post-secondary access directly from high school was remote.

The relationship of Grade 9 absenteeism to university access is even more direct. While nearly three quarters (72%) of students with 0% absenteeism in Grade 9 confirmed an offer of admission for university by the end of five years of high school, 44% of students with 3% absenteeism confirmed an offer, and 22% of students with 10% absenteeism confirmed an offer. For more details, see Figure 13 and Table 8.

Figure 13: Grade 9 Absenteeism (September-June): Graduation and University Confirmation by the End of Year 5 (Fall 2009)

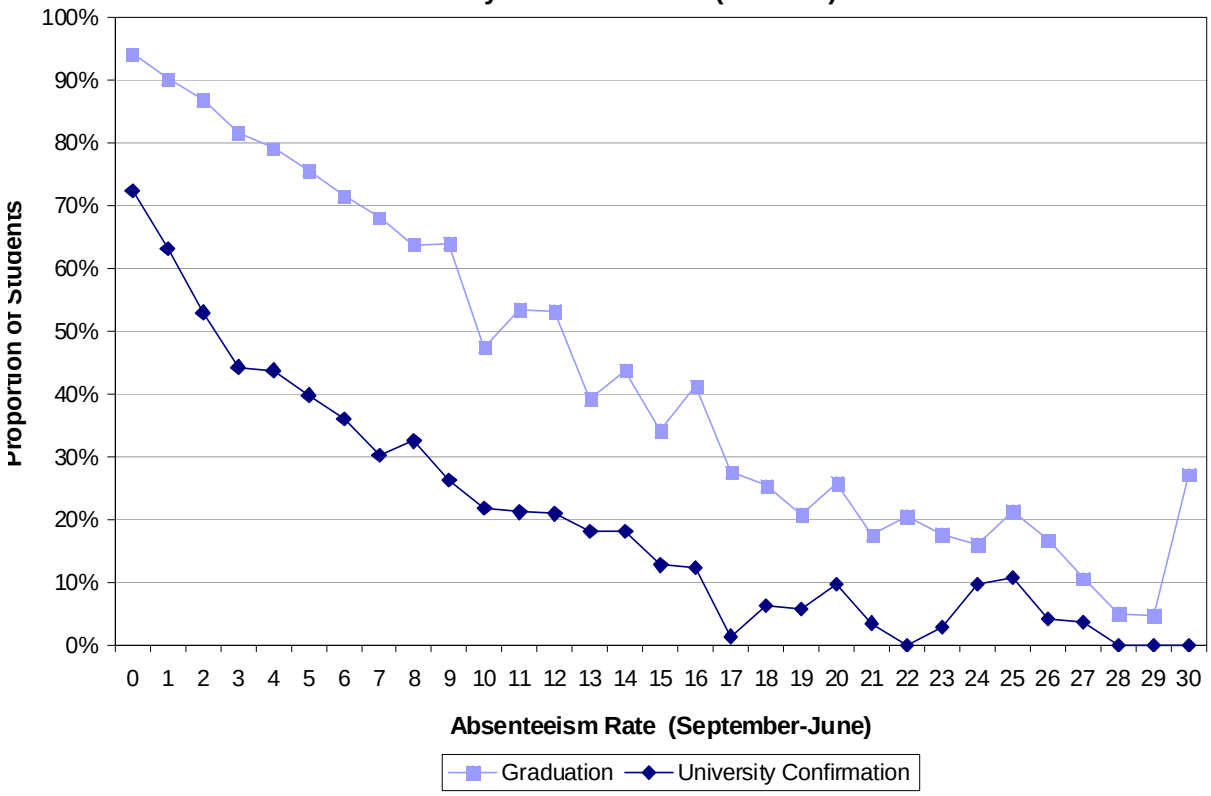


Table 8: Grade 9 Absenteeism and Post-secondary Pathways at the End of Year 5

Grade 9 Absenteeism Rate	Confirm University in Ontario	Confirm College in Ontario	Apply to Post-secondary in Ontario	Did Not Apply to Post-secondary	Total	N
0	72.4%	13.4%	6.7%	7.5%	100.0%	1086
1	63.2%	14.8%	7.8%	14.2%	100.0%	3177
2	53.0%	16.9%	10.1%	20.0%	100.0%	2287
3	44.3%	18.6%	12.0%	25.0%	100.0%	1741
4	43.8%	17.2%	13.0%	25.9%	100.0%	1323
5	39.8%	14.7%	13.3%	32.3%	100.0%	981
6	36.0%	14.4%	11.1%	38.6%	100.0%	759
7	30.3%	14.4%	11.3%	44.0%	100.0%	564
8	32.5%	11.1%	11.4%	45.0%	100.0%	431
9	26.3%	14.6%	12.0%	47.1%	100.0%	342
10	21.9%	8.7%	8.7%	60.7%	100.0%	183
11	21.2%	9.8%	11.0%	58.0%	100.0%	245
12	20.9%	8.0%	10.0%	61.2%	100.0%	201
13	18.2%	8.4%	8.4%	65.0%	100.0%	143
14	18.2%	8.3%	7.4%	66.1%	100.0%	121
15	12.8%	8.5%	8.5%	70.1%	100.0%	117
16	12.4%	11.3%	11.3%	64.9%	100.0%	97
17	1.4%	11.6%	14.5%	72.5%	100.0%	69
18	6.3%	6.3%	9.5%	77.8%	100.0%	63
19	5.7%	11.3%	5.7%	77.4%	100.0%	53
20	9.7%	9.7%	0.0%	80.6%	100.0%	31
21	3.5%	3.5%	7.0%	86.0%	100.0%	57
22	0.0%	11.8%	2.9%	85.3%	100.0%	34
23	2.9%	5.9%	2.9%	88.2%	100.0%	34
24	9.7%	0.0%	3.2%	87.1%	100.0%	31
25	10.7%	3.6%	0.0%	85.7%	100.0%	28
26	4.2%	4.2%	4.2%	87.5%	100.0%	24
27	3.6%	3.6%	7.1%	85.7%	100.0%	28
28	0.0%	0.0%	0.0%	100.0%	100.0%	20
29	0.0%	4.8%	0.0%	95.2%	100.0%	21
30	0.0%	9.1%	0.0%	90.9%	100.0%	11

13. Student Languages

As seen in Table 9, the five-year graduation rate of language groups increased between the Fall 2000 and Fall 2004 cohorts. English, the largest language group, had a slight increase; from 69% to 71%.The graduation rate of Bengali students increased 13%, Bengali-speaking students had the highest graduation rate of the Fall 2004 cohort, with 90% of students graduating within 5 years. Punjabi students had the highest increase, from 56% to 79%.The three language groups with the lowest graduation rates in both Fall 2000 and Fall 2004 were Portuguese, Spanish, and Somali-speaking students. However, each language group showed a pronounced increase over the 5 cohorts. The graduation rate of Portuguese students increased from 48% to 66%, Spanish students increased from 47% to 58%, and Somali students increased from 53% to 68%.

