DOCUMENT RESUME

ED 373 109 TM 022 009

AUTHOR Brown, Robert S.

TITLE A Follow-up of the Grade 9 Cohort of 1987 Every

Secondary Student Survey Participants. No. 207.

INSTITUTION Toronto Board of Education (Ontario). Research

Dept.

REPORT NO ISBN-0-88881-229-9; ISSN-0316-8786

PUB DATE Nov 93

NOTE 22p.; For Part I, see ED 351 385; for Parts II and

III, see TM 022 007-008.

AVAILABLE FROM Toronto Board of Education, Research Dept. 155

College St., Toronto, Ontario, M5T IP6, Canada (\$5

Canadian).

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS Black Students; Cohort Analysis; Demography;

*Dropouts; Ethnic Groups; *Followup Studies; *Grade 9; *High School Graduates; High Schools; High School Students; Public Schools; *Socioeconomic Status; Surveys; Track System (Education); Urban Schools;

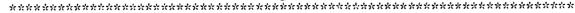
White Students

IDENTIFIERS Toronto Board of Education ON

ABSTRACT

A 5-year followup study was conducted of students who had participated in the 1987 Every Secondary Student Survey of the Toronto (Ontario, Canada) public schools. In the 1987-88 school year, 4,077 Toronto students started grade 9. By the followup year, 56 percent graduated with diplomas or completed 30 or more secondary credits. Eleven percent had not graduated and were still in school, and 33 percent had left school without graduating. The 33 percent cohort dropout rate is quite different from the 8 percent annual dropout rate of 1991-92 for all secondary students. In this cohort, 69 percent of advanced-level students graduated, compared with 40 percent of general-level students and 27 percent of basic-level students. Females were more likely to graduate than males, as were students from high socioeconomic status families. Graduation rates for the major racial groups were (1) Asians, 72 percent; (2) Blacks, 44 percent; and (3) Whites, 59 percent. Credits completed by the end of one year of secondary school was a fairly accurate predictor of graduation. Overall, student achievement was found to be related to sociodemographic variables. Five figures and six charts present study findings. (Contains 20 references.) (SLD)

from the original document.





^{*} Reproductions supplied by EDRS are the best that can be made

D 373 109

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION
CENTED (FRIC)

- Of his document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve seconduction quality
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO HEPRODUCE THIS MATERIAL HAS BEEN GRANTED BY MAISY CHENG

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) "

Follow-up Of The Grade 9 Cohort of 1987 Every Secondary Student Survey Participants

No. 207



A Soutes

TORONTO BOARD OF EDUCATION

Follow-up Of The Grade 9 Cohort of 1987 Every Secondary Student Survey Participants

November 1993

Robert S. Brown



Executive Summary

This study is a five-year follow-up of the Grade 9 students who participated in the 1987 Every Secondary Student Survey. Among the highlights:

- By the end of the 1991-1992 school year (5 years later), 56% of Grade 9 students had graduated with their Ontario Secondary School Diploma (OSSD), or had completed 30 or more secondary credits (the 1987-1992 cohort graduation rate); 11% had not graduated and were still attending school in the Toronto Board; and 33% had left school without graduating (the 1987-1992 cohort drop out rate).
- The 33% cohort drop out rate noted above is quite different from the 8% annual drop out rate of 1991-1992. While the cohort rate follows the academic careers of Grade 9 students over 5 school years, the annual rate looks at the outcome of all secondary students in one school year. The two should be thought of as related but separate student tracking indicators.
- Of the 1987-1988 Grade 9 students, 69% of Advanced students had graduated by 1992, compared to 40% of General level students and 27% of Basic level students.
- 62% of females in the Grade 9 cohort had graduated by 1992, compared to 51% of males.
- 80% of students in the highest SES category had graduated by 1992; 44% of students in the lowest SES category had done so.
- Graduation rates for the three major racial groups are: 72% of Asian students; 44% of Black students; and 59% of White students. The "drop out" rate for Asian students was 18%; for Black students, it was 42%; and for White students, it was 31%.
- Graduation rates for various language groups in the Toronto Board are: Chinese (72%) Vietnamese (64%), Greek (63%), English only (53%), Italian (53%), and Portuguese (48%).
- Graduation rates of those born outside of Canada (57%) are similar to those who were born in Canada (54%).
- Students from two-parent families are much more likely to graduate (63%) than students from single-parent families (41%).
- The number of credits accumulated after only one year in secondary school appears to be a fairly accurate predictor of graduation. Students who completed 6 credits by the end of Year I (1987-1988) had a 36% chance of graduating by 1992, while students who completed 8 credits had a 79% chance of graduating by 1992. This pattern clearly continues in each year.
- Students who graduated had an average credit accumulation of 7 credits per year; students still active in the system had an average credit accumulation of 4 credits per year; and those who left without graduating earned, on average, 3 credits per year.
- Patterns of OAC credit completion are virtually identical to patterns in graduation. Student achievement in OAC credits is found to be related to such socio-demographic characteristics as race, gender, socio-economic status, home language, and parental status. In general, OAC completion rates are higher for Asian students, females, higher SES groups, those who speak Chinese at home, and those who live with both parents.



