ARTICLES

STUDENTS' CHOICE OF SCHOOLS FOR THEIR CHILDREN: LOGISTIC REGRESSION ANALYSIS ON CONTRIBUTING FACTORS

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School choice has been an issue in the education systems where parents are given the autonomy to select schools for their children. Previous research suggests that parental decisions are affected by demographic, financial, and value-related factors. This study investigated variables including: demographic and socio-economic background, motivation, quality of school curriculum, quality of school life, and classroom environment as factors contributing to secondary students' choice of schools for their own children. The sample comprised 8,265 secondary students from 70 Catholic schools in New South Wales, Australia. Analysis of variance and logistic regression were used to identify contributing factors of school choice. Findings suggested that students' expectations of schools, quality of school curriculum, quality of school life, and the classroom environments they experienced all contributed to their intention to send their own children to the same schools, after controlling for their background differences. On the other hand, students' intentions were not affected by their gender, socio-economic backgrounds, or country of birth.

INTRODUCTION

The purpose of this paper is to identify the factors that influence the intention of Grade 12 students enrolled in Catholic schools to send their children to Catholic schools. Much of the research into school choice has taken a parental perspective (Reay & Lucey, 2000). This study attempts to present the students' intention to send their children to Catholic schools, having experienced Catholic education themselves. Specifically, this study aims to relate students' choice of sending or not sending their children to Catholic schools to their school experiences, their evaluation of the school curricu-

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lum, and school environment after controlling for students' background variables in order to shed light on factors that influence the choice of Catholic schools from the students' perspective.

IMPORTANCE OF SCHOOL CHOICE RESEARCH

School choice is one of the most controversial educational issues today and has enjoyed much attention in the Netherlands, the UK, and the US in the last 15 years (Jeynes, 2000). The school choice movement emerged as a reaction to the disappointment concerning the lack of progress of education reforms (Jeynes, 2000) and the apparent edge of private school students over their public school counterparts in standardized test scores (Goldhaber, 1997). The freedom of parents to choose schools for their children is, in itself, appealing, and is in line with the concept of liberty, a fundamental value underpinning modern European and American culture. Some supporters of school choice, such as Friedman, advocate it as a mechanism for ensuring school quality (Jeynes, 2000). Other writers (Unger, 1998) hail school choice as a "new era in education" and assert that school choice enables parents and children to exercise their civic rights to quality education (*America*, 1991; Lanis, 1999). From an educational and economic perspective, market selection may be a mechanism to bring in a balance of power between the provider and consumer of education (Jeynes, 2000; Stevans & Sessions, 2000). Most arguments against school choice rested on two propositions. First, school choice was thought to lead to inequity. It was argued that families with different socio-economic status had different options of choice and parents were differentially equipped to choose because of their educational and occupational backgrounds. Choice was thus perceived to result in further segregation. Opponents of choice feared for the creaming off of elite students from more affluent families that had both the capacity and the knowledge to choose (Gewirtz, Ball, & Bowe, 1995; Goldhaber, 1997; Reay & Ball, 1998). The second argument against school choice is doubt to the claim that school choice leads to improvement. It was argued (Goldhaber, 1997, 1999) that parents might choose on religious or racial grounds, instead of on school quality. Thus, school choice might not lead to improvement.

RATIONALITY OF SCHOOL CHOICE

Research into school choice has identified 10 variables within three domains that can be used to differentiate between school systems (Teelken, 1999). The three domains are as follows.

- Demand and supply of education. This domain refers to the opportunities for school choice in terms of transportation and available informa-

tion for selection and the diversity of supply;
- Regulative structures and choice behavior. This domain refers to the rationality of school choice and the regulative structures including educational streaming, formal availability of school choice, and entrance criteria for students;
- Balance between control and autonomy. This domain refers to the capacity of decision making by schools, the financial autonomy of schools, and the degree of autonomy of schools in setting their own curriculum.

The current study falls within the second domain and concerns the rationality and motives behind parental school choices. Previous research in this domain found that parents selected schools on the basis of quality, rather than on geographical distance or denomination (Flynn, 1993; Teelken, 1999). Nevertheless, the capacity to determine school quality differed across socio-economic groups. Gewirtz, Ball, and Bowe (1995) identified three groups of choosers: the privileged or skilled choosers, who have both the knowledge and tendency to choose; the semi-skilled choosers, who are inclined to choose but are limited in their capacity to choose; and the disconnected choosers, who are limited in their choices and low in inclination. The educational level, neighborhood, and social network of parents determine to a great extent what type of choosers they are. Ball and Vincent (1998) distinguish between "official" knowledge, which comprises knowledge normally prepared for formal dissemination such as examination results and school profile, and "grapevine" knowledge, which is impressionistic, based on informal exchanges and personal experiences, such as those shared among neighbors and social networks. According to their findings, although school choice is a complex issue, access to knowledge is essentially socially structured. Parental preference is determined largely by their social engagement with the grapevine, and their choice is confirmed by the opinions, experience, and choice of friends and relatives. The implication for the design of this study of school choice research is that antecedent variables including students' home and language background have to be included. Further, students' experiences in class and in school, and their perception of the quality of school curriculum are expected to contribute to their inclination to choose Catholic schools for their children.

School Choice in Australia

Parents in Australia have been granted more choices of schools for their children than their counterparts in the Netherlands, England, Scotland, or the US. The public school system in New South Wales, Australia, where

this study was carried out, was virtually "de-zoned" in 1990 following the Education Reform Act. Currently, state legislation guarantees enrollment of any student in the designated local comprehensive school, primary and secondary school, identified on a geographic basis. There are no longer any sibling rights. Any student can apply to any school, although there are competitive entry requirements for the state's 21 selective high schools and special schools, such as the Conservatorium of Music and Sports High Schools. If there are surplus places after a school has met its designated local commitment, the school can recruit students from outside the local area and select students according to criteria set by the school itself. Selection criteria vary from school to school. Some schools use a "first-come-first-served" method; others admit students on merit, defined by various combinations of performance at entrance interviews, prior assessment reports, or teacher recommendation of previous schools, established by the schools' admission board, which is comprised of staff, local parents, and community representatives.

At the time of the study, about 20% of students in New South Wales were enrolled in Catholic schools. According to Flynn (1993), the enrollment of children in Catholic schools had gone through several historical changes. Prior to the 1960s, it was a rarity for Catholic parents to send their children to non-Catholic schools. However, by 1970, 39% of Catholic students in New South Wales were enrolled in non-Catholic schools. The restructuring of Catholic education in the mid 1970s increased enrollment in Catholic schools in New South Wales from 16.8% in 1977 to 19.6% in 1989, amounting to a 2.8% increase. This was against a background of a reduction of 6.5% in enrollment in government schools in the same period (Flynn, 1993). Nevertheless, there was a dearth of systematic research into the reasons why parents chose Catholic schools in Australia (Flynn, 1993).

Four pieces of research are noteworthy; namely, Praedtz's study, *Where Shall We Send Them*? (1974); Partington's study, *Why Parents are Choosing Independent Schools* (1990); Carpenter and Western's study, *Choosing Non-government Secondary Schooling* (1992); and Flynn's study, *The Culture of Catholic Schools* (1993). These studies over 2 decades consistently confirmed that religious denomination was a major determining factor of parents' choosing Catholic schools for their children. Parents aspired to the Catholic values and moral standards cultivated in church schools. In addition, there was a clear articulation by parents that they preferred Catholic schools for their high academic standards and sound curriculum, the sound quality of teachers and teaching in these schools, the high standard of school discipline, the care and sense of community experienced by students, and for the safe school environment (Flynn, 1993).