Table 9: Grade 9 Cohorts Fall 2000 - Fall 2004: Key Languages and Graduation Rates

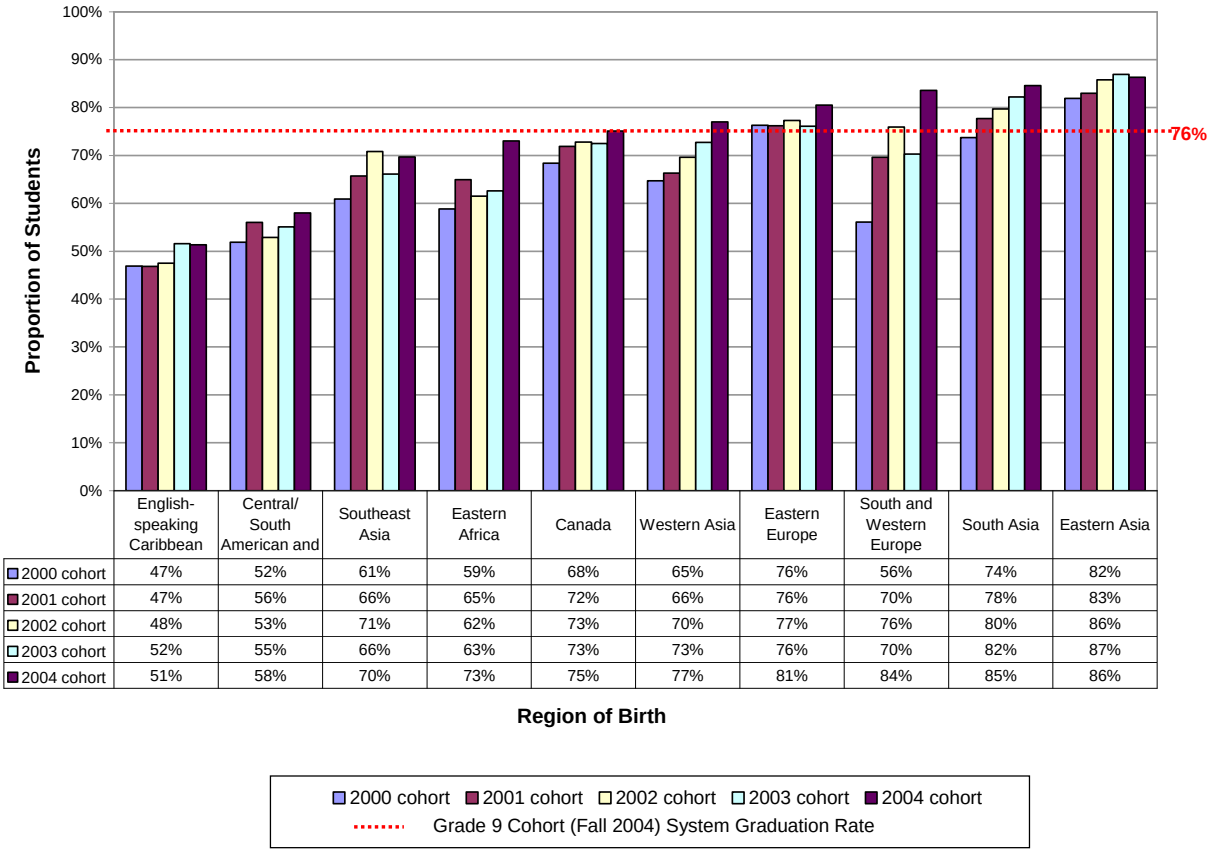
Language	% Graduates: Fall 2000 Cohort	% Graduates: Fall 2001 Cohort	% Graduates: Fall 2002 Cohort	% Graduates: Fall 2003 Cohort	% Graduates: Fall 2004 Cohort	Number of Students in the Fall 2004 cohort
Arabic	64.3	66.4	76.5	63.9	74.8	143
Bengali	76.5	83.7	85.9	87.9	90.1	202
Chinese	82.2	85.5	87.4	87.2	88.5	2032
English	68.5	68.6	69.8	69.6	71.2	8052
Greek	71.8	82.1	69.9	76.7	82.4	131
Gujarati	82.9	87.6	87.9	87.2	85.1	222
Hindi	*	76.2	*	84.0	87.0	115
Korean	71.8	82.1	80.2	86.1	83.6	298
Persian (Farsi)	61.9	65.0	68.1	72.5	71.3	327
Portuguese	47.8	49.0	55.6	*	66.0	103
Punjabi	56.2	78.8	74.4	79.0	78.9	213
Romanian	85.3	*	*	83.3	*	*
Russian	76.4	71.4	74.4	71.3	77.7	301
Somali	52.7	62.3	56.7	61.5	67.5	234
Spanish	46.9	50.0	51.4	50.4	57.8	277
Tamil	77.5	81.9	83.2	82.8	87.3	770
Urdu	72.6	73.6	79.0	74.8	83.2	494
Vietnamese	62.7	64.1	68.4	72.2	77.1	245

**Not released since number in group is less than 100.*

14. Regions of Birth

TDSB students came from over 200 countries, former countries, or colonies and these have been combined into 10 Regions of Birth. As seen in Figure 14, students born in Canada had a 75% graduation rate nearly equal to the full TDSB graduation rate of 76%. Students born in the English-speaking Caribbean (51%), and Central/South America/Mexico (58%), had the lowest graduation rates, while those born in South and Western Europe, South Asia, and East Asia had the highest graduation rates (84-86%). The graduation rates of all Regions of Birth have increased over time.

Figure 14: Grade 9 Cohorts of Fall 2000 - Fall 2004: Graduation Rates by Region of Birth



	English-speaking Caribbean	Central/ South American and	Southeast Asia	Eastern Africa	Canada	Western Asia	Eastern Europe	South and Western Europe	South Asia	Eastern Asia
2000 cohort	47%	52%	61%	59%	68%	65%	76%	56%	74%	82%
2001 cohort	47%	56%	66%	65%	72%	66%	76%	70%	78%	83%
2002 cohort	48%	53%	71%	62%	73%	70%	77%	76%	80%	86%
2003 cohort	52%	55%	66%	63%	73%	73%	76%	70%	82%	87%
2004 cohort	51%	58%	70%	73%	75%	77%	81%	84%	85%	86%

15. Arrival Date in Canada

Table 10 shows the relationship between years in Canada and graduation. This relationship is not clear. It would appear that neither being born outside Canada, nor the number of years in Canada, make a great deal of difference to the overall graduation rate. One thing that is clear is that graduation rates have been consistently increasing, regardless of whether students were born inside or outside Canada. Thus, between the Fall 2002 and Fall 2004 cohort, the graduation rate of Canadian-born students increased 2%, from 73% to 75%; the graduation rate of students in Canada for a year or less increased 3%, from 71% to 74% (Brown, 2008, Table 7, p. 18).