Contents

Inti	roduction	1
,	What Are Drop out Rates And Why Are They Different?	1
I.	The Toronto Board 1987-1992 Cohort Rate and 1991-1992 Annual F	Late3
	1987-1992 Cohort Rate	3
	1991-1992 Annual Rate	3
	Graduation Rate Patterns from the 1987-1992 Cohort	4
Π.	Credit Accumulation of Students	8
	Average Credits Per Year	10
Ш	Ontario Academic Credits	11
IV	. Leaving the Toronto Board	12
V.	References	13
Ar	opendix: Calculation of Drop out/Graduation Rate	15
1 - }	1. Grade 9 Cohort Dropout/Graduation Rate	15
	Sources of Information	15
	Definition of the 1987-1988 Grade 9 Cohort Population	
	Division of the 1987-1988 Grade 9 Cohort Population	16
	2. 1991-1992 Annual Drop out/Graduation Rate	16
	Sources of Information	16
	Definition of Secondary School Student Population	17
	Division of Secondary School Student Population	17



Introduction

The 1987 Every Secondary School Survey was undertaken in response to a request from the Board's Race Relations Committee on February 3, 1987:

"That the Director of Education prepare a report for the April meeting of the Race Relations Committee on ways and means of monitoring student achievement/placement across the secondary school system according to indications of race/ethnic/socio-economic status..." (Board minutes, October 22, 1987, p. 797).

The 1987 Every Secondary Student Survey included data on students' background by gender, race, family structure, and socio-economic status, and level of study. Detailed results were presented in the survey report (Cheng et al., 1989).

The present report is a five-year follow-up of the Grade 9 students who participated in the 1987 survey. Among the most important outcomes of the academic careers of these students is whether they graduate with a high school diploma, or whether they leave school before graduating. The issue of 'school leaving' or 'drop out' is important, complex, and contentious; therefore, we will present a brief discussion of how these rates are collected, before presenting detailed results.

What Are Drop Out Rates And Why Are They Different?

In their study of American drop out rate definitions and formulas, Ligon et al. note that

The public and news media talk about THE dropout rate the same way they refer to THE Cost of Living Index, THE Dow Jones Average, and THE high temperature for the day. They report as if there is a standard definition of a dropout and as if there is a single rate that can easily or routinely be calculated by some governing body. (Ligon et al., 1990).

Unfortunately, as Ligon et al. make clear, there is no such consistent definition in the United States; nor is there in Canada. The 'Drop out Rate' is a concept which appears at first glance to be intuitively obvious. It is in trying to get something that is consistent and comprehensive that one runs into difficulties. There are two main questions that have to be answered: what is a drop out; and what is the denominator out of which the drop out rate is calculated. Neither is as simple to answer as first appears. Are students who enter provincially-recognized apprenticeship programs drop outs? When one looks at the total population of students, do you include all students who entered a secondary system throughout the year, or do you look only at students who enter in September, the traditional 'beginning' of the school year. Or do you follow a cohort or group of students over time?

Because there is no clear or predominant set of definitions, Statistics Canada, provincial ministries, and boards of education all use differing methodologies. In the Toronto Board, two



main ways to calculate drop out rates have been used. The first is a cohort study: it tracks a group of similar individuals, or cohort (Grade 9 students) over a period of time (five years, the time it takes the majority of Ontario students to complete their diploma requirements). Such studies have been done at periodic intervals by Research Services for decades, starting with the 1959-1960 Toronto Board Grade 9 cohort (Wright, 1967). It is a cohort study that is the focus of this report. This cohort study shows that at the end of their fifth year of study in the Toronto Board, students either:

- graduate-- that is, the cohort graduation rate
- continue their studies in the Board
- leave the educational system without a diploma--that is, the cohort drop out rate

The second type is the **annual** completion/drop out rate. This second rate is a 'snapshot' of secondary students over a one-year period. The Toronto Board's 1991-1992 annual rate shows that out of all students in the system who are 19 years or less, students either:

- graduate
- transfer out of the Board to some other educational system
- continue their studies in the Board
- leave the educational system without a diploma--that is, the annual drop out rate.

The methodologies of the cohort and the annual rates are substantially different. In cohort calculations, for example, students who transfer to other educational systems without graduating are usually eliminated from the sample; in annual rates, transfer students are usually included in the sample. For a complete description of how these two rates were derived, see the Appendix.

