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# A comparison of the perceptions of male students at coeducational and single gender Catholic high schools in regard to Catholic identity

William Hambleton

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The University of San Francisco

A COMPARISON OF THE PERCEPTIONS OF MALE STUDENTS AT  
COEDUCATIONAL AND SINGLE GENDER CATHOLIC HIGH SCHOOLS IN  
REGARD TO CATHOLIC IDENTITY

A Dissertation  
Presented to  
The Faculty of the School of Education  
Department of Leadership Studies  
Catholic Educational Leadership Program

In Partial Fulfillment  
of the Requirements for the Degree  
Doctor of Education

By  
William Hambleton

San Francisco  
May 2008

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

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## CHAPTER ONE

### THE RESEARCH PROBLEM

#### Statement of the Problem

The problem for the present study was that The Second Vatican Council mandated that Catholic schools manifest a strong Catholic identity (Buetow, 1988; McDermott, 1997). The National Conference of Catholic Bishops (NCCB) (1972) stated that this mandate has never been “more pressing a need, more urgent a duty, and more ennobling a vocation than in these times when mankind stands poised between unprecedented fulfillment and equally unprecedented calamity” (§ 6).

The Congregation for Catholic Education (CCE) (1988) claimed that young people are subject to many influences, which they are not yet capable of ordering and prioritizing. It is incumbent upon Catholic schools to “orient the whole of human culture to the message of salvation so that the knowledge which the pupils acquire of the world, of life, and of men is illumined by faith” (Vatican II, 1965a, § 8).

The CCE (1988) asserted that young people are at a point in their lives in which they search for deeper meaning and experience crises of doubt and indifference and that Catholic schools must offer them a “knowledge that embraces Christian wisdom” (§ 23). DiGiacomo (2007) claimed that for Catholic schools “the highest achievement is turning out well-informed, convinced young believers who identify with the faith community and participate in the sacramental life of the church. This includes moral sensitivity and a developing social conscience” (p. 13). Conversely, Miscamble (2007) stated that the danger in Catholic education is that “students emerge from Catholic schools rather

unfamiliar with the riches of the Catholic tradition and with their imaginations untouched by a religious sensibility” (p. 26).

Greeley (2007) stated, “everyone seems interested these days in defining Catholic identity” (p. 19). His assertion was that many different factions approach the problem from many perspectives. For the purpose of this study, Catholic identity was operationally defined by four components: message, community, service, and worship. The first three of these components were articulated as requisite elements of a Catholic school by the NCCB (1972) in their document *To Teach as Jesus Did*.

The educational mission of the Church is an integrated ministry embracing three interlocking dimensions: the message revealed by God (didache) which the Church proclaims; fellowship in the life of the Holy Spirit (koinonia); service to the Christian community and the entire human community (diakonia). While these three essential elements can be separated for the sake of analyses, they are joined in the one educational ministry. (§ 14)

In 1977 the NCCB in *Sharing the Light of Faith* reiterated the importance of worship in the Catholic school community, as stated by the Second Vatican Council’s *Declaration on Christian Education* (1965a).

In the exercise of its functions in education the Church is appreciative of every means that may be of service, but it relies on those which are essentially its own. Chief among these is catechetical instruction, which illumines and strengthens the faith, develops a life in harmony with the spirit of Christ, stimulates a conscious and fervent participation in the liturgical mystery and encourages men to take an active part in the apostolate. (§ 4)

### Purpose of the Study

The purpose of this study was to compare the perceptions of boys in coeducational Catholic high schools to boys in single gender Catholic high schools in regard to Catholic identity. The researcher sought to examine the perceived manifestation

of Catholic identity in the two educational models in order to discern whether the educational model may have some effect on student perception of Catholic identity.

Coleman (1961) asserted that adolescents have their own society or subculture, and that subculture is often in conflict with the goals of education. He further found that the adolescent culture is more predominant in coeducational schools than in single-gender schools. He concluded that coeducation may be detrimental to both academic achievement and social adjustment. Lee and Bryk (1986) claimed that the educational models affect student success in the areas of academic achievement and attitudes toward academics. The purpose of this study was to build upon the above findings by extending the examination of the effects of the two educational models to the problem of Catholic identity.

Gurian (2001) found that boys have different brain structures than girls, and that these differences often give rise to differing perceptions, attitudes, and behaviors between the genders. Kindlon and Thompson (1999) asserted that boys have different emotional needs than girls, which affects the way that they develop and grow in a school setting. They insisted that it is very dangerous to ignore the emotional needs of males in order to accommodate the emotional needs of females, and they claimed, “when boys perceive that their normal developmental skills and behavior *are* normal and that others perceive them that way, they engage more meaningfully in the learning experience” (p. 48). Given the differences between boys and girls in growth, development, and perception, the purpose of the present study was only to compare the perceptions of boys in regard to Catholic identity

## Background and Need

The history of Catholic education in the United States grew from an organic recognition of the need for a strong sense of Catholic identity. Cremin (1980) claimed that Catholic leaders in the early 1800s were compelled to create Catholic schools in order to avoid the Protestant system of moral education that was normative in the public school system. Hennesey (1981) asserted that the need for Catholic schools was driven not only by a desire to avoid the Protestant moral and theological influence, but also by a desire to avoid prejudice and anti-Catholic bigotry. Ellis (1969) concluded that the emergence of Catholic schools was a result of the Catholic community's desire to protect its people, its tradition, and its faith.

From the inception of Catholic education in the United States, Catholic schools were staffed and led by religious men and women who responded to the Gospel mandate to give their lives in service to the Catholic Church (Jacobs, 2000). The religious presence in Catholic schools was infectious, as large numbers of students pursued religious life when they graduated. The preponderance of religious staff Catholic schools, coupled with their success, inspired the American Catholic bishops to vociferously support the Catholic educational system (Jacobs, 2000).

For the first 60 years of the 20th century, American religious continued the good work of their predecessors and engaged the American educational system with Catholic tradition and faith (Jacobs, 1998). The success of American Catholic education was so prevalent that, by the 1960s, it was the largest private school system in the world (Hunt & Kunkel, 1984). During the later half of the 20th century, this success began to wane and

Greeley (1989) suggested that Catholic schools were entering their “golden twilight” (p. 106).

During the 30 years after the Second Vatican Council, the number of Catholic schools in America decreased by 38% (NCEA 1986). By 1995, the number of religious men and women who taught in Catholic schools in America decreased by 85% (NCEA, 1996). This change in the demographics of Catholic schools necessitated that lay people play a key role in the preservation of Catholic identity in Catholic schools, but that they must do so with a lesser degree of religious formation (Buetow, 1970).

As the Catholic educational system struggled in the post-Vatican II world with the preservation of its mission, much concern has been generated about the educational models that are most conducive to that end. The Catholic Church has traditionally favored the single gender model for its schools (Thompson, 1967). Pope Pius XI (1929) proclaimed that coeducation was harmful to Christian education in that it created unnecessary distractions driven by emerging promiscuity.

As of 1978-79 approximately 42% of Catholic secondary schools were single gender (Coleman, Hoffer, & Kilgore, 1982). Since that time, however, a number of Catholic schools have made the transition from single gender to coeducational models. In 2005, only 34% of Catholic secondary schools were single gender (NCEA, 2005). These transitions have been largely the result of financial restraints, and not necessarily of a recognition of greater benefits in coeducation (Steinbrecher, 1991). Ryan (1964) asserted that financial concerns were amplified by critics who insisted that Catholic schools drained already limited church resources, while educating only a minority of Catholic young people.

James Coleman's (1961) book, *The Adolescent Society*, was the landmark work in favor of single gender education (Steinbrecher, 1991). Coleman (1961) came to the same conclusion as Pope Pius XI, that coeducation is inimical to academic achievement and social development. While Coleman's (1961) assertion was driven primarily by social and academic factors, as opposed to moral factors, his work provided sociological support of the Church's ecclesiastical position.

Reginald Dale's (1969, 1971, 1974) three-volume book, *Mixed or Single-Sex School?*, was the landmark work in favor of coeducation (Marsh, 1989). Dale (1974) concluded that the achievement of boys is "probably improved by coeducation, while the achievement of girls is not harmed" (p. 267).

In the debate surrounding single gender and coeducational schooling, more attention has been paid to girls than to boys (Mac an Ghaill, 1996; Weaver-Hightower, 2003). Weaver-Hightower (2003) asserted that this is as it should be, since "in every society women as a group relative to men are disadvantaged socially, culturally, politically, and economically" (p. 471). However, there is an emerging recognition in the world of educational research that boys have been neglected for decades. Many of the issues that have previously only been addressed in the research focused on girls must now be addressed in research that focuses on boys. Weaver-Hightower (2003) calls this the "boy turn" in research.

### Conceptual Framework

While Catholic schools have traditionally offered strong academic programs, their scope has always been broader than the singular goal of intellectual formation. The Catholic educational system has always stressed the formation of the individual as a

whole. This is a major factor behind the success of Catholic schools (Coleman & Hoffer, 1987; Lee, Bryk, & Holland, 1993). Students of Catholic educational institutions learn more than the subject matter of academic disciplines; they learn a faith tradition and a belief system in which they may ultimately encounter Christ. The Congregation for Catholic Education (CCE) (1988) in *The Religious Dimension of Education in a Catholic School* underscored this point:

Each student has a distinct origin and is a unique individual. A Catholic school is not simply a place where lessons are taught; it is a centre that has an operative educational philosophy, attentive to the needs of today's youth and illuminated by the Gospel message. (§ 22)

The conceptual framework for the present study focused on three areas: (a) current brain research, which identifies cerebral gender differences, leading to differences in perception, growth, and development, (b) Catholic identity, which creates an atmosphere for the transmission of a faith tradition, and (c) stages of faith, which offer a developmental theory for the integration of faith.

Each of the abovementioned parts of this conceptual framework worked together to describe the manner in which students integrate Catholic identity. Conceptual learning, cultural transmission, and faith development each contribute to the integration of Catholic identity (Cook, 2003).

### *Brain Research*

Michael Gurian (2001) conducted extensive research in the area of gender differences in brain research. He compiled evidence that demonstrated that there are developmental, structural, chemical, hormonal, and functional differences, as well as differences in processing emotions between the brains of boys and girls. The fact that the brains of boys and girls are different leads to dramatic learning-style differences, which



affect student perception and behavior (Gurian, 2001). Boys and girls have different needs and ultimately exhibit different outcomes in the areas of deductive and inductive reasoning, abstract and concrete reasoning, use of language, logic and evidence, the likelihood of boredom, the use of space, movement, sensitivity to group dynamics, use of symbolism, and the use of learning teams.

Gurian's (2001) theory draws on the specific gender differences in the brain and the learning-style differences of boys and girls in order to postulate the components of a classroom that will optimize learning for both boys and girls. He claimed that there are different sets of needs surrounding the two genders and that single-gender education should be used whenever necessary. He further asserted that single-gender education should be politically advocated.

Kindlon and Thompson (1999), two psychologists specializing in the treatment of boys for more than 35 years, co-authored *Raising Cain, Protecting the Emotional Life of Boys*. Like Gurian (2001), they theorized that the learning needs of boys are different from those of girls. Kindlon and Thompson and Gurian all acknowledged that if boys are to be successful learners, schools must accommodate the particular needs of the male gender. Kindlon and Thompson (1999) asserted:

When normal boy activity levels and developmental patterns are accommodated in the design of schools, curricula, classrooms, and instructional styles, an entire stratum of "boy problems" drops from sight. When a boy's experience of belonging at a school is greater than his sense of differentness, then the burden of shame, inadequacy, and anger drops away, and he is free to learn. (p. 47)

The present study sought to examine the problem of Catholic identity through the perceptions of male students in the settings of coeducational and single gender Catholic high schools. The inclusion of the above brain research in the conceptual framework was

integral in defining the population of the study as exclusively male and in describing the learning process of boys.

### *Catholic Identity*

Cook (2003) claimed that Catholic educational leaders must be deliberate in the immersion of newcomers into the culture of a Catholic school environment. This deliberate immersion allows for the passing on of Catholic culture through acculturation and socialization. Cook defined Catholic school culture as follows:

A way of life rooted in Christ, a Gospel-based creed and code, and a Catholic vision that provides inspiration and identity, is shaped over time, and is passed from one generation to the next through devices that capture and stimulate the Catholic imagination such as symbols and traditions. (p. 16)

Walch (2000) claimed that, in a Catholic school, students, parents and faculty share a specific set of beliefs that gives the school a sense of moral purpose. McBrien (1994) asserted that, while other religions and denominations share some of these beliefs, it is the intentional intermingling of these principles that sets the Catholic tradition apart from others. Cook (2003) noted that “the primary duty of the Catholic educational leader – as an architect of Catholic culture – is to connect the school’s core values and beliefs to Christ and the Gospel intentionally, deliberately and continually” (p. 20). The NCCB (1972, 1977) proclaimed that the means by which a Catholic school manifests this connection are through message, community, service and worship. The integration of Catholic identity could not take place without the existence of a rich Catholic culture, which is both modeled and handed on (Cook, 2003).

### *Stages of Faith*

James Fowler (1981) utilized the stage theories of Kohlberg (1981, 1983) and Piaget (1958, 1964) in the creation of his theory of the stages of faith development.

Kohlberg and Piaget concurred on the assertion that structural development in the human person transpires when the person interacts with the environment and struggles to accommodate the new challenges that the environment presents. Development, or stage progression, is the result of the person's attempt to restore balance with the environment after some environmental change has created cognitive dissonance for the person.

Fowler (1981) asserted, "Growth and development in faith also result from life crises, challenges and the kinds of disruptions that theologians call revelation. Each of these brings disequilibrium and requires changes in our ways of seeing and being in faith" (pp. 100-101).

Fowler (1981) developed a theory that depicted six stages of faith and one pre-stage. Graven (1999) claimed that spiritual maturity is compromised when the individual does not appropriately resolve the issues associated with the primary stages of faith early in life. Fowler's (1981) stages are as follows: undifferentiated faith, intuitive-projective faith, mythic-literal faith, synthetic-conventional faith, individuative-reflective faith, conjunctive faith and universalizing faith.

Beyond learning about Catholic identity and receiving the Catholic cultural tradition, the integration of Catholic identity requires an individual development of the faith that directs and informs Catholic identity (Vatican II, 1965a).

### Research Questions

This study was driven by eight research questions. The questions were structured to address the four components of Catholic identity in regard to the two educational models: coeducational schools and single gender schools.

1. To what extent do boys in single gender Catholic high schools integrate the “message” aspect of Catholic identity?
2. To what extent do boys in coeducational Catholic high schools integrate the “message” aspect of Catholic identity?
3. To what extent do boys in single gender Catholic high schools integrate the “community” aspect of Catholic identity?
4. To what extent do boys in coeducational Catholic high schools integrate the “community” aspect of Catholic identity?
5. To what extent do boys in single gender Catholic high schools integrate the “service” aspect of Catholic identity?
6. To what extent do boys in coeducational Catholic high schools integrate the “service” aspect of Catholic identity?
7. To what extent do boys in single gender Catholic high schools integrate the “worship” aspect of Catholic identity?
8. To what extent do boys in coeducational Catholic high schools integrate the “worship” aspect of Catholic identity?

#### Limitations and Delimitations

The limitations of the present study were related to survey research. The present study was given during the second semester of the academic year to senior students. The latter half of a student’s senior year in high school is replete with preparations for college. Students may have been focused on their future to such an extent that they may not have been sufficiently reflective on their high school experience.

The researcher could not control the process by which students were chosen to participate in the study. The respondents could have had biases and prejudices that may have affected the way in which they answered questions. Given the large number of respondents (1027) it is likely that some students may have interpreted questions differently than others. The researcher was not available to students to answer questions, and the proctors would not have been sufficiently familiar with the study to answer questions.

The present study was delimited by the fact that the researcher was not able to obtain consent from two schools in the 13 regions of the NCEA. The researcher could not obtain consent from a single gender school in Region 8. Thus, the present study was limited to 25 schools.

This study was also delimited by the fact that the large number of schools made it impossible for the researcher to personally administer the surveys. This created the possibility of error on the part of the proctor as he or she may not have fully understood the instructions. Thus, there could have been some discrepancies in the facilitation of the process from one school to another.

### Significance

Many Catholic educational institutions have transitioned from single gender institutions to coeducational institutions in the last 40 years. This shift has often been a result of financial necessity, and not necessarily a result of reflection on the benefits and detriments of single gender education (Riordan, 1990). This study will contribute to the body of literature that examines the benefits and detriments of single gender education, specifically in regard to Catholic identity. The findings of this study will help to foster

informed decisions as more Catholic schools consider the move from single gender to coeducational models.

This study will additionally offer knowledge to educators as they strive to meet the specific needs of each gender, particularly in the area of religious formation. It will inform best practices in both coeducational and single gender Catholic high schools. It will offer insights into the organization of religious curriculum, retreat programs, campus ministry programs, service learning programs, and all extra curricular areas that relate to Catholic identity.

### Definition of Terms

**Message:** refers to the revelation given by God to humanity for the attainment of salvation (NCCB, 1972).

**Community:** refers to a unity of humanity in one body with Christ as head (NCCB, 1972).

**Service:** refers to the Church as a servant community in which the needs of all people must be met so that all people may enjoy life with God now and eternally (NCCB, 1972).

**Worship:** refers to the liturgical life of the Church, in which its members celebrate unity and faith (NCCB, 1977).

**Catholic Identity:** refers to the integration of message, community, service, and worship in the life of the Church.

## CHAPTER TWO

### THE REVIEW OF LITERATURE

#### Introduction

The purpose of this study was to compare the perceptions of male students in coeducational Catholic high schools to the perceptions of male students in single gender Catholic high schools in regard to Catholic identity. Consequently, this review of literature focused on the question of single gender education vs. coeducation, Catholic identity (defined by message, community, service, and worship), stage theory of faith development and literature concerning current brain research, which addresses the issue of girls' and boys' learning differences.

#### Single Gender and Coeducational Schools

Pope Pius XI (1929) set the tone for the model of Catholic educational institutions by declaring that coeducation is harmful to young people. In his encyclical, *Divini Illius Magistri*, it is clear that single gender education is the preferred model for the education of youth. Pius XI stated:

False and harmful to Christian education is the so-called method of “co-education.” This too, by many of its supporters, is founded upon naturalism and the denial of original sin; but by all, upon a deplorable confusion of ideas that makes a leveling promiscuity and equality, for the legitimate association of the sexes. . . These principles, with due regard to time and place, must, in accordance with Christian prudence, be applied to all schools, particularly in the most delicate and decisive period of formation, that, namely, of adolescence. (¶ 68)

Buetow (1970) pointed out that Catholic educators were bound by the Pope's decision to shun coeducation, but the financial impossibility of building separate schools for girls and boys created a difficult roadblock for the Pope's ideal. Frison (1959) asserted that in response to the need for a balance between obedience to the papacy and

financial viability, the Sacred Congregation for Religious (1957) issued an instruction that offered the “coinstitutional” model.

The Apostolic See advises or favors the system of education commonly known as “coinstitution” which entails a building consisting of two separate schools, one for boys and one for girls, under a single administration, having a single library and a single laboratory. Boys and girls have access to these facilities separately and at different times. Expenses would thus be considerably reduced, and this would not be coeducation in the ordinary sense. (§ 17)

Traditionally the Catholic Church favored single gender education on the basis of morality. Subsequent researchers have investigated the advantages of single gender and coeducational schools in regard to social and academic outcomes. Coleman (1961) was one of the first researchers to conduct a thorough examination of American high schools. He selected 10 high schools in northern Illinois, which were diverse enough to be generalizable to the American population. He distributed surveys and conducted interviews with students, teachers, and parents, in addition to collecting grades, IQ scores, and attendance records of all the students involved. He found that adolescents have a society of their own, which is often in conflict with adult society. Coleman maintained:

Our adolescents today are cut off, probably more than ever before, from the adult society. They are still oriented toward fulfilling their parents’ desires, but they look very much to their peers for approval as well. Consequently, our society has within its midst a set of small teen-age societies, which focus teen-age interests and attitudes on things far removed from adult responsibilities, and which may develop standards that lead away from those goals established by the larger society. (p. 9)

Coleman (1961) further found that the adolescent society often detracts from academic achievement. “The adolescent is no longer a child, but will spend his energy in the ways he sees fit. It is up to the adult society to so structure secondary education that it captures this energy” (p. 329). Coleman further asserted that the adolescent society is



present to a greater degree in coeducational schools than in single gender schools, and he ultimately concluded that coeducation is detrimental to academic achievement.