Table 10: Years in Canada and Outcomes by Year 5 (Fall 2009)

Years in Canada	Outcomes to Year 5, Fall 2004 Cohort (#, %)						TOTAL
	Graduate		Still in TDSB		Dropout		
One year or less	364	74.0%	32	6.5%	96	19.5%	492
2 years	325	75.1%	22	5.1%	86	19.9%	433
3 years	426	78.3%	33	6.1%	85	15.6%	544
4 years	520	80.6%	31	4.8%	94	14.6%	645
5 years	421	84.5%	12	2.4%	65	13.1%	498
6 years	349	80.6%	21	4.8%	63	14.5%	433
7 years	270	79.9%	19	5.6%	49	14.5%	338
8 years	284	80.5%	21	5.9%	48	13.6%	353
9 years	280	84.6%	11	3.3%	40	12.1%	331
10 years	252	78.3%	17	5.3%	53	16.5%	322
11 years	190	76.6%	20	8.1%	38	15.3%	248
12 years	223	78.2%	17	6.0%	45	15.8%	285
13 years or more	376	74.0%	42	8.3%	90	17.7%	508
Born in Canada	7920	75.1%	813	7.7%	1813	17.2%	10546
TOTAL	12200	76.4%	1111	7.0%	2665	16.7%	15976

16. Completion of the Grade 10 Ontario Secondary School Literacy Test (OSSLT) and Year 5 Achievement

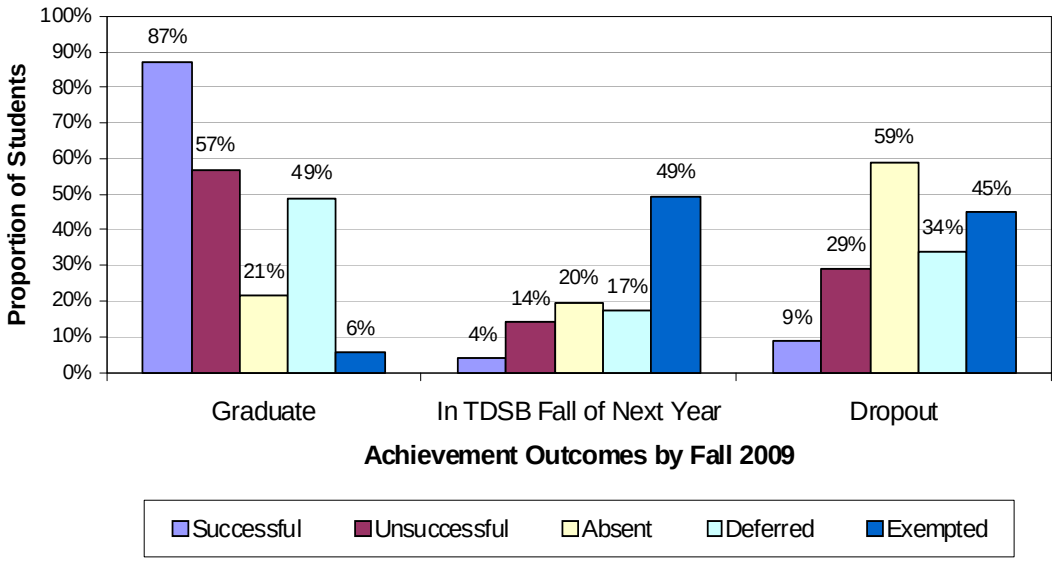
Students are required to pass a Literacy test, which is administered in their second year of high school. The five-year outcomes of these students, according to Literacy achievement (see Figure 15), are very similar to findings of earlier cohorts.

First-time participants who successfully completed the Ontario Secondary School Literacy Test (OSSLT) on the first administration are likely to graduate on time (87%). We have also found that these students are also most likely to complete 16 credits by the end of Grade 10, showing little difference between age-appropriate Literacy and at-risk status, according to credit accumulation.

First time students who took the test but failed it should be considered only moderately at-risk: that is, 57% of students who were unsuccessful the first time had graduated by the end of 5 years of high school.

Students who should write the test, but do not, and students who are exempted from writing the test, are the most at risk: that is less than half of the students who were deferred, less than a quarter of the students who were absent during the test, and one in twenty of exempted students, had graduated by the end of 5 years.

Figure 15: Grade 9 Cohort of Fall 2004:
First OSSLT Test Results and Achievement by Year 5 (Fall 2009)

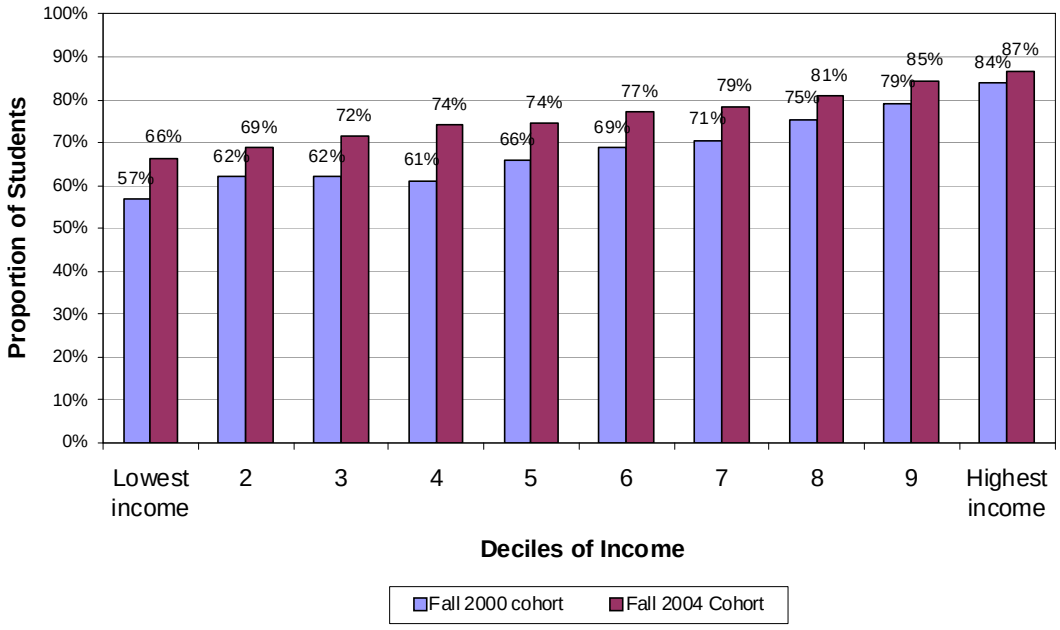


17. Neighbourhood Income

We do not collect the income of the students' families, but instead derive a proxy from Federal Census data. This is calculated by taking the postal code of where students lived in Grade 9, and matching it to the average family income of the student neighbourhood (Dissemination Area) of the national census. Students were then divided into ten income groups, from lowest income to highest income. For the Fall 2000 cohort, we used income from the 1996 Census, whereas for the Fall 2004 cohort, we used the most recent 2006 Census data.