Much has changed in the context of education, and indeed in the concept of learning, since these early studies. Cheng (2000) asserted that we are now in the Age of Contextualized Multiple Intelligence (CMI) and that quality education has to equip the next generation to apply new knowledge with relevance to the individual, the local, and the global communities. Quality education is to be redefined in this new framework of multiple intelligence, comprising the social, cultural, political, economic, technological, and educational dimensions (Cheng, 2000). Australia has been influenced by the changes at the national and global levels. What sort of Catholic schools are our students seeking for the next generation? How do our students choose schools for their children? This era of rapid change demands deep reflection upon the issue of choice. Through understanding choice, we establish the rationale and direction for change. This is the purpose of the study reported here.

CONCEPTUAL FRAMEWORK GUIDING THE STUDY

Informed by the literature, four blocks of variables were identified as being potential contributors to students' choice of Catholic schools. The first block of contributing variables concerns the background of students, including gender, religious affiliation, language used at home, and parental education levels. Students' background is expected to impact upon the other three blocks of contributing variables; nevertheless, focus is on the effect of student background on school choice. The literature suggests that demographic and socio-economic background are strong determinants of school choice. The next block of contributing variables comprises the academic motivation of students and their expectations of Catholic schools. Academic motivation is reflected by the reasons why students have elected to stay to Grade 12 after compulsory school years. Students' expectations of Catholic schools indicate the priorities they have for schools and thus represent the operative values upheld by students. Motivation and values have been found in previous studies reviewed to have strong impact on school choice. The third block of variables is concerned with the quality of school curriculum as perceived by the students. Since learning is the main function of schools, students' evaluation of the school curriculum, based on their direct experience, is expected to affect their choice of Catholic schools. The fourth block of variables concerns the quality of students' school and classroom experiences at Catholic schools. This conceptual framework, together with indicators of the variables is presented in Figure 1.

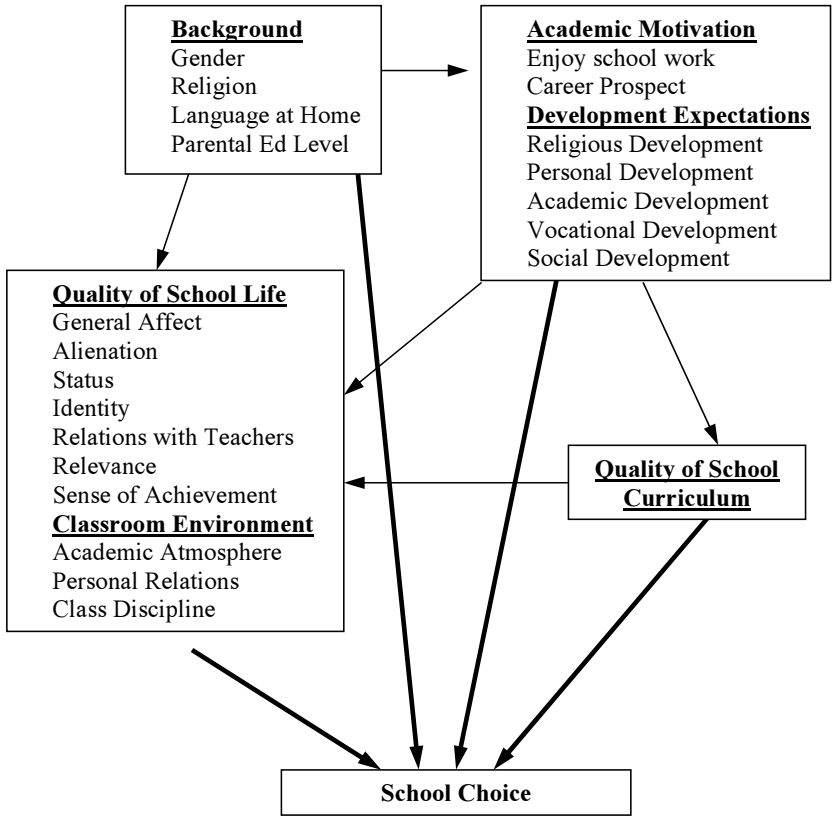

Figure 1. Conceptual framework guiding the study

Note: Relationships of major concern to this study are represented by bold arrows.

METHODS

THE SAMPLE OF STUDENTS AND SCHOOLS

A survey research design was chosen for the study. The sample comprised 8,265 Grade 12 students from 70 Catholic schools in New South Wales and the Australian Capital Territory (ACT), Australia. Table 1 indicates the breakdown of the sample according to student gender and other characteristics. A typical student in the sample was a Catholic, day-student in one of the sample schools, Australian by birth, born in an English-speaking family with both parents at home, and both parents being Australian-born and having completed secondary education.

Schools in this study were not randomly selected. Instead, schools

Table 1

Sample Characteristics of Students (Total sample size = 8,265)

Sample Characteristics	Categories	Count	Row %
Student gender	Male	4,601	55.7%
	Female	3,664	44.3%
Day or Boarding	Day	7,725	93.7%
	Boarding	521	6.3%
Student religion	Catholic	6,465	78.4%
	Orthodox	360	4.4%
	Other Christian	676	8.2%
	Non-Christian	240	2.9%
	No religion	503	6.1%
Student's place of birth	Australia	6,967	84.7%
	Another English speaking country	205	2.5%
	European or Middle East	271	3.3%
	Asia	600	7.3%
	Other	178	2.2%
Mother's place of birth	Australia	4,680	56.8%
	Another English speaking country	515	6.2%
	European or Middle East	1,616	19.6%
	Asia	976	11.8%
	Other	457	5.5%
Father's place of birth	Australia	4,325	52.6%
	Another English speaking country	591	7.2%
	European or Middle East	1,969	24.0%
	Asia	906	11.0%
	Other	424	5.2%
Mother's religion	Practicing Catholic	4,732	57.5%
	Non-practicing Catholic	1,324	16.1%
	Other Christian	1,496	18.2%
	Non-Christian	342	4.2%
	No religion	331	4.0%
Father's religion	Practicing Catholic	3,723	45.5%
	Non-practicing Catholic	1,651	20.2%
	Other Christian	1,705	20.8%

	Non-Christian	376	4.6%
	No religion	730	8.9%
Father's education	Primary	552	6.8%
	Some secondary	2,970	36.5%
	Year 12	1,444	17.7%
	Some tertiary	721	8.9%
	Degree or diploma	2,456	30.2%
Mother's education	Primary	402	4.9%
	Some secondary	3,363	41.2%
	Year 12	1,605	19.7%
	Some tertiary	764	9.4%
	Degree or diploma	2,022	24.8%
Parent status	Both at home	6,740	81.8%
	One parent died	257	3.1%
	Both parents died	26	.3%
	Divorced	814	9.9%
	Separated	405	4.9%
Language at home	English	6,881	83.6%
	Other language	1,349	16.4%

were selected in order to have comparability with earlier cohorts in previous studies by the second author. Further, schools were selected to be representative of schools in the dioceses and in terms of gender compositions. Accordingly, the following four criteria were used to obtain the sample:

- Criterion 1: Comparisons with data collected in previous studies by the second author (Flynn, 1975, 1985, 1993) should be possible. Using this criterion, as far as possible, all schools that had participated in earlier studies were included.
- Criterion 2: Each diocese of New South Wales (NSW) and each region of the Archdiocese of Sydney should be represented by roughly equal numbers of male and female students.
- Criterion 3: The sample of schools should be broadly representative of the three types of school organization related to Grade 12 students, namely all-boys' schools, all-girls' schools, and co-educational high schools in NSW and the ACT, Australia.
- Criterion 4: The total number of male and female students in the sample should reflect the proportion of these students in Grade 12 classes in Catholic high schools in each year group.