Dale (1969, 1971, 1974) conducted research in England and Wales offering findings quite different from those of Coleman. Dale surveyed and randomly observed teachers. He also conducted three surveys with a population of former students, and finally he conducted a longitudinal study of students, in which the students were asked to answer a questionnaire and then asked to answer it again two years later. He found that, in regard to happiness and enjoyment of school, students in coeducational institutions fared better than those in single gender institutions. Dale claimed that all members of the school community in coeducational schools have a higher degree of happiness in their environment than do their counterparts in single gender schools. The grammar school model to which Dale refers would include students through 10<sup>th</sup> grade. In regard to boys, he found that neurosis was more present in single gender schools than coeducational schools. (The term *neurosis* is no longer used with children) (Como, 1998).

Dale (1974) discovered that boys achieved better academically in coeducational schools than in single gender schools. He did not find this to be so for girls, nor did he find any positive correlation between single gender schools and academic achievement for girls. He therefore claimed that coeducational school setting have a positive effect of the growth of boys and a neutral effect on the growth of girls.

Finn, Dulberg, and Reis (1979) authored a cross-national study, which reviewed numerous studies of educational attainment for boys and girls. Their findings indicated that women are generally disadvantaged educationally around the world and that neither single gender schools nor coeducational schools clearly offer a better education for girls.

They asserted that girls benefit from positive attitudes and behaviors that are modeled in schools, and do not necessarily benefit from a specific educational model. Finn et al stated:

The influence of same-sex models may be intensified in sex-segregated schools. Compared with coeducational institutions, these schools may either limit or extend the range of possibilities. For example, Australia's schools of domestic science channel girls into traditional roles, while girls in English single-sex schools perform well in science. Both students and teachers serve as models for sex-appropriate behavior. For example, it may be particularly important for girls to see successful science students among their female peers. (p.498)

Trickett, Trickett, Castro and Schaffner (1982) examined 15 single gender and coeducational independent boarding schools on the secondary level in the United States. They utilized the Classroom Environment Scale (CES) (Trickett & Moos, 1973) and a Student Experience Questionnaire (SEQ). The CES has three scales (relationship, goal orientation, and system maintenance and system change) and nine sub-scales (involvement, affiliation, teacher support, task orientation, competition, order and organization, rule clarity, teacher control, and innovation). The SEQ was made up of 17 questions, which assessed student perceptions and student participation in school environments. 78 classrooms were used and 456 students were involved. The results of the study indicated that the environments of coeducational and single gender independent boarding schools were different from one another (Trickett et al., 1982, p. 374).

The CES data for the single gender and the coeducational schools taken together was different from the normative public school data in regard to seven of the nine CES sub-scales (Trickett et al., 1982). Independent school classroom environments scored higher than their public schools counterparts in the areas of student involvement, student affiliation, teacher support, task orientation, and order and organization. They scored

lower than public school classrooms in the areas of rule clarity and teacher control.

There were no differences between the two school types in the areas of competition and innovation (Trickett et al., 1982).

When the CES data for single gender schools and coeducational schools were not taken together, but rather compared to one another, the classroom environments were shown to differ in regard to six of the nine sub-scales. Single gender schools scored higher than coeducational schools in every category except teacher support, rule clarity and innovation. Trickett et al. (1982) concluded that “the differences between the classroom environments of the two types of schools is greatest in the authority structure in the classroom and the qualitative aspect of student-student relationships” (p. 380). The SEQ data indicated that there is a clear difference in academic emphasis between the single gender and coeducational schools (Trickett et al., 1982). “Here, single-sex students report spending more time each day doing homework, being more likely to spend weekend time on homework, spending less time on extracurricular activities, and having less free time in general” (p. 380).

In a similar study to that of Trickett et al (1982), Schneider and Coutts (1982) compared five coeducational schools to four all-male schools and four all-female schools. They surveyed a total of 2,029 students. Based on research literature, they developed three hypotheses. The hypotheses are described in Table 1.

Table 1

*Schneider and Coutts (1982) Hypotheses*


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|--------------|---|
| Hypothesis 1 | Compared with their single-sex school counterparts, coeducational school students perceive their schools as placing less emphasis on scholarship and achievement. |
| Hypothesis 2 | Students perceive coeducational schools as placing greater emphasis than single-sex schools on affiliation and more pleasurable, nonacademic activities.          |
| Hypothesis 3 | Students perceive coeducational schools as placing less emphasis than single-sex schools on control and discipline.   |

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*Note: Schneider & Coutts, 1982, p. 899*

In order to measure value climate, students answered a questionnaire as a group at their schools. For measures of environmental press, scales from the High School Characteristics Index (HSCI) were employed. Schneider and Coutts (1982) found that their results did not completely support Hypothesis 1. While the value climate data showed support for Hypothesis 1, the environmental press data did not. While the two tests are conceptually different, a greater correlation of scores would be necessary to assert support for Hypothesis 1. However, Hypotheses 2 and 3 were firmly supported by the data. Schneider and Coutts asserted that students in coeducational schools described a high degree of affiliation and pleasure in their schools, which offered support for hypothesis 2. Schneider and Coutts also found that students in coeducation schools experience less overt control from authority figures and feel more freedom from strict discipline than students in single gender schools, which offered support for Hypothesis 3.

Riordan (1985) analyzed single gender and coeducational Catholic high schools in relation to coeducational public schools. He hypothesized that single gender schools experience an adolescent subculture to a lesser extent than coeducational schools, and

that single gender schools offer more role models with significant academic achievements. Riordan suggested that this creates an environment of higher quality teaching and more competitive academic standards.

Riordan (1985) used data from the National Longitudinal Study (NLS) of the High School Class of 1972. The NLS surveyed 18,143 high school seniors in the United States. Follow-up surveys were conducted in 1973, 1974, 1976, and 1979. One problem with the NLS data was that the Catholic school sample was not racially balanced. The sample included a majority of white students from school communities that were predominately white in racial demographic. This demographic was not representative of all students in Catholic schools in the United States.

Seven variables were examined: Vocabulary and Reading, verbal and math SAT scores, verbal and math scores in 1979, and Educational Attainment in 1979 (Riordan, 1985, p. 529). No significant differences were found between Catholic coeducational schools and public coeducational schools. However, Riordan discovered that Catholic single gender schools scored consistently higher than public schools. Riordan asserted that, in general, Catholic single gender schools are twice as effective as Catholic coeducational schools.

Lee and Bryk (1986) compared the effects of single gender and coeducational secondary schools, using a sample of 1,807 students in 75 Catholic high schools, 45 of which were single gender institutions. The study surveyed high school sophomores and then surveyed the same population two years later when they were high school seniors.

Lee and Bryk (1986) considered academic achievement in specific areas in sophomores and seniors, gains in academic achievement over the two years, future

educational plans, affective measures of locus control or self imaging, sex role stereotyping, and attitudes and behaviors related to academics. All of the statistically significant single-gender school effects were positive. The results revealed that the benefits for girls at all-girl schools were particularly strong. Lee and Bryk stated that single gender schools offer girls freedom from some of the pressure that they may feel from the opposite sex. This freedom helps girls to recognize their potential as it may remove some of the distractions that interfere with academic development.

Marsh (1989) critiqued Lee and Bryk's (1986) study. He observed that their use of one-tailed statistical tests was not sufficient. He pointed out that Lee and Bryk (1986) conducted 74 tests of statistical significance: 37 for boys and 37 for girls. Of these tests, 25 were reported to be statistically significant (10 for boys and 15 for girls). All of the 25 statistically significant tests were in favor of single gender schools. Marsh (1989) claimed that the conclusion, which was that all of the statistically significant effects were in the direction of single gender schools, demonstrated that a one-tailed test was not appropriate. He asserted that it would not be possible to have significant effects in favor of coeducational schools if a one-tailed test had been appropriately applied.

Marsh (1989) compared the effects of single gender and coeducational high schools in regard to achievements, attitudes and behaviors, and determined whether attending single gender schools affected well-established sex differences in these variables. Marsh used the data from The National Center for Education Statistics (1983) *High School and Beyond Study* to examine 2,332 high school students in 47 single gender and 33 coeducational high schools.

There were many statistically significant differences between single gender and coeducational students on the outcomes considered in Marsh's (1989) investigation. For the most part, these differences were in favor of students of single gender schools, particularly boys in single gender schools. However, Marsh asserted that these differences could not be legitimately interpreted as school-type effects because they may have reflected preexisting differences. His major finding was that there was no significant effect in relation to school-type effects on growth during the last two years in high school (p. 80).

Lee and Marks (1992) investigated whether single gender schools were chosen over coeducational schools for traditional reasons or because the schools were valued as opportunity structures. The data for their study was collected as part of the National Study of Gender Grouping in Independent Secondary Schools. The population consisted of 3,183 students in 20 all boy schools, 20 all girl schools, and 20 coeducational schools.

Lee and Marks (1992) found that religious orientation characterized students who selected the single gender option. While 35 percent of coeducational schools required attendance at religious services, 45 percent of girls' schools and 55 percent of boys' schools required such attendance. In schools where religious attendance was obligatory, it was more frequent in single gender schools than in coeducational schools. The authors surmised that this relationship could suggest that students' self-perceptions of religiosity increased as a result of compulsory attendance at religious services, but they asserted that it was equally likely that students who perceived themselves as religious found single gender schools congenial.

Woodward (1992) conducted a study that examined which gender was more participative when students moved from single gender to coeducational classrooms. She observed four coeducational secondary classes at two independent schools. The classes were comprised of students who normally attended single gender schools, and were taught by two male teachers and two female teachers. Woodward found that, while one classroom showed a higher tendency on the boys' part to control discussions (two thirds of the class were boys, but they responded more than three-quarters of the time), overall the girls manifested an advantage. There were a high number of student responses in all of the classes. Students responded an average of 119 times per class. Girls made up 55 percent of the study, but responded 59 percent of the time. Boys made up 45 percent of the study, but responded only 41 percent of the time.

When asked about their preference of single gender or coeducational classes, Woodward (1992) reported that only 18 percent of boys and 15 percent of girls favored single gender classes. The students who preferred coeducational classes felt that having both genders in the classroom made the environment freer, more enjoyable and more relaxed. They reported that they liked having different perspectives and more competition. Students who preferred single gender classes stated that they felt more able to be open with their opinions and perspectives and more free to express their views. A small percentage of boys claimed that there was too much talking between boys and girls in coeducational classes, and a small percentage of girls expressed that they were treated differently in classes with boys.



Lee, Marks and Byrd (1994) examined the effects of sexism in single gender and coeducational high schools. They underscored the crucial roles that schools play in the process of gender socialization. Lee et al. asserted:

Schools and schooling are contradictory forces in the socialization of students to gender, as well as to social and racial relations. As agents of society, schools necessarily reinforce gender social definitions, whereas as socializing agents, they are also primary locations for the development of new standards, roles, and attitudes toward gender. (p. 94)

The data for Lee et al.'s study was collected as part of the National Study of Gender Grouping in Independent Secondary Schools. Sixty schools were selected to take part in the study: 20 boys' schools, 20 girls' schools, and 20 coeducational schools. The sample for the data consisted of the entire 1989 senior class in each sampled school and all secondary Math and English teachers in each school. The data was collected from questionnaires, school records, interviews, classroom observations, field notes, and documents supplied by the schools.

Lee et al. (1994) examined six areas of sexism: sexism by subject area, gender imbalance in coeducational schools, gender of teachers, teachers as initiators of sexist incidents, critical incidents of classroom sexism, and gender equity in classrooms. The study found that most incidents of sexism were initiated by teachers. There was a similarity in the frequency of sexism in the three types of schools, but differences in the types of sexism. Chemistry classes were the primary place of sexism in coeducational schools. Of all incidents of sexism in coeducational classrooms, 66% occurred in chemistry classes, although these classes only constituted 20% of the observations. It was in these classes that the researchers observed the most blatant examples of male dominated discussions, teachers favoring boys, and the humiliation of girls.

Lee et al. (1994) found that female single gender schools exhibited the most gender equity events. These events included instances in which teachers encouraged students to engage in dependent or childlike behaviors, teachers accepted a non-rigorous approach to subject matter, and teachers treated female students like little girls. The researchers classified these as gender equity events because similar teacher-student interactions did not occur with boys. Lee et al. found that the severest form of sexism was manifested in boys' schools. Gender reinforcement, embedded discrimination and sex-role stereotyping were not uncommon. The most serious form occurred in five incidents that were explicitly sexual in nature. In each of these incidents a teacher made a covert comment or a clear implication, which indicated a superiority of the male gender. In these instances, male students were learning to value women as sex objects and were at times socialized to maintain control and power in sexual situations. Lee et al. concluded that the schools with policies that actively promoted gender equity in enrollment, hiring, and personal relations were the least likely sites of sexism.

Sommers (2000) asserted that there is a common perception that boys are favored in American education, but that in reality girls hold the primary position. She used data from the United States Department of Education to demonstrate that in today's schools girls get better grades than boys, they enroll in more advanced placement classes including high-level math and science courses, they read more books, they are more likely to study abroad, and they score higher than boys on tests for artistic and musical ability.

Sommers (2000) claimed that Carol Gilligan's (1972) book *In a Different Voice*, did much to create a national perception that American girls were in crisis. She asserted

that Gilligan's claims received immediate attention, but that her research was anecdotal and her data was not available for review. Sommers claimed that this cast some doubt on the merits of Gilligan's work

Sommers (2000) suggested that the manufactured idea that girls are in crisis has in turn created a crisis for boys. She asserted that there is a widening gender gap in academic achievement that is threatening the future of boys. She concluded that "We should repudiate partisanship that currently clouds the issues surrounding differences in schools. We should call for balance, productive information, fair treatment, and a concerted national effort to get boys back on track" (p. 74).

Mulrine (2001) questioned whether boys are in fact the weaker sex. She found that 70% of the D's and F's that teachers give out are assigned to boys. She further asserted that boys make up two-thirds of the students who are labeled "learning disabled." Additionally, she claimed that boys account for 80% of all high school dropouts and attention deficit disorder diagnoses. Finally, she stated that boys are less likely to go to college than girls, asserting that by 2007 there will be a projected 9.2 million women enrolled in universities and 6.9 million men.

Mulrine (2001) claimed that there is mounting evidence to suggest that boys are more impulsive, more vulnerable to benign neglect, and less efficient classroom learners. She suggested that this claim is manifested in the fact that girls now outnumber boys in student government, honor societies, school newspapers and debate clubs. She suggested that two possible methods of dealing with this problem are 1) delaying the entrance of boys into kindergarten, allowing them time to "catch up" and 2) creating single gender classrooms so that boys would be able to develop at their own pace.

Jost (2002) addressed three key questions in the debate surrounding coeducational and single gender schools. He asked whether single gender education enhances learning, whether single gender schools reinforce gender stereotypes, and whether single gender schools help the goal of gender equality. Jost compiled the research of significant writers on the topic of single gender education in order to offer reference points for these questions.

In regard to whether single gender education enhances learning, Jost (2002) indicated that the enhancement in learning in single gender schools is not as significant as the enhancement in learning due to teacher training and ability. Jost asserted that enhancement in learning in single gender education is primarily among students in lower economic classes.

In regard to the reinforcement of gender stereotypes, Jost (2002) demonstrated that students in single gender environments were more candid about topics like “gender roles” than students in coeducational environments. He found that girls benefited academically when the distraction of male students was removed from classrooms. However, he asserted that teasing and disruptive behavior were intensified in single gender schools. Jost went on to claim that single gender schools neither promote nor hinder gender stereotyping, that such stereotyping is equally possible in both single gender and coeducational schools.

On the topic of gender equality, Jost (2002) asserted that single gender schools violate all of the progress that has been made in the equality of American education and that schools cannot be both separate and equal. He then claimed that the battle of

equality is one of the past, insisting that there are sufficient safeguards currently in place to ensure that boy schools and girl schools would have equal resources.

Weaver-Hightower (2003) claimed that the majority of research in gender and education has focused on girls, but that recently there has been a turn in the research world to focus on boys. He asserted that boys have become the gender meriting concern in education and he examined the major critiques of the distress about boys. He conducted a review of literature that focused on four categories that represent key divisions in the research on boys in education.

The first of the aforementioned categories was popular-rhetorical literature. This literature “generally argues that boys are disadvantaged or harmed by schools or society and that schools are feminized” (Weaver-Hightower, 2003, p. 474). Weaver-Hightower claimed that this category of literature was most responsible for the boy turn in research because it has the broadest base of readers. He went on to assert that there is a crisis in masculinity in American culture, which can be defined as “perceptions that men in a society are acting in harmful ways toward themselves or others because of conditions in the culture, economy or politics that prevent them from fulfilling a culturally specific ‘hegemonic’ masculine role” (p. 476).

The second category in the research on boys education was theoretically-oriented literature. This literature is “concerned with cataloguing types of masculinity and their origins and effects. Additionally this literature examined the ways in which schools and society produce masculinities, largely using the tools of qualitative research” (Weaver-Hightower, 2003, p. 474). Weaver-Hightower asserted that this category of

literature is more concerned both with identifying the origin and understanding the forms of masculinity than it is with examining the impact on individuals or groups.

The third category was practice-oriented literature. This literature is “concerned with developing and evaluating school based and classroom based interventions in boys’ academic struggles and social problems” (Weaver-Hightower, 2003, p. 474). Weaver-Hightower summarized the core pedagogical and programmatic issues that concern practice-oriented literature:

These include (a) suggesting whole-school approaches rather than isolated programs; (b) considering carefully the gender of the teachers conducting the programs; (c) training teachers to teach boys, despite obstacles and discouragement; (d) providing reasons for boys to change; (e) creating respectful, nonblaming approaches to working with boys; (f) attending to the gendering of textbooks and materials; and (g) using critical literacy to teach boys about gender and its construction through texts. (p. 481)

The fourth category was feminist and pro-feminist responses. This literature “critiques the boy turn in research, moral panics over boys, notions of ‘underachievement’ and popular-rhetorical backlashes” (Weaver-Hightower, 2003, p. 474). Weaver-Hightower posited that the most common critique that this literature made of the boy turn in research is that there is a failure in identifying which boys are at risk. Similarly, scholars in this area question the indicators that are used to establish the educational needs of boys. Weaver-Hightower stated that some of these critics also claim that some of the disadvantages of boys are simply the consequences of having other advantages, and that the solutions offered by proponents of the boy turn are not sufficient.

### Catholic Identity

The Congregation for Catholic Education (CCE) (1988) in its document *The Religious Dimension of Education in a Catholic School* asserted that in a Catholic school,

“Jesus must be translated from the ideal to the real. The Gospel spirit should be evident in a Christian way of thought and life, which permeates all facets of the educational climate” (§ 25). This educational climate is, at its core, an invitation to know Christ and to live his message. The Catholic school is a setting in which this invitation can be fostered, sustained and embraced. It is a setting in which young Christians come together with adults to make Christ present among them. Consequently, the two ends of learning and believing must always coexist in the Catholic school (McDermott, 1997, p. 11).

In addition to the ends of learning and believing, the National Conference of Catholic Bishops (NCCB) (1972) asserted, in their document *To Teach as Jesus Did*, that, as an expression of the Church, the effects of Catholic schools must extend beyond their own boundaries into the world. They claimed:

Catholic education is an expression of the mission entrusted by Jesus to the Church He founded. Through education the Church seeks to prepare its members to proclaim the Good News and to translate this proclamation into action. Since the Christian vocation is a call to transform oneself and society with God’s help, the educational efforts of the Church must encompass the twin purposes of personal sanctification and social reform in light of Christian values. (§ 7)

The Catholic school is similar to other schools in the variety of activities and breadth of programs offered, but “there is one essential difference: it draws its inspiration and its strength from the Gospel in which it is rooted” (CCE, 1988, § 45). It is this essential difference that forms the basis for the mission of Catholic education. The NCCB (1972) stated:

The educational mission of the Church is an integrated ministry embracing three interlocking dimensions: the message revealed by God (didache) which the Church proclaims; fellowship in the life of the Holy Spirit (koinonia); service to the Christian community and the entire human community (diakonia). While these three essential elements can be separated for the sake of analysis, they are joined in the one educational ministry. Each educational program or institution

under Church sponsorship is obliged to contribute in its own way to the realization of the threefold purpose within the total educational ministry. (§ 14)

The NCCB (1977) in *Sharing the Light of Faith* later added the fourth dimension of worship to the threefold educational mission of the Church. This addition recognized the intrinsic connection between worship and faith development as articulated by the Second Vatican Council's (1965) *Declaration on Christian Education*. The Council stated:

In the exercise of its functions in education the Church is appreciative of every means that may be of service, but it relies on those which are essentially its own. Chief among these is catechetical instruction, which illumines and strengthens the faith, develops a life in harmony with the spirit of Christ, stimulates a conscious and fervent participation in the liturgical mystery and encourages men to take an active part in the apostolate. (§ 4)

In the following section the researcher will review each of the four components of Catholic identity individually.