How should these rates be compared with other rates? The answer is to be very cautious. It is quite common to see people getting the cohort rate mixed up with annual rates, although the annual rate (being a sample of one year) is always lower than a cohort rate. But even comparing supposedly similar rates can be misleading, because of incompatible definitions and types of data collection. To address this problem, the Toronto Board's Research Services is one of several Board research departments working with the Ministry of Education to derive consistent and replicable standards of drop out and other student outcomes.



L. The Toronto Board 1987-1992 Cohort Rate and 1991-1992 Annual Rate

1987- 1992 Cohort Rate

There were 4,077 Toronto Board students who started Grade 9 in the 1987-1988 school year¹. By the end of their fifth year in the Toronto Board (the 1991-1992 school year):

- 56% graduated with their Ontario Secondary School Diploma (OSSD), or had completed 30 or more secondary credits;
- 11% had not graduated and were still attending school in the Toronto Board;
- 33% had left school without graduating.

The proportion of students still attending school (11%) is worth noting. It is probable that many of these students will either graduate or 'drop out' in the next school year.² Very few studies have followed students beyond their fourth year. An exception was the first report on Toronto school retention (Wright, 1967) which followed the 1959-1960 cohort over six years. Over a quarter of collegiate-level students in that 1959-1960 cohort, and 16% of all students in the 1959-1960 cohort, were still attending secondary school in their sixth year.

1991-1992 Annual Rate

There were 24,083 students in the Toronto Board in the 1991-1992 school year, who were 19 years of age 31 younger. By the end of that year,

- 16% graduated with their Ontario Secondary School Diploma (OSSD);³
- 6% transferred to other educational systems;
- 70% had not graduated and were still attending school in the Toronto Board;
- 8% had left school without graduating.

As can be seen, the 8% annual drop out rate is only a fraction of the 33% cohort drop out rate. The two should be thought of as related but separate student tracking indicators.

The remainder of the study will follow the directions of the Board Minutes of September 1987 and follow student outcomes of the 1987-1988 Grade 9 cohort, in terms of graduation, continuance in the system, and drop out.

³This includes 13% who graduated with an OSSD during the 1991-2 school year, and 3% who had previously received an OSSD prior to the 1991-2 school year. Most of those appear to be students who are working on OAC's for odmission to post-secondary study. Note that in the 1987-92 cohort study, students who had received 30 or more credits were counted as having graduated. While this may slighly overcount the graduation rate—by including students with 30 or more credits who are missing mandatory courses—it is necessary because students who have applicable credits to graduate may decide to postphone graduation while working on their OAC credits.



¹Students who transferred to another secondary system, or were accepted into post-secondary systems without graduating, were eliminated from the sample.

²Over half (52%) of still active students had 23 or more completed credits; they needed 7 or less credits to graduate; over a third (37%) of active students had completed Ontario Academic Credits (OAC's).

Graduation Rate Patterns from the 1987-1992 Cohort

Numerous American and Canadian studies on school retention have found that graduation and drop out are not evenly distributed; instead, the graduation rate (and, conversely, the drop out rate) of one socio-demographic or other group will often be quite different from the graduation rate of another group. (See, for example, Karp, 1988; Sullivan, 1988; Radwanski, 1987; King, 1988; McCaul et al., 1992).

Cheng et al. (1989) found that the academic achievement of 15 year olds in the 1987 Every Secondary Student Survey was related to such socio-demographic characteristics as race, academic level or stream, gender, socio-economic status, home language, birthplace, and parental presence. Graduation rates of the Survey's Grade 9 cohort show very similar patterns.

Academic Level. As noted above, research on Ontario students has been quite consistent in finding a high rate of graduation among students in the Advanced academic level stream, with a much lower rate in the General and Basic levels. (Karp, 1988; Shaffelburg, 1988; Radwanski, 1987.) In the 1987 Grade 9 cohort, 69% of Advanced students graduated, compared to 40% of General level students and 27% of Basic level students.

Gender. Ontario and Canadian studies have shown that males are more at risk of dropping out than females, a finding that differs from comparable American data (Statistics Canada, 1991; Parkin et al., 1988; McCaul et al., 1992). Cheng et al. found that females in Toronto exhibited higher levels of academic achievement than did males. In fact, 62% of females in the Grade 9 cohort had graduated by 1992, compared to 51% of males.

Socio-economic Status. Many studies have suggested that the socio-economic status of students' parents is a powerful indicator of student retention. (Karp, 1988; Sullivan, 1988; Fitzpatrick and Yoels, 1992). Cheng et al. (1989) found a "clear relationship between SES and credit accumulation. The higher the SES of the family, the more likely it is that the student performs at or above the average in terms of credit completion at age 15." Graduation patterns were similar: 80% of students in the highest SES category had graduated by 1992; 44% of students in the lowest SES category had done so.