Figure 16 shows the graduation rate of students according to neighbourhood income for the Fall 2000 cohort and then the Fall 2004 cohort. With both cohorts, there is a wide gap between the lowest decile (low income) and the highest decile (highest income). However, it is useful to note that the graduation rate of all income groups increased; though, the graduation rate of the lowest income group increased by 9% (57% to 66%) while the graduation rate of the highest income group increased by 3% (84% to 87%). Thus, the socioeconomic disparity as measured through neighbourhood income – while remaining very large – has declined.[2]

Figure 16: Grade 9 Cohort of Fall 2004:
Graduation Rates by Family Income, End of Year 5



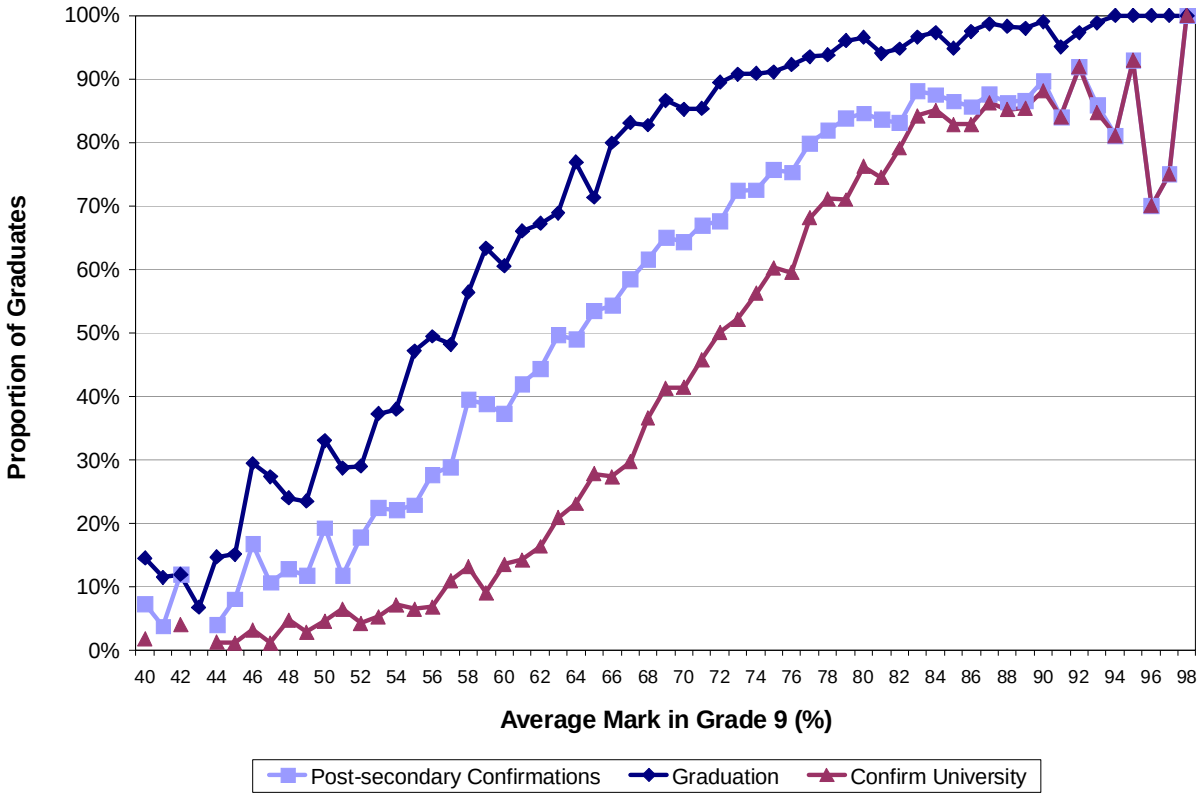
[2] It could be argued that using deciles of the 1996 and then the 2006 Census may result in an 'apples and oranges' comparison due to changes over time. In another study (Brown 2008) income information of the first three TDSB cohorts was matched to the same pre-defined income ranges from the 2001 Census. The changes documented, using this consistent methodology, were similar to what is found here: large differences between deciles, but with a slight decrease in the disparity between the poorest and richest neighbourhoods.

18. Graduation Based on Average Grade 9 Marks

Figure 17 shows the average mark in Grade 9, and its relationship to graduation at the end of 5 years; the proportion of students confirming university; and the proportion of students confirming post-secondary (that is, college or university). This is provided here for the first time. In our first Grade 9 cohort studies, several of the legacy systems did not include the marks of failed credits; therefore, we could not provide an average Grade 9 mark.

As seen in Figure 17, there is an extremely strong relationship between average mark and graduation, with few students graduating who had an average mark below 46. At the same time, once students have an average mark of about 55, the majority graduate. It would appear that many of the 'resilient' students who are behind but later catch up are in this 46-55 mark range.

Figure 17: Graduation Rate of Grade 9 Students Based on Average of All Grade 9 Credits (Graduation Rate after Five Years of Secondary School Four Years after End of Grade 9)



The relationship to post-secondary is also strong, although somewhat different from graduation (see Figure 17 and Table 11):

- Most of the students who have a mark of 60 or below did not apply to post-secondary (although as noted, most of those with a 55-60 mark will graduate).
- Most of the students with a mark of 61-64 will apply to post-secondary, less than half will confirm an offer of admission.
- The majority of students with a mark of 65-68 will get into post-secondary, though most likely into community college. In fact, the optimal college confirmations marks appear to be 58 to 68, when 25-29% will confirm college.
- Students with a mark of 69 or higher are more likely to confirm university than college. The majority of the students with a mark of 72 or higher will confirm university.

Table 11: Average Grade 9 Mark and Post-secondary Confirmations

Average Mark	Confirm University in Ontario	Confirm College in Ontario	Apply to Post-secondary in Ontario	Did Not Apply to Post-secondary	Total
26	5.9%	0.0%	5.9%	88.2%	100.0%
27	0.0%	0.0%	0.0%	100.0%	100.0%
28	0.0%	0.0%	3.6%	96.4%	100.0%
29	0.0%	0.0%	0.0%	100.0%	100.0%
30	0.0%	0.0%	0.0%	100.0%	100.0%
31	0.0%	4.3%	0.0%	95.7%	100.0%
32	0.0%	4.0%	4.0%	92.0%	100.0%
33	0.0%	0.0%	0.0%	100.0%	100.0%
34	0.0%	3.3%	0.0%	96.7%	100.0%
35	0.0%	7.7%	0.0%	92.3%	100.0%
36	0.0%	0.0%	0.0%	100.0%	100.0%
37	0.0%	0.0%	0.0%	100.0%	100.0%
38	0.0%	10.0%	3.3%	86.7%	100.0%
39	2.0%	0.0%	2.0%	95.9%	100.0%
40	1.8%	5.5%	0.0%	92.7%	100.0%
41	0.0%	3.8%	9.6%	86.5%	100.0%
42	4.0%	8.0%	4.0%	84.0%	100.0%
43	0.0%	0.0%	1.4%	98.6%	100.0%
44	1.3%	2.7%	5.3%	90.7%	100.0%
45	1.2%	7.0%	3.5%	88.4%	100.0%
46	3.2%	13.7%	7.4%	75.8%	100.0%
47	1.2%	9.5%	8.3%	81.0%	100.0%
48	4.8%	8.0%	7.2%	80.0%	100.0%
49	2.9%	8.8%	7.8%	80.4%	100.0%