Within each sampled school, all Grade 12 students were invited to participate on a voluntary basis. The observation was that nearly all (over 99%) the students from sampled schools would participate in the study.

VARIABLES IN THE STUDY

The criterion variable is students' intention to send their children to a Catholic school. Students were consulted in the form of a Likert item, "I would send my children to a Catholic school" with associated options, *certainly false, probably false, uncertain, probably true,* and *certainly true*. Using students' responses to this variable, they were divided into five intention groups and their responses to motivational and school life experience variables were compared. In addition, a number of control variables were included in the analysis to facilitate identification of contributing factors to choice of Catholic schools. The control variables were students' gender, country of birth, language spoken at home, and family socio-economic status, which is a composite variable of parental education levels.

Academic Motivation

The block of motivational variables comprised reasons why students stayed on in school after the compulsory years of schooling. In Australia, where this study took place, students were obliged to stay in school for free education until Grade 10. A recent study by the Australian Council on Educational Research (ACER; Marks, Fleming, Long, & McMillan, 2000) found that, among other results, 76% of their sample participated in Grade 12; females were more likely than males to participate in Grade 12. Students from higher socio-economic status home backgrounds were more likely than those from lower socio-economic status families to stay on until Grade 12. Students from non-English speaking home backgrounds were more likely than those from English speaking homes to participate in Grade 12. Three variables, each made up of a number of Likert items with a common question, "How important were the following reasons in your decision to go on to Grade 12 in a Catholic school?" were used to gauge students' motivation in studying at Grade 12. The three motivational variables were:

- *Enjoy school work*. This refers to staying on in Grade 12 because of enjoyment in school work. It is made up of 7 Likert items. A typical item is "School work is interesting."
- *Career prospect*. This variable refers to students staying on in Grade 12 because studying is perceived to enhance the opportunities of getting a good job. It is made up of 6 Likert items. A typical item is "I need to complete Grade 12 for my career."
- *Can't find work*. This variable refers to students staying on in Grade 12 because the student could not find a job (negative motivation). It is made up of 7 Likert items. A typical item is "I could not find any kind of job."

Expectation of School

This block of variables refers to the aims and objectives of schools as perceived by the students. Students who had higher expectations of their schools were found in previous studies to enjoy better quality of school life than did those having lower expectations (Mok & Flynn, 1998). This block of variables comprised students' expectations of five operative goals: religious development, personal development, academic development, vocational development, and social development, of Catholic schools. Together, these variables reflected the priorities of students with regard to the purposes of Catholic schooling. Not surprisingly, schools are expected to develop students' skills and knowledge within the academic domain. In addition, there is also strong commitment expressed to the development of students in the moral, intellectual, personal, social, emotional, and aesthetic domains (Flynn, 1993).

Each expectation variable is made up of a number of Likert items. A five-point response scale, ranging from *no importance, little importance, some importance, very important,* to *most important,* was used. A high score on the scale indicates high importance is assigned to the dimension and a low score suggests low importance. The five expectation variables are:

- *Religious Development Expectation*. This variable refers to the students' commitments on their Catholic schools to support them in developing their religious beliefs. Religious expectation is measured by 11 Likert items. A typical item is represented by "Catholic schools should develop Christian values in students' lives."
- *Personal Development Expectation*. This variable refers to the priority students placed on their schools with regard to students' personal development. Personal expectation is measured by 7 Likert items. A typical item is represented by "Schools should help students to understand themselves."
- *Academic Development Expectation*. This refers to the emphasis students placed on their schools to develop their academic competencies, including helping students to prepare for public examinations and offering students a good formal school curriculum. Academic expectation is measured by 8 Likert items. A typical item is, "Schools should prepare students for the HSC (Higher School Certificate) examination as well as possible."
- *Vocational Development Expectation*. This refers to the expectations students have with regard to their career development. Vocational expectation is measured by 6 Likert items. A typical item is "Schools should prepare students for their future careers."
- *Social Development Expectation*. This refers to students' expectation

of their schools concerning their interpersonal and social development. Social expectation is measured by 8 Likert items. A typical item is "Schools should encourage students to be concerned for the needs of others."

Quality of the School Curriculum

One of the determinants of students' positive attitudes toward school was found to be the perceived quality of the school curriculum (Ainley, Reed, & Miller, 1986). In this study, students' perceptions about the quality of school curriculum were measured by a 9-item Likert scale. A typical item is "The school has a good academic program of studies."

Classroom Environment

Classroom environment was found to be an important factor contributing to students' attitudes toward school (Ainley et al., 1986). Three aspects of classroom environment were included in this study; namely, the classroom's academic atmosphere, quality of personal relations in the classroom, and class discipline. These three aspects of the classroom environment were operationalized correspondingly by three Likert scales originally developed by Dorman (1995) as follows:

- *Academic Atmosphere*. This measures the emphasis by teachers and students during class time on standards and academic matters. It was measured by a 10-item Likert scale. A typical item is, "The quality of teaching in the classrooms is of a good standard."
- *Personal Relations Atmosphere*. This measures the quality of interpersonal relations among peers and between students and teachers in class. It was measured by a 5-item Likert scale. A typical item is, "Teachers are friendly and considerate of students."
- *Class Discipline*. This measures the orderliness of the classroom. It was measured by a 4-item Likert scale. A typical item is, "There are rules which students are expected to observe in the classroom."

Quality of School Life

School life experience is expected to affect students' intention to send the next generation of students to Catholic schools. The quality of school life in this study was measured using a scale developed by Williams and Batten (1981) for gauging the well-being of secondary students in schools. Researchers (Ainley, 1999; Flynn, 1993) of the Australian Council for Educational Research (ACER) have contributed to the refinement of the scale. The Quality of School Life (QSL) scale used in this study was based on Flynn's (1993) version, with permission from ACER, for secondary students.