Race. Most indicators of academic success in Cheng et al. (1989) show White students to do somewhat better than Black students, and Asian students to do better than White or Black students. A similar pattern can be seen in 1992 graduation rates. By the end of 1992, 44% of Black students in the Grade 9 cohort had graduated, compared to 59% of White students and 72% of Asian students. The "drop out" rate for Black students was 42%; for Whites, it was 31%, and for Asians, it was 18%.

Home Language. Previous findings on the relationship between home language and retention have been inconclusive or incomplete (Morris et al., 1991; Sullivan, 1988). Graduation rates of the students representing the most commonly spoken languages in the Toronto Board are:

Chinese	72%	English only-	-53%
Vietnamese	64%	Italian	53%
Greek	63%	Portuguese	48%



Birthplace. Graduation rates of those born outside of Canada (57%) are similar to those who were born in Canada (54%).

Parental Presence. Students from two-parent families are much more likely to graduate than students from single-parent families (63% to 41%), replicating patterns found in numerous other studies (Cheng et al. 1987; Karp, 1988; Parkin et al., 1988).

Tables A through D show these data in more detail.

A. Breakdown of Grade 9 Cohort Rate According to Demographic Variables

Variable	Subgroup	Graduated (%)	Still in TBE system (%)	Left School without graduating (%)
OVERALL		56	11	33
	Advanced	69	10	21
Academic level	General	40	12	48
	Basic	27	9	64
	Asian	72	11	18
Race	Black	44	14	42
	White	59	10	31
Gender	Male	51	12	37
	Female	62	9	29
	Professional	80	5	15
Socio-economic status	Semi-professional	59	12	29
(of parents)	Skilled/semi-skilled	61	10	29
	Unskilled	54	11	35
	Non-remunerative	44	11	46
,	Chinese	72	10	19
	English only	53	11	37
	Greek	63	15	22
Home language	Italian	53	15	32
_	Portuguese	48	11	41
	Vietnamese	64	14	22
Birthplace	Born in Canada	54	11	35
-	Born outside Canada	57	10	33
Parental presence	Lives with both parents	63	10	27
-	Lives with one parent	41	11	48



B. Grade 9 Cohort Rate by Race and Socio-economic Status

Race	Socio-economic status (of parents)	Graduated (%)	Still in TBE system (%)	Left School without graduating (%)
	Professional	87	5	8
Asian students	Semi-professional	69	16	16
	Skilled/semi-skilled	78	7	15
	Unskilled	70	13	18
	Non-remunerative	63	9	28
	Professional	*	*	*
Black students	Semi-professional	46	11	43
•	Skilled/semi-skilled	62	13	26
	Unskilled	33	14	52
<u></u>	Non-remunerative	*	*	*
	Professional	82	4	14
White students	Semi-professional	61	12	28
	Skilled/semi-skilled	60	9	30
	Unskilled	55	10	35
	Non-remunerative	45	9	46

^{*} Breakdowns with 15 or fewer students per row are omitted; for example, Black students from Professional SES families.

C. Grade 9 Cohort Rate of Cohort by Race and Gender

Race	Gender	Graduated (%)	Still in TBE system (%)	Left School without graduating (%)
Asian students	Male	67	13	20
	Female	77	7	16
Black students	Male	41	11	48
	Female	47	17	36
White students	Male	54	11	35
	Female	65	9	27



D. Grade 9 Cohort Rate by Home Language and Socio-economic Status

Home Language	Socio-economic status (of parents)	Graduated (%)	Still in TBE system (%)	Left School without graduating (%)
	Professional	*	*	*
Chinese	Semi-professional	71	20	9
	Skilled/semi-skilled	79	4	16
	Unskilled	63	16	21
	Non-remunerative	67	7	27
	Professional	81	4	14
English only	Semi-professional	56	13	31
	Skilled/semi-skilled	53	11	36
	Unskilled	48	9	43
	Non-remunerative	37	10	54
	Professional	*	*	*
Greek	Semi-professional	71	1242	29
	Skilled/semi-skilled	65	18	17
	Unskilled	59	16	25
	Non-remunerative	*	*	*
	Professional	*	*	*
Italian	Semi-professional	*	*	*
	Skilled/semi-skilled	64	8	28
	Unskilled	59	24	18
	Non-remunerative	*	*	*
	Professional	*	*	*
Portuguese	Semi-professional	55	18	27
	Skilled/semi-skilled	58	10	31
	Unskilled	50	6	43
	Non-remunerative	24	10	67