Average Mark	Confirm University in Ontario	Confirm College in Ontario	Apply to Post-secondary in Ontario	Did Not Apply to Post-secondary	Total
50	4.6%	14.7%	5.5%	75.2%	100.0%
51	6.5%	5.2%	8.5%	79.7%	100.0%
52	4.3%	13.6%	6.2%	75.9%	100.0%
53	5.3%	17.2%	8.9%	68.6%	100.0%
54	7.2%	14.9%	7.7%	70.3%	100.0%
55	6.5%	16.4%	8.9%	68.2%	100.0%
56	6.9%	20.7%	12.8%	59.6%	100.0%
57	11.0%	18.0%	9.2%	61.8%	100.0%
58	13.2%	26.3%	10.2%	50.4%	100.0%
59	9.1%	29.7%	10.5%	50.7%	100.0%
60	13.6%	23.8%	9.6%	53.0%	100.0%
61	14.3%	27.7%	13.4%	44.6%	100.0%
62	16.4%	28.1%	14.7%	40.8%	100.0%
63	20.9%	28.8%	10.5%	39.8%	100.0%
64	23.1%	25.9%	14.6%	36.4%	100.0%
65	27.8%	25.7%	10.0%	36.5%	100.0%
66	27.4%	26.9%	14.0%	31.7%	100.0%
67	29.7%	28.8%	15.2%	26.4%	100.0%
68	36.6%	25.0%	12.6%	25.8%	100.0%
69	41.3%	23.8%	8.3%	26.6%	100.0%
70	41.4%	22.9%	13.0%	22.7%	100.0%
71	45.8%	21.2%	11.9%	21.2%	100.0%
72	50.1%	17.5%	11.6%	20.8%	100.0%
73	52.2%	20.2%	9.9%	17.7%	100.0%
74	56.2%	16.3%	13.8%	13.8%	100.0%
75	60.3%	15.4%	9.9%	14.3%	100.0%
76	59.5%	15.8%	13.2%	11.5%	100.0%
77	68.1%	11.8%	9.3%	10.9%	100.0%
78	71.1%	10.8%	7.4%	10.6%	100.0%
79	71.0%	12.8%	8.5%	7.8%	100.0%
80	76.2%	8.4%	8.0%	7.4%	100.0%
81	74.5%	9.1%	8.0%	8.4%	100.0%
82	79.1%	4.0%	8.8%	8.1%	100.0%
83	84.2%	3.9%	7.3%	4.6%	100.0%
84	85.1%	2.4%	7.2%	5.3%	100.0%
85	82.8%	3.7%	7.4%	6.0%	100.0%
86	82.8%	2.8%	9.6%	4.8%	100.0%
87	86.3%	1.3%	8.7%	3.7%	100.0%
88	85.2%	1.1%	9.2%	4.6%	100.0%
89	85.4%	1.2%	10.1%	3.2%	100.0%
90	88.2%	1.5%	8.9%	1.5%	100.0%
91	84.0%	0.0%	9.9%	6.2%	100.0%
92	91.9%	0.0%	3.6%	4.5%	100.0%
93	84.7%	1.2%	11.8%	2.4%	100.0%
94	81.1%	0.0%	13.5%	5.4%	100.0%
95	92.9%	0.0%	7.1%	0.0%	100.0%

Average Mark	Confirm University in Ontario	Confirm College in Ontario	Apply to Post-secondary in Ontario	Did Not Apply to Post-secondary	Total
96	70.0%	0.0%	30.0%	0.0%	100.0%
97	75.0%	0.0%	25.0%	0.0%	100.0%
98	100.0%	0.0%	0.0%	0.0%	100.0%

19. Who is NOT in the Grade 9 Cohort: Secondary Entrance after Grade 9

This cohort study examines the progress of students who started in Grade 9 in Fall 2004. However, the mobility of the TDSB is such that many students leave the TDSB, while others enter the TDSB from other counties and boards and a certain number re-enter the TDSB after leaving during their years in the elementary panel.

We will look at this process in more detail, while examining the 17 year old students in the TDSB present in Fall 2007, when students in this cohort started their fourth year of secondary school, 3 years after starting Grade 9. In theory, if all students were age-appropriate for their grade, and if no students entered the TDSB after the beginning of Grade 9, these 18,949 students would be in the Grade 9 cohort. However, they are not, and we will explain how, if not why.

a. Who are the Students Outside the Cohort Study?

In Fall 2004 there were 16,936 age-appropriate students in the Grade 9 cohort[3]. By Fall 2007 **we had lost 2,199**:

- 1,324 transferred to another educational institution; and
- 875 had dropped out.

This left us with 14,737 cohort students – 78% of 17 year olds as of Fall 2007. At the same time, **we picked up 4,212 new students – the other 22%**.

Table 12 shows 17 year olds in Fall 2007 according to cohort origin:

Table 12: 17 Year Olds in Fall 2007 by Cohort Origin

	Frequency	Percent
Year 9 cohort 2004-5	14737	77.8%
Arrivals from other countries	2248	11.9%
Grade 9 cohort of 2005-6 retained	507	2.7%
TDSB re-entrants or not in cohort	386	2%
From other boards or provinces	1071	5.7%
Total	18949	100%

[3] Note that 5% of the cohort was either a year younger or a year older than age-appropriate. Here we are looking only at the students born in 1991.

The 4,212 new students can be divided into the following:

- Two thousand two hundred and forty-eight (2,248) students (or 12% of 17 year olds present in Fall 2007) recently arrived from other countries. Thus, for these students, the majority of their elementary panel years were spent in other countries, and in some cases, their early secondary years were also spent in other countries.

- Five hundred and seven (507) students (or 3% of 17 year olds) were identified in the *next* Grade 9 cohort (Fall 2005) that is, they started Grade 9 a year later than the cohort. For the most part these are students retained in the elementary panel.

- Three hundred and eighty-six (386) students (or 2% of 17 year olds) had been in the TDSB elementary panel, but had re-entered the TDSB after Grade 9 started.[4]

- One thousand and seventy-one (1,071) students (or 6% of 17 year olds) entered the TDSB from other provinces and boards (although this number will also include a number of TDSB re-entrants who we could not identify).

We will examine each of these groups in some detail.

i. Arrivals from Other Countries (N = 2,248)

These students arrived in Canada between 1999 (5 years before the cohort started in Grade 9) and 2007. In fact, the vast majority of the students (87%) arrived in Canada after the Grade 9 cohort started in high school. These students were slightly more likely to be male (54% compared to 52% for the TDSB system). The vast majority (89%) also spoke a language other than English, most noticeably Chinese (28%), Korean (6%), Urdu (5%), Persian/Farsi (5%), and Russian (4%). They were most likely to have been born in Eastern Asia (36%), South Asia (19%), and Western Asia (11%).

Slightly under a third (32%) graduated by the end of the 2007-08 school year, the majority (56%) returned to the TDSB for an additional school year, 7% transferred outside the TDSB and 6% dropped out.