### *Message*

Message refers to the data of revelation handed on to humanity from God. It is the Word of God, manifested in the sacred scriptures and the Christian tradition (NCCB, 1972). The soteriological components of this message of faith are fourfold: (1) the faith in itself is unchanging, (2) the doctrinal and pastoral expressions of the faith are subject to ongoing development, (3) the faith must be expressed through contemporary methods and language, and (4) the faith must be put into action.

The Second Vatican Council's document on *Divine Revelation* (1965b) stated "no new public revelation is to be expected before the glorious manifestation of our Lord Jesus Christ" (§4). The NCCB (1972) added that "In Jesus, the Son of God, the message



of the Old Law was fulfilled and the fullness of God's message was communicated" (§ 16).

The life of faith is an ongoing dialogue between God and humanity and is therefore necessarily subject to doctrinal and pastoral developments. The Christian tradition is a "living tradition" in which people are constantly called to a fuller understanding of revelation (NCCB, 1972). The CCE (1988) summed this up with the assertion that "the educational process is not simply a human activity; it is a genuine Christian journey toward perfection" (§ 48).

Since the faith is intended for all peoples, it must have a compelling expression across cultural and geographic boundaries (NCCB, 1972). The United States Conference of Catholic Bishops (USCCB) (2005) added that 26% of students in Catholic schools in America are members of minority groups, and that this number is rapidly growing. They referred to this phenomenon as the changing face of the Church. The bishops insisted that Catholic educators must imitate Jesus who "used images from the lives of His hearers and spoke in the idiom of His day" (NCCB, 1972, § 18).

The message of faith requires more than intellectual assent, it likewise requires pragmatic action. The NCCB (1972) stated that believers "must not only accept the Christian message but act on it, witnessing as individuals and as a community to all that Jesus said and did" (§ 19). McDermott (1997) added that the Church wants "to give every individual the enlightenment needed to qualify that person for higher responsibilities" (p. 23).

### *Community*

The notion of community in a Catholic school “is based not on force or accident of geographic location or even on deeper ties of ethnic origin, but on the life of the spirit which unites its members in a unique fellowship” (NCCB, 1972, ¶ 22). The NCCB asserted that this fellowship in the spirit begins at the moment of baptism (¶ 22). Klein (1993) stated that “when we are baptized into the mystery of Christ we become one in his body, so that when the Father sees the Son, he sees us, and when he sees us, he recognizes the Son” (p. 67).

The CCE (1988) affirmed the importance of community and broadened the definition of community in the Catholic school to include even the non-baptized.

Everyone directly involved in the school is a part of the school community: teachers, directors, administrative and auxiliary staff. Parents are central figures, since they are the natural and irreplaceable agents in the education of their children. And the community also includes the students, since they must be active agents in their own education. (¶ 32)

The USCCB (2005) concurred on this broader definition of community and stated, “Catholic schools should be available to students who are not Catholic and who wish to attend them. This has been a proud part of the history of Catholic schools in the nineteenth and twentieth centuries” (p. 8). The USCCB asserted that Catholic schools in the third millennium must embrace the growing number of minority students, as well as students with special educational and physical needs.

Buetow (1988) claimed that there are several indispensable characteristics of the Catholic school as a community. He stated that the Catholic school community is “an agency for the transmission of Christian values; an enlivener of the Gospel spirit of charity and liberty; and a provider of opportunities for cooperation, participation, and

coresponsibility” (p. 225). Lee, Bryk & Holland (1993) identified four characteristics that make Catholic schools true communities. These characteristics are clear boundaries for membership, shared beliefs, shared activities that reinforce these shared beliefs, and a formal organizational structure of personnel. Cook (2003) summarized the nature of community in the Catholic school in the following statement:

Well-developed community life is widely regarded as the distinguishing feature of Catholic schools. But, what distinguishes these faith communities from their public and private counterparts is that the who, what, and why of community is intentionally connected to the Gospel, making these faith communities “Gospel Cultures.” (p. 15)

### *Service*

“The experience of Christian community leads naturally to service” (NCCB, 1972, ¶ 28). McDermott (1997) claimed that “after Vatican II, the Catholic schools incorporated into their mission statements prophetic and servant language based on the dignity of each student and the call to create a just world community” (p. 21). The USCCB (2005) underscored the indispensable role that Catholic schools play in the creation of a just world community. They asserted that “the Church and its schools are often among the few institutions providing immigrants and newcomers with a sense of welcome, dignity, community, and a connection with their spiritual roots” (p. 4).

The Second Vatican Council’s (1965) *Declaration on Christian Education* stated that true education must look at the human person from a teleological perspective. This focus on the final end of the human person necessarily entails attention to the good of society to which the person belongs, “and to the duties of which he will, as an adult, have a share” (¶ 1). Likona (1991) reiterated the importance of being attentive to the needs of society. He suggested that one of the primary goals in the educational process was to

create an awareness among students of the needs of the broader world community and to empower students to respond to those needs with integrity and conscience.

No institution on earth has the unique resources of vision and values that Christ entrusted to the Church and, thus, the Church's mission of service is as crucial in the present age as it has ever been in the past (NCCB, 1972, p. 9). Weigel (2002) summarized:

For if what the Church teaches is not just the truth about the Church's story but the truth about the world's story, then to be an orthodox Catholic, thinking with the mind of the Church and living in service to others because of one's Catholic convictions, is to help the world to achieve its true destiny. (p. 230)

### *Worship*

The Catholic school becomes a channel of divine grace through communal public worship (Buetow, 1988). The Second Vatican Council's (1965) *Declaration on Christian Education* stated that a Christian education should introduce students to "a knowledge of the mystery of salvation" (§ 2) and challenge students to "become more appreciative of the gift of faith which they have received." (§ 2) This growth in knowledge and integration of faith should take place "especially through the liturgy" (§ 2).

The theological faith system that is articulated in Catholic schools must find expression in the life of the community of believers. Steinfels (2003) pointed out that the ancient Christian maxim, *lex orandi lex credendi*, indicates that the law of prayer is the law of belief. The realities of worship and theology are "intimately and inextricably entwined" (p. 165). Cook (2003) asserted that "ritual routines in Catholic schools can speak volumes about Gospel values and religious mission" (p. 47). He went on to state that rituals serve an important cultural role. They are reminders of cultural values and

they “reinforce those values through ordinary human behavior” (p. 47). Deal and Peterson (1982) added that “without expressive events, any culture will die” (p. 63).

Cummings (1996) noted that “worship is the ultimate sign of an individual’s or group’s commitment to integral faith formation” (p. 29). Through worship the believing community offers itself to God, recognizing its dependence in the divine relationship (NCCB, 1977). Greeley and Rossi (1966) demonstrated the efficacy of worship in Catholic schools when they found that adults who attended Catholic schools were more likely to practice their faith later in life than adult Catholics who did not attend Catholic schools.

### Stages of Faith

Pope John Paul II (2000) in his encyclical letter, *Fides et Ratio*, underscored the inherent connection between faith and reason. He suggested that the two human capacities are not mutually exclusive, but rather that they work together so that faith seeks understanding and accordingly moves the human person closer to the fullness of Truth. James Fowler (1981) similarly affirmed the connection between faith development and cognitive learning. He stated, “We shape our actions and responses in life in accordance with our interpretations of the larger patterns of actions that impinge upon us. Communities of faith are communities of shared interpretations” (p. 98).

Fowler (1981) noted that he incorporated the moral development theories of Lawrence Kohlberg (1981, 1983) and Jean Piaget (1958, 1964) in his own study of faith development. He asserted that “neither Piaget nor Kohlberg has offered a theory of the epistemological or moral self” (p. 105). Fowler developed a structural-developmental theory of faith as a theory of personal knowing and acting. He noted that an appropriate

structural-developmental theory of faith must “relate structural stages of faith to the predictable crisis and challenges of developmental eras and to take life histories seriously in this study” (p. 105). Lownsdale (1997) asserted “the various stages of faith are neither achievements, nor progressive steps to salvation, but simply degrees that one’s faith goes through as it develops” (p. 51).

Fowler defined six stages of faith and one pre-stage and described them as follows:

The faith stages are not to be understood as an achievement scale by which to evaluate the worth of persons. Nor do they represent educational or therapeutic goals toward which to hurry people. Seeing their optimal correlations with psychological eras gives a sense of how time, experience, challenge and nurture are required for growth in faith. Education and nurture should aim at the full realization of the potential strength of faith at each stage and at keeping the reworking of faith that comes with stage changes current with parallel transitional work in psychosocial eras. (p. 114)

Fowler described the pre-stage as “undifferentiated faith” (p. 121). He asserted that the pre-stage is inaccessible to empirical research but that the human qualities of mutuality, trust, hope and courage along with their opposites which are developed in this stage underlie the development of faith in the subsequent stages. Graven (1999) noted that when basic emotional needs are not met in infancy, a child’s spiritual development is compromised. Hymans (2004) claimed that “a child who has not learned to trust other people may find it difficult to trust God” (p. 36). Fowler (1981) argued that the danger of the pre-stage is a failure at mutuality, which could either lead to excessive narcissism or patterns of isolation.

Stage one is identified as an intuitive-projective faith (Fowler, 1981). In this stage “the child can be powerfully and permanently influenced by examples, moods, actions and stories of the visible faith of primally related adults” (p. 133). Westerhoff

(1976) described this stage as “a time of imitation... a child prays the Lord’s Prayer without understanding the meaning of all the words” (p. 89). It is during this stage that concrete operational thinking emerges and the danger of this stage is the possible exploitation of her or his imagination in the “reinforcement of taboos and moral or doctrinal expectations” (Fowler, 1981, p. 134).

Stage two, identified as mythical-literal faith, is the stage in which the child begins to take personal ownership of the beliefs that symbolize belonging to a community (Fowler, 1981). The individual in stage two focuses on the notion of fairness and justice based on reciprocity. Fowler (1981) claimed, “The new capacity in this stage is the rise of narrative and the emergence of story, drama and myth as ways of finding and giving coherence to experience” (p. 149). The dangers of stage three are either “an overcontrolling, stilted perfectionism” or the opposite, which is “an abasing sense of badness, embraced because of mistreatment” (p. 150).

Fowler (1981) defined stage three as synthetic-conventional faith in which an individual’s experience and perspective begins to extend beyond the family. The individual in this stage is heavily influenced by the judgments of significant others. The individual in this stage has a basically consistent set of values but is not sufficiently reflective on them. The new capacity in stage three is the ability to form one’s own personal story of identity and faith. Fowler described the deficiencies of stage three as follows:

The expectations and evaluations of others can be so compellingly internalized that later autonomy of judgment and action can be jeopardized; or interpersonal betrayals can give rise either to nihilistic despair about a personal principle of ultimate being or to a compensatory intimacy with God unrelated to mundane relations. (p. 173)

Fowler (1981) characterized stage four as individuative-reflective faith. In this stage the individual develops a sense of “self” which is no longer sustained by its meaning for others. Similarly, the individual develops a worldview that is differentiated from the worldviews of others. “Stage four typically translates symbols into conceptual meanings. This is a demythologizing stage” (p. 182). Fowler noted that the strength of stage four “has to do with its capacity for critical reflection on identity (self) and outlook (ideology). Its dangers inhere in its strengths: an excessive confidence in the conscious mind and in critical thought” (p. 182).

Stage five is conjunctive faith in which the self-certainty of stage four is transcended. This development involves the recognition of one’s social unconscious and allows the individual to accept paradox and truth in apparent contradictions (Fowler, 1981). Ricoeur (1967) classified this type of faith as a “second naivete” (p. 351), and noted that the individual in stage five does not necessarily trust the critical capacities that were relied upon in stage four. Fowler (1981) claimed:

The new strength of this stage comes in the rise of ironic imagination – a capacity to see and be in one’s or one’s group’s most powerful meanings, while simultaneously recognizing that they are relative... its danger lies in the direction of a paralyzing passivity or inaction, giving rise to complacency or cynical withdrawal. (p. 198)

Fowler (1981) described stage six as universalizing faith in which individuals can recognize partial truths and their limitations because they have been apprehended by a more comprehensive vision of truth. Stage six develops a concrete actualization of the imperatives of love and justice. Fowler asserted:

Universalizers are often experienced as subversive of the structures (including religious structures) by which we sustain our individual and corporate survival, security and significance. Many persons in this stage die at the hands of those whom they hope to change. Universalizers are often more honored and revered



after death than during their lives. The rare persons who may be described by this stage have a special grace that makes them seem more lucid, more simple, and yet somehow more fully human than the rest of us. (p. 201)

Fowler (1981) claimed to rely in part on the work of Niebuhr (1960) as he developed his stage theory. Niebuhr asserted that faith development necessarily entails a relationship of total trust in a principle of being. He characterized this principle of being as a monotheistic reality characteristic of Christianity, Judaism and Islam. Parrott and Steele (1995) claimed that Fowler's (1981) work is inadequate because it represents a theory of faith development that is limited by the boundaries of western culture. Johnson (1996) reiterated this limitation, noting that any universal theory of faith development must appropriately encompass the universality of human nature.

Hollander (1980) criticized Fowler (1981) for employing an excessively deductive approach. Hollander (1980) claimed that Fowler (1981) primarily created universal categories of faith and secondarily addressed the question of how people fit into those categories, thus challenging the practicality of the stage theory. Hollander (1980) asserted that Fowler's (1981) use of jargon is both excessive and unnecessarily confounding.

### Brain Research

Children are, in many ways, shaped by the cultural environments in which they are reared. However, culture is not arbitrarily designed. "It is the result of a history of neural responses to natural surroundings and processes. Culture is the result of the strivings, both timorous and excessive, of nature, especially neural nature" (Gurian, 2001, p. 4). Gurian, in his work, brought together three perspectives on brain-based research:

- I. Neurological and endocrinological (hormonal) effects on learning and behavior
- II. Developmental psychology, especially the effects of natural human development cycles on learning and behavior
- III. Gender difference research, that is research comparing both environmental and neurobiological areas of differences (and similarities) between boys and girls (p. 4).

These three fields coalesce in Gurian's general term of *brain-based research*. Gurian asserted that high quality education occurs when teachers recognize the need to understand how the brain learns, and how boys' and girls' brains learn differently.

There are several areas of male-female brain difference to consider. The first major area of differences between the brains of boys and girls is in regard to developmental and structural differences. Myelination is the process by which nerves of the brain are coated. This coating (myelin) facilitates the movement of electrical impulses through nerves. The process of myelination is complete in young woman earlier than it is in young men, creating a difference in maturity level. Kindlon and Thompson (1999) echoed this sentiment and stated clearly that "boys mature more slowly than girls" (p. 31). They insisted that this maturity difference is biological and that it is only influenced by parents and educators to the extent that they support or fail to support the development and growth of boys. Sowell (1999) concurred and explained that the difference is related to the fact that the frontal lobes of girls mature faster than those of boys during puberty. Sax (2005) contested this point in his assertion that the brains of boys do not necessarily develop more slowly than those of girls, but that they develop in a different sequence. Sax asserted:

While the areas of the brain that involve language and fine motor skills mature about six years earlier in girls than in boys, the areas of the brain involving targeting and spatial memory mature about four years earlier in boys than girls. (p. 93)

Gurian (2001) stated that another structural difference in the brain regards the nerves that connect the right and left hemispheres. This group of nerves is called the corpus callosum and it can be as much as 20% larger in the female brain than in the male brain. The larger corpus callosum gives the female brain a greater ability to communicate between the right and left hemispheres. The right hemisphere of the male brain is typically more developed than the female counterpart. This gives boys better spatial skills, which are often manifested in things like measuring and any sort of mechanics. Moir and Jessel (1992) stated:

The prejudice of male motorists is confirmed by experiment; girls and boys were each given city street maps and, without rotating the map, asked to describe whether they would be turning left or right at particular intersections as they mentally made their way across town and back. Boys did better. More women than men like to turn the map round, physically to match the direction in which they are traveling when they are trying to find their way. (p. 17)

Kimura (2005) found that brain functions that relate to language are structured differently in the brains of men and women. In women these functions are concentrated in the front left area of the brain. In men these functions are located both in the front and back left brain. Kimura asserted that the differing brain structures directly affect the way men and women think.

A second major area of difference is chemical. There is a divergence in the serotonin levels between the brains of the two genders. The female brain secretes a greater amount of serotonin than the male brain. This lack of serotonin can cause boys to be more impulsive and less able to sit still. The act of crying causes the secretion of oxytocin in a child's brain. However, this secretion is much more substantial in the female brain than in the male brain, making most girls more immediately capable of

empathy (Gurian, 2001). Brizendine (2006) asserted, “Typical female newborns less than twenty-four hours old respond more to the distressed cries of another baby--and to the human face--than male newborns do” (p. 18). Kindlon and Thompson (1999) stated that, in the context of therapy, girls usually focus excessively on the emotional responses of others, but boys tend to be the opposite. “They struggle alone, often with tragic consequences” (p. 143).

A third major difference between the brains of boys and girls is hormonal. While all of the human hormones are found in both males and females, testosterone is the predominate male hormone, while estrogen and progesterone are the predominate female hormones. Each day males experience five to seven surges of testosterone, which cause them to move back and forth between moods that are aggressive and withdrawn. A boy will usually function at a higher level on spatial exams, but at a lower level on verbal exams when his testosterone level is high. A girl will most often function at a higher level on both in-class and standardized tests when her estrogen level is high (Gurian, 2001). Sax (2005) noted that hormonal sex differences in childhood are larger and more important than sex differences in adulthood. Moir and Jessel (1992) stated, “Female hormones have a much stronger impact on a brain which is, by its very design, more sensitive to their effect, while a male brain is predisposed, again by design, to react to male hormones” (p. 70).

Kindlon and Thompson (1999) stated that testosterone has become overly associated with aggression in boys and that there is not sufficient scientific evidence to make this connection. Yet, they did recognize the hormonal effect on gender activity and asserted that “boys tend to be more physically active than girls, moving faster and staying

in motion longer... this propensity for activity and the consequences of it shape a boy's every experience and the way others experience him" (p. 12). Brinzendine (2006) claimed:

The testosterone-formed boy brain simply doesn't look for social connection in the same way a girl brain does. In fact, disorders that inhibit people from picking up on social nuance – called autism spectrum disorders and Asperger's syndrome – are eight times more common in boys." (p. 23)

A fourth area of difference is functional. Girls generally utilize the left hemisphere of their brains to a greater extent than the right. It is the opposite for boys. Girls tend to process emotive material through the upper brain where the thought process is more complex, while boys tend to process such material from the limbic system to the brain stem where the fight or flight response resides. The male brain operates at a greater level than the female brain in the area of abstract reasoning, while the female brain operates at a greater level than the male brain in the areas of memory and sensory intake (Gurian, 2001). Viadero (2006) asserted that a study, which will soon be published in the journal, *Intelligence*, stressed differences in processing speeds between boys and girls. This affects learning because processing speed is essential to reading and writing fluency and computational math. Kindlon and Thompson (1999) claimed that if a boy is asked how a certain action made him feel, he will often not know how to respond. Instead of answering the question, he will discuss how he plans to solve the problem. Gurian (2001) asserted that "cultural factors certainly reinforce these tendencies, but the differences are innate, in brain functioning" (p. 30).

The fifth difference in brain functioning is in the area of processing emotion. Gurian (2001) claimed that this is an area to which educators have not given enough attention "because we have been taught to think of it as nonessential to learning. In fact,

brain based research shows us it is crucial” (p. 31). The female brain is able to process emotive stimulants more comprehensively than the male brain. This creates fragility in boys because they cannot work through their emotions as quickly as girls, which in turn affects their ability to learn. Brizendine (2006) stated that boys not only take longer to work through emotions, but they also take longer to interpret emotional meaning. Kindlon and Thompson (1999) stressed the need for parents and educators to offer boys an emotional vocabulary and to encourage them to use it. Only with these tools will boys be able to “unclench their hearts” (p. 20).

The aforementioned differences between the brains of the genders give rise to several learning style differences. Gurian (2001) asserted that girls are more inductive in their reasoning, focusing on concrete examples. Boys, on the contrary, are deductive in their thinking, focusing on general or abstract principles. Similarly, boys exhibit a greater ability to calculate a problem without the benefit of a tactile connection. For example, boys have a general advantage over girls if math is taught on the blackboard, while the success rate of girls improves when math is taught with manipulatives. Moir and Jessel (1992) claimed that, while girls typically learn to count earlier than boys, boys have a greater aptitude for arithmetical reasoning. They suggested that “the early female advantage in math begins to fade, as the nature of mathematics changes from computation to theory” (p. 89).