The Quality of School Life (QSL) questionnaire consisted of 40 Likert items grouped into 7 subscales, designed to measure 2 general dimensions and 5 specific domains. The 7 subscales of this instrument are defined as follows:

- *General Affect* – This general dimension of quality of school life explores students' overall positive feelings about school. This subscale is made up of 5 Likert items. A typical item in this dimension is: "My school is a place where I get enjoyment from being there."
- *Negative Affect* – This general dimension of school life examines students' overall negative experiences of school. This subscale is made up of 5 Likert items and is reversely coded such that a higher score means lower negative effect. A typical item is: "My school is a place where I get upset."
- *Status* – This specific domain refers to students' sense of self-worth and importance at school. This subscale is made up of 6 Likert items. A typical item is: "My school is a place where people look up to me."
- *Identity* – This specific domain is concerned with students' awareness of themselves and their ability to relate to others at school. This subscale is made up of 6 Likert items. A typical item reflecting this domain is: "My school is a place where I learn how to get along with other people."
- *Teachers* – This specific domain refers to the relationships between teachers and students at school. This subscale is made up of 6 Likert items. A typical item is: "My school is a place where teachers treat me fairly in class."
- *Relevance* – This specific domain refers to the extent to which students consider school work to be relevant to their future lives and creates career opportunities for them. This subscale is made up of 6 Likert items. A typical item is: "My school is a place where the things I learn will help me in adult life."
- *Achievement* – This specific domain refers to students' sense of achievement in relation to their school work. This subscale is made up of 6 Likert items. A typical item is "My school is a place where I am a success as a student."

STUDY PROCEDURES

Data were collected by the authors in 1998-1999, with support from consultants from the Catholic Education Offices of the 13 dioceses and the Archdiocese of New South Wales and the ACT, Australia. Grade 12 students were consulted, usually in the school hall, using a questionnaire that comprised the School Expectation Questionnaire as well as other scales for

the larger study, during class time. Students participated in the study on an entirely voluntary basis. Parental permission was not required for students' participation. The schools considered the exercise as part of school life. Students were given complete autonomy in choosing whether to participate in the study. As the questionnaires were anonymous, a return of the questionnaire indicated consent.

In general, the questionnaire took about 1 hour to complete, with a 5-minute break in between. At the outset, we explained to the students that, as they had spent up to 12 years in their schools, they were in a unique position to reflect on their schools as a whole and tell us about them through the two questionnaires. We were impressed by the commitment and genuineness of the students during the data collection process.

LIMITATIONS AND DELIMITATIONS OF THE STUDY

This study had all the drawbacks of cross-sectional survey research designs. Since data were collected at the same point in time, investigation of cause-and-effect relationship is impossible, for the study suffers from a lack of control. Two variables found to be strongly correlated might not be causally related (Gall, Borg, & Gall, 1996). Further, survey research utilizing a standardized questionnaire has the inherent drawback of not being able to cater to the idiosyncrasies of each student. This study was limited to Grade 12 students studying in Catholic schools within the context of New South Wales educational settings. As discussed in the introduction, school choice legislations in New South Wales are different from those of the UK or the US. Consequently, generalization of findings in this study to European or American contexts has to take the necessary contextual differences into consideration.

Another limitation concerns the restriction of sampling from Catholic schools only and that the majority of students in the sample were Catholic students. There is no intention to compare students' intentions of sending their children to Catholic schools and non-Catholic schools, nor between intentions of students from Catholic and non-Catholic schools. Instead, this study aims to identify the factors that contribute to students' intentions to send their children to Catholic schools among the group of students who have gone through the experience of studying at Catholic schools themselves.

ANALYSIS AND RESULTS

Two sets of analysis were undertaken in order to identify factors contributing to school choice. First, a set of one-way analysis of variance (ANOVA) was undertaken to ascertain whether or not students who had different lev-

els of intention to choose Catholic schools also differed in their academic motivation and school or classroom experiences. Second, logistic regression analysis was used to identify factors contributing to the decision of students with regard to their choice of Catholic schools for their children.

The dependent variable in the study, namely, choice of Catholic schools, is a discrete variable with dichotomous outcome for each individual student. The dichotomous outcome is coded as *Yes* if the response to the item "I would send my children to a Catholic school" is *Certainly/Probably* and *No* if the response to the same item is *Certainly Not/Probably Not/Uncertain*. When the dependent variable is dichotomous as in the current situation, ordinary least square regression analysis violates the statistical assumptions of normality and homoscedasticity. This is because a normal distribution is not possible with only two outcome values, and residuals of the regression will be low for the portions of the regression line near the tails (i.e., near the *Yes* and *No* ends), but high in the middle. To address these issues, logistic regression (Menard, 2002) is used to enable prediction of the dichotomous outcome from a set of independent variables. Variables included in the logistic regression included the blocks of academic motivation factors, students' expectation of schools, their perceptions of the quality of the school curriculum, their evaluation of the classroom environment, and their quality of school life. Background variables, including students' gender, their religion, their parents' educational background, and the language used at home, were, based on the literature, selected for inclusion in the logistic regression analysis.

In theory, multilevel, rather than single-level, logistic regression analysis should have been undertaken to determine the relationship between contributing factors and school choice. The sample was drawn from a population of students nested within schools. Students from the same school tended to share much in common in terms of their school and classroom experiences, which in turn influenced their intention to send their children to Catholic schools. Multilevel analysis (Goldstein, 1995) was therefore deemed necessary to control for the clustering effect of the data. Nevertheless, initial analysis indicated that school choice had an intraclass correlation (Goldstein, 1995) of only 2%. Intraclass correlation is an estimate of the proportion of the total variance of the dependent variable, in this case school choice, which is accounted for by school membership. A small intraclass correlation means that the between-school variation of school choice is relatively small compared to the within-school variation. In such circumstances, multilevel analysis does not add to the interpretation of the data. Consequently, the decision was made to build a single-level logistic regression model of the relationship between school choice and its contributing factors, after controlling for the background variables.

FREQUENCIES OF STUDENTS WHO WOULD SEND THEIR CHILDREN TO CATHOLIC SCHOOLS

Initial frequency counts suggested about two thirds (66%) of students currently enrolled in Grade 12 of Catholic schools would *certainly* or *probably* send their children to Catholic schools. Another quarter (23%) was *uncertain* of their choice. The remaining 11% of students were not prepared to choose Catholic schools for their children. The following analyses aim to identify factors underlying these choices of students.

DIFFERENCES IN ACADEMIC MOTIVATION

Analysis of variance results show that those who were more academically motivated were also more inclined to choose Catholic schools than those who were less motivated. Those who were more inclined to agree that they stayed in Grade 12 because of enjoyment of schoolwork were more disposed toward choosing Catholic schools than those who were less inclined. The results are presented in Table 2 and Figure 2. Similarly, those students

Table 2

Analysis of Variance on Academic Motivation

Academic motivation	School choice groups: "I would send my children to a Catholic school"	n	Mean	SD	F	Sig
Enjoy school work	Certainly false	448	2.52	0.89	179.82 (4, 7448)	P < 0.001
	Probably false	398	2.68	0.83		
	Uncertain	1695	2.91	0.78		
	Probably true	2234	3.10	0.74		
	Certainly true	2678	3.34	0.78		
Career prospect	Certainly false	455	3.86	1.03	88.60 (4, 7629)	P < 0.001
	Probably false	411	4.02	0.85		
	Uncertain	1737	4.08	0.78		
	Probably true	2288	4.23	0.67		
	Certainly true	2743	4.39	0.66		
Cannot find work	Certainly false	456	2.19	0.82	0.94 (4, 7675)	P = 0.44
	Probably false	410	2.23	0.76		
	Uncertain	1741	2.26	0.79		
	Probably true	2309	2.25	0.75		
	Certainly true	2764	2.26	0.78		

who were more inclined to agree that Grade 12 would help their future career opportunities were also more likely to choose Catholic schools than those who were less inclined. There was no significant difference, however, among school choice groups with regard to not being able to find work as a reason for staying on until Grade 12. These results suggest that students who feel more academically motivated by their schools tend to choose the same type of schools for their children.

