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Forecast of Full-Time Equivalent Student Enrollment in Québec Universities, 2001-2002 to 2015-2016

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Introduction

Each year, the Ministère de l'Éducation du Québec (MEQ) forecasts student enrollment. The forecasts in this report concern a 15-year period, beginning in 2001-2002 and ending in 2015-2016; they update the forecasts for the period 2000-2001 to 2014-2015, essentially on the strength of recent data for the 2000-2001 university year.

In general, we have employed the method adopted several years ago and described in the report on the period 1987-2007² as well as the most recent demographic projections established by the Institut de la statistique du Québec (ISQ) broken down by administrative region, age and sex, in order to forecast student enrollment: these projections extend for 1996 through to 2041. We selected Scenario A, also called the "reference scenario," as recommended by the ISQ.

In the following pages we will present a brief overview of the main methodological features of our forecasts and the specific features of the forecasts for the 2001-2002 to 2015-2016 period, followed by the highlights of the forecast results.

Methodological considerations

Overview of the model

The model used as the basis for this report has three main elements:

- the characteristics of the university student population
- the evolution of the university attendance rate
- the evolution of the Québec population, by region

The most recent observations, from 2000-2001, have been used to describe the characteristics of the university student population, in other words the number of students and the university attendance rate.

At the starting point (time "0"), the university attendance rate (T₀) is calculated by comparing the number of full-time equivalent (FTE) students³ enrolled in universities in Québec with the population of Québec (P₀), broken down into various categories (by sex, age group, mother tongue, level of study and region of origin). Since both the data for the 1991 and 1996 census in Canada and the demographic forecasts of the ISQ now cover nonpermanent residents,⁴ there

^{1.} Jacques LAVIGNE. Forecast of Full-Time Equivalent Student Enrollment in Québec Universities, 2000-2001 to 2014-2015. Education Statistics Bulletin No. 22. (Québec: Ministère de l'Éducation, Direction des statistiques et des études quantitatives, Secteur de l'information et des communications, July 2001).

André LESPÉRANCE et Jacques LA HAYE. Les prévisions de l'effectif étudiant universitaire pour investissements: méthodologie générale et prévisions 1987-1988 à 2007-2008, (Québec, ministère de l'Enseignement supérieur et de la Science, Direction générale de l'enseignement et de la recherche universitaires, December 1988), p. 3-8.

^{3.} The attendance rate is calculated using full-time equivalent (FTE) students as a measure. One FTE student corresponds to the normal course load in credits for a student attending university full-time during the university year. This course load is equal to 30 credits per year. For more information on the counting of FTE students, see: Jacques La Haye. Politique générale et méthode de dénombrement de l'effectif étudiant en équivalence au temps plein (EEETP) à partir du système « RECU » (Québec: Ministère de l'Éducation, Enseignement supérieur, Direction de l'enseignement et de la recherche universitaires, April 1998), p. 9-31.

^{4. &}quot;Individuals holding a study permit, work permit or ministerial permit, or who claim refugee status." (Source: letter from Mr. Guy Oddo of Statistics Canada to Mr. Pierre Ducharme of the Ministère de l'Éducation, September 1992).

is no longer any need to calculate and forecast the part of the enrollment made up of students from other countries.

The forecast of student enrollment for a given university-level institution (i) is based on the university attendance rate for that institution (by sex, age group, mother tongue, level of study and region of origin) and a population projection (P). For a given forecast year "t", the following formula is obtained:

Student enrollment: $E_{it} = T_{i0} \times P_{t}$

The first step in the forecast presented in this report is, as in previous forecasts, based on the fixed attendance rates for each university. The second step involves adjusting the forecast made using fixed rates for each university to reflect the provisional statement of student enrollment for Fall 2001 issued by the Conférence des recteurs et des principaux des universités du Québec (CREPUQ) at the end of September 2001. This operation affects the way the attendance rate for each university-level institution changes over time.

