

INTRODUCTION

Towards better retention of adolescents and teenagers

Attrition in longitudinal surveys can have a direct impact on data quality¹. It is of primary importance to implement effective retention strategies and adapt them to the changing reality of the study population. For example, in the Québec Longitudinal Study of Child Development (QLSCD), the first few retention strategies were mainly aimed at the parents since they were responsible for the participation of their child. By examining in parallel the various strategies used and the attrition level observed in each round, we can see which combinations of strategies seemed to be most effective. Over time we observed that the children decided more and more for themselves whether they would continue to participate, and this affected the participation of the whole family². Therefore, QLSCD team surveyed its adolescent participants in order to implement effective strategies to ensure their ongoing participation in the survey. Here are the lessons we learned about the QLSCD retention strategies used for the parents and the growing children.

Description of the QLSCD

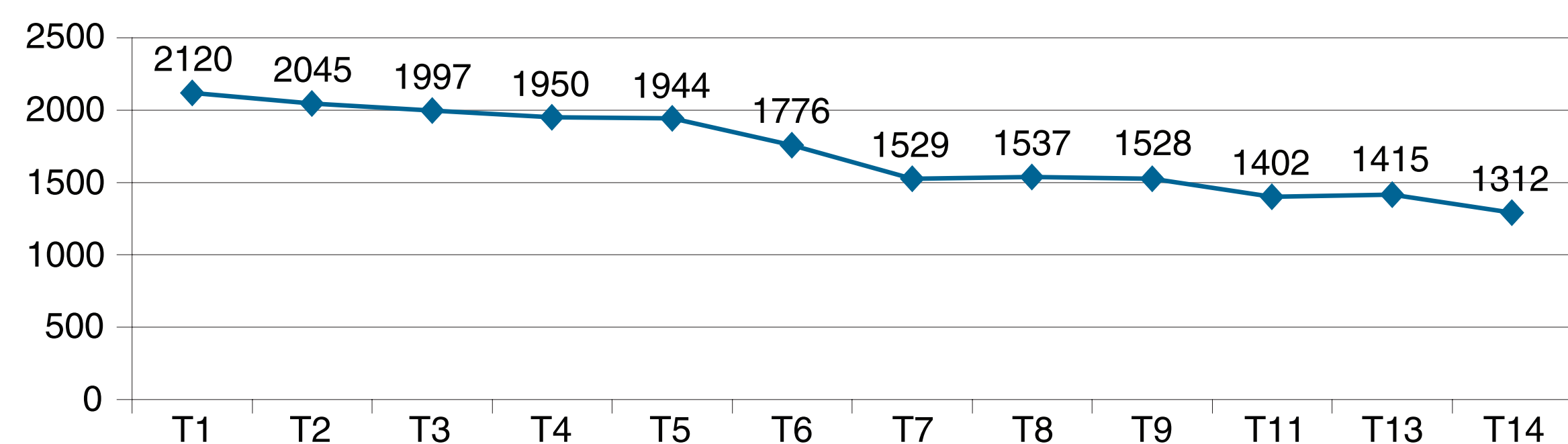
The Québec Longitudinal Study of Child Development was designed to advance our knowledge of child development³. Since 1998, a cohort of 2,120 Québec children (beginning when they were 5 months old) and their parents have been followed annually or biennially. The participating children are now fourteen years old and upcoming rounds of data collection should take place when they will be fifteen and seventeen years old, in 2013 and 2015 respectively.

Attrition in the QLSCD

Analyzing attrition was essential for adapting strategies to the target population.

Figure 1

Number of participants in the QLSCD, 1998 to 2011



Definition of attrition: "Attrition occurs when some cases either drop out of the study permanently or fail to participate in one or more of the follow-up assessments" (Mirowski, J. & Reynolds, J.R., p. 477)⁴

Explanations of attrition

Three general types of people do not remain as participants: 1) those who cannot be located; 2) those who refuse to continue; and 3) those who have died or become unable to participate (Miller & Wright 1995). Certain respondents were also excluded from continuing the study because they moved out of the province or did not sufficiently participate.

Those who refused to continue to participate were mainly:

- > Families whose everyday language of conversation was neither English nor French
- > Single-parent families
- > Families with insufficient income
- > Non-European immigrant families
- > Children as they aged (compared to their parents – see next section on partial attrition)

Increase in partial attrition among adolescents

Since T1 we have observed *partial attrition*, namely the non-participation of one of the members of the household (parent or child) compared to *complete attrition*, the non-participation of the entire household. Over the first seven years, the difference in participation between children and parents can be explained by external factors, such as a baby's lack of cooperation and various aspects of logistics.