Gurian (2001) stated that girls are more vocal than boys in the context of the learning process. However, the language of girls is often very concrete, while boys are more prone to utilize jargon and coded language. Additionally, Gurian claimed that “girls are generally better listeners than boys, hear more of what’s said, and are more

receptive to the plethora of details... Boys tend to hear less and more often ask for clear evidence to support a teacher's or other's claim" (p. 46). Moir and Jessel (1992) stated that "when the sexes are compared, women show a greater sensitivity to sound... Six times as many girls as boys can sing in tune" (pp. 17-18). Brizendine (2006) asserted that this phenomenon is due to the fact that boys undergo a "testosterone marination" in utero, which affects the communication centers in their brains. Girls, however, do not experience the infusion of testosterone, and thus their communication centers are left intact, giving them a greater ability to hear human vocal tones. Sax (2005) added that "the female-male difference in hearing only gets bigger as kids get older" (p. 17).

Gurian (2001) noted that boys suffer from boredom to a greater extent than girls. Similarly, boys often utilize more physical space than girls in the learning process. This is often interpreted by teachers as rude or poor behavior, when in reality it simply reflects the mode in which the spatial male brain learns. The lower serotonin and higher metabolism of boys often requires them to move around while learning. Movement stimulates the brains of boys in a way that is not as necessary for girls. This perceived poor behavior of boys is amplified because, as Sax (2005) noted, "Girls are more likely to assume that the teacher is an ally and a friend. Boys are less likely to make that assumption" (p. 85). Similarly, Jensen (2006) indicated that the brains of boys may be affected by familial instability to a greater extent than the brains of girls. He stated:

In 1998, for Black and Hispanic children living with single mothers, the poverty rates were 54 percent and 64 percent, respectively. Boys in single-parent families were more likely to develop psychiatric disease and narcotics-related disease than were girls, and they also had a greater risk of all-cause mortality. (p. 115)

Gurian (2001) pointed out that girls often find it easier to engage in group dynamics than boys. The greater female ability to empathize with others facilitates

healthy social interaction, while boys are often focused on the task at hand. Moir and Jessel (1992) asserted that “It has been shown that girl babies are much more interested than boys in people and faces; the boys seem just as happy with an object dangled in front of them” (p. 17). Jensen (2006) downplayed this disparity and stated, “both genders are generally poor at reading and interpreting emotion” (p. 102).

Gurian (2001) also noted that “boys tend toward symbolic texts, diagrams, and graphs. They like the coded quality better than girls do, who tend to prefer written texts” (p. 49). When students engage in teamwork, girls tend to be less structured in team organization but pay more attention to managing team processes, while boys remain more focused on the team goal.

Differences in brain function and, by extension, in learning styles between boys and girls create challenges in the formation of an educational system that will accommodate both genders. Kimmel (2006) argued that “boy-proponents” create a false opposition between boys and girls. He asserted that the educational reforms that have been taken during the past 10 to 20 years to aid the performance of girls have also helped boys. He insisted that classroom environments in the first half of the 20th century were more stridently rigid against boys, noting that rambunctious boys were not tolerated and simply dropped out. Kindlon and Thompson (1999) disagreed, noting that the current educational system does not adequately recognize and value the needs of boys. They claimed that “grade school is a largely feminine environment, populated predominately by woman teachers and authority figures, that seems rigid against boys, against the higher activity level and lower level of impulse control that is normal for boys” (p. 23).



Gurian and Stevens (2005) reiterated this conviction. They recognized the difficulties boys face in the current educational system, which is more oriented to the learning styles of girls. They claimed:

A child who expresses himself and learns to compensate for weaknesses is following one of the most natural instincts of our species: to *adapt*. We as adults protect the minds of children when we help the children adapt, using their own natural skills and talents, to the needs of a society. We don't protect their minds by putting a generation of schoolboys on drugs or watching them gradually fail. (p. 62)

### Summary

This review of literature focused on four areas: a) single gender and coeducational schools, b) Catholic identity, c) stages of faith, and d) brain research. In regard to single gender and coeducational schools, the literature demonstrated that the model of a school can have an impact on student achievement in several areas. The literature showed that girls often excel academically to a greater extent in single gender environments than they do in coeducational environments. The literature did not demonstrate as clear an academic advantage for boys in single gender environments, but it highlighted the fact that boys often manifest greater social development in coeducational environments than they do in single gender environments. There was some evidence to support the claim that single gender schools offer students greater religious outcomes than coeducational schools. The present study investigated whether the educational model may have an affect on boys' perceptions of Catholic identity.

This review of literature operationally defined Catholic identity as relating to message, community, service, and worship. Message refers to the faith of the Church, revealed by God, that is present in a Catholic school. Community refers to the fellowship and unity of people in the Holy Spirit. Service refers to the servant Church where the

needs of all are met. Worship refers to the signs, symbols, and liturgical celebrations of the community in which the people express their love of God. The present study examined whether the educational model of schools affect boys' perceptions of each of the aforementioned categories.

This review of literature examined a stage theory of faith development. Since Catholic identity is related to faith, a person's perception of Catholic identity will be influenced by his/her level of faith. Faith development, along with learning and religious enculturation, will provide a perspective from which to perceive Catholic identity.

This review of literature examined brain research in regard to gender differences. The brain structures of the two genders are different, leading to distinct learning styles. Different learning styles create the possibility of different perceptions. Since boys and girls may perceive the world around them in different ways, this study was limited to the perceptions of boys

## CHAPTER THREE

### METHODOLOGY

#### Restatement of the Problem

The problem for the present study is the need for Catholic identity in Catholic schools. The *Declaration on Christian Education* (Vatican II, 1965) insisted that young people have a sacred right to an education that offers them an ability to make sound moral judgments from a well-formed conscience that ultimately leads them to love God more perfectly.

It therefore exhorts the sons of the Church to assist in a Spirit of generosity in the whole field of education, especially with the aim of extending more rapidly the benefits of suitable education and instruction throughout the world. (§3).

This exhortation has fueled a motivation for an increased sense of Catholic identity in Catholic schools since the close of the Second Vatican Council (Buetow, 1988).

#### Research Design

The research methodology of this study was survey research. A researcher-designed survey instrument (*The Catholic Identity Student Survey*) (Appendix A) was generated and distributed to senior male students in 25 Catholic secondary schools. This study generated inferences about a population of students based on a sample. Survey methodology was the preferred type of data collection procedure for this study because it provides a rapid turnaround for a large sample group that was spread across a large geographic area (Babbie, 1990). The researcher-designed survey was a self-administered questionnaire (due to the large sample size) and was administered at one specific point in time.

## Population

The researcher selected 25 Catholic high schools from across the United States. Of the 25 schools, 12 were male single gender and 13 were coeducational. One single gender school and one coeducational school were chosen from each of the 13 NCEA regions in the continental United States. The researcher primarily used diocesan websites to identify the schools. The researcher searched these websites and created lists of coeducational high schools and all male single gender high schools in specific geographic areas. The researcher contacted a total of 96 schools in order to obtain the consent of 25 schools. The researcher was unable to recruit the participation of a single gender school in region 8, which necessitated the use of 12 single gender schools instead of 13. The national breadth of the sample was necessary for generalizability to the universal population of male students in Catholic high schools in the United States. Table 2 correlates the NCEA regions with the geographic regions they represent.

Table 2

### *NCEA Regions by States*

| NCEA Region | States   |
|-------------|--|
| Region 1    | Main, New Hampshire, Vermont. Rhode Island, Massachusetts and Connecticut  |
| Region 2    | New York   |
| Region 3    | New Jersey and Pennsylvania  |
| Region 4    | District of Columbia, Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia and West Virginia |
| Region 5    | Alabama, Kentucky, Louisiana, Mississippi and Tennessee  |
| Region 6    | Michigan and Ohio  |

Table 2 continued

*NCEA Regions by States*

| NCEA Region | States  |
|-------------|---|
| Region 7    | Illinois, Indiana and Wisconsin                 |
| Region 8    | Minnesota, North Dakota and South Dakota        |
| Region 9    | Iowa, Kansas, Missouri and Nebraska             |
| Region 10   | Arkansas, Oklahoma and Texas                    |
| Region 11   | California, Nevada and Hawaii                   |
| Region 12   | Alaska, Idaho, Montana, Oregon and Washington   |
| Region 13   | Arizona, Colorado, Wyoming, New Mexico and Utah |

The present study sought to describe the perspectives of male students in each of the 25 high schools. Each male student respondent was in the twelfth grade. Students in the twelfth grade typically had been enrolled in the school for four years (freshman through senior year), giving them appropriate background and experience to respond to the questionnaire thoughtfully.

In order to determine the minimum necessary sample size from each of the two school types, the researcher utilized the formula of Power and Sample Size for Testing Two Proportions. Snedecor and Cochran (1989) stated that this formula reflects four parameters that a researcher must define. Two of these parameters are related to risk: 1) alpha risk 2) beta risk. Alpha risk is the risk of stating that one population is different from another when, in fact, they are the same. Beta risk is the risk of stating that both populations are the same when, in fact, they are different. The third parameter is establishing the worst-case proportion, which is 50%. The final parameter is establishing

the minimum difference to detect, which in the present study is 10%. Using the Formula of Power and Sample Size for Testing Two Proportions, the researcher found the minimum sample size for each group (senior male students in single gender Catholic high schools and senior male students in coeducational Catholic high schools) in the present study to be 305 students. The respondent rate exceeded the minimum sample size. The respondent rate among male students in single gender Catholic high schools was 554 and the respondent rate among male students at coeducational Catholic high schools was 473. The total number of respondents in the present study was 1027.

#### Instrumentation

The method of this study was survey research. The *Catholic Identity Student Survey* (Appendix A) was designed by the researcher. The instrument was made up of 20 items in a Likert scale format, one question in regard to the religion of the respondent, and one question in regard to the nature of the school (coeducational or single gender). The Likert scale had five ordered categories including the options of: strongly disagree, agree, no opinion, agree, and strongly agree. The same survey instrument was used in each of the 25 schools.

The 20 main items of the instrument revolved around the four aspects of Catholic identity: message, community, service and worship. There were five items pertaining to each aspect of Catholic identity. Table 3 displays the correlation of each item to a particular aspect of Catholic identity.

Table 3

*Survey Instrument by Theme*

| Theme     | Item Number      |
|-----------|------------------|
| Message   | 1, 5, 9, 13, 17  |
| Community | 2, 6, 10, 14, 18 |
| Service   | 3, 7, 11, 15, 19 |
| Worship   | 4, 8, 12, 16, 20 |

## Validity

The researcher gathered a panel to review the validity of the instrument. The panel was made up of 10 individuals who had substantial experience in one or more of the following areas: single gender education and coeducational education, Catholic education, and Catholic identity (Appendix B). The researcher contacted the panel members by email to request their participation. Upon their consent, the panel was mailed the survey instrument along with a questionnaire (Appendix C), asking each of them to comment on content and construct validity, and clarity of the instrument. They were also asked to offer suggestions for additions, deletions, and substitutions to the instrument. The mailing also included a self-addressed stamped envelope in which the panel members were to return the questionnaire to the researcher. Panel members suggested that the researcher adjust the format of the instrument to display the items within a grid in order to create greater clarity. It was also suggested that the researcher expand the instructions of the survey to include more detail. The final copy of the survey instrument reflected the aforementioned changes.

## Reliability

The test-retest method was utilized to establish the reliability of the survey instrument. The researcher sought permission to distribute the survey instrument to male students in one Catholic high school who did not participate in the present study. The instrument was distributed to a population of 30 male students at a coeducational high school. These 30 students were not involved in the actual study.

The surveys were distributed to male senior students at the Catholic high school and then redistributed two weeks later. The surveys were coded in order to compare the responses of each student to his previous responses. The researcher utilized the statistical method of ordinal logistic regression to establish the consistency in the responses of the students (Hosmer & Lemeshow, 2000; O'Connell, 2006). Each of the 20 items on the survey instrument was evaluated and there was no statistical evidence to suggest that student responses would differ over time (Appendix D). Table 4 lists the p-value for each of the 20 items. The p-value represents the probability that the coefficient will not be significantly different than zero (a coefficient of zero indicates no difference in responses from one distribution of the instrument to the next). A p-value greater than .10 indicates that there was no evidence to suggest that the coefficient is significantly different than zero.

Table 4

### *P-value by Survey Item*

| Item Number | P-Value | Item Number | P-Value |
|-------------|---------|-------------|---------|
| Item 1      | 0.824   | Item 11     | 0.639   |
| Item 2      | 1.000   | Item 12     | 0.824   |



Table 4 continued

*P-value by Survey Item*

| Item Number | P-Value | Item Number | P-Value |
|-------------|---------|-------------|---------|
| Item 3      | 0.824   | Item 13     | 0.824   |
| Item 4      | 0.623   | Item 14     | 1.000   |
| Item 5      | 0.876   | Item 15     | 0.876   |
| Item 6      | 0.458   | Item 16     | 0.814   |
| Item 7      | 0.802   | Item 17     | 0.623   |
| Item 8      | 0.747   | Item 18     | 0.623   |
| Item 9      | 0.396   | Item 19     | 0.640   |
| Item 10     | 0.606   | Item 20     | 0.793   |

## Data Collection

Phase one of the collection of data for this study was to contact each of the 25 administrators of the Catholic schools listed in the study in order to request permission to distribute The Catholic Identity Student Survey in their schools (Appendix E). Once the consent of the administrators was established, the researcher applied for and received approval from the Institutional Review Board for the Protection of Human Subjects at the University of San Francisco to conduct this research (Appendix F). Phase two of the data collection was to mail a packet to each school containing the survey instruments (Appendix A), subject (Appendix G) and parental (Appendix H) consent forms, instructions for the proctor (Appendix I) and a self-addressed stamped envelope so that the administrator or his or her delegate could return the surveys to the researcher. The

administrator or his or her delegate randomly distributed the surveys to male students in the senior class.

The researcher requested that school administrators distribute 40 surveys to students. Ten additional surveys were included in the packet in order to accommodate possible student mistakes that would necessitate a new copy. Some schools distributed the 10 extra copies and thus returned more than 40 surveys to the researcher.

Additionally, some of the school administrators requested permission from the researcher to reproduce the survey instrument and distribute it to more than the 40 students that were requested. This requested was made so that they could use the instrument to assess a greater number of their students for their own internal information. The researcher granted permission. In some cases, administrators returned copies of additional surveys that they reproduced for their own purposes. The result was that some schools returned more than 40 surveys. The researcher made the decision to include all surveys that were returned except those that were incomplete, because a student failed to complete the backside of the form.

Some schools distributed the survey instrument in classrooms with small class sizes and some did not distribute the survey in a classroom setting, but asked students to come to a central location. The result was that some schools returned fewer than 40 surveys.

### Data Analysis

The present study examined eight research questions. In order to analyze the responses to these questions, the researcher used an ordinal logistic model. Liao (1994) stated that this is an effective model to assess social or public opinion when the scale

being used represents an ordered hierarchy but the differences between adjacent categories are not the same. The assumptions of a classical regression model (that is, Ordinary Least Squares Regression) would not be satisfied under the conditions of the present study. Therefore, the tests associated with a classical regression methodology would not be valid (p. 37).

Using the ordinal logistic model to address the eight research questions of the present study, a probability was established for the most likely response for a given category (that is, message, community, service, worship) as a function of school type (that is, single gender or coeducational). An odds ratio was also analyzed for each category at each level of response, comparing single gender schools to coeducational schools.

## CHAPTER FOUR

### FINDINGS

#### Restatement of the Problem

The problem for the present study was the mandate to establish a strong sense of Catholic identity in Catholic secondary schools (Vatican II, 1965). Following the Second Vatican Council, researchers, theologians and ecclesiastical authorities have agreed that there remained a continuing need to fulfill this mandate (Buetow, 1988; Congregation for Catholic Education (CCE), 1988; Cook, 2003; Deal & Petersen, 1982; Greeley and Rossi, 1966; McDermott, 1997; National Council of Catholic Bishops (NCCB), 1972, 1977).

#### Student Responses by School

The researcher sought to examine the Catholic identity of Catholic secondary schools through the perceptions of students. For the purpose of the present study the researcher focused exclusively on the perceptions of male students, given the differences in brain structure between the genders that lead to differences in learning, perception and growth (Brizendine, 2006; Gurian, 2001; Gurian & Stevens, 2005; Kimmel, 2006; Kimura, 2005; Kindlon & Thompson, 1999; Moir & Jessel, 1992; Sax, 2005; Viadero, 2006). The researcher sought to compare the perceptions of male students who attend coeducational Catholic high schools to the perceptions of male students who attend single gender Catholic high schools in regard to Catholic identity. The goal of the researcher was to discern whether the educational model may affect a male student's perception of Catholic identity.

The researcher coordinated with representatives from 25 Catholic high schools (13 coeducational and 12 single gender) in the United States in order to distribute

*Catholic Identity Student Survey* (Appendix A) to male members of their student bodies. The survey instrument contained 20 statements in regard to Catholic identity. The statements were constructed to positively reflect important themes of Catholic identity as seen in the literature. When a student agreed or strongly agreed with a statement on the survey instrument, he was indicating that he perceived a positive manifestation of Catholic identity in his school community in regard to that particular theme. When a student disagreed or strongly disagreed with a statement on the survey instrument, he was indicating that he perceived a negative manifestation of Catholic identity in his school community in regard to that particular theme. The majority of individual responses were in the agree category (A) and the next largest number of response were in the strongly agree category (SA). The disagree category (D) had the next largest number of responses followed by the no opinion category (NO). The strongly disagree category had the smallest number of responses. Table 5 displays the number of student responses by category of likert scale.

Table 5

*Number of Student Responses by Category of Likart Scale*

| Category of Likart Scale | SA    | A      | NO    | D     | SD  |
|--------------------------|-------|--------|-------|-------|-----|
| Total Student Responses  | 6,104 | 10,334 | 1,492 | 2,070 | 501 |

As Table 5 indicates, the most likely response to each question on the survey instrument was A. Following A, the likeliness of a student's response was in the following order from most likely to least likely: SA, D, NO, SD. Any deviations from this sequence were noted by the researcher for each school in the following section. In the tables that follow, percentages were rounded to the nearest percent.

*Single Gender School in Region One*

The single gender school in region one of the NCEA (SG1) returned 50 *Catholic Identity Student Surveys* to the researcher. Of the 50 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG1 was 50.

The total number of student responses for SG1 was 1000. Of the 1000 responses, 30% were in the strongly agree category (SA), 46% were in the agree category (A), 12% were in the no opinion category (NO), 11% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 6 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 6

*Percentages and Frequencies of Student Responses by Category in School SG1*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 250     | 250       | 250     | 250     |
| Percentage of Responses in SA | 28%     | 32%       | 38%     | 20%     |
| Frequency of Responses in SA  | 71      | 80        | 94      | 50      |
| Percentage of Responses in A  | 44%     | 50%       | 44%     | 46%     |
| Frequency of Responses in A   | 109     | 126       | 110     | 115     |
| Percentage of Responses in NO | 11%     | 8%        | 13%     | 16%     |
| Frequency of Responses in NO  | 28      | 19        | 33      | 40      |

Table 6 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG1*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in D  | 12%     | 9%        | 5%      | 17%     |
| Frequency of Responses in D   | 31      | 22        | 13      | 43      |
| Percentage of Responses in SD | 4%      | 1%        | 0%      | 1%      |
| Frequency of Responses in SD  | 11      | 3         | 0       | 2       |

In the service category in SG1 there were more student responses in NO than in D. Appendix J displays the total of all student responses in SG1. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region One*

The coeducational school in region one of the NCEA (CE1) returned 43 Catholic Identity Student Surveys to the researcher. Of the 43 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE1 was 43.

The total number of student responses for CE1 was 859. Of the 859 responses, 23% were in the strongly agree category (SA), 57% were in the agree category (A), 15% were in the no opinion category (NO), 6% were in the disagree category (D), and 0% were in the strongly disagree category (SD). Table 7 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 7

*Percentages and Frequencies of Student Responses by Category in School CE1*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 215     | 214       | 215     | 215     |
| Percentage of Responses in SA | 16%     | 18%       | 23%     | 33%     |
| Frequency of Responses in SA  | 35      | 39        | 50      | 70      |
| Percentage of Responses in A  | 62%     | 69%       | 58%     | 38%     |
| Frequency of Responses in A   | 133     | 147       | 125     | 82      |
| Percentage of Responses in NO | 18%     | 7%        | 12%     | 21%     |
| Frequency of Responses in NO  | 38      | 15        | 26      | 46      |
| Percentage of Responses in D  | 4%      | 6%        | 7%      | 6%      |
| Frequency of Responses in D   | 8       | 12        | 14      | 13      |
| Percentage of Responses in SD | 1%      | 1%        | 0%      | 2%      |
| Frequency of Responses in D   | 1       | 1         | 0       | 4       |

In every category (message, community, service, and worship) in CE1 there were more student responses in NO than in D. In the message category there were more student responses in NO than in SA. Appendix K displays the total of all student responses in CE1. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced.