Population breakdown by mother tongue

In the last published set of forecasts, we pointed out that the regional forecasts of the ISQ do not include information on the mother tongue of the future Québec population. This statement still holds true today. However, we used the 1996 census data, which does provide information on the mother tongue. In addition, for the period covered by our forecasts, we retained the proportion of allophones and anglophones observed in 1996, eliminating the need for demo-linguistic analysis. Appendix 1 shows the percentage breakdown of the population by mother tongue, by sex and by administrative region. The method proposed by Michel Paillé¹ as used to allocate multiple declarations.

The Statistics Canada data from the 1996 census show that, in the 17 administrative regions of Québec, francophones represented between 49% (Nord-du-Québec) and 99% (Bas-Saint-Laurent) of the total population, anglophones between 0.6% (Bas-Saint-Laurent) and almost 19% (Montréal), and allophones between 0.2% (Bas-Saint-Laurent) and over 46% (Nord-du-Québec).

The tables in Appendix 1 summarize the information used to prepare this report, namely the statistics on the mother tongue of the population of each administrative region, by five-year age groups and by sex.

Adjustments to the demographic data from the 1996 census

In general, the raw data from a census underestimates certain figures, to varying degrees. As mentioned above, the Québec population forecasts established by the ISQ for each administrative region are based on 1996 Canadian census data. However, the ISQ used the revised data from the 1996 census to take into account the underestimates in the census.

Future enrollment trends

As mentioned earlier, for each university we first established a forecast based on fixed attendance rates. Next, we adjusted the forecast for student enrollment in each university as follows: using the data from the Fall 2001 provisional statement of student enrollment made by CREPUQ in late September 2001, we estimated FTE student enrollment in 2001-2002. Then, we compared the results of the estimates with the forecasts based on fixed university attendance rates for 2001-2002. For that year, we assumed that the estimates made using the provisional data from CREPUQ would be accurate; in view of the observations made in recent years, this

Michel Paillé, Nouvelles tendances démolinguistiques dans l'île de Montréal 1981-1996 (Québec: Conseil de la langue française, 1989) (Collection Notes et documents, no. 1), p. 152.

hypothesis seems valid, since enrollment in the Fall semester is an important factor in estimated FTE student enrollment for the whole of the university year. These estimates therefore constitute the forecast made for 2001-2002.

For subsequent years, using the rule of three we revised the forecast for each university to reflect the difference between the forecast for 2001-2002 based on a fixed attendance rate, and the forecast for the same year based on the provisional data from CREPUQ on student enrollment in the Fall of 2001. This operation ensured that the university attendance rate for each university was consistent with the estimate for 2001-2002. Next, we adjusted the university attendance rates for the whole of Québec using data on college enrollments and extrinsic data, such as the economic forecasts of the chief economists of TD Bank and the CIBC, as well as those of the governor of the Bank of Canada (Fall 2001 and January 2002).

With regard to enrollment in regular full-time courses at the college level, it is expected that the number of students in pre-university programs will drop by almost 7% between Fall 2000 and Fall 2005. After this period, the number of students should grow and, by 2010, return to the level of the late 1990s.

The economists of TD Bank predict that the job market will remain weak for most of 2002. In addition, the economists of the CIBC are expecting an increase in Québec's unemployment rate in 2002. However, the governor of the Bank of Canada believes that the Canadian economy will be in full recovery beginning in the third quarter of 2002.

In light of the above forecasts and of various other considerations, such as the signing of "performance contracts" between the universities and the MEQ, an improvement in employment prospects for university graduates, and recent changes in university attendance, we forecast a moderate increase in the attendance rates from 2001-2002 to 2003-2004 (see Appendix 2, columns E and F). We expect that, beginning in 2004-2005, university attendance will remain at the same level as in 2003-2004. It should be noted that the university attendance rate in Québec peaked during the 1993-1994 university year. Note also that the estimated rates for 2001-2002 are very similar to those observed in 1993-1994.