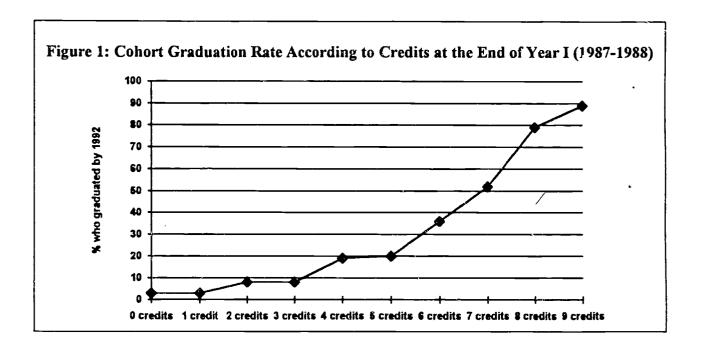
^{*} Breakdowns with 15 or fewer students per row are omitted, for example, students speaking Italian at home from non-remunerative SES families. Less than half of Vietnamese students gave their parents' occupations, therefore they are omitted in this table.



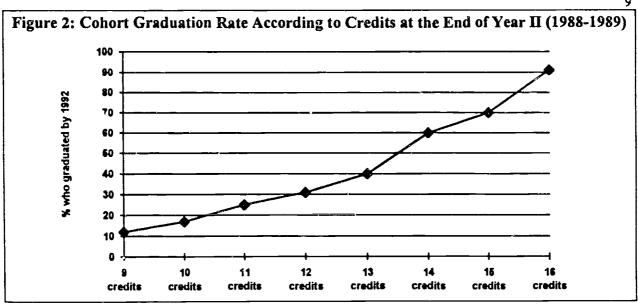
II. Credit Accumulation of Students

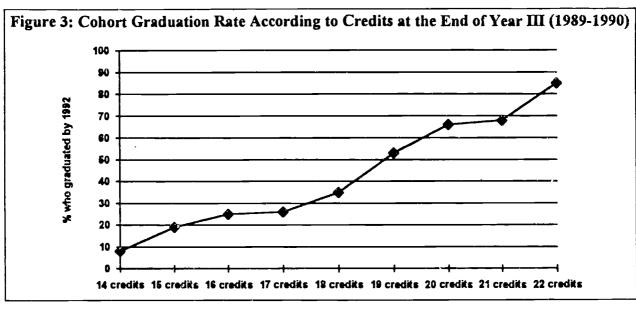
Several Canadian studies of drop outs have found that students who dropped out were not failing school, although they tended to have lower grades than did school completers (Statistics Canada, '91; Sullivan, 1988). A related but different indicator is credit accumulation. In Ontario, udents receive their Ontario Secondary School Diploma (OSSD) upon completion of at least 30 credits at the secondary level, including 16 mandatory, specified courses. There is some evidence that students who fall behind in their accumulation of these credits are highly at risk of dropping out. King et al. (1988) found that the vast majority of drop outs surveyed left school because they were so far behind in their credit accumulation that the likelihood of graduation was considered remote. Lawton and Leithwood (1988) found that those who were most knowledgeable about how many credits they had, and what was required for graduation, were those that the system was already serving well, such as Advanced level students and those already planning post-secondary education.

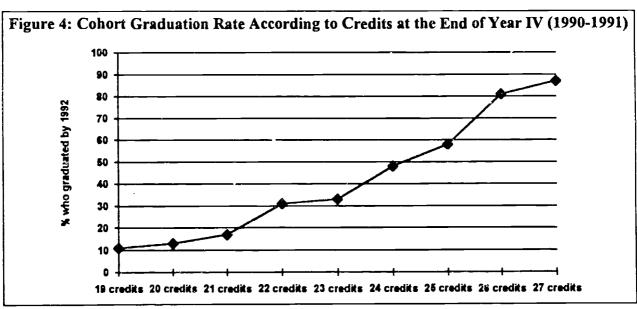
When credit accumulation of Grade 9 students in this study is looked at on a yearly basis, it is apparent that the number of credits accumulated after only one year appears to be a fairly accurate predictor of graduation. As can be seen in Figure 1, students who completed 6 credits by the end of Year I (1987-1988) had a 36% chance of graduating by 1992. However, students who completed 8 credits had a 79% chance of graduating by 1992. This pattern clearly continues in Years II, III and IV (see Figures 2-4).













Average Number of Credits Per Year

Another way of looking at the credit accumulation of students is to examine the average, or mean, of students' credit accumulation rate.⁴ There is a very distinct relationship between average credit accumulation and graduation. Students who graduated had an average credit accumulation of 7 credits per year; students still active in the system had an average credit accumulation of 4 credits per year; and those who left without graduating earned, on average, 3 credits per year. The average credit accumulation of 7 courses per year for successful students is consistent across all subgroups, as can be seen in Table E below.