*Single Gender School in Region Two*

The single gender school in region two of the NCEA (SG2) returned 55 *Catholic Identity Student Surveys* to the researcher. SG2 was a school in which an administrator created more copies than were originally sent by the researcher, and returned more copies



than were sent by the researcher. Of the 55 surveys returned, 4 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG2 was 51.

The total number of student responses for SG2 was 1016. Of the 1016 responses, 19% were in the strongly agree category (SA), 48% were in the agree category (A), 12% were in the no opinion category (NO), 17% were in the disagree category (D), and 4% were in the strongly disagree category (SD). Table 8 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 8

*Percentages and Frequencies of Student Responses by Category in School SG2*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 255     | 254       | 254     | 253     |
| Percentage of Responses in SA | 20%     | 22%       | 20%     | 15%     |
| Frequency of Responses in SA  | 50      | 56        | 50      | 39      |
| Percentage of Responses in A  | 47%     | 49%       | 51%     | 43%     |
| Frequency of Responses in A   | 120     | 125       | 129     | 109     |
| Percentage of Responses in NO | 12%     | 12%       | 10%     | 14%     |
| Frequency of Responses in NO  | 30      | 30        | 26      | 36      |
| Percentage of Responses in D  | 17%     | 14%       | 17%     | 21%     |
| Frequency of Responses in D   | 43      | 36        | 42      | 53      |
| Percentage of Responses in SD | 4%      | 3%        | 3%      | 7%      |
| Frequency of Responses in SD  | 10      | 8         | 7       | 17      |

Appendix L displays the total of all student responses in SG2. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

### *Coeducational School in Region Two*

The coeducational school in region two of the NCEA (CE2) returned 45 *Catholic Identity Student Surveys* to the researcher. Of the 45 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE2 was 45.

The total number of student responses for CE2 was 900. Of the 900 responses, 24% were in the strongly agree category (SA), 63% were in the agree category (A), 4% were in the no opinion category (NO), 8% were in the disagree category (D), and 1% were in the strongly disagree category (SD). Table 9 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 9

#### *Percentages and Frequencies of Student Responses by Category in School CE2*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 225     | 225       | 225     | 225     |
| Percentage of Responses in SA | 20%     | 29%       | 22%     | 24%     |
| Frequency of Responses in SA  | 44      | 66        | 49      | 54      |
| Percentage of Responses in A  | 63%     | 60%       | 68%     | 60%     |
| Frequency of Responses in A   | 141     | 136       | 154     | 135     |

Table 9 (continued)

*Percentages and Frequencies of Student Responses by Category in School CE2*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in NO | 6%      | 4%        | 2%      | 4%      |
| Frequency of Responses in NO  | 13      | 9         | 4       | 10      |
| Percentage of Responses in D  | 9%      | 6%        | 6%      | 11%     |
| Frequency of Responses in D   | 20      | 13        | 14      | 25      |
| Percentage of Responses in SD | 3%      | 0%        | 2%      | 0%      |
| Frequency of Responses in SD  | 7       | 1         | 4       | 1       |

In the service category of CE2 there were the same number of student responses in NO as there were in D. Appendix M displays the total of all student responses in CE2. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Single Gender School in Region Three*

The single gender school in region three of the NCEA (SG3) returned 21 Catholic Identity Student Surveys to the researcher. Of the 21 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG3 was 21.

The total number of student responses for SG3 was 420. Of the 420 responses, 17% were in the strongly agree category (SA), 50% were in the agree category (A), 7% were in the no opinion category (NO), 22% were in the disagree category (D), and 4% were in the strongly disagree category (SD). Table 10 describes the percentages and

frequencies of student responses by degree of agreement and category of Catholic identity.

Table 10

*Percentages and Frequencies of Student Responses by Category in School SG3*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 105     | 105       | 105     | 105     |
| Percentage of Responses in SA | 12%     | 21%       | 18%     | 15%     |
| Frequency of Responses in SA  | 13      | 22        | 19      | 16      |
| Percentage of Responses in A  | 47%     | 52%       | 52%     | 50%     |
| Frequency of Responses in A   | 49      | 55        | 55      | 52      |
| Percentage of Responses in NO | 10%     | 7%        | 6%      | 7%      |
| Frequency of Responses in NO  | 10      | 7         | 6       | 7       |
| Percentage of Responses in D  | 23%     | 17%       | 22%     | 25%     |
| Frequency of Responses in D   | 24      | 18        | 23      | 26      |
| Percentage of Responses in SD | 9%      | 3%        | 2%      | 4%      |
| Frequency of Responses in SD  | 9       | 3         | 2       | 4       |

There were a high number of student responses in the D category in SG3. In three categories (message, service, and worship) there were more student responses in the D category than in the SA category. Appendix N displays the total of all student responses in SG3. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Three*

The coeducational school in region three of the NCEA (CE3) returned 43 *Catholic Identity Student Surveys* to the researcher. Of the 43 surveys returned, 2 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE3 was 41.

The total number of student responses for CE3 was 816. Of the 816 responses, 21% were in the strongly agree category (SA), 57% were in the agree category (A), 8% were in the no opinion category (NO), 10% were in the disagree category (D), and 4% were in the strongly disagree category (SD). Table 11 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 11

*Percentages and Frequencies of Student Responses by Category in School CE3*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 205     | 204       | 202     | 205     |
| Percentage of Responses in SA | 20%     | 18%       | 19%     | 28%     |
| Frequency of Responses in SA  | 40      | 37        | 39      | 58      |
| Percentage of Responses in A  | 60%     | 61%       | 59%     | 47%     |
| Frequency of Responses in A   | 122     | 125       | 119     | 97      |
| Percentage of Responses in NO | 10%     | 4%        | 7%      | 8%      |
| Frequency of Responses in NO  | 20      | 9         | 15      | 17      |
| Percentage of Responses in D  | 6%      | 13%       | 10%     | 12%     |
| Frequency of Responses in D   | 13      | 26        | 20      | 25      |

Table 11 (continued)

*Percentages and Frequencies of Student Responses by Category in School CE3*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in SD | 5%      | 3%        | 5%      | 4%      |
| Frequency of Responses in SD  | 10      | 7         | 9       | 8       |

In the message category of CE3 there were more responses in NO than in D.

Appendix O displays the total of all student responses in CE3. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Single Gender School in Region Four*

The single gender school in region four of the NCEA (SG4) returned 50 *Catholic Identity Student Surveys* to the researcher. Of the 50 surveys returned, 1 was discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG4 was 49.

The total number of student responses for SG4 was 980. Of the 980 responses, 33% were in the strongly agree category (SA), 51% were in the agree category (A), 5% were in the no opinion category (NO), 9% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 12 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 12

*Percentages and Frequencies of Student Responses by Category in School SG4*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 245     | 245       | 245     | 245     |
| Percentage of Responses in SA | 34%     | 35%       | 48%     | 15%     |
| Frequency of Responses in SA  | 83      | 86        | 117     | 36      |
| Percentage of Responses in A  | 54%     | 57%       | 39%     | 55%     |
| Frequency of Responses in A   | 131     | 139       | 95      | 135     |
| Percentage of Responses in NO | 7%      | 2%        | 3%      | 9%      |
| Frequency of Responses in NO  | 16      | 6         | 8       | 21      |
| Percentage of Responses in D  | 5%      | 4%        | 8%      | 20%     |
| Frequency of Responses in D   | 12      | 10        | 20      | 49      |
| Percentage of Responses in SD | 1%      | 2%        | 2%      | 2%      |
| Frequency of Responses in SD  | 3       | 4         | 5       | 4       |

In the message category of SG4 there were more student responses in NO than in D. In the service category there were more student responses in SA than in A. In the worship category there were more student responses in D than in SA. Appendix P displays the total of all student responses in SG4. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Four*

The coeducational school in region four of the NCEA (CE4) returned 42 *Catholic Identity Student Surveys* to the researcher. Of the 42 surveys returned, none were

discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE4 was 42.

The total number of student responses for CE4 was 836. Of the 836 responses, 37% were in the strongly agree category (SA), 46% were in the agree category (A), 8% were in the no opinion category (NO), 6% were in the disagree category (D), and 4% were in the strongly disagree category (SD). Table 13 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 13

*Percentages and Frequencies of Student Responses by Category in School CE4*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 209     | 208       | 209     | 210     |
| Percentage of Responses in SA | 29%     | 36%       | 49%     | 34%     |
| Frequency of Responses in SA  | 61      | 74        | 103     | 72      |
| Percentage of Responses in A  | 45%     | 52%       | 39%     | 49%     |
| Frequency of Responses in A   | 93      | 109       | 81      | 102     |
| Percentage of Responses in NO | 11%     | 6%        | 3%      | 11%     |
| Frequency of Responses in NO  | 23      | 13        | 7       | 22      |
| Percentage of Responses in D  | 8%      | 3%        | 6%      | 5%      |
| Frequency of Responses in D   | 16      | 7         | 12      | 11      |
| Percentage of Responses in SD | 8%      | 2%        | 3%      | 1%      |
| Frequency of Responses in SD  | 16      | 5         | 6       | 3       |



In the message category of CE4 there were more student responses in NO than in D and an equal number of student responses in D and SD. In the community category there were more student responses in NO than in D. In the service category there were more student responses in SA than in A. In the worship category there were more student responses in NO than in D. Appendix Q displays the total of all student responses in CE4. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

#### *Single Gender School in Region Five*

The single gender school in region five of the NCEA (SG5) returned 40 *Catholic Identity Student Surveys* to the researcher. Of the 40 surveys returned, 1 was discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG5 was 39.

The total number of student responses for SG5 was 780. Of the 780 responses, 34% were in the strongly agree category (SA), 47% were in the agree category (A), 7% were in the no opinion category (NO), 10% were in the disagree category (D), and 3% were in the strongly disagree category (SD). Table 14 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 14

#### *Percentages and Frequencies of Student Responses by Category in School SG5*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 195     | 195       | 195     | 195     |
| Percentage of Responses in SA | 26%     | 27%       | 49%     | 35%     |

Table 14 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG5*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Frequency of responses in SA  | 51      | 53        | 95      | 69      |
| Percentage of Responses in A  | 48%     | 54%       | 39%     | 48%     |
| Frequency of Responses in A   | 93      | 105       | 75      | 93      |
| Percentage of Responses in NO | 6%      | 8%        | 5%      | 7%      |
| Frequency of Responses in NO  | 12      | 16        | 10      | 14      |
| Percentage of Responses in D  | 14%     | 9%        | 6%      | 9%      |
| Frequency of Responses in D   | 28      | 18        | 11      | 17      |
| Percentage of Responses in SD | 6%      | 2%        | 2%      | 1%      |
| Frequency of Responses in SD  | 11      | 3         | 4       | 2       |

In the service category of SG5 there were more responses in SA than in A.

Appendix R displays the total of all student responses in SG5. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Five*

The coeducational school in region five of the NCEA (CE5) returned 45 *Catholic Identity Student Surveys* to the researcher. Of the 45 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE5 was 45.

The total number of student responses for CE5 was 898. Of the 898 responses, 34% were in the strongly agree category (SA), 47% were in the agree category (A), 8%

were in the no opinion category (NO), 10% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 15 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 15

*Percentages and Frequencies of Student Responses by Category in School CE5*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 225     | 224       | 224     | 225     |
| Percentage of Responses in SA | 30%     | 38%       | 41%     | 27%     |
| Frequency of Responses in SA  | 68      | 85        | 92      | 60      |
| Percentage of Responses in A  | 48%     | 49%       | 51%     | 42%     |
| Frequency of Responses in A   | 107     | 110       | 114     | 94      |
| Percentage of Responses in NO | 9%      | 6%        | 4%      | 12%     |
| Frequency of Responses in NO  | 21      | 13        | 8       | 26      |
| Percentage of Responses in D  | 10%     | 6%        | 5%      | 18%     |
| Frequency of Responses in D   | 22      | 13        | 10      | 40      |
| Percentage of Responses in SD | 3%      | 1%        | 0%      | 2%      |
| Frequency of Responses in SD  | 7       | 3         | 0       | 5       |

In the community category of CE5 there were an equal number of student responses in NO and in D. Appendix S displays the total of all student responses in CE5. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Single Gender School in Region Six*

The single gender school in region six of the NCEA (SG6) returned 70 *Catholic Identity Student Surveys* to the researcher. SG6 was a school in which an administrator requested permission to reproduce the survey instrument. SG6 returned more surveys to the researcher than the researcher originally sent. SG6 returned the largest number of surveys of all the schools that participated in the present study. Of the 70 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG6 was 70.

The total number of student responses for SG6 was 1399. Of the 1399 responses, 32% were in the strongly agree category (SA), 53% were in the agree category (A), 7% were in the no opinion category (NO), 8% were in the disagree category (D), and 0% were in the strongly disagree category (SD). Table 16 describes the percentages and frequencies of student responses by degree of agreement and Catholic identity category.

Table 16

*Percentages and Frequencies of Student Responses by Category in School SG6*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 350     | 350       | 349     | 350     |
| Percentage of Responses in SA | 28%     | 35%       | 34%     | 30%     |
| Frequency of Responses in SA  | 98      | 122       | 119     | 104     |
| Percentage of Responses in A  | 55%     | 59%       | 50%     | 47%     |
| Frequency of Responses in A   | 191     | 205       | 174     | 166     |
| Percentage of Responses in NO | 8%      | 3%        | 7%      | 9%      |
| Frequency of Responses in NO  | 28      | 10        | 25      | 31      |

Table 16 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG6*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in D  | 8%      | 3%        | 9%      | 13%     |
| Frequency of Responses in D   | 29      | 12        | 31      | 44      |
| Percentage of Responses in SD | 1%      | 0%        | 0%      | 1%      |
| Frequency of Responses in SD  | 4       | 1         | 0       | 5       |

Appendix T displays the total of all student responses in SG6. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Six*

The coeducational school in region six of the NCEA (CE6) returned 24 *Catholic Identity Student Surveys* to the researcher. Of the 24 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE6 was 24.

The total number of student responses for CE6 was 479. Of the 479 responses, 24% were in the strongly agree category (SA), 55% were in the agree category (A), 5% were in the no opinion category (NO), 12% were in the disagree category (D), and 4% were in the strongly disagree category (SD). Table 17 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 17

*Percentages and Frequencies of Student Responses by Category in School CE6*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 120     | 119       | 120     | 120     |
| Percentage of Responses in SA | 19%     | 21%       | 32%     | 23%     |
| Frequency of Responses in SA  | 23      | 25        | 38      | 28      |
| Percentage of Responses in A  | 48%     | 63%       | 58%     | 53%     |
| Frequency of Responses in A   | 57      | 76        | 69      | 63      |
| Percentage of Responses in NO | 8%      | 0%        | 7%      | 3%      |
| Frequency of Responses in NO  | 10      | 0         | 8       | 4       |
| Percentage of Responses in D  | 22%     | 11%       | 2%      | 15%     |
| Frequency of Responses in D   | 26      | 13        | 2       | 18      |
| Percentage of Responses in SD | 3%      | 4%        | 3%      | 6%      |
| Frequency of Responses in SD  | 4       | 5         | 3       | 7       |

In the message category of CE6 there were more student responses in D than in SA. In the community category there were more student responses in SD than in NO. In the service category there were more student responses in both NO and SD than in D. In the worship category there were more responses in SD than in NO. Appendix U displays the total of all student responses in CE6. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Single Gender School in Region Seven*

The single gender school in region seven of the NCEA (SG7) returned 50 *Catholic Identity Student Surveys* to the researcher. Of the 50 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG7 was 50.

The total number of student responses for SG7 was 996. Of the 996 responses, 45% were in the strongly agree category (SA), 41% were in the agree category (A), 5% were in the no opinion category (NO), 7% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 18 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 18

*Percentages and Frequencies of Student Responses by Category in School SG7*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 249     | 249       | 249     | 249     |
| Percentage of Responses in SA | 44%     | 42%       | 62%     | 33%     |
| Frequency of Responses in SA  | 110     | 105       | 154     | 82      |
| Percentage of Responses in A  | 35%     | 49%       | 34%     | 43%     |
| Frequency of Responses in A   | 88      | 123       | 85      | 108     |
| Percentage of Responses in NO | 8%      | 3%        | 2%      | 8%      |
| Frequency of Responses in NO  | 19      | 7         | 4       | 21      |
| Percentage of Responses in D  | 10%     | 6%        | 2%      | 13%     |
| Frequency of Responses in D   | 24      | 14        | 4       | 32      |

Table 18 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG7*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in SD | 3%      | 0%        | 1%      | 2%      |
| Frequency of Responses in SD  | 8       | 0         | 2       | 6       |

In the service category of SG7 there were more student responses in SA than in A and an equal number of responses in NO and D. Appendix V displays the total of all student responses in SG7. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Seven*

The coeducational school in region seven of the NCEA (CE7) returned 42 *Catholic Identity Student Surveys* to the researcher. Of the 42 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE7 was 42.

The total number of student responses for CE7 was 839. Of the 839 responses, 31% were in the strongly agree category (SA), 53% were in the agree category (A), 6% were in the no opinion category (NO), 10% were in the disagree category (D), and 0% were in the strongly disagree category (SD). Table 19 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.



Table 19

*Percentages and Frequencies of Student Responses by Category in School CE7*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 210     | 210       | 209     | 210     |
| Percentage of Responses in SA | 25%     | 35%       | 34%     | 30%     |
| Frequency of Responses in SA  | 53      | 74        | 71      | 63      |
| Percentage of Responses in A  | 58%     | 52%       | 53%     | 49%     |
| Frequency of Responses in A   | 122     | 110       | 110     | 102     |
| Percentage of Responses in NO | 7%      | 3%        | 8%      | 5%      |
| Frequency of Responses in NO  | 15      | 7         | 17      | 11      |
| Percentage of Responses in D  | 9%      | 9%        | 5%      | 15%     |
| Frequency of Responses in D   | 19      | 19        | 11      | 32      |
| Percentage of Responses in SD | 1%      | 0%        | 0%      | 1%      |
| Frequency of Responses in SD  | 1       | 0         | 0       | 2       |

In the service category of CE7 there were more student responses in NO than in D. Appendix W displays the total of all student responses in CE7. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Eight*

The coeducational school in region eight of the NCEA (CE8) returned 6 *Catholic Identity Student Surveys* to the researcher. CE8 returned the smallest number of surveys of all schools that participated in the present study. There was no single gender counterpart to CE8, which resulted in Region 8 of the NCEA being underrepresented in

this study. Of the 7 surveys returned, 1 was discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE8 was 5.

The total number of student responses for CE8 was 100. Of the 100 responses, 34% were in the strongly agree category (SA), 53% were in the agree category (A), 8% were in the no opinion category (NO), 5% were in the disagree category (D), and 0% were in the strongly disagree category (SD). Table 20 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 20

*Percentages and Frequencies of Student Responses by Category in School CE8*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 25      | 25        | 25      | 25      |
| Percentage of Responses in SA | 48%     | 20%       | 36%     | 32%     |
| Frequency of Responses in SA  | 12      | 5         | 9       | 8       |
| Percentage of Responses in A  | 48%     | 76%       | 44%     | 44%     |
| Frequency of Responses in A   | 12      | 19        | 11      | 11      |
| Percentage of Responses in NO | 0%      | 4%        | 12%     | 16%     |
| Frequency of Responses in NO  | 0       | 1         | 3       | 4       |
| Percentage of Responses in D  | 4%      | 0%        | 8%      | 8%      |
| Frequency of Responses in D   | 1       | 0         | 2       | 2       |
| Percentage of Responses in SD | 0%      | 0%        | 0%      | 0%      |
| Frequency of Responses in SD  | 0       | 0         | 0       | 0       |

In the message category of CE8 there were an equal number of student responses in SA and A and an equal number of responses in NO and SD. In the community category there were a greater number of student responses in NO than in D. In the service category there were a greater number of student responses in NO than in D. In the service category there were a greater number of responses in NO than in D. In CE8 there were no student responses in SD in any of the four categories. Appendix X displays the total of all student responses in CE8. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

#### *Single Gender School in Region Nine*

The single gender school in region nine of the NCEA (SG9) returned 30 *Catholic Identity Student Surveys* to the researcher. Of the 30 surveys returned, 4 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG9 was 26.