Since the round when children were 10 years of age (T11), we have observed that their participation rate has been lower than that of their parents. Since conditions were favourable for participation of both groups, we believe that it has become increasingly difficult to retain adolescent children (i.e. teenagers). This is why we have needed to implement retention strategies specifically adapted to adolescents themselves.

Retention strategies used and lessons learned

Table 1 presents a list of retention activities, attrition observed in each round, and cumulative attrition. The retention activities are grouped according to the four main strategies described by Sullivan(1996).⁵ To the "Gain the trust of participants" category, we have added "and maintain their interest," since as soon as trust has been established, we need to retain it and devote activities to this end. By simultaneously observing annual attrition and retention strategies, we can suggest that the main factors related to participant attrition and retention were the following:

Factors associated with attrition

- T6 > End of the 5-year period announced to participants at the beginning of the survey
- > Uncertainty of obtaining funding
- > Introduction of new interviewers to conduct data collection
- T7 Heavier burden in terms of the duration of the interview
- T11 Data collection resumes after a one-year gap
- T14 > First data collection of the new phase
- > Respondent children are growing up – they become autonomous with regards to deciding to participate.

Factors associated with participant retention

- T1 to T5 > Obtaining a 5-year informal commitment to participate
- > Continuity in the team of female interviewers
- T8 Introduction of many strategies:
 - > The name and logo were changed from "In 2002... I was 5 years old" to "I am, I'll be."
 - > Careful study of the sample to concentrate efforts towards families who could continue to participate
 - > Newsletter presenting results sent to the families
 - > Flexibility offered to the families in terms of the location and mode of data collection.
 - > Return to a lower duration of the interview (1½ hours)
- T13 > Messages to families were adapted to the realities of today's youth
- > Reintroduction of a newsletter sent to families and the introduction of a prize draw for the adolescent participants.

1. CORDRAY, S. & POLK, K. (1983). The implications of respondent loss in panel studies of deviant behavior. *Journal of Research in Crime and Delinquency*, 20, 214-242.
 2. MILLER, R.B. & WRIGHT, D.W. (1995). Detecting and correcting attrition bias in longitudinal family research. *Journal of Marriage and the Family*, 57, 921-929.
 3. GREEN, S.M. & al. (1994). Potential Dropouts in a longitudinal study: prevalence, stability and associated characteristics. *Journal of Child and Family Studies*, 3 (1), 69-87.
 4. PERRON B. & al., Attrition in the Québec Longitudinal Study of Child Development (QLSCD): Success, Problems, and Solutions, (in preparation).
 5. JETTÉ, M. & DESGROSEILLERS, L. (2000). Survey description and methodology. *QLSCD 1998-2002*, Volume 1, Number 1, Québec, Institut de la statistique du Québec.
 6. MIROWSKI, J. & REYNOLDS, J.R. (2000). Age, depression, and attrition in the National Survey of Families and Households. *Sociological Methods and Research*, 28 (4), 476-504.
 7. SULLIVAN, C.M. & al. (1996). Retaining Participants in Longitudinal Community Research: A Comprehensive Protocol. *Journal of Applied Behavioral Science*, 32 (3), 262-276.

Results of an opinion survey on the QLSCD conducted on 14-year-old participants

A survey (web-based or paper version) covering various aspects of our longitudinal study was filled out by adolescent participants earlier this year (2012). It was mainly filled out by those whose families were loyal participants, namely those who had participated in at least 9 out of 11 rounds of data collection.

Motivation to continue in the survey

In order of preference, here are the responses given by the young teenagers who were asked about what would motivate them to continue to participate:

- > The amount of money received at the end of each round of data collection would be increased (29%)
- > You could win a prize in a draw for participating (26%)
- > You fill out a questionnaire every year, but it would not be as long (15%)
- > You receive information on the survey between data collections (12%)
- > Your parents also fill out a questionnaire (7%)
- > Someone comes and helps you fill out your questionnaire (6%)
- > The survey website would be made more interesting for you (2%)
- > Your birthday is highlighted (2%)

Interest in the newsletter addressed to young participants

Approximately three times a year, a one-page newsletter is sent to each young participant; 41% of respondents said they read it. The most interesting sections for them to read were the one related to the draw and the one on various facts entitled "Did you know...".

Type of questionnaire preferred

Here are the answers of respondents who were asked which types of questionnaire they would like to respond to in the next round of data collection:

- > Computerized questionnaire you fill out at home (by yourself with an interviewer present) (49.4%)
- > Web-based questionnaire you fill out by yourself alone (34.8%)
- > Less than 12% chose paper questionnaire, computerized questionnaire filled out at school after hours and telephone questionnaire

New strategies to come

In light of observations made by examining retention strategies and attrition in parallel over time, and the results of our survey of young respondents, the QLSCD plans to implement the following strategies for teenagers.