We will now turn to the hypothesis concerning the trend in the attendance rate presented in Appendix 2. It goes without saying that we could have made other hypotheses concerning changes in the attendance rate, such as a more marked increase. However, the forecast of the number of students enrolled in regular college-level courses over the next 10 years tends to support our choice. The new, stricter entrance requirements at the college level caused a drop in new enrollments beginning in the 1997-1998 school year, and Québec's universities will eventually be affected by the same change. In addition, the fact that the forecast rates for 2001-2002 reach levels equalled only by those of 1993-1994 diminishes our optimism for another substantial increase in the near future. Had we retained a more "pessimistic" hypothesis, we would have obtained a forecast of around 155 000 students for 2015-2016.

In line with the comments made in the preceding paragraphs, we should add that the general trend in student enrollment will, in coming years, generally match demographic trends in the university-age population.

Postdoctoral placement students

Beginning in 1996-1997, the FTE student enrollment taken into consideration in our forecasts includes students completing postdoctoral placements. We identified 667 of these students for 1996-1997, 871 for 1997-1998, 768 for 1998-1999, 760 for 1999-2000 and 812 in 2000-2001. However, since these students represent 0.5% of all students funded by the MEQ, we selected a fixed number for each university and each year of the forecast. For the university system as a whole, we added 786 FTE students for each of the 15 years in the forecast.

For most universities, the addition of students completing postdoctoral placements, calculated in FTE students, has a minimal effect on the total student enrollment. It should also be noted that some universities, like the branches of the Université du Québec, had already begun to count these students in their enrollment prior to 1996-1997.

Results The period from 2001-2002 to 2015-2016

As shown in Table 2, "Forecasts of full-time equivalent (FTE) student enrollment for the period 2001-2002 to 2015-2016," we predict that the number of FTE students enrolled in Québec universities in 2015-2016 will be slightly below the number for 2000-2001. We estimate that there will be 159 421 students at the end of the period, compared to the total of 160 389 recorded during the most recent observation year. We therefore expect a 0.6% drop in enrollment, in other words 968 FTE students. However, compared to the results for 1992-1993 (168 271), the drop is 5.3%, a loss of 8 850 FTE students.

The 1994-1995 school year marks an important shift in student enrollment trends; this was the year university attendance rates in Québec not only stopped rising, but actually dropped clearly. Total enrollment of FTE students in the Québec university system dropped by 2.8% between 1993-1994 and 1994-1995, and by 2.3% between 1994-1995 and 1995-1996. Since the deterioration in university attendance rates ended in 1998-1999, and since the rates actually improved in both 1999-2000 and 2000-2001 (and even in 2001-2002, according to the preliminary data from CREPUQ for Fall 2001), we have made a slight adjustment to the attendance rate, raising it in the estimate for 2000-2001. After reaching a low point for the period under consideration in 2008-2009, total university enrollment should once again begin to increase towards the end of the forecast period, due to the expected change in the age structure of the Québec population.

It should be noted that changes in student enrollment vary from one university to another. For almost half of the universities (nine), the enrollment forecast for 2015-2016 is below the current enrollment, with some decreases more marked than others. For instance, the drop for Université du Québec à Chicoutimi is –19.4%; for Université du Québec à Rimouski, -11.0%; for Université du Québec en Abitibi-Témiscamingue, -10.7%; for Université Laval, -10.6%; for Télé-université, -8.5%; and for Université du Québec à Trois-Rivières, -8.2% and Université de Sherbrooke, -7.1%.

At the other end of the spectrum, several universities should see a stabilization or even an increase in their enrollment for 2015-2016. If we exclude the École de technologie supérieure which is still undergoing a significant period of growth, Université du Québec à Hull and Concordia University will see an increase of more than 8% and McGill University, the École des Hautes Études Commerciales de Montréal and the Ecole nationale d'admi-nistration publique will see increases of nearly 5% each. For the three English-language universities, the forecast increase in enrollment remains valid only if we assume that the increased tuition fees charged to non-Québec students will not affect enrollment.