E. Average Number of Credits Per Year, According to Demographic Variables

Variable	Subgroup	Total	Graduated	Still in TBE system	Left School without graduating
OVERALL		5	7	4	3
	Advanced	6	7	4	4
Academic level	General	5	7	4	3
	Basic	4	7	4	3
	Asian	6	7	4	4
Race	Black	. 5	7	4	3
	White	5	7	4	3
Gender	Male	5	7	4	3
	Female	6	7	4	3
	Professional	6	7	4	4
Socio-economic status	Semi-professional	6	7	4	3
(of parents)	Skilled/semi-skilled	6	7	4	3.
(- F - · · · · ·)	Unskilled	5	7	4	3
	Non-remunerative	5	7	4	3
	Chinese	6	7	4	3
	English only	5	7	4	3
	Greek	6	7	4	3
Home language	Italian	5	7	5	3
	Portuguese	5	7	4	3
	Vietnamese	6	7	4	3
Birthplace	Born in Canada	5	7	4	3
4	Born outside Canada	5	7	4	3
Parental presence	Lives with both parents	6	7	4	3
	Lives with one parent	5	7	4	3



主じ

⁴This rate is calculated for each student, by dividing the total credit accumulation of each student by the number of years the student was in the Board since 1987 (determined by the year the student was terminated). Thus, if the student had a total accumulation of 35 credits, and left the Board in 1992, s/he would have an average yearly credit accumulation of 35 divided by (1987-1992, or 5 years) or 7 credits per year.

III. Ontario Academic Credits

Under OS:IS⁵, Ontario Academic Credits (OAC's) are Advanced-level credits completed by students as prerequisites to university admission. They may be taken as part of the Ontario Secondary School Diploma, or independent of it. Ontario universities normally require a student to have completed six OAC courses to be considered for admission to first year undergraduate studies. Thus, in the table below, one observes that 36% of the 1987 Grade 9 cohort were qualified to apply to university by the end of Year 5.

Patterns of OAC credit completion are virtually identical to patterns in graduation. Student achievement in OAC credits is found to be related to such socio-demographic characteristics as race, gender, socio-economic status, home language, and parental status. In general, OAC completion rates are higher for Asian students, females, higher SES groups, those who speak Chinese at home, and those who live with both parents.

F. OAC Credits, According to Demographic Variables

Variable	Subgroup	6 or more (%)	less than 6 (%)	No OAC credits (%)
OVERALL		36	18	47
	Advanced	53	23	25
Academic level	General*	7	9	84
-	Basic*		1	99
	Asian	54	20	27
Race	Black	16	20	65
	White	37	17	45
Gender	Male	31	15	54
	Female	42	20	38
	Professional	70	16	14
Socio-economi : status	Semi-professional	45	23	32
(of parents)	Skilled/semi-skilled	35	20	45
	Unskilled	24	17	60
	Non-remunerative	23	16	61
	Chinese	56	17	27
	English only	36	17	47
	Greek	33	29	38
Home language	Italian	27	19	55
- -	Portuguese	16	12	72
	Vietnamese	39	24	38
Birthplace	Born in Canada	35	18	48
- 	Born outside Canada	36	18	47
Parental presence	Lives with both parents	42	18	40
-	Lives with one parent	26	16	59

⁵Ontario Schools: Intermediate and Senior Divisions (grades 7-12/OAC's): Program and Diploma Requirements (Ministry of Education, 1984).

^{*}While OAC's are, by definition. Advanced level credits, students taking most of their courses at General or Basic level can take OAC's if they have taken a prerequisite course at the Advanced level. For example, a student taking mainly General level courses might be taking Advanced level French in Grade 11, thus qualifying the student to enroll in OAC French.

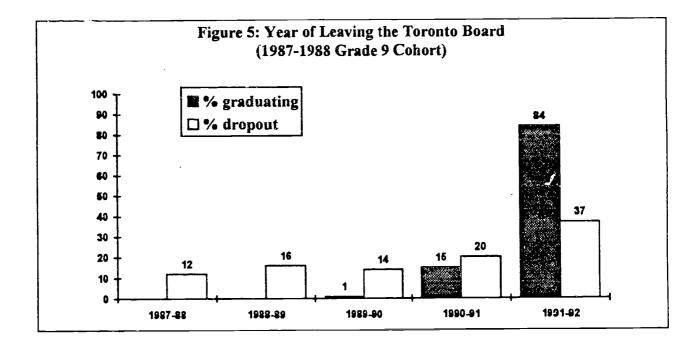


13

IV. Leaving the Toronto Board

Over two thirds of the Grade 9 cohort were still in the Toronto Board in 1991-1992, their fifth school year (and, as noted, 11% of those who did not graduate were still 'active' students at the beginning of the 1992-3 school year). Most of those who graduated (84%) were in the Board during the their fifth (1991-1992) year⁶.

Over half (57%) of drop outs left in their fourth or fifth year of study. This may be a continuation of a trend in recent years, where the proportion of drop outs in the higher grades has been increasing, while the proportion of drop outs in Grade 9 has been dec asing. It may also be related to credit accumulation: King et al. (1988) noted that "those who drop out at 18 or 19 are often students who are well behind in their credit accumulation, making their chance of graduation quite remote."