Gain their trust and maintain their interest by

- > Mainly communicating with the teenagers directly
- > Modernizing the image of the study so that it appeals to youth
- > Using new technologies
- > Reducing the burden on the parents as much as possible.

Acquire detailed information about their whereabouts and future plans by

- > Obtaining the teenagers' email addresses

Compensate them by

- > Increasing the financial compensation of participants
- > Continuing to organize draws for participants and increasing their chances of winning when participation of the household has been completed

Provide them with a tangible reminder of the next interview by

- > Keeping both the children and their parent(s) informed of upcoming rounds of data collection through letters and newsletters.

When the teenagers have become adults, we will need to re-examine our strategies. It may be possible to contact the families who abandoned the survey to solicit participation of their child who has attained the age of majority. We need to brainstorm to maintain the best possible participation rate and to ensure the continuity of QLSCD.

Table 1 – Annual attrition and retention strategies over time in the QLSCD

Age	PHASE 1 5 months to 4 years of age (Pre-school)					PHASE 2 5 to 12 years of age (Kindergarten and Elementary School)					PHASE 3 13 to 17 years of age (High School – [Secondary 1-3-5])							
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2013 - 2015
Year	T1	T2	T3	T4	T5	T6	T7	T8	T9		T11			T14				T18 - upcoming
Number of respondents contacted (N contacted)	2120	2120	2102	2047	2002	1996	1996	2002	1979		1974			1889				
Number of participants (N participants)	2120	2045	1997	1950	1944	1776	1529	1537	1528		1402			1312				
Participation rate (N participated / N contacted)		96%	95%	95%	97%	89%	77%	77%	77%		71%			69%				
Number of child participants	1774	1828	1820	1882	1881	1019	1209	1489	1497		1328			1234				
Number of parent participants	2120	2045	1997	1950	1944	1759	1492	1528	1466		1342			1290				
Annual attrition		3.5%	2.3%	2.4%	0.3%	8.6%	13.9%	-0.5%	0.6%		8.2%			7.3%				
Cumulative attrition		3.5%	5.8%	8.0%	8.3%	16.2%	27.90%	27.50%	27.90%		33.90%			38.10%				
Respondents' burden: duration of the visit	Approximately 1h30					Return to a 1½-hour visit												
Respondents' burden: special additional round	Nutrition Round					Child care Psychomotricity					Psychomotricity Health Round							
Gain the trust of participants (and maintain their interest)																		
Mailing a pamphlet on the survey, a personalized portrait of the child or souvenir folder											Brochures containing results 1998-2010							
Stable team of female interviewers																		
Mailing of informative newsletters to the parents	Twice a year					Mailing of a publication					"Echoes" publication mailed to the parents							
Mailing of informative newsletters to the children											"The Investigator" mailed to the children							
Personalized, diversified communication (telephone call confirming visit/ mailing of a "thank you" letter and a telephone call on satisfaction with the survey)						Creation of a website												
Flexibility offered on data collection mode to accommodate families	Parent: Face-to-face at home Child: Face-to-face at home					Parent: Telephone call Child: Face-to-face at home					Parent: Face-to-face or telephone call (abridged version for reluctant parents) Child: Face-to-face at school or at home							
Graphic image of survey updated						New name, new logo, new image												
Survey of participating adolescents' opinions on the QLSCD						Telephone call to the parents					To the teenagers							
Acquire detailed information about their whereabouts and future plans																		
Tracking using data from the Ministère de l'Éducation, du Loisir et du Sport																		
Change of address form included with mailings																		
Request participants to provide contact information for two relatives and/or friends	Information asked for two relatives/ friends					Information asked for two relatives/ friends					Information asked for 3 relatives/friends							
Compensate the participants for their time and cooperation																		
Compensation (money) given to the parents after their participation	20\$					25\$					25\$ 30\$							
Personalized journal containing the child's individual results																		
Compensation (gift, money) given to children after their participation	Gift such as board games (Yatzee, Trouble), books, stickers					Gift such as board games (Yatzee, Trouble), books, stickers					Certificate of physical condition 10\$							
Draw of prizes for participating children											Comic books, iPod, Nintendo, video 10\$							
Personalized birthday card sent to children	Birthday card					Birthday card					Sum of money Netbooks after the opinion survey 25\$? 25\$?							
Provide the participants a tangible reminder of the next interview																		
Commitment of families	5-year commitment																	
Communication adapted according to aspects of the ongoing survey	Last round of phase 1 data collection					Shorter data collection *Announcement that the survey will continue					Future rounds to be conducted every 2 years							
Information on the next round of data collection in newsletters, letters and telephone calls											Last round conducted in elementary school							
											Measuring the transition from elementary school to high school							
											Important period of time in the expectation of attaining a diploma							
											End of high school for most participants							

Strategies adapted to the children/ adolescent
 Strategies adapted to the parents