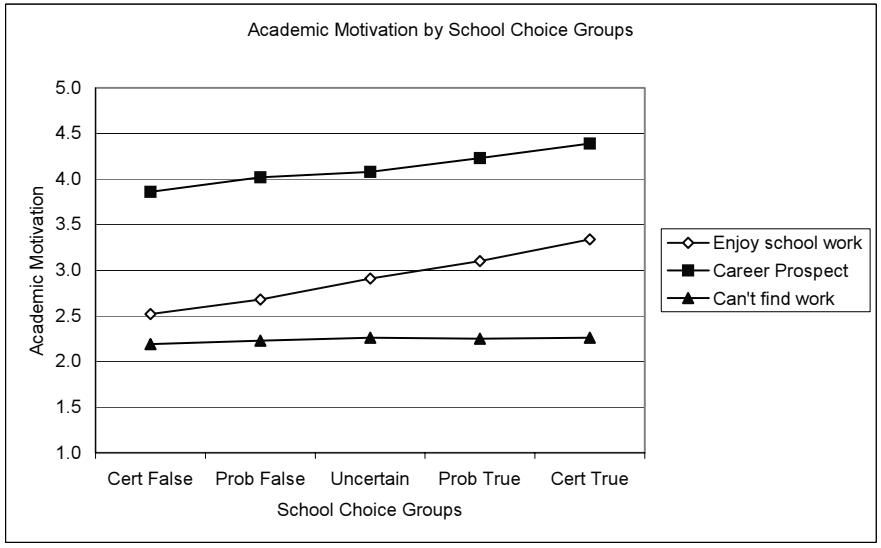

Figure 2. Mean academic motivation across school choice groups

DIFFERENCES IN DEVELOPMENT EXPECTATIONS

There were significant statistical differences among school choice groups in terms of students' expectations of Catholic schools. Analysis of variance results suggest that the groups of students who would like to send their children to Catholic schools also had higher expectations of Catholic schools in the dimensions of religious development, personal development, academic development, vocational development, and social development. The results are given in Table 3 and Figure 3.

Table 3

Analysis of Variance on Expectation of Schools

Expectation of schools	School choice group	*n*	Mean	*SD*	*F* value (degrees of freedom)	Sig
Religious Development	Certainly false	468	2.36	1.04	315.55 (4, 7688)	P < 0.001
	Probably false	417	2.69	0.88		
	Uncertain	1751	2.85	0.85		
	Probably true	2295	3.10	0.76		
	Certainly true	2762	3.50	0.85		
Personal Development	Certainly false	477	3.75	1.03	177.69 (4, 7820)	P < 0.001
	Probably false	416	3.79	0.78		
	Uncertain	1773	3.95	0.72		
	Probably true	2342	4.09	0.61		
	Certainly true	2817	4.35	0.58		
Academic Development	Certainly false	470	4.03	0.92	113.16 (4, 7785)	P < 0.001
	Probably false	420	4.00	0.76		
	Uncertain	1769	4.13	0.65		
	Probably true	2331	4.21	0.54		
	Certainly true	2800	4.42	0.49		
Vocational Development	Certainly false	477	4.14	0.97	88.08 (4, 7809)	P < 0.001
	Probably false	417	4.12	0.80		
	Uncertain	1773	4.24	0.69		
	Probably true	2349	4.30	0.58		
	Certainly true	2816	4.51	0.52		
Social Development	Certainly false	476	3.54	0.99	150.06	P < 0.001
	Probably false	420	3.60	0.75		
	Uncertain	1770	3.74	0.69		
	Probably true	2345	3.84	0.61		
	Certainly true	2803	4.11	0.62		

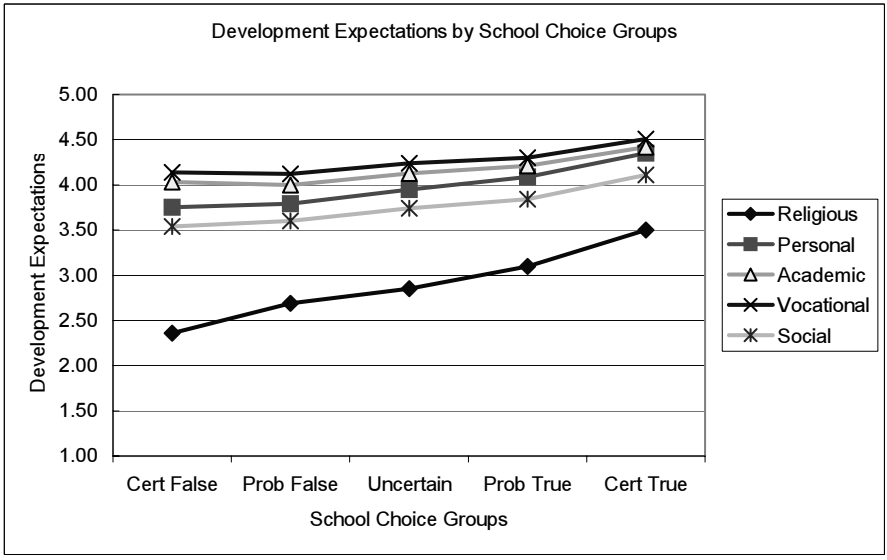

Figure 3. Mean development expectation values across school choice groups

DIFFERENCES IN QUALITY OF THE SCHOOL CURRICULUM AND CLASSROOM ENVIRONMENT

Empirical evidence showed that students who were more inclined to send their children to Catholic schools had more positive attitudes toward the school curriculum. In addition, they tended to have experienced a more positive classroom environment in terms of the academic atmosphere, personal relationships, and discipline within the classroom. The ANOVA results are given in Table 4 and Figure 4.

Table 4

Analysis of Variance on Quality of the School Curriculum and Classroom Environment

Curriculum & climate	School choice group	*n*	Mean	*SD*	*F* value (degrees of freedom)	Sig
School Curriculum	Certainly false	467	2.95	0.91	366.73 (4, 7744)	P < 0.001
	Probably false	416	3.18	0.71		
	Uncertain	1753	3.45	0.68		
	Probably true	2317	3.69	0.58		
	Certainly true	2796	3.95	0.66		
Academic Atmosphere	Certainly false	473	3.14	0.91	370.94 (4, 7684)	P < 0.001
	Probably false	411	3.33	0.68		
	Uncertain	1733	3.59	0.64		
	Probably true	2310	3.81	0.54		
	Certainly true	2762	4.07	0.60		
Personal Relations Atmosphere	Certainly false	476	3.31	0.96	310.55 (4, 7791)	P < 0.001
	Probably false	416	3.47	0.74		
	Uncertain	1766	3.72	0.68		
	Probably true	2331	3.93	0.58		
	Certainly true	2807	4.19	0.62		
Class Discipline	Certainly false	472	3.54	0.87	171.07 (4, 7760)	P < 0.001
	Probably false	415	3.60	0.68		
	Uncertain	1762	3.76	0.61		
	Probably true	2326	3.90	0.53		
	Certainly true	2790	4.10	0.58		