⁶In fact, 281 of 2285 graduates in the cohort (12%) were still in the Toronto system by Fall 1992. Most (84%) had completed at least one OAC. About half (47%) had less than 5 OAC credits by the end of summer 1992, and it is probable that many of these students were attempting to complete the minimum of 6 credits to apply for university admission.



V. References

Cheng, Maisy, Gerry Tsuji, Maria Yau, and Suzanne Ziegler. The Every Secondary Student Survey, Fall 1987. Toronto: Toronto Board of Education, 1989.

Fitzpatrick, Kevin M., and William C. Yoels. "Policy, School Structure, and Sociodemographic Effects on Stateside High School Dropout Rates", Sociology of Education, January 1992.

Karp, Ellen. The Drop-out Phenomenon in Ontario Secondary Schools. Toronto: Ministry of Education, 1988.

King, Alan. The Adolescent Experience. Toronto: Ontario Secondary School Teachers' Federation, 1986.

King, A. J. C., W.K. Warren, C. Michalski, M.J. Pearlt. Improving Student Retention in Ontario Secondary Schools. Toronto: Ministry of Education, 1988.

Lawton, Stephen, and Kenneth A. Leithwood. Student Retention and Transition in Ontario High Schools. Politics, Practices, and Prospects. Toronto: Ministry of Education, 1988.

Ligon, Glynn, Bridget Stewart, and David Wilkinson. Making Dropout Rates Comparable: An Analysis of Definitions and Formulas. Paper presented to the Annual Meeting of the American Educational Research Association, Boston, Massachusetts, 1990.

McCaul, Edward J., Gordon A. Donaldson, Theodore Coladarci, William E. Davis, "Consequences of Dropping Out of School: Findings of High School and Beyond", Journal of Educational Research, March/April 1992.

Ministry of Education, Ontario. 1990-1991 Key Statistics: Elementary and Secondary Education in Ontario. Ontario Ministry of Education, 1992

Morris, Sonia, Walter Pawlovich, Douglas McCall. Evaluating the Effectiveness of School Drop-Out Prevention Strategies: Some Suggestions for Future Research. Toronto: Canadian Educational Association, 1991.

Parkin, Michael, Gwynth Watkin, Rosemary Bonyun. More on Dropouts: A Three Part View. Paper Presented at the Ontario Educational Researc'n Council, December 1988.

Radwanski, George. Ontario Study of the Relevance of Education, and the Issue of Dropouts. Toronto: Ontario Ministry of Education, 1987.

Shaffelburg, Diane. Dropouts and the Ontario Educational System: A New Perspective. (North York) Educational Research and Evaluation Services, 1988.

Statistics Canada. School Leavers Survey. Ottawa: Statistics Canada, December 1991.

Sullivan, Michael . A Comparative Analysis of Drop-outs and Non Drop-outs in Ontario Secondary Schools. Toronto: Ontario Ministry of Education, 1988



Topa, Michael. Predicting Academic Outcomes for Grade Nine Students at Malvern Collegiate Institute: A Research Study 1987-1988. Toronto: Toronto Board of Education, 1988.

Toronto Board of Education. Board Minutes, October 22, 1987.

Wright, E. N. Retention Rates in Toronto Secondary Schools. Toronto: Toronto Board of Education, 1967.

Wright, E. N. The Retention and Credit Accumulation of Students in Secondary School. Toronto: Toronto Board of Education, 1985.

Yau, Maria. Annual Drop Out Rate for the Toronto Board, 1989-1990. Unpublished data, Toronto Board of Education Research Services, 1991.



Appendix: Calculation of Drop out/Graduation Rates

1. GRADE 9 COHORT DROP OUT/GRADUATION RATE

Sources of Information

Information used to prepare this report was obtained by merging a number of separate computer databases of student records in the Toronto Board. These were:

- data from the Every Secondary Student Survey completed by students at the beginning of the 1987-8 school year (including age, languages spoken at home, self-identified racial and ethnic group, gender, and academic level)
- status of the student as of September 1992 (whether the student was off student rolls -- i.e. no longer in the Toronto Board of Education-- or on student rolls, and still considered an "active" student)
- destination of students no longer in the Toronto Board as of September 1992 (e.g. to other Board in Metro Toronto, other secondary school outside the country, employment in Ontario, university, etc.)
- month and year of students' departure from the Toronto Board
- diploma or diplomas awarded to the student by the Toronto Board (e.g. the Ontario Secondary School Diploma, or OSSD) as of August 1992
- credits successfully completed by students while at the Toronto Board, including year and month awarded, subject, mark, and credit value.