Nevertheless, our forecast points to an overall decrease of 9.8% in student enrollment compared to the forecast for the period 1992-1993 to 2006-2007 ([174 495 - 157 461] \div 174 495 \times 100).

Table 1
Comparison between current and previous forecasts

Forecast	1991	1993	1997	2001	2003	2006
1992-2006	164 405	170 649	147 945	178 695	178 295	174 495
1995-2009	164 405	167 886	158 608	164 348	164 158	160 775
1997-2011	164 405	167 886	154 996	153 585	153 046	149 349
1999-2013	164 405	167 886	155 012	158 320	157 049	152 006
2000-2014	164 405	167 886	155 012	160 904	159 834	154 740
2001-2015	164 405	167 886	155 012	162 933	162 566	157 461

This 9.8% decrease clearly demonstrates the slowdown in the growth of university attendance rates after 1992-1993 and, specifically, the drop observed from 1994-1995. In the forecast covering the period 1992-1993 to 2006-2007, university enrollment was expected to increase steadily until 1994-1995, and then more slowly until 2004-2005.

Table 2 Forecasts of full-time equivalent (FTE) student enrollment for the period 2001-2002 to 2015-2016

	Observations Forecast Variation Servations						Variation												
Establishments	1998-	1999-	2000-	2001-	2002-	2003-	2004-	2005-	2006-	2007-	2008-	2009-	2010-	2011-	2012-	2013-	2014-	2015-	2015/
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2000
Laval	25 759	25 750	25 875	25 929	25 763	25 539	25 192	24 713	24 225	23 828	23 597	23 463	23 458	23 523	23 607	23 625	23 486	23 126	-10.6%
McGill	20 923	20 757	20 601	20 806	20 858	20 889	20 776	20 590	20 433	20 423	20 569	20 779	21 002	21 214	21 421	21 598	21 677	21 543	4.6%
Bishop's	2 063	2 175	2 141	2 129	2 124	2 119	2 106	2 082	2 063	2 061	2 077	2 101	2 126	2 148	2 168	2 186	2 191	2 171	1.4%
Montréal	23 351	24 520	25 700	26 537	26 500	26 455	26 292	26 024	25 763	25 634	25 652	25 782	26 016	26 281	26 548	26 759	26 801	26 607	3.5%
Polytechnique	3 808	4 005	4 184	4 198	4 236	4 262	4 234	4 184	4 140	4 125	4 139	4 172	4 220	4 273	4 326	4 367	4 380	4 345	3.8%
HEC	6 046	6 329	6 662	6 974	6 967	6 955	6 908	6 835	6 763	6 724	6 721	6 749	6 808	6 879	6 955	7 014	7 030	6 988	4.9%
Concordia	17 165	17 809	18 260	19 268	19 242	19 218	19 107	18 932	18 775	18 711	18 752	18 876	19 075	19 311	19 556	19 763	19 856	19 780	8.3%
Sherbrooke	11 817	11 887	11 809	11 713	11 690	11 610	11 497	11 319	11 138	11 003	10 942	10 931	10 977	11 048	11 115	11 153	11 111	10 968	-7.1%
UQ																			
UQAM	22 310	22 933	22 766	22 486	22 488	22 445	22 327	22 126	21 928	21 795	21 746	21 800	21 972	22 197	22 441	22 638	22 696	22 594	-0.8%
UQTR	6 520	6 525	6 108	6 142	6 138	6 101	6 033	5 930	5 822	5 730	5 669	5 641	5 647	5 673	5 702	5 717	5 689	5 605	-8.2%
UQAC	3 930	4 020	4 006	3 922	3 924	3 893	3 834	3 756	3 665	3 583	3 519	3 464	3 426	3 397	3 377	3 348	3 299	3 230	-19.4%
UQAR	2 497	2 543	2 636	2 777	2 766	2 750	2 709	2 655	2 596	2 546	2 510	2 485	2 471	2 457	2 446	2 429	2 396	2 346	-11.0%
UQAH	2 742	2 707	2 772	2 846	2 860	2 876	2 881	2 877	2 873	2 871	2 877	2 897	2 931	2 967	3 005	3 027	3 031	3 006	8.4%
UQAT	1 149	1 178	1 118	1 097	1 097	1 093	1 084	1 074	1 062	1 049	1 037	1 031	1 028	1 024	1 024	1 023	1 012	998	-10.7%
INRS	299	312	340	345	347	348	348	346	344	342	340	339	338	338	339	340	339	339	-0.3%
ENAP	429	430	462	511	511	513	512	510	507	503	500	495	492	491	489	488	487	485	5.0%
ETS	2 247	2 344	2 584	2 976	3 045	3 224	3 203	3 166	3 128	3 091	3 068	3 056	3 066	3 093	3 121	3 145	3 147	3 127	21.0%
TELUQ	2 350	2 418	2 365	2 277	2 276	2 276	2 264	2 250	2 236	2 220	2 205	2 193	2 185	2 181	2 179	2 176	2 171	2 163	-8.5%
Total	1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2000 2010 2010 2010 2010 2010 2010																		