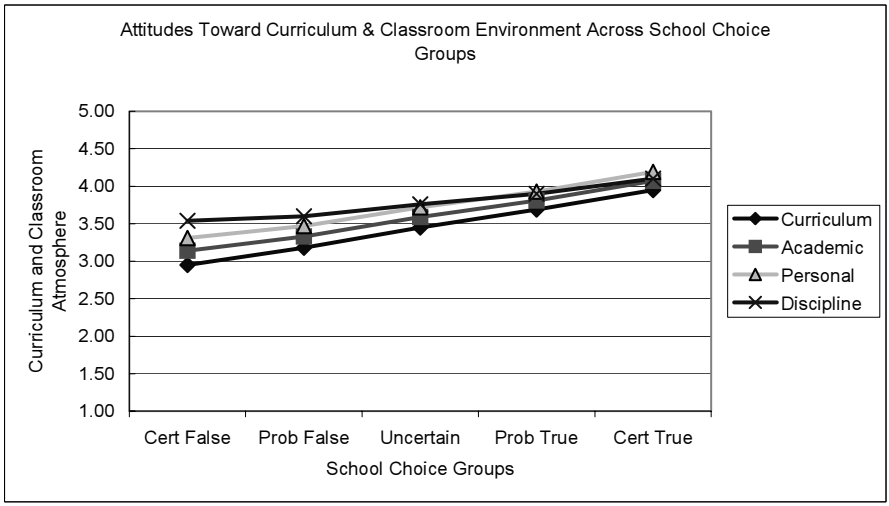

Figure 4. Mean school curriculum and classroom atmosphere across school choice groups

DIFFERENCES IN QUALITY OF SCHOOL LIFE

Students who intended to send their children to Catholic schools had a more positive experience of school life than those who intended not to send their children to Catholic schools. Analysis of variance results (Table 5 and Figure 5) suggests that the group that intended to choose Catholic schools had the most positive affect, the least alienation, the highest perceived status among peers, the best sense of identity, the best relationship with teachers, saw the most relevance of school work, and had the best sense of achievement compared with other school choice groups. The other school choice groups decreased in their quality of school life sequentially according to their intention to choose Catholic schools.

Table 5

Analysis of Variance on Quality of School Life Across School Choice Groups

Quality of school life	School choice group	*n*	Mean	*SD*	*F* value (degrees of freedom)	Sig
General affect	Certainly false	447	2.67	0.94	413.20 (4, 7470)	P < 0.001
	Probably false	399	2.90	0.85		
	Uncertain	1699	3.27	0.76		
	Probably true	2249	3.54	0.70		
	Certainly true	2681	3.87	0.72		
Negative affect	Certainly false	447	2.85	1.03	76.14 (4, 7419)	P < 0.001
	Probably false	394	2.81	0.90		
	Uncertain	1692	2.63	0.91		
	Probably true	2230	2.45	0.88		
	Certainly true	2661	2.28	0.92		
Status	Certainly false	452	3.02	0.92	165.40 (4, 7478)	P < 0.001
	Probably false	395	3.11	0.77		
	Uncertain	1704	3.30	0.71		
	Probably true	2231	3.45	0.66		
	Certainly true	2701	3.71	0.72		
Identity	Certainly false	449	3.42	0.87	191.62 (4, 7495)	P < 0.001
	Probably false	398	3.47	0.69		
	Uncertain	1708	3.70	0.66		
	Probably true	2251	3.85	0.58		
	Certainly true	2694	4.07	0.60		
Teachers	Certainly false	453	3.09	0.92	246.80 (4, 7529)	P < 0.001
	Probably false	397	3.27	0.80		
	Uncertain	1721	3.49	0.73		
	Probably true	2264	3.72	0.63		
	Certainly true	2699	3.96	0.71		
Relevance	Certainly false	445	3.24	1.01	198.97 (4, 7496)	P < 0.001
	Probably false	394	3.46	0.80		
	Uncertain	1705	3.67	0.75		
	Probably true	2251	3.84	0.67		
	Certainly true	2706	4.08	0.69		
Achievement	Certainly false	446	3.04	0.78	197.16(4, 7439)	P < 0.001
	Probably false	393	3.16	0.65		
	Uncertain	1686	3.32	0.64		
	Probably true	2235	3.46	0.62		
	Certainly true	2684	3.72	0.63		

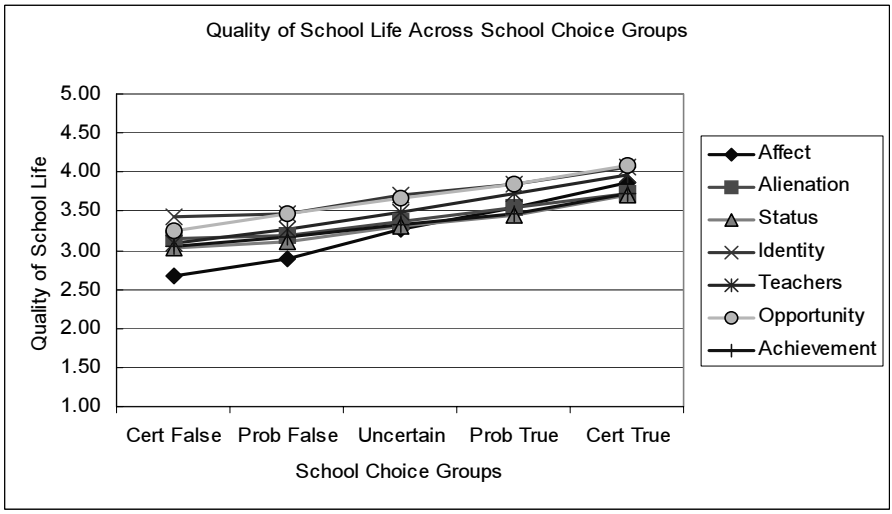

Figure 5. Mean quality of school life across school choice groups

FACTORS CONTRIBUTING TO THE CHOICE OF SCHOOLS

Logistic regression results on factors contributing to the choice of Catholic schools are presented in Table 6. The dependent variable of the logistic regression is choice of Catholic schools and is coded *Yes* if the response is *Certainly/Probably True*, or *No* if the response is *Certainly/Probably Not True/Uncertain*. The top part of Table 6 presents a classification table that gives an indication of how well the logistic regression model predicts the outcome. The two rows of the classification table are the observed (actual responses). Values in the rows indicate that 3,693 (equals 3,149 + 544) students would send their children to a Catholic school (i.e., the *Yes* category), and 2,097 (equals 989 + 1,108) students would not send their children to a Catholic school (i.e., the *No* category). The two columns of the same classification table present the predicted number of students in the *Yes* and *No* categories. The model predicts 4,138 (equals 3,149 + 989) students would send their children to a Catholic school and 1,652 (equals 544 + 1,108) would not. The percentage of correct prediction by the model can be calculated from the classification table. The logistic regression model correctly predicts 85.3% (equals 3,149 predicted out of the 3,693 observed) of the *Yes* category and 52.8% (equals 1,108 predicted out of the 2,097 observed) of the *No* category. On average, the model predicts 73.5% (equals 3,149 + 1,108 correct predictions out of the total 5,790 cases) of the cases correctly. The Cox and Snell (1989) R-squared (equals to 0.21) and Nagelkerke (1991) R-squared (equals to 0.29) statistics, both of which can take values from 0 to 1 and are analogous in interpretation to the R-squared values in ordinary least square regression, suggest that the model explains a substan-

tial amount of variance in the Catholic school choice of the students. Using the Hosmer and Lemeshow (1989) goodness of fit test being greater than 0-.05 as an indicator that the model fits the data well, the logistic model in this study, which has a Hosmer and Lemeshow Chi-square value of 39.55, seems to have a reasonable good fit to the data.