[4] In fact, the number is higher. There is a TDSB entry code of 're-entrant' but it appears to be rarely used. These cases were identified because they had a school ID number from one of the TDSB legacy systems. This will miss most students from North York and those who left the TDSB after the Trillium system was implemented.

ii. Retained Students from the Fall 2005-06 Cohort (N = 507)

These students were more likely to be male (62%). Interestingly, these retained students were more likely to have been born outside of Canada than the regular cohort students (43% compared to 34% of the Fall 2004 cohort students) although the proportion speaking only English was the same (51%). None of these students graduated by the end of 2007, though 84% returned to the TDSB for an additional (fourth) school year (4% transferred outside the TDSB and 12% dropped out).

iii. Re-entrants to the TDSB (N = 386)

There were slightly more female re-entrants (51%) than male. A quarter were born outside Canada and slightly under two thirds (63%) spoke only English, a higher proportion than other subgroups. Slightly more than a third (36%) of the students graduated by the end of 2007, while 42% of them returned to the TDSB for an additional year. Approximately one-sixth (17%) dropped out.

iv. Entrants to the TDSB from Other Boards or Provinces (N = 1,071)

The gender of these students was split equally (50%). Only 14% were born in other countries and no students arrived after 1998. The proportion of students speaking only English was the same as the cohort (51%) with Chinese at 8% the only key language. The proportion of graduates by the end of 2007 was 37%, almost the same as re-entrants to the TDSB, while 39% returned to the TDSB for an additional year, 9% transferred outside the TDSB, and 15% dropped out.

b. Special Needs

We examined the Special Needs status of all 17 year old students in Fall 2007, according to the above status. Approximately 13% were non-Gifted Special Needs, but there was an extraordinary difference between the groups. While there were 2,401 17 year old students with non-Gifted Special Needs, 1,942 were in the Fall 2004 cohort and 229 were in the Fall 2005 cohort, for a total of 2,171 or 90% of all Special Needs students. Students who came into the TDSB after Grade 9 accounted for 20% of 17 year olds, but only 10% of 17 year old Special Needs students. Moreover, students who recently arrived from other countries had very low representation in Special Needs records: 42 out of 2,248 students, or less than 2%. As seen in the earlier section on Special Needs amongst the Grade 9 cohort (see Section 11), there was little change in Special Needs status of students once they had entered Grade 9. Likewise, from this analysis, it is apparent that comparatively few students entering the TDSB after Grade 9 (in

particular, those arriving from other countries) have been provided with either an IPRC or IEP designation.

SUMMARY

Graduation Patterns

The Fall 2004 cohort study follows the progress of students who started in Grade 9 over 5 years. By Fall 2009, after removing the students who transferred out of the Toronto District School Board (TDSB), we found that 76% of the students had graduated while 17% dropped out. Cohort studies are snapshots over time, and 5 years is not enough to show the full story: 7% of the students returned to the TDSB for an additional sixth year. We have found from previous studies that it will take 8 years for all students to complete their initial high school experience. Even this is not the full story, since many of those who drop out will eventually return to the education system, in other boards, as adult students, or to post-secondary through various community college or adult programs.

The findings of the TDSB cohort graduation study over time have shown a pattern of continuous, although gradual, improvement. The improvement in the graduation rate over five years (starting with the baseline of the Fall 2000 cohort) is 7%, slightly over 1% per year. In fact, a long-term examination of 17 years of cohort studies has shown an increase of slightly over 1% per year over that time.

Indeed, graduation in Ontario has changed from being an outcome of a selected subgroup of the population in the 1940's, to becoming the majority in the 1980's, to becoming the general rule in current times.

That being said, there are still large numbers of students who do not finish their high school requirements within the generally accepted range of 5 years. Patterns have been very consistent. The findings of this report and an earlier report (Brown, 2006) are identical in showing that students are less likely to graduate on time if they:

- Took a majority of their courses in the Applied or Locally Developed (Essentials) program of study;
- Had a mark of less than 60 in Grade 9 English, Mathematics, Science, or Geography (similar patterns have been found with Grade 8 subjects);

- Achieved fewer than 7 credits by the end of Grade 9 and fewer than 15 credits by the end of Grade 10;
- Resided in lower income neighbourhoods;
- Were older than the age-appropriate year of birth (14) when they started secondary school;
- Were born in the English-speaking Caribbean or Central/South America/Mexico;
- Spoke Portuguese, Spanish, or Somali at home;
- Had high absenteeism rates in Grade 9 (missing more than 10% of instructional days);
- Were deferred or absent from writing the Grade 10 Ontario Secondary School Literacy Test (OSSLT); and
- Were male.

There are grounds for optimism. The graduation rate of almost all key subgroups has increased over the five years of the TDSB cohort studies. Moreover, in looking at the cohorts of the TDSB students, we have found that many key 'gaps' have been reduced. Thus,

- The graduation rates of male students rose faster than female students.
- The rates of those speaking Somali, Portuguese, or Spanish rose faster than both the TDSB average and that of English-speaking students (although the rate of students speaking those languages remains below the TDSB total).
- Students taking a majority of Applied and Locally Developed (Essentials) courses had graduation rate increases that were higher than those taking the Academic program of study – and students taking Applied courses are slightly more likely to take University courses in Grades 11-12.
- Older students had a graduation rate increase higher than those of age-appropriate students and a majority of these older students are now graduating.
- The graduation rate of students living in lower income neighbourhoods improved more than the rate of students living in higher income neighbourhoods.

Very large gaps still remain and this has been well documented in this report, and progress in some cases has been limited. For example, the graduation rate of students born in the English-

speaking Caribbean did increase, but did so at a rate below the TDSB average (and thus, potentially, increasing the gap).

Post-secondary Confirmations

Almost two thirds (61%) of the cohort confirmed an offer of admission from an Ontario college or university over the 2008 and 2009 application cycle (years 4 and 5 of this cohort study). Most of the students who did not confirm dropped out of school. Almost all (89%) of the graduates applied to post-secondary and 78% confirmed an offer of admission. Given the students who confirm an offer of admissions to post-secondary outside Ontario, and those who will be accepted in the future, a conservative estimate of graduates eventually going to post-secondary would be 85%.

Generally, given that graduation rates and post-secondary rates are converging, the predictors of graduation also tend to be predictors of post-secondary access. Yet there are important differences. The majority of students taking Grade 9 courses in the Applied Programs of Study now graduate; however, only a third confirmed an offer of admission from a college or university. The majority of both university and college confirmations came from students taking Academic courses in Grade 9. We therefore have, in practice and function, a post-secondary stream (students taking Academic courses in Grade 9) and a Workplace stream (students taking all other courses). This is quite different from the Ministry of Education's official definition of Applied courses, which are in theory intended for those with a college pathway. It has been over a decade since the Ministry implemented its most recent ('OSS') curriculum plan. The shifting ground of post-secondary access has changed enough that a serious re-examination is in order.

The focus on dropout and graduation rates from key research and discussion of a quarter century old (Radwanski, 1987). Although still currently the key focus of secondary achievement it is probable that in a few years "graduation" in itself will become less relevant than post-secondary access, and the focus will shift from gaps in graduation, to gaps in post-secondary access.

Absenteeism

Grade 9 absenteeism for all TDSB students was provided in this report for the first time. The relationship between Grade 9 absenteeism and graduation by the end of 5 years has been documented in previous reports and similar findings are seen here: almost all the students with

very low absenteeism (0-1%) had graduated by the end of 5 years, while those with an absenteeism rate of over 10% (an average of half a day a week or more) were moderately at-risk while students with a Grade 9 absenteeism rate of over 20% (an average of 1 day a week or more) are unlikely to have finished high school. However, the relationship of Grade 9 absenteeism to post-secondary confirmations appears to be much stronger than graduation itself. The majority of students with an absenteeism rate of 7% or above may have graduated – but for the most part, they did not confirm an offer of admission from an Ontario post-secondary institution.