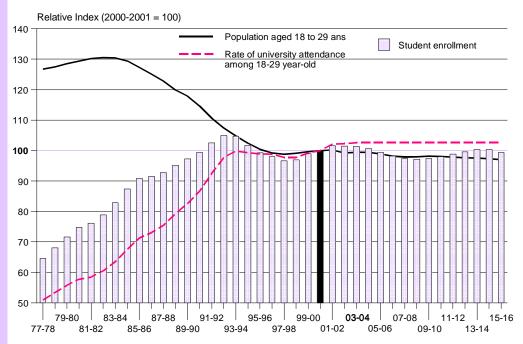
Notes

- 1. Student enrollment data excludes medical residents, but includes postdoctoral placement students.
- 2. To establish the university attendance rates, we used fixed rates based on the situation observed in 2000-2001; we then adjusted the forecast for each university for 2001-2002 to take into account the provisional observations available for Fall 2001 (preliminary data from CREPUQ). Between 2001-2002 and 2003-2004, the university attendance rates increase slightly; after 2003-2004, they remain fixed.
- 3. The data from the Institut national de la recherche scientifique include data from the Institut Armand-Frappier.

Source: Secteur de l'information et des communications, Direction des statistiques et des études quantitatives, Ministère de l'Éducation du Québec, February 26, 2002.

Graph 1, "Evolution of student enrollment, the population aged 18-29 and university attendance rates in Québec, 1977-1978 to 2015-2016," compares the evolution of student enrollment from 1977-1978 to 2015-2016, that of the 18-29 age group in the population, and that of the university attendance rate over the same period. We can see that, despite a substantial drop (17.7%) in the population aged 18 to 29 between 1983-1984 and 1992-1993, student enrollment rose rapidly (26.5%) over the same period. Also, after 1992-1993, changes in the population, student enrollment and the university attendance rate are closely linked. For the part of the forecast covering the years after 2004-2005, the gap between the student enrollment curve and the 18-29 age group curve, most visible between 2007-2008 and 2010-2011, can be explained by the age structure of the population, which is generally unfavourable for the universities over the period concerned. Even with fixed rates of university attendance, when the age groups less likely to attend university become numerically more significant within the general population, enrollment drops.