The total number of student responses for SG9 was 519. Of the 519 responses, 30% were in the strongly agree category (SA), 51% were in the agree category (A), 7% were in the no opinion category (NO), 11% were in the disagree category (D), and 1% were in the strongly agree category (SD). Table 21 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 21

*Percentages and Frequencies of Student Responses by Category in School SG9*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 129     | 130       | 130     | 130     |
| Percentage of Responses in SA | 21%     | 25%       | 43%     | 32%     |
| Frequency of Responses in SA  | 27      | 33        | 56      | 41      |
| Percentage of Responses in A  | 58%     | 55%       | 43%     | 45%     |
| Frequency of Responses in A   | 75      | 72        | 56      | 59      |
| Percentage of Responses in NO | 5%      | 7%        | 7%      | 8%      |
| Frequency of Responses in NO  | 7       | 9         | 9       | 10      |
| Percentage of Responses in D  | 15%     | 1%        | 7%      | 14%     |
| Frequency of Responses in D   | 19      | 13        | 9       | 18      |
| Percentage of Responses in SD | 1%      | 2%        | 0%      | 2%      |
| Frequency of Responses in SD  | 1       | 3         | 0       | 2       |

In the community category of SG9 there were more student responses in NO than in D. In the service category there were an equal number of student responses in SA and in A, and an equal number of student responses in NO and D. Appendix Y displays the total of all student responses in SG9. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are re-produced for the convenience of the reader.

*Coeducational School in Region Nine*

The coeducational school in region nine of the NCEA (CE9) returned 45 *Catholic Identity Student Surveys* to the researcher. Of the 45 surveys returned, none were

discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE9 was 45.

The total number of student responses for CE9 was 898. Of the 898 responses, 44% were in the strongly agree category (SA), 45% were in the agree category (A), 4% were in the no opinion category (NO), 6% were in the disagree category (D), and 1% were in the strongly disagree category (SD). Table 22 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 22

*Percentages and Frequencies of Student Responses by Category in School CE9*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 225     | 223       | 225     | 225     |
| Percentage of Responses in SA | 47%     | 42%       | 53%     | 33%     |
| Frequency of Responses in SA  | 106     | 93        | 120     | 75      |
| Percentage of Responses in A  | 44%     | 50%       | 36%     | 52%     |
| Frequency of Responses in A   | 98      | 111       | 82      | 116     |
| Percentage of Responses in NO | 4%      | 2%        | 7%      | 4%      |
| Frequency of Responses in NO  | 10      | 4         | 16      | 8       |
| Percentage of Responses in D  | 5%      | 5%        | 2%      | 11%     |
| Frequency of Responses in D   | 11      | 10        | 5       | 24      |
| Percentage of Responses in SD | 0%      | 2%        | 0%      | 1%      |
| Frequency of Responses in SD  | 0       | 5         | 2       | 2       |

In the message category of CE9 there were a greater number of student responses in SA than in A. In the community category there were a greater number of student responses in SD than in NO. In the service category there were a greater number of student responses in SA than in A, and a greater number of student responses in NO than in D. Appendix Z displays the total of all student responses in CE9. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

### *Single Gender School in Region Ten*

The single gender school in region ten of the NCEA (SG10) returned 60 *Catholic Identity Student Surveys* to the researcher. SG10 was a school in which an administrator requested permission to create more copies of the survey instrument. SG10 returned more surveys to the researcher than the researcher originally sent. Of the 60 surveys returned, 1 was discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG10 was 59.

The total number of student responses for SG10 was 1175. Of the 1175 responses, 30% were in the strongly agree category (SA), 49% were in the agree category (A), 8% were in the no opinion category (NO), 10% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 23 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 23

*Percentages and Frequencies of Student Responses by Category in School SG10*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 295     | 294       | 295     | 291     |
| Percentage of Responses in SA | 28%     | 29%       | 34%     | 29%     |
| Frequency of Responses in SA  | 81      | 84        | 101     | 84      |
| Percentage of Responses in A  | 53%     | 51%       | 46%     | 47%     |
| Frequency of Responses in A   | 155     | 151       | 136     | 136     |
| Percentage of Responses in NO | 6%      | 9%        | 8%      | 10%     |
| Frequency of Responses in NO  | 19      | 25        | 24      | 30      |
| Percentage of Responses in D  | 11%     | 10%       | 8%      | 12%     |
| Frequency of Responses in D   | 33      | 29        | 24      | 35      |
| Percentage of Responses in SD | 2%      | 2%        | 3%      | 2%      |
| Frequency of Responses in SD  | 7       | 5         | 10      | 6       |

In the service category of SG10 there were an equal number of student responses in NO and D. Appendix AA displays the total of all student responses in SG10. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Ten*

The coeducational school in region ten of the NCEA (CE10) returned 23 *Catholic Identity Student Surveys* to the researcher. Of the 23 surveys returned, 5 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE10 was 18.

The total number of student responses for CE10 was 359. Of the 359 responses, 20% were in the strongly agree category (SA), 50% were in the agree category (A), 13% were in the no opinion category (NO), 13% were in the disagree category (D), and 3% were in the strongly disagree category (SD). Table 24 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 24

*Percentages and Frequencies of Student Responses by Category in School CE10*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 89      | 90        | 90      | 90      |
| Percentage of Responses in SA | 16%     | 24%       | 18%     | 23%     |
| Frequency of Responses in SA  | 14      | 22        | 16      | 21      |
| Percentage of Responses in A  | 63%     | 52%       | 56%     | 31%     |
| Frequency of Responses in A   | 56      | 47        | 50      | 28      |
| Percentage of Responses in NO | 9%      | 14%       | 14%     | 13%     |
| Frequency of Responses in NO  | 8       | 13        | 13      | 12      |
| Percentage of Responses in D  | 8%      | 8%        | 9%      | 28%     |
| Frequency of Responses in D   | 7       | 7         | 8       | 25      |
| Percentage of Responses in SD | 5%      | 1%        | 3%      | 4%      |
| Frequency of Responses in SD  | 4       | 1         | 3       | 4       |

In three of the categories of CE10 (message, community, and service) there were more student responses in NO than in D. In the worship category there were more student responses in D than in SA. Appendix BB displays the total of all student



responses in CE10. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

### *Single Gender School in Region Eleven*

The single gender school in region eleven of the NCEA (SG11) returned 41 *Catholic Identity Student Surveys* to the researcher. Of the 41 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG11 was 41.

The total number of student responses for SG11 was 819. Of the 819 responses, 15% were in the strongly agree category (SA), 53% were in the agree category (A), 7% were in the no opinion category (NO), 17% were in the disagree category (D), and 8% were in the strongly disagree category (SD). Table 25 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 25

#### *Percentages and Frequencies of Student Responses by Category in School SG11*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 205     | 205       | 204     | 205     |
| Percentage of Responses in SA | 8%      | 20%       | 27%     | 4%      |
| Frequency of Responses in SA  | 16      | 41        | 55      | 9       |
| Percentage of Responses in A  | 52%     | 58%       | 55%     | 46%     |
| Frequency in Responses in A   | 107     | 119       | 113     | 95      |
| Percentage of Responses in NO | 14%     | 5%        | 4%      | 7%      |

Table 25 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG11*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Frequency of Responses in NO  | 28      | 10        | 8       | 15      |
| Percentage of Responses in D  | 19%     | 12%       | 12%     | 26%     |
| Frequency of Responses in D   | 39      | 24        | 24      | 53      |
| Percentage of Responses in SD | 7%      | 5%        | 2%      | 16%     |
| Frequency of Responses in SD  | 15      | 11        | 4       | 33      |

In the message category of SG11 there were more student responses in both NO and in D than in SA. In the community category there were more student responses in SD than in NO. In the worship category there were more student responses in D than in SA, and there were more student responses in SD than in NO. Appendix CC displays the total of all student responses in SG11. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Eleven*

The coeducational school in region eleven of the NCEA (CE11) returned 40 *Catholic Identity Student Surveys* to the researcher. Of the 40 surveys returned, 4 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE11 was 36.

The total number of student responses for CE11 was 720. Of the 720 responses, 20% were in the strongly agree category (SA), 51% were in the agree category (A), 10%

were in the no opinion category (NO), 15% were in the disagree category (D), and 5% were in the strongly disagree category (SD). Table 26 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 26

*Percentages and Frequencies of Student Responses by Category in School CE11*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 180     | 180       | 180     | 180     |
| Percentage of Responses in SA | 12%     | 31%       | 22%     | 15%     |
| Frequency of Responses in SA  | 21      | 55        | 39      | 27      |
| Percentage of Responses in A  | 49%     | 47%       | 58%     | 50%     |
| Frequency of Responses in A   | 89      | 84        | 104     | 90      |
| Percentage of Responses in NO | 12%     | 11%       | 8%      | 9%      |
| Frequency of Responses in NO  | 22      | 19        | 14      | 17      |
| Percentage of Responses in D  | 16%     | 9%        | 12%     | 21%     |
| Frequency of Responses in D   | 29      | 16        | 22      | 38      |
| Percentage of Responses in SD | 11%     | 3%        | 1%      | 4%      |
| Frequency of Responses in SD  | 19      | 6         | 1       | 8       |

In the message category of CE11 there were more student responses in both NO and D than in SA. In the community category there were more student responses in NO than in D. In the service category there were more student responses in D than in SA. Appendix DD displays the total of all student responses in CE11. The student responses

are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

### *Single Gender School in Region Twelve*

The single gender school in region twelve of the NCEA (SG12) returned 50 *Catholic Identity Student Surveys* to the researcher. Of the 50 surveys returned, 3 were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG12 was 47.

The total number of student responses for SG12 was 938. Of the 938 responses, 36% were in the strongly agree category (SA), 47% were in the agree category (A), 8% were in the no opinion category (NO), 7% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 27 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 27

#### *Percentages and Frequencies of Student Responses by Category in School SG12*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 235     | 235       | 234     | 234     |
| Percentage of Responses in SA | 40%     | 40%       | 35%     | 30%     |
| Frequency of Responses in SA  | 93      | 93        | 81      | 70      |
| Percentage of Responses in A  | 44%     | 50%       | 48%     | 47%     |
| Frequency of Responses in A   | 104     | 118       | 112     | 109     |
| Percentage of Responses in NO | 9%      | 4%        | 9%      | 12%     |
| Frequency of Responses in NO  | 21      | 9         | 21      | 28      |

Table 27 (continued)

*Percentages and Frequencies of Student Responses by Category in School SG12*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Percentage of Responses in D  | 6%      | 4%        | 8%      | 10%     |
| Frequency of Responses in D   | 13      | 9         | 18      | 23      |
| Percentage of Responses in SD | 2%      | 3%        | 1%      | 2%      |
| Frequency of Responses in SD  | 4       | 6         | 2       | 4       |

In three of the categories of SG12 (message, service, and worship) there were more student responses in NO than in D. In the community category there were an equal number of responses in NO and D. Appendix EE displays the total of all student responses in SG12. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Twelve*

The coeducational school in region twelve of the NCEA (CE12) returned 43 *Catholic Identity Student Surveys* to the researcher. Of the 43 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE12 was 43.

The total number of student responses for CE12 was 860. Of the 860 responses, 35% were in the strongly agree category (SA), 51% were in the agree category (A), 4% were in the no opinion category (NO), 9% were in the disagree category (D), and 1% were in the strongly disagree category (SD). Table 28 describes the percentages and

frequencies of student responses by degree of agreement and category of Catholic identity.

Table 28

*Percentages and Frequencies of Student Responses by Category in School CE12*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 215     | 215       | 215     | 215     |
| Percentage of Responses in SA | 35%     | 39%       | 38%     | 28%     |
| Frequency of Responses in SA  | 75      | 84        | 82      | 61      |
| Percentage of Responses in A  | 54%     | 55%       | 50%     | 43%     |
| Frequency of Responses in A   | 115     | 119       | 107     | 93      |
| Percentage of Responses in NO | 4%      | 2%        | 4%      | 4%      |
| Frequency of Responses in NO  | 9       | 5         | 8       | 9       |
| Percentage of Responses in D  | 7%      | 3%        | 7%      | 21%     |
| Frequency of Responses in D   | 14      | 7         | 15      | 45      |
| Percentage of Responses in SD | 1%      | 0%        | 1%      | 3%      |
| Frequency of Responses in D   | 2       | 0         | 3       | 7       |

Appendix FF displays the total of all student responses in CE12. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Single Gender School in Region Thirteen*

The single gender school in region thirteen of the NCEA (SG13) returned 51 Catholic Identity Student Surveys to the researcher. Of the 51 surveys returned, none

were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for SG13 was 51.

The total number of student responses for SG13 was 1018. Of the 1018 responses, 35% were in the strongly agree category (SA), 48% were in the agree category (A), 6% were in the no opinion category (NO), 10% were in the disagree category (D), and 2% were in the strongly disagree category (SD). Table 29 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 29

*Percentages and Frequencies of Student Responses by Category in School SG13*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 255     | 254       | 254     | 255     |
| Percentage of Responses in SA | 34%     | 39%       | 45%     | 22%     |
| Frequency of Responses in SA  | 86      | 99        | 113     | 56      |
| Percentage of Responses in A  | 47%     | 52%       | 40%     | 52%     |
| Frequency of Responses in A   | 120     | 133       | 101     | 132     |
| Percentage of Responses in NO | 6%      | 2%        | 7%      | 7%      |
| Frequency of Responses in NO  | 15      | 6         | 18      | 17      |
| Percentage of Responses in D  | 9%      | 6%        | 7%      | 17%     |
| Frequency of Responses in D   | 24      | 16        | 18      | 44      |
| Percentage of Responses in SD | 4%      | 0%        | 2%      | 2%      |
| Frequency of Responses in SD  | 10      | 0         | 4       | 6       |

In the service category of SG13 there were more student responses in SA than in A and an equal number of student responses in NO and in D. Appendix GG displays the total of all student responses in SG13. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

*Coeducational School in Region Thirteen*

The coeducational school in region thirteen of the NCEA (CE13) returned 44 *Catholic Identity Student Surveys* to the researcher. Of the 44 surveys returned, none were discarded due to a lack of completion. The total number of surveys analyzed by the researcher for CE13 was 44.

The total number of student responses for CE13 was 877. Of the 877 responses, 26% were in the strongly agree category (SA), 56% were in the agree category (A), 2% were in the no opinion category (NO), 11% were in the disagree category (D), and 5% were in the strongly disagree category (SD). Table 30 describes the percentages and frequencies of student responses by degree of agreement and category of Catholic identity.

Table 30

*Percentages and Frequencies of Student Responses by Category in School CE13*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Total Responses               | 219     | 220       | 219     | 219     |
| Percentage of Responses in SA | 21%     | 24%       | 33%     | 25%     |
| Frequency of Responses in SA  | 46      | 53        | 72      | 54      |
| Percentage of Responses in A  | 52%     | 64%       | 57%     | 53%     |



Table 30 (continued)

*Percentages and Frequencies of Student Responses by Category in School CE13*

| Category                      | Message | Community | Service | Worship |
|-------------------------------|---------|-----------|---------|---------|
| Frequency of Responses in A   | 113     | 140       | 125     | 116     |
| Percentage of Responses in NO | 3%      | 1%        | 2%      | 3%      |
| Frequency of Responses in NO  | 7       | 2         | 5       | 7       |
| Percentage of Responses in D  | 14%     | 8%        | 6%      | 16%     |
| Frequency of Responses in D   | 30      | 17        | 13      | 34      |
| Percentage of Responses in SD | 11%     | 4%        | 2%      | 4%      |
| Frequency of Responses in SD  | 23      | 8         | 4       | 8       |

In three of the categories (message, community, and worship) of CE13 there were more student responses in SD than in NO. Appendix HH displays the total of all student responses in CE13. The student responses are listed by their correlation of survey question and degree of agreement. The survey questions are reproduced for the convenience of the reader.

## Student Responses by Category

*Message*

The message category of the *Catholic Identity Student Survey* consisted of items 1, 5, 9, 13, and 17. Students in coeducational schools made 2,362 responses in the message category of the *Catholic Identity Student Survey*. Research question two stated, “to what extent do boys in coeducational Catholic high schools integrate the message aspect of Catholic identity?” In response to research question two, 79% of coeducational school student responses in the message category were in SA or A. Students in single

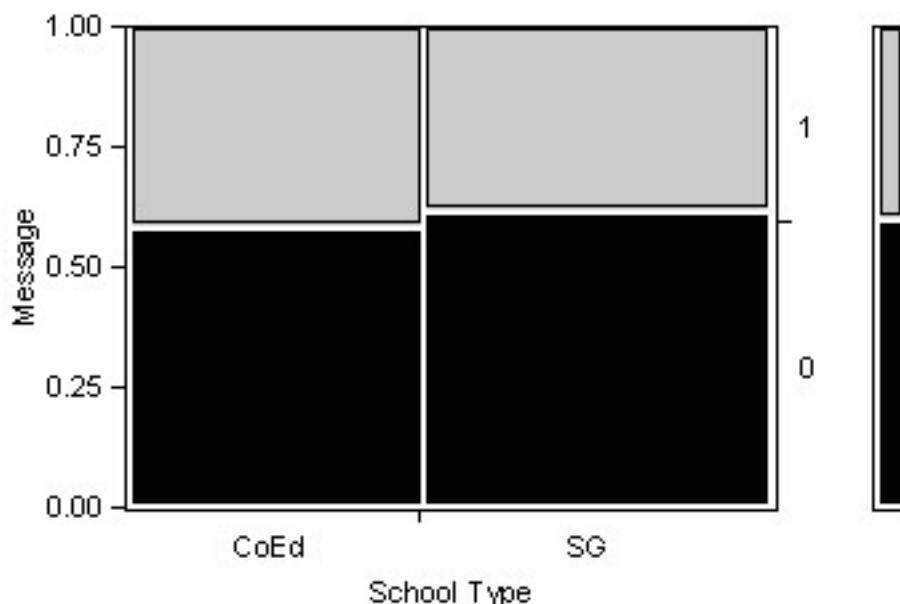
gender schools made 2,766 responses in the message category of *The Catholic Identity Student Survey*. Research question one stated, “to what extent do boys in single gender Catholic high schools integrate the message aspect of Catholic identity?” In response to research question one, 77% of single gender school student responses in the message category were in SA or A. Table 31 displays the frequencies and percentages of student responses in the message category from both coeducational and single gender schools.

Table 31

*Student Responses in Message Category*

| School Type                  | SD | D   | NO  | A     | SA  |
|------------------------------|----|-----|-----|-------|-----|
| <u>Coeducational Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 4% | 9%  | 8%  | 53%   | 25% |
| Frequency of Responses       | 94 | 216 | 196 | 1,258 | 598 |
| <u>Single Gender Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 3% | 12% | 8%  | 49%   | 28% |
| Frequency of Responses       | 93 | 319 | 233 | 1,342 | 286 |

In the following figure, the lightly shaded area represents the total of student surveys in the message category in which every student response was in SA or A. This group is designated by the number 1. The dark area represents the total of student surveys in the message category in which some student responses were in NO, D, or SD. This group is designated by the number 0.



*Figure 1. Positive Perception of Message vs. Negative Perception of Message*

The researcher used the Pearson Chi-square test in order to test the hypothesis as to whether the response rate was the same in two sample groups. In this case, the sample groups were 1) student surveys in which all responses were in SA or A and 2) student surveys in which one or more responses were in NO, D, or SD. The Pearson Chi-square test is a two-tailed test that is calculated by summing the squares of differences between observed and expected cell counts. The test exploits the property that frequency counts tend to a normal distribution in very large samples (Snedecor & Cochran, 1989). In the present study the minimum difference to detect was 10%.

The researcher determined through the Pearson Chi-square test that the Chi-square value in the message category was 1.2. The probability of being greater than Chi-square (p value) was 0.27. There was a 27% chance that the difference between the two variables could occur by chance, which indicated that there was not a statistically significant difference between the two variables in the message category.

### *Community*

The community category of the *Catholic Identity Student Survey* consisted of items 2, 6, 10, 14, and 18. Students in coeducational schools made 2,357 responses in the community category of the *Catholic Identity Student Survey*. Research question four stated, “to what extent do boys in coeducational Catholic high schools integrate the community aspect of Catholic identity?” In response to research question four, 87% of coeducational school student responses in the community category were in SA or A. Students in single gender schools made 2,767 responses in the community category of the *Catholic Identity Student Survey*. Research question three stated, “to what extent do boys in single gender Catholic high schools integrate the community aspect of Catholic identity?” In response to research question three, 85% of single gender school student responses in the community category were in SA or A. Table 32 displays the percentages and frequencies of student responses in the community category from both coeducational and single gender schools.