The relationship to university access is even stronger. While nearly three quarters (72%) of students with 0% absenteeism in Grade 9 confirmed an offer of admission for university by the end of 5 years of high school, 44% of students with 3% absenteeism confirmed an offer, and 22% of students with 10% absenteeism confirmed an offer. For some decades, absenteeism has been widely considered to be an important indicator of at-risk status outside Ontario, but it has not been carefully examined in this province (Brown, 1999). As post-secondary pathways become increasingly important, it is important to re-examine this attitude.

Special Needs

This cohort study is the first time we have been able to look at Special Needs status at the beginning of Grade 9 (October 31 2004 in this case) and then to look at the same students for 5 years. A few key points:

- Very few students in the cohort received *new* Special Needs status after the beginning of Grade 9 – for all intents and purposes, whether students were Special Needs or not throughout high school was decided by the end of Grade 8.
- There is a fairly limited difference in terms of achievement between the different sub-categories of Special Needs students; that is, students with exceptionalities; those who are 'Non-identified' (i.e., identified by the Special Education department but without exceptionalities), and 'Local IEP' (i.e., students not identified by Special Education but possessing an Individual Education Plan [IEP]). There is one major exception to this – students with a ***Behavioral*** exceptionality. Most of these students dropped out and few went onto post-secondary (there were no successful transitions to university amongst students with Behavioral exceptionalities). The Behavioral students are, however, a fairly small number in this cohort (a little over 100 students).

- There are very limited differences between the so-called 1) "Non-identified" (i.e., identified by Special Education but without an exceptionality) and 2) the Local IEP'd students (i.e., those students who had an IEP but were not on the radar of Special Education). In fact, when we looked at Grade 9 and then Grade 12 Special Needs status of the same students, many 'Non-identified' and 'Local IEP' students played musical chairs, in terms of their classification. While Special Education uses 'Non-identification' for funding, and does not consider other students with IEP's, it is apparent that this is a distinction without a difference in terms of long-term function and achievement.

- The distinction between full-time Special Education (students with exceptionalities, taking Special Education classes in fully self-contained or partially integrated settings) and part-time Special Education (students with exceptionalities in Regular classes) is also a somewhat artificial one, when we look at the same students over time. Of the students in this cohort, between 8 and 9 out of 10 were in full-time Special Education classes in elementary school. Yet less than half were in full-time Special Education classes in Grade 9, while **only 27%** were in Special Education classes by Grade 12. The term "full-time Special Education" is therefore challenging in terms of any longitudinal examination of students, given that few students who start in full-time Special Education classes will remain in them.

- Most students identified with non-Gifted Special Needs will – with sufficient support, and given enough time – graduate from high school. However, most will **not** go onto post-secondary – while approximately a third will mostly go into the community college system. Given the increased focus and importance of post-secondary pathways, it is clear that this is one of the groups with the most limited participation, at least in the direct transition from high school.

These results show the need to reappraise the structure of Special Education programming in the secondary panel. Given that the province sets the structure of Special Education, such a reappraisal should go beyond the Toronto District School Board.

Adult Education

In today's education system, the relatively short-term longitudinal analysis seen in a five-year cohort study is quite limited in providing the full picture of access to post-secondary education. We know that more challenged and resilient students will take up to eight years to finish their

secondary school requirements. These students will also take multiple years in order to enter the post-secondary system. We have looked at these longer trends in several ways. First, we extended the first TDSB cohort (students who started in Fall 2000) to six years (to Fall 2006) and compared outcomes to similar students in Montreal and Vancouver (McAndrew, Ait-Said, Ledent, Murdoch, Anisef, Sweet, Walters, Brown, Aman & Garnett, 2009). Secondly, as part of a research study involving several academics across Ontario, we examined student post-secondary pathways of the cohort in five OUAC and OCAS application cycles (2004 through 2008); that research is currently in progress (Sweet, Brown & Anisef, 2010).

It is also important to examine the progress of these students after their career in the TDSB secondary system. As part of a pilot research study, we are looking at students in the original Fall 2000 cohort as they entered the TDSB's continuing education system, and applied to community college as adult students.

Who Is Not in the Grade 9 Cohort

An examination of 17 year olds in Fall 2007 found that close to a fifth of students were not in the Grade 9 cohort of Fall 2004 – most students had entered the TDSB from other countries, other students from other Canadian or Ontario boards, while a small number of these students re-entered the TDSB. In part, this is something that has always happened in Toronto, which draws more new immigrants than any other city in Canada. If anything, the rate may currently be lower than in previous years, since the number of recent immigrants has been in decline. These students may have different educational paths than the more traditional and stable cohort students: for example, most had not graduated by the end of Fall 2008. Perhaps in the future, a comprehensive examination of TDSB progress will involve a composite longitudinal study – one where the traditional cohort study is combined with more recent additions.

Conclusion

In conclusion, this examination of the TDSB secondary panel found clear evidence of consistent improvement over time (e.g., the TDSB graduation rate improving over time, part of a long-term trend over decades). On the negative side, this examination found many substantial inequities – most of which had already been clearly documented. On the positive side, many of the more challenged populations are making substantive progress – although certain groups, for example students born in the English-speaking Caribbean, are making progress but at a rate below the TDSB average.

Within this generally positive picture, there are a number of areas for suggested improvement, for example, in looking at the organization of Special Needs in the secondary panel. There are also clear directions for future research: a greater emphasis on post-secondary pathways; following students as they explore options of adult education; and looking at the large number of students who entered the TDSB after high school had started. Over half a century has passed since the Toronto Grade 9 cohort of 1959 started their secondary careers, and in that time the Ontario and Toronto educational systems have altered dramatically. Our cohort study process will hopefully have the flexibility to monitor key changes happening now, and into the future.

REFERENCES

Brown, R. S. (1993). *A follow-up of the grade 9 cohort of 1987 every secondary student survey participants.* Toronto, Ontario, Canada: Toronto Board of Education.

Brown, R. S. (1997). *The Toronto board grade 9 cohort of fall 1991: A five year tracking study 1991-1996*. Toronto, Ontario, Canada: Toronto Board of Education.

Brown, R.S., Turner, C., Chan, G., Chaikoff, K., Handscombe, J. (1996). *Dropouts in Ontario: Developing a consistent method between four school boards and the province for calculating, interpreting and reporting secondary student data.* Toronto, Ontario, Canada: Unpublished paper.

Brown, R. S. (2006). *The TDSB grade 9 cohort study: A five-year analysis 2000-2005*. Toronto, Ontario, Canada: Toronto District School Board.

Brown, R. S. (2008). *Special education/special needs information in the TDSB, 2005-6*. Toronto, Ontario, Canada: Toronto District School Board.

Brown, R. S. (2008). *The grade 9 cohort of fall 2002: A five-year cohort study, 2002-2007*. Toronto, Ontario, Canada: Toronto District School Board.

Cheng, M., Tsuiji, G., Yau, M., & Ziegler, S. (1989). *The every secondary student survey, fall 1987*. Toronto, Ontario, Canada: Toronto Board of Education.