Table 6

Logistic Regression of School Choice by Academic Motivation, Expectation, Curriculum, Classroom Environment, and Quality of School Life, after Controlling for Background Variables

Classification Table: "I would send my children to a Catholic school"

Observed	YES	NO	Percentage Correct
YES	3,149 (3,693)	544 (0)	85.3 (100.0)
NO	989 (2,097)	1108 (0)	52.8 (0.0)
Overall Percentage			73.5 (63.8)

Note:

1. Values of the Final Model were printed in cells; values of the Null Model were printed below in brackets.
2. YES is coded "1" in the logistic regression analysis. It represents *Certainly True* and *Probably True* responses to the item "I would send my children to a Catholic school."
3. NO is coded "0" in the logistic regression analysis. It represents *Certainly False*, *Probably False*, and *Uncertain* responses to the item "I would send my children to a Catholic school."
4. Observed categories are the actual responses of the students.
5. Predicted categories are the responses predicted by the logistic regression model.

Model statistics:

Cox & Snell R Square = 0.21
Nagelkerke R Square = 0.29
Hosmer and Lemeshow Test, Chi-square = 39.55 (degrees of freedom = 8)

(table continues)

The Logistic Regression Model

	B	*SE*	Wald	*df*	Sig		Exp(B)	95% CI for Exp(B)	
								Lower	Upper
Academic Motivation									
Enjoy school work	-0.174	0.058	8.895	1	0.003	*	0.840	0.749	0.942
Career Prospect	0.187	0.054	12.137	1	0.000	*	1.205	1.085	1.339
Expectation of Development by School									
Religious Development	0.529	0.049	114.609	1	0.000	*	1.697	1.540	1.870
Personal Development	0.194	0.095	4.187	1	0.041		1.214	1.008	1.463
Academic Development	0.095	0.108	0.770	1	0.380		1.099	0.890	1.359
Vocational Development	0.190	0.099	3.653	1	0.056		1.209	0.995	1.470
Social Development	-0.300	0.094	10.145	1	0.001	*	0.741	0.616	0.891
Quality of School Curriculum	0.277	0.075	13.512	1	0.000	*	1.319	1.138	1.528
Classroom Environment									
Academic Atmosphere	0.378	0.090	17.631	1	0.000	*	1.460	1.223	1.742
Personal Relations Atmosphere	0.102	0.083	1.521	1	0.217		1.107	0.942	1.303
Class discipline	0.220	0.067	10.872	1	0.001	*	1.246	1.093	1.420
Quality of School Life									
General Affect	0.496	0.070	50.561	1	0.000	*	1.642	1.432	1.883
Negative Affect	0.046	0.039	1.392	1	0.238		1.048	0.970	1.132
Status	0.195	0.065	9.003	1	0.003	*	1.216	1.070	1.381
Identity	-0.055	0.076	0.515	1	0.473		0.947	0.816	1.099
Relations with Teachers	-0.088	0.071	1.559	1	0.212		0.915	0.797	1.052
Relevance	-0.071	0.064	1.213	1	0.271		0.932	0.822	1.057
Sense of Achievement	0.126	0.067	3.527	1	0.060		1.134	0.995	1.293
Background Characteristics									
Gender (Male = 1; Female = 2)	-0.109	0.065	2.788	1	0.095		0.897	0.790	1.019
Religion			104.873	4	0.000	*			
Catholic	0.714	0.174	16.867	1	0.000	*	2.042	1.452	2.871
Orthodox	-0.253	0.241	1.106	1	0.293		0.776	0.485	1.244
Other Christian Faith	-0.179	0.207	0.748	1	0.387		0.836	0.557	1.255
Non-Christian Religion	-0.145	0.277	0.272	1	0.602		0.865	0.502	1.491
Parental Education Level	-0.061	0.028	4.762	1	0.029		0.941	0.891	0.994
Language at Home (English)	-0.029	0.098	0.087	1	0.768		0.971	0.801	1.178
Country of Birth			9.630	4	0.047				
Australia	0.024	0.229	0.011	1	0.917		1.024	0.654	1.604
Another English-Speaking Country	-0.359	0.323	1.231	1	0.267		0.699	0.371	1.317
European/Middle East Country	-0.133	0.285	0.219	1	0.640		0.875	0.501	1.530
Asian Country	-0.327	0.250	1.717	1	0.190		0.721	0.442	1.176
Constant	-9.715	0.482	407.074	1	0.000		0.000		

Note: * Significant at 0.01 level

The second part of Table 6 shows the logistic regression coefficients. It can be seen that after controlling for students' gender, religion, country of birth, language used at home, and parental education level, students' choice of Catholic schools is affected by their academic motivation, expectation of development by school, quality of the school curriculum, their perceptions of the classroom environment and their quality of school life. These independent variables have significant logistic regression coefficients as indicated by the significant Wald's Statistic (Menard, 2002).

The logistic regression coefficients are interpreted differently from the linear regression coefficients. First, if the sign of the logistic regression coefficient of an independent variable is positive, then increasing values of the independent variable increases the odds of the *Yes* category of the outcome variable. A negative logistic regression coefficient implies increasing values of the independent variable decreases the odds ratio of the *Yes* category of the outcome variable. Second, the exponential value of the logistic regression coefficient represents the increase in odds. In this study, being a Catholic (logistic regression coefficient is 0.714, Table 6) increases the odds of the student's intention to send his or her children to a Catholic school. Table 6 shows that the odds ratio of being a Catholic is 2.042 (Column "Exp[B]" of Table 6), which means that Catholic students are almost twice as likely to send their children to Catholic schools than are non-Catholic students.

By the same argument, the odds ratio of sending their children to Catholic schools is increased by, after controlling for all other independent variables in the equation, increases in students' higher expectations on the school's religious development (odds ratio increased by about 1.7 times for each unit increase in the scale); their general satisfaction with the quality of school life (odds ratio increased by 1.6 times for each unit increase in the scale); their satisfaction with the academic atmosphere of the classroom environment (odds ratio increased by 1.5 times); their satisfaction with the quality of the school curriculum (odds ratio increased by 1.3 times); their satisfaction with the class discipline (odds ratio increased by 1.2 times); their status within school in their quality of school life (odds ratio increased by 1.2 times); and their inclination to stay the extra years in school after compulsory education because of better career prospects (odds ratio increased by 1.2 times).

On the other hand, the odds ratio of students to send their children to Catholic schools decreases if the students indicate they stay until Year 12 because of their enjoyment in school work (odds ratio decreased by 0.84 times) or if they have high social development expectations of their school (odds ratio decreases by 0.74), holding everything else in the equation constant. Negative logistic regression coefficients are in general more difficult

to interpret than positive ones, as in our case.

In addition, there is no significant effect on Catholic schools of either gender, country of birth, parental education level, or language spoken at home. The Wald's statistics for these independent variables are not statistically significant (Table 6).