Table 32

#### *Student Responses in Community Category*

| School Type                  | SD | D   | NO  | A     | SA  |
|------------------------------|----|-----|-----|-------|-----|
| <u>Coeducational Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 2% | 7%  | 5%  | 57%   | 30% |
| Frequency of Responses       | 42 | 160 | 110 | 1,333 | 712 |
| <u>Single Gender Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 2% | 8%  | 6%  | 53%   | 32% |
| Frequency of Responses       | 47 | 221 | 154 | 1,471 | 847 |

In the following figure, the lightly shaded area represents the total of student surveys in the community category in which every student response was in SA or A. This group is designated by the number 1. The dark area represents the total of student surveys in the community category in which some student responses were in NO, D, or SD. This group is designated by the number 0.

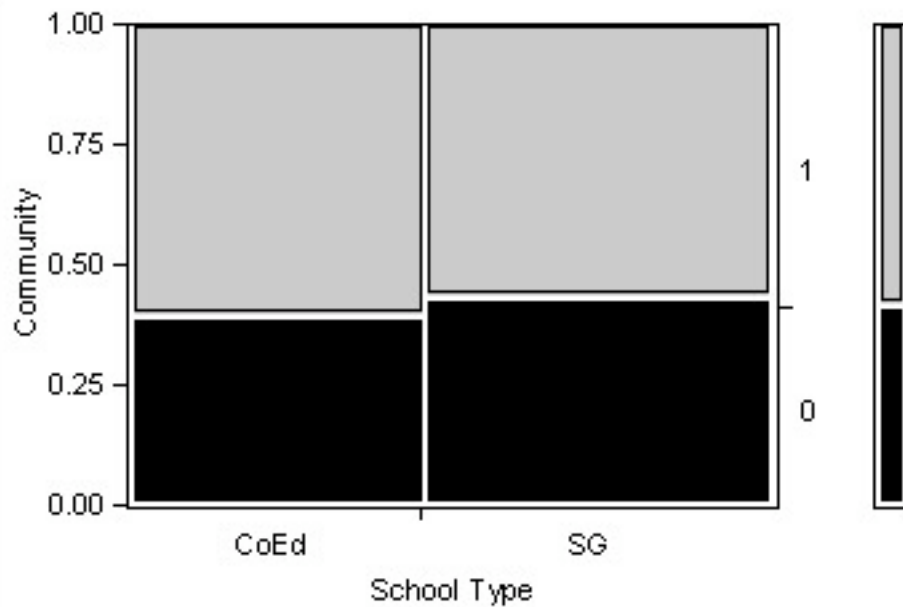


Figure 2. *Positive Perception of Community vs. Negative Perception of Community*

The researcher determined through the Pearson Chi-square test that the Chi-square value in the message category was 2.03. The probability of being greater than Chi-square (p value) was 0.15. There is a 15% chance that the difference between the two variables could occur by chance, which indicates that there was not a statistically significant difference between the two variables in the community category.

#### *Service*

The service category of the *Catholic Identity Student Survey* consisted of items 3, 7, 11, 15, and 19. Students in coeducational schools made 2,358 responses in the service category of the *Catholic Identity Student Survey*. Research question six stated, “to what

extent do boys in coeducational Catholic high schools integrate the service aspect of Catholic identity?” In response to research question six, 86% of coeducational school student responses in the service category were in SA or A. Students in single gender schools made 2,764 responses in the service category of the *Catholic Identity Student Survey*. Research question five stated, “to what extent do boys in single gender Catholic high schools integrate the service aspect of Catholic identity?” In response to research question five, 83% of single gender school student responses in the service category were in SA or A. Table 33 displays the percentages and frequencies of student responses in the service category from both coeducational and single gender schools.

Table 33

*Student Responses in Service Category*

| School Type                  | SD | D   | NO  | A     | SA    |
|------------------------------|----|-----|-----|-------|-------|
| <u>Coeducational Schools</u> |    |     |     |       |       |
| Percentage of Responses      | 1% | 6%  | 6%  | 53%   | 33%   |
| Frequency of Responses       | 35 | 148 | 144 | 1,251 | 780   |
| <u>Single Gender Schools</u> |    |     |     |       |       |
| Percentage of Responses      | 1% | 9%  | 7%  | 45%   | 38%   |
| Frequency of Responses       | 40 | 237 | 192 | 1,241 | 1,054 |

In the following figure, the lightly shaded area represents the total of student surveys in the service category in which every student response was in SA or A. This group is designated by the number 1. The dark area represents the total of student surveys in the service category in which some student responses were in NO, D, or SD. This group is designated by the number 0.

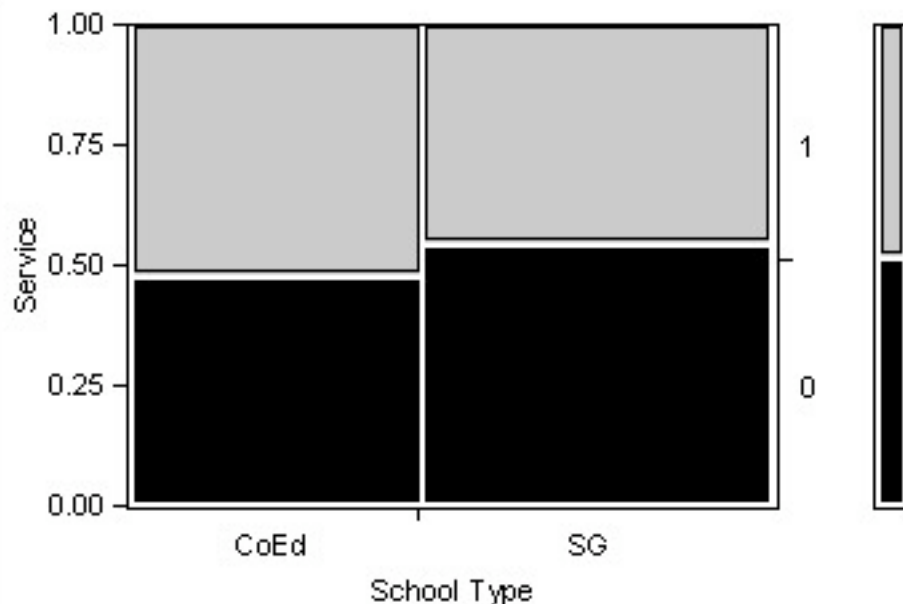


Figure 3. *Positive Perception of Service vs. Negative Perception of Service*

The researcher determined through the Pearson Chi-square test that the Chi-square value in the service category was 4.52. The probability of being greater than Chi-square (p value) was 0.03. There is a 3% chance that the difference between the two variables could occur by chance, which indicates that there was a statistically significant difference between the two variables in the service category as the probability is less than 10%.

### *Worship*

The worship category of the *Catholic Identity Student Survey* consists of items 4, 8, 12, 16, and 20. Students in coeducational schools made 2,364 responses in the worship category of the *Catholic Identity Student Survey*. Research question eight stated, “to what extent do boys in coeducational Catholic high schools integrate the worship aspect of Catholic identity?” In response to research question eight, 75% of coeducational school student responses in the worship category were in SA or A. Students in single gender schools made 2,763 responses in the worship category of the *Catholic Identity*

*Student Survey.* Research question seven stated, “to what extent do boys in single gender Catholic high schools integrate the worship aspect of Catholic identity?” In response to research question seven, 71% of single gender school student responses in the worship category were in SA or A. Table 34 displays the percentages and frequencies student responses in the worship category from both coeducational and single gender schools.

Table 34

*Student Responses in Worship Category*

| School Type                  | SD | D   | NO  | A     | SA  |
|------------------------------|----|-----|-----|-------|-----|
| <u>Coeducational Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 2% | 14% | 8%  | 48%   | 28% |
| Frequency of Responses       | 59 | 332 | 193 | 1,129 | 651 |
| <u>Single Gender Schools</u> |    |     |     |       |     |
| Percentage of Responses      | 3% | 16% | 10% | 47%   | 24% |
| Frequency of Responses       | 91 | 437 | 270 | 1,309 | 656 |

In the following figure, the lightly shaded area represents the total of student surveys in the worship category in which every student response was in SA or A. This group is designated by the number 1. The dark area represents the total of student surveys in the worship category in which some student responses were in NO, D, or SD. This group is designated by the number 0



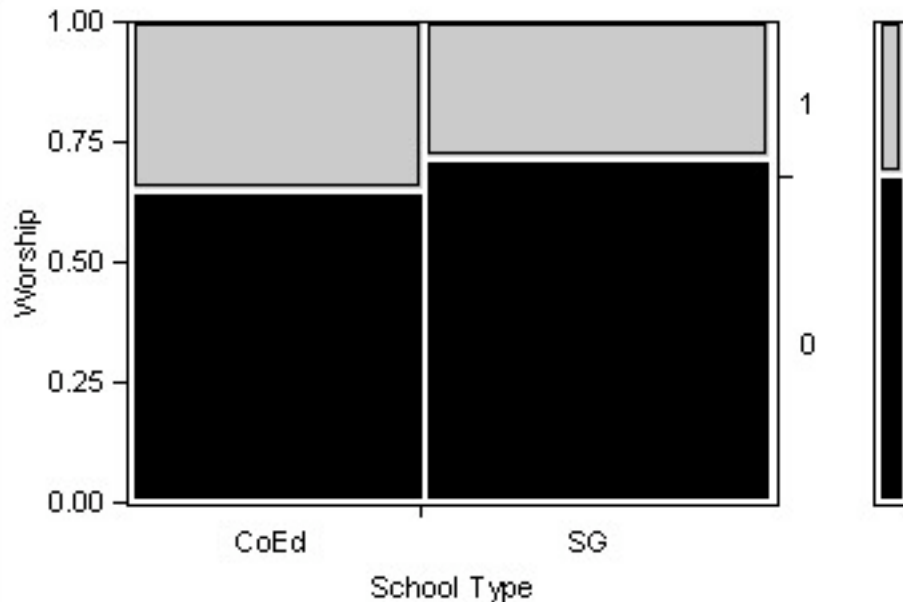


Figure 4. *Positive Perception of Worship vs. Negative Perception of Worship*

The researcher determined through the Pearson Chi-square test that the Chi-Square value in the worship category was 5.2. The probability of being greater than Chi-Square (p value) was 0.02. There is a 2% chance that the difference between the two variables could occur by chance, which indicates that there was a statistically significant difference between the two variables in the worship category as the probability was less than 10%.

#### Catholic Influence

The researcher was concerned that a notable higher percentage of Catholic students in one of the two school types (coeducational or single gender) might affect the findings of the present study. Catholic students may have been more amenable to perceiving Catholic identity. The researcher asked students to indicate their religion on the survey instrument. 71% of students who participated in the present study from coeducational schools were Catholic. 69% of students who participated in the present study from single gender schools were Catholic.

### Summary

The researcher distributed a researcher-generated survey instrument to male students in 25 Catholic high schools throughout the United States (13 coeducational schools and 12 single gender schools). The researcher received and analyzed a total of 1,027 student surveys and 20,501 individual student responses. The student surveys were analyzed by school and by category (message, community, service, and worship). In each of the four categories male students in coeducational Catholic high schools perceived a greater manifestation of Catholic identity in their school community than did male students in single gender schools. While the differences were present in the categories of message and community, the differences were not statistically significant. In the categories of service and worship, the differences were statistically significant. In chapter five, the researcher will draw conclusions from the above findings and make recommendations for further study.

## CHAPTER FIVE

### CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

#### Introduction

The present study sought to compare the perceptions of male students in coeducational Catholic high schools to the perceptions of male students in single gender Catholic high schools in regard to Catholic identity. For the purpose of this study, Catholic identity has been defined by the categories of message, community, service, and worship (NCCB, 1972, 1977).

Male students in 25 Catholic high schools in the 13 regions of the NCEA (13 coeducational schools and 12 single gender schools) were given a researcher-generated survey instrument (*Catholic Identity Student Survey*) (Appendix A) and asked to indicate their level of agreement with 20 statements about Catholic identity (five statements in each of the four categories: message, community, service, and worship). The researcher statistically analyzed 1,027 surveys.

The present study found that male students in coeducational Catholic high schools perceived a greater degree of Catholic identity in their school communities than did male students in single gender Catholic high schools. The categories of service and worship demonstrated differences in student perception between the two groups that were statistically significant (p values of .0335 and .0231 respectively).

#### Conclusions

Dwyer (1987) insisted that the interdependence of the genders must be acknowledged and respected in order for a person to achieve a healthy spirituality and sexuality. He claimed “we are called to accept our dependence on the other sex if we are

ever to discover ourselves and to find our own identity” (p. 148). Dwyer (1987) noted that this dependence must be manifested in individuals taking responsibility for the other gender and for the work of helping members of the opposite gender to achieve a healthy identity and maturity. He concluded that we must “affirm the total complementarity of the sexes in all domains of personal existence and to resist any tendency to limit the complementarity of the sexes to the physical realm” (p. 148). This affirmation of the complementarity of the sexes would necessarily extend to the educational domain.

Every Catholic school must have Jesus Christ as its model, and the work of every Catholic school must be informed and directed by the ministry of Jesus Christ (NCCB, 1972). McDermott (1997) reiterated this conviction and asserted, “His [Christ’s] whole public ministry was aimed at forming people into a unity” (p. 25). This unity which is primordially mandated by the ministry of Jesus and which is the necessary model for the Catholic identity of any Catholic school community, may be compromised by the segregation of the sexes in Catholic schools.

The findings of the present study offered some justification for the above premise. The findings indicated that boys in coeducational Catholic high schools perceived a greater manifestation of Catholic identity in their schools than did boys in single gender Catholic high schools, particularly in regard to the categories of service and worship. The difference in perception may have been affected by the presence or absence of the “unity” to which McDermott (1997) alluded above. The following sections describe the inherent connection of service and worship to the ideal of “unity.” The categories of message and community are not described below, as they did not demonstrate statistically significant differences between single gender and coeducational schools.

### *Service*

The Catechism of the Catholic Church (CCC) (1994) acknowledged the inclusive nature of Christian service when it declared, “the common good concerns the life of all” (¶ 1906). Cooke (1976) articulated the conviction that all people, without division, should work together, not separately, in service to humanity. The Second Vatican Council (1965c) in its document *Gaudium et Spes* stated, “Christians cherish a feeling of deep solidarity with the human race” (¶ 1), and therefore must co-operate with one another “to serve and not to be served” (¶ 3). The conviction of the Council was that it is not sufficient to be of service to all people without exception, but that it is necessary to transcend divisions when engaging in the work of service. The expectation that boys and girls would be artificially segregated from one another into separate communities and then mandated to engage in Christian service would be in contradiction to the counciliar mandate.

The findings of the present study demonstrated a statistically significant difference in the perceptions of male students in the service category in favor of coeducational environments. The more positive perceptions in coeducational schools may have been affected by a greater manifestation of solidarity of the genders in coeducational schools (Vatican II, 1965c). A reasonable conclusion to this line of thought would indicate that if the Church calls men and women to work together in the service of humanity in the world, then the Church should not negate the possibility of that mutual service in the formation process of those men and women in Catholic schools.

### *Worship*

The CCC (1994) asserted that the liturgical life of the Catholic faith is, by its very nature, inclusive. The CCC underscored the fact that there can be no division in authentic liturgical celebrations when it stated that “diversity must not damage unity” (§ 1206). The CCC further claimed that the liturgy is a sign of unity and “an ‘action’ of the *whole Christ (Christus totus)*” (§ 1136). Cooke (1976) asserted, “with both men and women functioning in full sacramental fashion, we will have a fuller and more balanced reflection of the church’s faith, and therefore an integral expression of the Christian community’s sacramental existence” (p. 655).

Cooke (1976) claimed that when men and women interact creatively at every level of the Church’s liturgical existence, it will better enable humanity to “realize its revealing role as the image of God” (p. 656). The Church’s sacramental understanding indicated that liturgical celebrations are incomplete when they are artificially divisive. The findings of the present study demonstrated that boys in coeducational schools perceived a higher degree of Catholic identity than boys in single gender schools in regard to worship. This difference in perception may have been affected by a more integrated approach to liturgy in coeducational schools. If gender-inclusive liturgies better reveal the image of God (Cooke, 1976) then boys who experience gender-inclusive liturgies may have a more positive experience of Catholic identity than boys who do not.

### *Implications*

The findings of the present study carry ramifications both for the future of Catholic high schools and for the practices of Catholic high schools. This study will help inform the practices of Catholic high schools in the facilitation of Catholic identity by

facilitating a greater understanding of the necessary complementarity of the sexes in the area of Catholic identity.

*The Future of Catholic High Schools*

In 1990 the USCCB declared, “The entire ecclesial community is called to value ever more deeply the importance of the task and mission of Catholic education and to continue to give it full and enthusiastic support” (p. 3). In 2005 the USCCB further stated “we are convinced that Catholic schools continue to be the most effective means available to the Church for the education of children and young people who are the future of the Church” (p. 2).

The effectiveness, to which the bishops refer (USCCB, 2005), hinges on an educational mission that mirrors the mission of the universal Church. Pope Pius XI (1929) insisted that single gender schools were a necessary condition for the pursuit of that mission. Despite the Pope’s position, many Catholic schools in the latter half of the 20th century transitioned from single gender to coeducational institutions (Buetow, 1988). The majority of these transitions were directed by financial necessity instead of anticipated educational benefits (Steinbrecher, 1991).

Researchers in favor of the single gender model insisted that there is not substantial evidence beyond financial necessity to justify the transition of schools from single gender models to coeducational models (Lee & Bryk, 1986; Riordan, 1990). Advocates for coeducational schools suggest there is good reason to make such transitions (Dale, 1969, 1971, 1974; Lee, Marks & Bird, 1994; Schneider & Coutts, 1985). Very little research has focused on the specific comparison of the facilitation of Catholic identity between coeducational and single gender Catholic high schools. The

present study offered statistically significant findings that demonstrate more positive student perception of some aspects (service and worship) of Catholic identity in coeducational schools than in single gender schools (for male students.) This information should be considered as a small part of a bigger question when schools are considering a transition from one educational model to another.

### *Practices of Catholic High Schools*

The findings of this study should inform the practices of both coeducational and single gender Catholic high schools. The fact that male students in Catholic high schools perceive a greater degree of Catholic identity in coeducational schools than they do in single gender schools points to the inclusive nature of Catholic identity.

Male single gender Catholic high schools, while limited by a lack of female students, should insure that their facilitation of Catholic identity in campus ministry, liturgies, Theology classes, and in the general school culture should be as inclusive as possible in order to integrate the complementarity of the sexes (Dwyer, 1987). Campus ministers should be both male and female. Female teachers and administrators should be involved in liturgical planning and celebration. Academic departments (particularly Theology departments) should include female instructors.

The general school culture of male single gender Catholic high schools should manifest an openness to the families of students and to their local communities as a means of maintaining a female presence and energy in the school community. Male single gender Catholic high schools might consider joint efforts with sister schools (neighboring female single gender Catholic high schools) in the facilitation of Catholic



identity, particularly in liturgical celebrations and Christian service projects in order to more fully manifest the image of God (Cooke, 1976).

Coeducational Catholic high schools should minimize unnecessary divisions of gender in their facilitation of Catholic identity. Moriarty (2003) claimed that the vast majority of Catholic high schools require their students to participate in service projects, but that those service projects are often performed by particular groups of students who are united by affiliations other than service. For example, the football team might decide to complete their individual service requirements through a group project in which the entire team participates. Moriarty stated that this type service endeavor creates divisions in service programs because athletic teams are almost always divided by gender.

Coeducational Catholic high schools should ensure that they are intentionally inclusive in their facilitation of Catholic identity, so that artificial divisions are not arbitrarily created as in the scenario described by Moriarty (2003). This intentionality should be directed toward a unity of all community members (Vatican II, 1965c). Coeducational Catholic high schools should encourage and facilitate relationships among students that are based on Catholic theological and social teaching to the same extent that they encourage relationships based on other extra-curricular activities.

### Recommendations

During the course of the present study, several ancillary questions emerged for the researcher. Due to the delimitations of the study, the researcher was unable to include many of these questions. The following sections enumerate several issues related to the scope of this study, which merit further research.

#### *Female Students*

The present study compared the perceptions of male students in single gender Catholic high schools to the perceptions of male students in coeducational Catholic high schools. Any conclusions of this study about single gender and coeducational Catholic high schools would only relate to male populations. Given the differences between girls and boys, there is no evidence to suggest that the perceptions of girls, when compared by the model of Catholic high school they attend, would mirror the perceptions of boys. In order to attain a more complete understanding of the comparison of single gender and coeducational schools in regard to the facilitation of Catholic identity, it will be necessary to conduct a similar study among female populations.