Definition of the 1987-1988 Grade 9 Cohort Population

Definition of Grade 9- In today's secondary school system, defining a new Grade 9 student is not as clear as it once was. Defining Grade 9 by homeroom can be deceptive, because many students in Grade 9 homerooms take most of their classes at the Grade 10 level, and students in Grade 10 homerooms may be taking mostly Grade 9 classes. To define a student as a Grade 9 student if s/he has fewer than 8 completed credits would include a number of students who have been in the secondary system for several years, and older students who have arrived from other countries or with experience in the workplace. In this study, a student has been defined as a Grade 9 student if s/he

- was born in 1972 or later; and
- had not completed any secondary courses prior to the 1987-1988 school year.

Students who transferred to another secondary or post-secondary educational institution without graduating were removed from the sample. These withdrawal codes were: transfer to Metro Toronto, Non-Metro Ontario school, Separate school (Metro and Non-Metro), private school, Apprenticeship, Education outside Ontario (in another province/territory, outside Canada), home



instruction by parent, College of Arts and Technology, Ryerson, University, Other Education, deceased.

A total of 4,077 students made up the 1987 Grade 9 cohort: i.e., they were registered in the Toronto Board in Fall 1987, were born in 1972 or later, had not completed any secondary courses prior to the 1987-1988 school year, and had not transferred to another secondary or post-secondary institution.

Division of the 1987-1988 Grade 9 Cohort Population

The above 1987-1988 Grade 9 Cohort Population (N= 4,077) was divided into the following:

Graduate- For the purposes of this study, a student is considered to have graduated if s/he received an Ontario Secondary School Diploma (OSSD) by August of 1992; or if sh/e had accrued 30 or more credits by August 1992. This made up 56% of 1987 Grade 9 Cohort Population.

Still in Toronto Board System- students who were "on rolls"--considered to be an "active" student in the Toronto secondary system-- at the end of August 1992. (Status of these students was verified in October 1992 to confirm that the students had return to the Toronto Board.). This accounted for 11% of the 1987 Grade 9 Cohort Population.

Left school without graduating- those students were no longer registered with the Toronto Board as of August 1992, but had not graduated, i.e. received OSSD or accrued 30 or more credits by August 1992, and had not transferred to another secondary or postsecondary system. This group accounted for 33% of the 1987 Grade 9 Cohort Population (this is the cohort drop out rate).

2. 1991-1992 ANNUAL DROP OUT/GRADUATION RATE

Sources of Information

The following student databases in the Toronto Board were used:

- registration data based on attendance in Toronto secondary schools in Fall 1991
- status of the student as of September 1992 (whether the student was off student rolls -i.e. no longer in the Toronto Board of Education-- or on student rolls, and still considered
 an "active" student)
- destination of students no longer in the Toronto Board as of September 1992 (e.g. to other Board in Metro Toronto, other secondary school outside the country, employment in Ontario, university, etc.)
- month and year of students' departure from the Toronto Board



- diploma or diplomas awarded to the student by the Toronto Board (e.g. the Ontario Secondary School Diploma, or OSSD) as of August 1992
- registration data based on attendance in Toronto secondary schools in Fall 1992.

Definition of Secondary School Student Population

Secondary School Student Population: All students attending in 1991-1992 (Fall 1991 enrollment) excluding 1) those attending Adult schools, and Adult ESL school, and 2) those born 1971 and earlier. There were 24,083 of these Toronto secondary students.

Division of Secondary School Student Population

The above student population (N= 24,083) for 1991-1992 was divided into the following:

Graduate- having been granted an OSSD during the 1991-1992 school year-- 13%.

Previous Graduate- student granted an OSSD prior to 1991-1992 school year-- 3%.

Transfer- transfer to another secondary or post-secondary institution: transfer to Metro Toronto, Non-Metro Ontario school, Separate school (Metro and Non-Metro), private school, Apprenticeship, Education outside Ontario (in another province/territory, outside Canada), home instruction by parent, College of Arts and Technology, Ryerson, University, Other Education, deceased-- 6%.

Still in Toronto Board System: -- students who continued into the Toronto Board in the 1992-1993 school year-- 70%.

Left school without graduating: those students who had not graduated (i.e. had not received an OSSD) and had not transferred to another secondary or postsecondary system, but were no longer registered with the Toronto Board as of the end of September 1992, with a withdrawal code due to: Employment (in Ontario, another province or country); courses too difficult; English language difficulties; financial reasons; health reasons; left with no forwarding address; tired of school; withheld (adult 18+); no show (students who pre-registered for the next school year but do not show up for class).8-- 8%. (This is the annual drop out rate.)

⁸In the case of errors, students were reclassified to "less than 30 credits", if the student was registered in the beginning of the 1992-3 school year.



^{7&}lt;sub>Continuing</sub> students were validated using Fall 1992 attendance data.