McAndrew, M., Ait-Said, R., Ledent, J., Murdoch, J., Anisef, P., Sweet, R., Walters, D., Brown, R., Aman, C., & Garnett, B. (2009). Educational pathways and academic performance of youth of immigrant origin: Comparing Montreal, Toronto and Vancouver. Vancouver, British Columbia, Canada: Canadian Council on Learning. http://www.ccl-cca.ca/CCL/Reports/Other+Reports/20090923CICReport.htm

Toronto District School Board and Offord Centre, McMaster University. (2000, Spring). Ongoing evaluation of the EDI pilot participants. Toronto, Ontario, Canada: Unpublished Research.

Turner, C., (1997). Tracking Educational Outcomes for a Cohort of Grade 9 Students: 1991-1996. Scarborough: Scarborough Board of Education.

Sweet, R., Brown, R., & Anisef, P. (2010). *Region of origin and the post-high school pathway choices of Native-born and immigrant secondary school students.* Paper presented at the Metropolis National Conference, Montreal, Canada.

Wright, E.N. (1967). *Retention rates in Toronto secondary schools*. Toronto, Ontario, Canada: Toronto Board of Education.

APPENDIX A

SELECTION OF THE GRADE 9 COHORT

Selection Process

At the time of the selection of Grade 9 students, no consistent flag existed among the three Student Information Systems then in place, to determine Grade 9 students who are new to secondary studies (as opposed to students who had started secondary studies in previous school years). The following outlines the selection criteria used.

The initial process selected students in TDSB secondary grades (including the Grade 9 students of 8 Toronto District School Board (TDSB) junior high schools) between the ages of 13 and 15, who were present in the TDSB in Fall 2004.

Then, the following students were deleted:

- Any student attending a secondary school in the TDSB the previous 2003-04 year;
- Any student who had completed more than 2 Grade 10 credits by the end of June 2005;
- Any student awarded an equivalency credit by the end of June 2005; and
- Any student who had been awarded more than 9 credits by the end of June 2005.

Sources of Information

Several sources of information have been used to develop the set of indicators of student success:

- Information drawn from the Student Information Systems currently being used in the TDSB, as provided by the Data Warehouse, for the 2004-05, 2005-06, 2006-07, 2007-08, and 2008-09 school years;
- Demographic data for all students attending TDSB secondary and junior high day schools (e.g., date of birth, grade, gender, country of birth, special needs, absenteeism);
- Exit dates and exit codes of TDSB secondary students over 5 years;
- Snapshots of all TDSB students at various points in time (usually, but not always done 3 times a year - October 31, March 31, and May/June);

- Transcript data for secondary students (including subject, mark, and credit information on all courses) over 5 years;
- Data on Ontario Secondary Student Literacy Test (OSSLT) from 2005-06 and 2006-07 from EQAO, the provincial testing authority;
- Ontario Universities Applications Centre (OUAC) and the Ontario College Application Centre (OCAS) from the 2008 and 2009 post-secondary applications cycles; and
- Family income data from the 2006 Census (the average income of families living in a City of Toronto Dissemination Area, or DA, which was then linked to the student datasets using the postal code of student residence).

APPENDIX B

HISTORICAL CHANGES: THE TORONTO LEGACY COHORTS 1987-2009[5]

In the current Ontario educational system, most students complete high school and much of the research focuses on who does not finish high school and why students drop out. It is important to remember that historically speaking, this is a recent development.

In 1946, the Department of Education (now the Ministry of Education) published a chart showing longitudinal student progress in Ontario at the time. Out of all the students starting Grade 1, only 67% passed the high school entrance exam and only 56% started Grade 9 (hence, 44% did not make it to Grade 9). A fifth (21%) of Ontario students completed Grade 12 and 13% completed Grade 13, while only 4%, or less than 1 in 20 who started in elementary school, made it to post-secondary institutions.

With the first Toronto Grade 9 cohort report of 1959, all students were expected to at least *start* high school (and the High School Entrance Exams were long gone) but "public" schools ended at Grade 10, commercial-technical schools ended at Grade 12, and collegiate/academic institutes at Grade 13. The lack of consistent curriculum and student timelines made a consistent 'graduation' or 'dropout' rate problematic. Still, it was determined that as of the end of Year 5 (1963-1964) only 13% of all students or 29% of students enrolled in collegiate/academic schools had completed Grade 13 (Wright, 1967), a rate not greatly different from the Ontario figures of 1945.

In the 1960's high school graduation was rare, but by 1987 it had became common enough that the Radwanski Report now focused on the crisis of a 'high' Ontario dropout rate of 30% (Radwanski, 1987). The first Toronto cohort of Fall 1987 is a useful benchmark in that it is one of the first years of the OS:IS system, where the structure of graduation is most similar to our current OSS system; the cohort of Fall 2000 was the first where all curriculum was clearly under the OSS system[6].

[5] This is an update of an appendix that appeared in Brown 2008.

[6] Depending on interpretation, there have been at least five major curriculum reorganizations in Ontario since the Education Act of 1871. OS:IS, implemented in the 1980's to replace the Robarts system was important in that for the first time all high school graduation took place after completing Grade 12. However, with OS:IS a majority of students took five to seven years to finish their requirements, and it was rare for students to have completed their Ontario Academic Credits (OAC), needed to apply to university, in under five years (Brown 1993). The students in the current OSS curriculum started graduating in 2003.

Table 1 shows six Grade 9 cohorts that were part of similar longitudinal studies. In each of the studies, students were followed for five school years after starting Grade 9. For consistent comparison, the information for the Fall 2000, Fall 2002, and Fall 2004 cohorts is provided here only for students attending schools in what had been the Toronto legacy system. The cohort of Fall 1987 was followed until Fall 1992; the cohort of Fall 2004 was followed until Fall 2009.

Table 1: Fifteen Years of Toronto Cohort Studies:
Toronto Legacy System Cohorts of 1987, 1991, 1993, 2000, 2002, and 2004

Cohort	Percentage Graduated	Percentage Still in TBE System	Percentage Dropped Out
Cohort of 2004 to Fall 2009	74%	10%	16%
Cohort of 2002 to Fall 2007	69%	9%	22%
Cohort of 2000 to Fall 2005	64%	12%	24%
Cohort of 1993 to Fall 1998	63%	17%	21%
Cohort of 1991 to Fall 1996	59%	19%	22%
Cohort of 1987 to Fall 1992	56%	11%	33%

Over the 17 years of cohort studies:

- The graduation rate increased from 56% to 74%;
- Dropout declined from 33% to 21% (Fall 1993), then increased to 24% with the Fall 2000 cohort, but has declined to 16%, less than half of the rate of the first cohort; and
- The proportion of students still in school in Year 6 of secondary school increased markedly from the 1987 to 1991 and 1993 cohorts (from 11% to 17%), but is now below levels of the Fall 1987 cohort.

Thus, the pattern of recent years is a continuation of longer Ontario trends, showing an increase in graduation – from a comparatively rarity in the 1960's, to a slight majority of students in the 1980's, to the current rate of around three quarters.

Figure 1: Grade 9 Cohorts 1987-2004 from Toronto Legacy Schools: Outcomes at the End of Five Years of Secondary School