Specifically, with the caveat that the magnitude of the regression coefficient, even if it has been standardized, might not always reflect the contribution of the predictor (Menard, 2002), it appears from Table 6 that being Catholic and having a high level of religious expectation of schools increase the odds ratio of sending children to Catholic schools. Religious denomination thus seems to be the most important contributing factor to students' choice of Catholic schools. After controlling for the religious factors, students' intentions were significantly affected by their general satisfaction with school life, the academic atmosphere in the classroom, the satisfaction with the school curriculum, the orderliness of the classroom, their sense of self-worth and importance at school, students' perception that staying until Grade 12 enhances their career prospects, students staying until Grade 12 because of their enjoyment of school work (negative effect), and students' high expectation of Catholic schools on their social development (negative effect). These findings suggest that students choose Catholic schools for their children on the basis of the quality of education they have experienced themselves at Catholic schools.

DISCUSSION

Two-thirds of current Grade 12 students expressed a desire to send their children to Catholic schools in this study. The result indicates a majority endorsement of Catholic education in New South Wales. Findings are in line with the school choice literature that suggests that religious affiliation is a major determining factor for students' choice of Catholic schools. What is new to the literature is that even after controlling for religious affiliation and home socio-economic background, students' academic motivation and the school's academic standards, as reflected by quality of the school curriculum, quality of students' school life, the academic atmosphere, and the classroom discipline, still contribute significantly to decisions about Catholic schools.

The finding that academic quality is a significant contributing factor to students' selection of Catholic schools implies that the improvement of Catholic schooling should have an academic focus. This finding has an important message to education reform, which at times may have been distracted by such issues as the vocational emphasis of the program, or other extrinsic influences on schooling. On the basis of this study, schools should focus on the core and equal concerns of academic standards and moral

value development of students.

Mok and Cheng (2001) identified paradigmatic changes in education in the new century, including the "demonopolization" of teaching; the change from teacher-centered teaching to student-centered learning; the development of self learning; the emphasis of lifelong learning; the redefinition of knowledge and methods of knowledge acquisition brought about by developments in information and communication technology. How is academic quality defined in this new paradigm? How should Catholic education be reformed to ensure the dual foci of academic quality and Catholic values be revitalized and sustained? These are challenging questions for researchers in Catholic education today.

REFERENCES

Ainley, J. (1999, July). *Schools and the social development of young Australians: Frameworks, outcomes and influences*. Paper presented at the 1999 National Social Outcomes of Schooling Forum, Queensland, Australia.

Ainley, J., Reed, R., & Miller, H. (1986). *School organisation and the quality of schooling*. Hawthorn, Victoria, Australia: Australian Council for Educational Research.

America 2000: An education strategy sourcebook. (1991). Washington, DC: U.S. Department of Education.

Ball, S. J., & Vincent, C. (1998). "I heard it on the grapevine": "Hot" knowledge and school choice. *British Journal of Sociology of Education, 19*(3), 377-400.

Carpenter, P. G., & Western, J. S. (1992). Choosing non-government secondary schooling. *The Australian Educational Researcher, 19*(2), 23-37.

Cheng, Y. C. (2000). A CMI-triplization paradigm for reforming education in the new millennium. *International Journal of Educational Management, 14*(4), 156-174.

Cox, D. R., & Snell, E. J. (1989). *Analysis of binary data* (2nd ed.). London: Chapman & Hall.

Dorman, J. (1995). Contrasting teacher and student perception of classroom environment: The rose coloured glasses syndrome. *Interlogue, 6*, 42-50.

Flynn, M. (1975). *Some Catholic schools in action*. Sydney, Australia: Catholic Education Office.

Flynn, M. (1985). *The effectiveness of Catholic schools*. Homebush, NSW, Australia: St Pauls Publications.

Flynn, M. (1993). *The culture of Catholic schools*. Homebush, NSW, Australia: St Pauls Publications.

Gall, M. D., Borg, W. R., & Gall, J. P. (1996). *Educational research: An introduction* (6th ed.). White Plains, NY: Longman Publishers.

Gewirtz, S., Ball, S., & Bowe, R. (1995). *Markets, choice, and equity in education*. Philadelphia: Open University Press.

Goldhaber, D. D. (1997). School choice as education reform. *Phi Delta Kappan, 79*(2), 143-147.

Goldhaber, D. D. (1999). School choice: An examination of the empirical evidence on achievement, parental decision making, and equity. *Educational Researcher, 28*(9), 16-25.

Goldstein, H. (1995). *Multilevel statistical models*. London: Edward Arnold.

Hosmer, D., & Lemeshow, S. (1989). *Applied logistic regression*. New York: Wiley & Sons.

Jeynes, W. (2000). Assessing school choice: A balanced perspective. *Cambridge Journal of Education, 30*(2), 223-241.

Lanis, V. A. (1999). School choice: The emancipation of education. *Contemporary Education, 71*(1), 56-59.

Marks, G., Fleming, N., Long, M., & McMillan, J. (2000). *Patterns of participation in year 12 and higher education in Australia: Trends and issues, LSAY Research Report No. 17*. Melbourne, Australia: Australian Council on Educational Research.

Menard, S. (2002). *Applied logistic regression analysis* (2nd ed.). Thousand Oaks, CA: Sage.
Mok, M., & Cheng, Y. C. (2001). Teacher self learning in a networked environment. In Y. C. Cheng, K. W. Chow, & K. T. Tsui (Eds.), *New teacher education for the future: International perspectives* (pp. 109-144). Hong Kong: Kluwers Academic Publishers.
Mok, M., & Flynn, M. (1998). Effect of Catholic school culture on students' achievement in the higher school certificate examination: A multilevel path analysis. *Educational Psychology, 18*(4), 409-432.
Nagelkerke, N. J. D. (1991). A note on a general definition of the coefficient of determination. *Biometricka, 78*(3), 691-692.
Partington, G. (1990). Why parents are choosing independent schools. *Education Monitor, 1*(3), 23-29.
Praedtz, H. (1974). *Where shall we send them? The choice of a school for a Catholic child.* Melbourne, Australia: The Hawthorn Press.
Reay, D., & Ball, S. J. (1998). "Making their minds up": Family dynamics of school choice. *British Educational Research Journal, 24*(4), 431-448.
Reay, D., & Lucey, H. (2000). Children, school choice and social differences. *Educational Studies, 26*(1), 83-100.
Stevans, L. K., & Sessions, D. N. (2000). Private/public school choice and student performance revisited. *Education Economics, 8*(2), 169-184.
Teelken, C. (1999). Market mechanisms in education: School choice in The Netherlands, England and Scotland in a comparative perspective. *Comparative Education, 35*(3), 283-302.
Unger, H. G. (1998). *School choice: How to select the best schools for your children.* New York: Checkmark Books.
Williams, T., & Batten, M. (1981). *The quality of school life.* Hawthorn, Victoria: Australian Council for Educational Research.

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Prior to the printing of this issue, the editorial staff learned that Brother Marcellin Flynn died on May 22, 2004. A preeminent researcher on Catholic education in Australia, Brother Flynn was the author of five books on Catholic schools: *Catholic Schools 2000* (2002), *Culture of Catholic Schools* (1993), *Some Catholic Schools in Action* (1972), *Catholic Schools and the Communication of Faith* (1979), and *The Effectiveness of Catholic Schools* (1985).