Graph 1
Evolution of student
enrollment, the
population aged 18 to 29
and university attendance
rates in Québec,
1977-1978 to 2015-2016



The 2031 horizon

There is nothing particularly alarming about our forecast of student enrollment for the period 2001-2002 to 2015-2016 except, of course, for the 4 university-level institutions for which we forecast a drop of over 10% in student enrollment by 2015-2016. However, the situation changes dramatically when we extend the forecast period. The next table leaves no room for doubt concerning the major decrease in student enrollment to be expected in the 2020s. In 2000-2001, FTE student enrollment was observed to be 160 389. In 2021-2022, the forecast number is 143 084, a drop of 17 305 FTE students (-10.8%), and there is no improvement in the years following. The forecast enrollment of 134 201 FTE students in 2031-2032 represents a decrease of 16.3% compared to 2000-2001. A comparison with the student enrollment in 1992-1993 (168 271) reveals a long-term downward trend over a period of almost 40 years. The decrease is 20.2%, a drop of over 34 000 FTE students.

Ta

Outlook for

able 3 r 2031	Forecast year	Forecast using fixed rates (2000-2001)	Forecast using adjusted rates
	2015-2016	155 822	159 421
	2017-2018	151 132	154 625
	2019-2010	145 557	148 934
	2021-2022	139 833	143 084
	2023-2024	136 275	139 445
	2025-2026	134 394	137 521
	2027-2028	132 803	135 894
	2029-2020	131 935	135 004
	2031-2032	131 150	134 201

Conclusion

The forecasts set out in this report differ slightly from those issued for the period 2000-2001 to 2014-2015, mainly because we once again expect a significant increase in student enrollment, hinted at by the provisional statement released by CREPUQ in September 2001. The university attendance rate had clearly begun to decline in 1994-1995 and 1995-1996, and the downward trend continued in 1996-1997 and 1997-1998. Given that the school year 1998-1999 seems to have marked the end of the trend, and that 1999-2000, 2000-2001 and 2001-2002 point to an increase in university attendance rates that we have projected to 2003-2004, this forecast is more positive than its predecessor. Since the change in the age structure of Québec's population should be favourable for the universities over the next four years, student enrollment should stabilize at around 160 000 FTE students during that period. Then, after reaching a low point in 2008-2009, it should begin to rise in the early 2010s, given that the age structure of the population will once again favour the universities, provided that university attendance rates do not begin a new downward trend.

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Appendix 1

Table 4
1996 distribution of the
female population of
Québec aged 15 to 59,
by administrative region
and mother tongue
(percentage)

Region	French	English	Other	Total
Abitibi-Témiscamingue	94.4	3.9	1.7	100.0
Bas-Saint-Laurent	99.3	0.6	0.1	100.0
Capitale-Nationale	96.3	2.0	1.7	100.0
Centre-du-Québec	97.6	1.3	1.1	100.0
Chaudière-Appalaches	98.8	0.9	0.3	100.0
Côte-Nord	87.3	5.4	7.3	100.0
Estrie	89.3	8.9	1.8	100.0
Gaspésie-Îles-de-la-Madeleine	89.8	9.3	0.9	100.0
Lanaudière	96.4	2.1	1.5	100.0
Laurentides	91.4	6.5	2.1	100.0
Laval	76.6	6.7	16.7	100.0
Mauricie	97.6	1.3	1.1	100.0
Montérégie	86.6	9.0	4.4	100.0
Montréal	54.4	18.8	26.8	100.0
Nord-du-Québec	48.3	3.2	48.5	100.0
Outaouais	80.4	15.6	4.0	100.0
Saguenay-Lac-Saint-Jean	98.9	0.7	0.4	100.0
Ensemble du Québec	81.7	8.8	9.5	100.0

Source: Statistics Canada, based on the 1996 census

Tableau 5
1996 distribution of the
male population of
Québec aged 15 to 59,
by administrative region
and mother tongue
(percentage)

Region	French	English	Other	Total
Abitibi-Témiscamingue	94.4	3.9	1.7	100.0
Bas-Saint-Laurent	99.2	0.6	0.2	100.0
Capitale-Nationale	96.1	2.0	1.9	100.0
Centre-du-Québec	97.4	1.3	1.3	100.0
Chaudière-Appalaches	98.8	0.9	0.3	100.0
Côte-Nord	87.5	5.4	7.1	100.0
Estrie	89.4	8.6	2.0	100.0
Gaspésie-Îles-de-la-Madeleine	89.2	9.8	1.0	100.0
Lanaudière	96.0	2.1	1.9	100.0
Laurentides	90.9	6.6	2.5	100.0
Laval	74.8	7.0	18.2	100.0
Mauricie	97.4	1.3	1.3	100.0
Montérégie	86.3	8.9	4.8	100.0
Montréal	52.0	18.9	29.1	100.0
Nord-du-Québec	49.6	4.1	46.3	100.0
Outaouais	79.4	16.0	4.6	100.0
Saguenay-Lac-Saint-Jean	98.8	8.0	0.4	100.0
Ensemble du Québec	81.3	8.7	10.0	100.0

Source: Statistics Canada, based on the 1996 census

Appendix 2

Table 6 Forecasts of full-time equivalent (FTE) student enrollment for the period 2001-2002 to 2015-2016: comparison of the forecast using fixed rates and the forecast using adjusted rates, taking into account the preliminary observations of student enrollment in the Fall of 2001

University year	First forecast: fixed rates (based on 2000-2001 observation)	Second forecast: adjusted to reflect the preliminary observations of CREPUQ for the Fall of 2001	Relation between the first and second forecasts	Adjustm based on a hypothetic attendar	Third forecast: adjusted to reflect a hypothetical change in university attendance rates	
				According to 2000-2001 observation	According to estimated enrollment in 2001-2002	
Α	В	С	D = C/B × 100	E	F	$G = C \times F/100$
2000-2001	160 389	160 389	100.0	100.0	-	-
2001-2002	160 347	162 933	101.6	101.6	100.0	162 933
2002-2003	159 819	162 395	101.6	101.9	100.3	162 832
2003-2004	159 009	161 574	101.6	102.2	100.6	162 566
2004-2005	157 777	160 323	101.6	102.2	100.6	161 307
2005-2006	155 875	158 392	101.6	102.2	100.6	159 369
2006-2007	154 003	156 492	101.6	102.2	100.6	157 461
2007-2008	152 800	155 276	101.6	102.2	100.6	156 239
2008-2009	152 476	154 958	101.6	102.2	100.6	155 920
2009-2010	152 789	155 288	101.6	102.2	100.6	156 254
2010-2011	153 740	156 268	101.6	102.2	100.6	157 238
2011-2012	154 955	157 516	101.6	102.2	100.6	158 495
2012-2013	156 242	158 836	101.6	102.2	100.6	159 819
2013-2014	157 182	159 802	101.6	102.2	100.6	160 796
2014-2015	157 179	159 807	101.6	102.2	100.6	160 799
2015-2016	155 822	158 430	101.6	102.2	100.6	159 421

Note: The data in column G summarize a series of calculations made for each university-level institution; the rounding-off of fractions creates discrepancies.

Appendix 3

Note concerning relative changes in full-time equivalent (FTE) student enrollment, the population aged 18 to 29, and university attendance rates Student enrollment was established by comparing the number of full-time equivalent (FTE) students for each year observed and forecast with the number of FTE students for the year 2000-2001; we then multiplied the result of each operation by 100. The last observation year, 2000-2001, represents the base number 100.

To establish the evolution of the population, we considered the entire population of Québec aged 18 to 29. We compared the population for each year observed and forecast with the estimated population for the year 2000; we multiplied the result of each operation by 100. 2000 represents the base number, 100, for the evolution of the population.

With regard to the university attendance rate, we compared the FTE student enrollment for each observation year with the population of Québec aged 18 to 29. This gave an annual measurement of university attendance. Next, we established a rate by comparing the annual measurement for 1977-1978 to 1999-2000 with the measurement for 2000-2001; we then multiplied the result of each operation by 100. 2000-2001 represents the base number, 100, for university attendance. For the forecast period, 2001-2002 to 2015-2016, we used the university attendance values given in the table in Appendix 2, column E.