#### *Non-Catholic Students*

The CCE (1988) claimed, “the religious freedom and the personal conscience of individual students and their families must be respected” (§ 6). The USCCB (2005) stated, “Catholic schools should be available to students who are not Catholic and who wish to attend them” (p. 8). Both the CCE and the USCCB articulated that Catholic schools should be welcoming communities. The perceptions of non-Catholic students will be a crucial factor in determining whether this goal is being realized in Catholic high schools. A study comparing the perceptions of Catholic students to the perceptions of non-Catholic students in regard to Catholic identity in their school communities would help assess the extent to which the Catholic educational system reflects the universal nature of the Church.

#### *Geographic Regions*

The present study sought to obtain a national perspective in the comparison of the perceptions of male students at single gender and coeducational Catholic high schools.

The researcher, therefore, included schools from each of the 13 NCEA regions in the continental United States. The present study did not examine differences in student perception based on varying geographic regions. The CCE (1988) stated that Catholic schools must promote respect for public authority and customs. It is possible that the promotion of varying secular customs and cultures may affect the facilitation of Catholic identity in a school of a particular geographic region. A study comparing the perceptions of students by varying regions of the United States in regard to the facilitation of Catholic identity in their school communities would help to assess the extent to which secular culture affects the mission of Catholic education.

### *Religious Charisms*

The CCE (1988) stated, “Most Catholic schools are under the direction of Religious Congregations, whose consecrated members enrich the educational climate by bringing to it the values of their own Religious communities” (§ 35). The varying charisms of different religious congregations could have a significant affect on the facilitation of Catholic identity in a school community.

The Second Vatican Council (1965e), in its document *Perfectae Caritatis*, asserted, “In the Church there are very many institutes, engaged in different kinds of apostolic work and endowed with gifts which vary according to the grace that is given to them” (§ 8). Along with varying religious charisms is the varying levels of religious formation that teachers and administrators might demonstrate in different schools. Jacobs (2000) noted that this disparity is most evident between schools that are staffed by religious and schools that are staffed by the laity. A study comparing the perceptions of students in Catholic schools of different religious affiliations, and in schools that lack any

religious affiliation, would help to determine the influence that particular religious congregations have on the facilitation of Catholic identity in Catholic high schools.

### *Qualitative Study*

The present study was delimited by its quantitative nature. In order to include a large population in this study, the researcher did not utilize any qualitative research methods. This enhanced the study by allowing for a significant number of respondents, but limited the study by disallowing for the possibility of deeper student reflection. A follow-up study including focus groups and open-ended questions would refine the findings of the present study by offering greater insights into the motivations and reasoning of individual students (Krathwohl, 1998).

### *Program Study*

The present study was limited to the perceptions of students. Catholic identity at single gender and coeducational Catholic high schools was examined based on student perceptions. The present study did not entail a firsthand examination of the programs of Catholic high schools in regard to Catholic identity. Student perception can be affected and skewed by multifarious factors, and while it presents a picture of the school environment, the picture is affected by the particular biases of individual students. A follow-up study examining firsthand the programs of Catholic identity at single gender and coeducational Catholic high schools would help to create a fuller picture of the integration of Catholic identity at Catholic high schools.

### *Closing Thoughts*

The present study compared the perceptions of boys in coeducational Catholic high schools to the perceptions of boys in single gender Catholic high schools in regard

to the extent to which their school community manifests a sense of Catholic identity. The researcher used a large population from across the United States in order to generalize the findings to the total population of male students in Catholic high schools in the United States.

The researcher experienced some disappointment that the findings of the study were not statistically significant in each of the four categories of Catholic identity. If the researcher had discovered that a significant difference existed between the two populations (boys in coeducational Catholic high schools and boys in single gender Catholic high schools) in each of the four categories, then the conclusion would be more evident that the educational model may affect a male student's perception of Catholic identity. Since the findings only indicated significant differences in two of the categories (service and worship), the conclusion that the educational model may affect a male student's perception of Catholic identity cannot be asserted as forcefully. The researcher similarly experienced some disappointment that no single gender school in region eight of the NCEA was available to participate.

The researcher was gratified by the fact that two categories of Catholic identity showed significant differences (service and worship) between the two populations. These differences allowed the researcher to draw some conclusions, which may be helpful to schools as they continue to examine and refine the Catholic identity of their communities. The researcher is grateful to the 25 schools that allowed the distribution of the *Catholic Identity Student Survey* (Appendix A) and to the 1,027 students who completed the surveys.

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APPENDIX A  
SURVEY INSTRUMENT

# CATHOLIC IDENTITY STUDENT SURVEY

Thank you for taking the time to complete this survey. Below you will find twenty statements. For each statement you are being asked the extent to which you agree or disagree with that particular statement. You may indicate that you strongly disagree, disagree, agree, or strongly agree with each statement. You may also mark that you have no opinion.

KEY **SD** = Strongly Disagree   **D** = Disagree   **NO** = No Opinion   **A** = Agree   **SA** = Strongly Agree

| STATEMENT  | SD | D | NO | A | SA |
|--|----|---|----|---|----|
| 1. I understand the beliefs and values of this high school   |    |   |    |   |    |
| 2. Students respect teachers in this high school   |    |   |    |   |    |
| 3. Students are encouraged to be involved in community service in this high school                             |    |   |    |   |    |
| 4. Classes begin with prayer in this high school   |    |   |    |   |    |
| 5. The activities of the campus ministry department help me to develop my faith                                |    |   |    |   |    |
| 6. Teachers respect students in this high school   |    |   |    |   |    |
| 7. This high school offers resources to help students deal with family problems                                |    |   |    |   |    |
| 8. Mass is celebrated regularly at this high school  |    |   |    |   |    |
| 9. Theology classes are an important part of the curriculum of this high school                                |    |   |    |   |    |
| 10. I would describe this high school as a caring community  |    |   |    |   |    |
| 11. This high school sponsors clubs and service groups that perform community service                          |    |   |    |   |    |
| 12. A high school chaplain or campus minister is always available to talk with students                        |    |   |    |   |    |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith |    |   |    |   |    |
| 14. Non-Catholic students are accepted in this high school   |    |   |    |   |    |

| STATEMENT   | SD | D | NO | A | SA |
|---|----|---|----|---|----|
| 15. This high school teaches that people should be of service to others                         |    |   |    |   |    |
| 16. Students are involved in planning religious ceremonies in this high school                  |    |   |    |   |    |
| 17. The values of this high school represent the values of the Catholic Church                  |    |   |    |   |    |
| 18. I feel accepted in this high school   |    |   |    |   |    |
| 19. Faculty members work hard to offer students the best possible education in this high school |    |   |    |   |    |
| 20. All faculty members participate in the religious ceremonies of this high school             |    |   |    |   |    |

Below you will find two multiple-choice questions. Please mark a check next to the response that best describes you.

1. What type of Catholic high school do you attend?

\_\_\_\_\_ Single Gender      \_\_\_\_\_ Coeducational

2. What is your religious affiliation?

\_\_\_\_\_ Catholic

\_\_\_\_\_ Protestant

\_\_\_\_\_ Other Christian

\_\_\_\_\_ Non-Christian

\_\_\_\_\_ Other – Please specify \_\_\_\_\_

APPENDIX B  
VALIDITY PANEL



### VALIDITY PANEL

| Name                   | Position            | B.A. | M.A.<br>M.Ed. | Ph.D.<br>Ed.D. | Catholic<br>School<br>Teacher | Single-<br>Gender<br>School<br>Teacher | Expertise<br>in<br>Catholic<br>Identity |
|------------------------|---------------------|------|---------------|----------------|-------------------------------|--|---|
| Edward Lamey           | Vice Principal      | X    | X             |                | X                             | X                                      |   |
| James Duane            | Technology Director | X    | X             | X              | X                             |  |   |
| Msgr. Francis Mannion  | Pastor              | X    | X             | X              |                               |  | X                                       |
| Sr. Catherine Kamphaus | Superintendent      | X    | X             |                | X                             |  | X                                       |
| Rev. Samuel Martin     | Seminary Rector     | X    | X             |                | X                             | X                                      | X                                       |
| Andrea Casey           | Secondary Teacher   | X    | X             |                | X                             |  | X                                       |
| Rev. Robert Gonzales   | Seminary Professor  | X    | X             | X              | X                             | X                                      | X                                       |
| Jason Hanks            | Dean of Students    | X    | X             |                | X                             | X                                      |   |
| Rev. Leo Patalinghug   | Associate Pastor    | X    | X             |                | X                             |  | X                                       |
| William Trentmen       | Secondary Teacher   | X    | X             |                | X                             |  | X                                       |

APPENDIX C  
VALIDITY PANEL QUESTIONNAIRE

***QUESTIONNAIRE***

Please take the enclosed survey and then answer the following questions. Thank you for your assistance.

1. How long did it take you to complete the survey?

Comments

2. Were the instructions clear?

Comments:

3. Were any particular questions unclear?

Comments:

4. Were any particular questions irrelevant?

Comments

5. Are there elements that you think should be added to the survey?

Comments:

APPENDIX D  
STATISTICAL RELIABILITY OF SURVEY INSTRUMENT BY ITEM

**Question #1**

| Score                 | SA=1         | A=2          | Indif=3      | DA=4  | SDA=5 |
|-----------------------|--------------|--------------|--------------|-------|-------|
| <b>Initial Resp</b>   |              |              |              |       |       |
| Frequency             | 15           | 12           | 1            | 2     | 0     |
| Proportion            | 0.500        | 0.400        | 0.033        | 0.067 | 0.000 |
| Cum Prop              | 0.500        | 0.900        | 0.933        | 1.000 | 1.000 |
| Cum Odds              | 1.000        | 9.000        | 14.000       | —     | —     |
| <b>Second Resp</b>    |              |              |              |       |       |
| Frequency             | 14           | 13           | 1            | 2     | 0     |
| Proportion            | 0.467        | 0.433        | 0.033        | 0.067 | 0.000 |
| Cum Prop              | 0.467        | 0.900        | 0.933        | 1.000 | 1.000 |
| Cum Odds              | 0.875        | 9.000        | 14.000       | —     | —     |
| <b>Odds Ratio</b>     | <b>1.143</b> | <b>1.000</b> | <b>1.000</b> | —     | —     |
| <b>Avg Odds Ratio</b> | <b>1.048</b> |              |              |       |       |

**Test for Proportional Odds Assumption:**

| Method       | Chi-Square | DF       | Pr > Chi-Square       |
|--------------|------------|----------|-----------------------|
| Pearson      | 0.0248     | 2        | 0.988                 |
|              |            |          |                       |
| Predictor    | Coef       | SE Coef  | Z P                   |
| Score (1)    | -0.12171   | 0.358017 | -0.34 0.734           |
| Score (2)    | 2.14348    | 0.492652 | 4.35 0.000            |
| Score (3)    | 2.58531    | 0.570181 | 4.53 0.000            |
| Survey       |            |          |                       |
| Initial Resp | 0.110553   | 0.495779 | 0.22 <b>0.824</b>     |
|              |            |          | <u>1.12</u> 0.42 2.95 |

The effect of time of test (Initial Response versus Second Resp) is 0.110553, with an associated odds ratio of 1.12 ( $e^{0.110553} = 1.12$ ). The Ordinal Logistic model is telling us that the odds of the Initial Response Test being at or below a given scoring category (SA, A, Indif,....) are about 1.12 times the odds for the Second Response Test, regardless of which cumulative split is considered. This can be observed in the above table.

Since the sample size of 30 per group is small, the cumulative odds ratio 95% CI will vary widely.

Note that the p-value for Survey (p) is **0.824**. This indicates that the probability of the survey response being the same by chance alone is 82.4%, meaning there is no evidence to reject the hypothesis that the factor, "Survey" does not affect scoring results.

**Conclusion:**

Question #1 is not affected by Survey

This general approach will be used for each question to determine whether or not the survey test instrument was reliable (i.e. had no significant effect on the scoring). There are several questions where the responses were limited to the same two scoring levels for both the Initial Response Test and the Second Response Test. In these specific instances a Binary Logistic model is applied.

**Legend:**

|        |                            |                  |
|--------|----------------------------|------------------|
| SA;    | Strongly Agree,            | score value of 1 |
| A;     | Agree,                     | score value of 2 |
| Indif; | Indifferent or No Opinion, | score value of 3 |
| DA;    | Disagree,                  | score value of 4 |
| SDA;   | Strongly Disagree,         | score value of 5 |

**Question #2**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 14           | 15           | 0              | 1           | 0            |
| Proportion            | 0.467        | 0.500        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.467        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 29.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 14           | 15           | 0              | 1           | 0            |
| Proportion            | 0.467        | 0.500        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.467        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 29.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>1.000</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>1.000</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |                       |      |
|---------------|-------------------|----------|-----------|---------------------------|-------------|-----------------------|------|
| Pearson       | 0.0000            |          | 1         | 1.0000                    |             |                       |      |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI<br>Lower Upper |      |
| Score (1)     | -0.13353          | 0.362794 | -0.37     | 0.713                     |             |                       |      |
| Score (2)     | 3.36730           | 0.762821 | 4.41      | 0.000                     |             |                       |      |
| Survey        |                   |          |           |                           |             |                       |      |
| Initial Resp  | 0.00000           | 0.508548 | 0.00      | <b>1.000</b>              | <u>1.00</u> | 0.37                  | 2.71 |

**Conclusion:**

Question #2 is not affected by Survey

**Question #3**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 13           | 14           | 1              | 2           | 0            |
| Proportion            | 0.433        | 0.467        | 0.033          | 0.067       | 0.000        |
| Cum Prop              | 0.433        | 0.900        | 0.933          | 1.000       | 1.000        |
| Cum Odds              | 0.765        | 9.000        | 14.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 14           | 13           | 1              | 2           | 0            |
| Proportion            | 0.467        | 0.433        | 0.033          | 0.067       | 0.000        |
| Cum Prop              | 0.467        | 0.900        | 0.933          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 9.000        | 14.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.874</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.958</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |
|---------------|-------------------|-----------|---------------------------|
| Pearson       | 0.0248            | 2         | 0.988                     |

| Predictor    | Coef      | SE Coef  | Z     | P            | Odds Ratio  | 95% CI |       |
|--------------|-----------|----------|-------|--------------|-------------|--------|-------|
|              |           |          |       |              |             | Lower  | Upper |
| Score (1)    | -0.145444 | 0.358107 | -0.41 | 0.685        |             |        |       |
| Score (2)    | 2.25382   | 0.500602 | 4.50  | 0.000        |             |        |       |
| Score (3)    | 2.69565   | 0.577551 | 4.67  | 0.000        |             |        |       |
| Survey       |           |          |       |              |             |        |       |
| Initial Resp | -0.110147 | 0.494868 | -0.22 | <b>0.824</b> | <u>0.90</u> | 0.34   | 2.36  |

**Conclusion:**

Question #3 is not affected by Survey

**Question #4**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 14           | 15           | 1              | 0           | 0            |
| Proportion            | 0.467        | 0.500        | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.467        | 0.967        | 1.000          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 29.000       | —              | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 16           | 13           | 1              | 0           | 0            |
| Proportion            | 0.533        | 0.433        | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.533        | 0.966        | 1.000          | 1.000       | 1.000        |
| Cum Odds              | 1.143        | 29.000       | —              | —           | —            |
| <b>Odds Ratio</b>     | <b>0.766</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.922</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |        |       |
|---------------|-------------------|----------|-----------|---------------------------|-------------|--------|-------|
| Pearson       | 0.035             |          | 1         | 0.852                     |             |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI |       |
| Score (1)     | 0.12572           | 0.363462 | 0.35      | 0.729                     |             | Lower  | Upper |
| Score (2)     | 3.50031           | 0.771004 | 4.54      | 0.000                     |             |        |       |
| Survey        |                   |          |           |                           |             |        |       |
| Initial Resp  | -0.250391         | 0.509629 | -0.49     | <b>0.623</b>              | <u>0.78</u> | 0.29   | 2.11  |

**Conclusion:**

Question #4 is not affected by Survey



**Question #5**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b> | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |            |                |             |              |
| Frequency             | 12           | 17         | 1              | 0           | 0            |
| Proportion            | 0.400        | 0.567      | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.400        | 0.967      | 1.000          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 29.000     | —              | —           | —            |
| <b>Second Resp</b>    |              |            |                |             |              |
| Frequency             | 12           | 18         | 0              | 0           | 0            |
| Proportion            | 0.400        | 0.000      | 0.000          | 0.000       | 0.000        |
| Cum Prop              | 0.400        | 0.000      | 0.000          | 0.000       | 1.000        |
| Cum Odds              | 0.667        | —          | —              | —           | —            |
| <b>Odds Ratio</b>     | <b>1.000</b> | —          | —              | —           | —            |
| <b>Avg Odds Ratio</b> | <b>1.000</b> | —          | —              | —           | —            |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |
|---------------|-------------------|-----------|---------------------------|
| Pearson       | 1.0051            | 1         | 0.316                     |

| Predictor    | Coef       | SE Coef  | Z     | P            | Odds Ratio  | 95% CI Lower | 95% CI Upper |
|--------------|------------|----------|-------|--------------|-------------|--------------|--------------|
| Score (1)    | -0.36559   | 0.369146 | -0.99 | 0.322        |             |              |              |
| Score (2)    | 4.11838    | 1.04320  | 3.95  | 0.000        |             |              |              |
| Survey       |            |          |       |              |             |              |              |
| Initial Resp | -0.0813995 | 0.520908 | -0.16 | <b>0.876</b> | <u>0.92</u> | 0.33         | 2.56         |

**Conclusion:**

Question #5 is not affected by Survey

**Question #6**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 11           | 18           | 0              | 1           | 0            |
| Proportion            | 0.367        | 0.600        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.367        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.579        | 29.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 14           | 15           | 0              | 1           | 0            |
| Proportion            | 0.467        | 0.500        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.467        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 29.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.662</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.887</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |            |              |       |
|---------------|-------------------|----------|-----------|---------------------------|------------|--------------|-------|
| Pearson       | 0.0817            |          | 1         | 0.777                     |            |              |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio | 95% CI Lower | Upper |
| Score (1)     | -0.14711          | 0.363034 | -0.41     | 0.685                     |            |              |       |
| Score (2)     | 3.57666           | 0.776865 | 4.60      | 0.000                     |            |              |       |
| Survey        |                   |          |           |                           |            |              |       |
| Initial Resp  | -0.382400         | 0.515271 | -0.74     | <b>0.458</b>              | 0.68       | 0.25         | 1.87  |

**Conclusion:**

Question #6 is not affected by Survey

**Question #7**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 11           | 18           | 0              | 1           | 0            |
| Proportion            | 0.367        | 0.600        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.367        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.578        | 29.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 12           | 17           | 0              | 1           | 0            |
| Proportion            | 0.400        | 0.567        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.400        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 29.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.867</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.956</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |            |        |       |
|---------------|-------------------|----------|-----------|---------------------------|------------|--------|-------|
| Pearson       | 0.0093            |          | 1         | 0.923                     |            |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio | 95% CI |       |
| Score (1)     | -0.41088          | 0.368654 | -1.11     | 0.265                     |            | Lower  | Upper |
| Score (2)     | 3.43429           | 0.768685 | 4.47      | 0.000                     |            |        |       |
| Survey        |                   |          |           |                           |            |        |       |
| Initial Resp  | -0.129790         | 0.518414 | -0.25     | <b>0.802</b>              | 0.88       | 0.32   | 2.43  |

**Conclusion:**

Question #7 is not affected by Survey

**Question #8**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 11           | 18           | 1              | 0           | 0            |
| Proportion            | 0.367        | 0.600        | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.367        | 0.967        | 1.000          | 0.000       | 1.000        |
| Cum Odds              | 0.579        | 29.000       | —              | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 13           | 15           | 1              | 1           | 0            |
| Proportion            | 0.433        | 0.500        | 0.033          | 0.033       | 0.000        |
| Cum Prop              | 0.433        | 0.933        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 0.765        | 14.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.757</b> | <b>2.071</b> | —              | —           | —            |
| <b>Avg Odds Ratio</b> | <b>1.414</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |            |        |       |
|---------------|-------------------|----------|-----------|---------------------------|------------|--------|-------|
| Pearson       | 1.345             |          | 2         | 0.511                     |            |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio | 95% CI |       |
|               |                   |          |           |                           |            | Lower  | Upper |
| Score (1)     | -0.32187          | 0.364409 | -0.88     | 0.377                     |            |        |       |
| Score (2)     | 3.03264           | 0.651481 | 4.65      | 0.000                     |            |        |       |
| Score (3)     | 4.16473           | 1.04479  | 3.99      | 0.000                     |            |        |       |
| Survey        |                   |          |           |                           |            |        |       |
| Initial Resp  | -0.164815         | 0.510291 | -0.32     | <b>0.747</b>              | 0.85       | 0.31   | 2.31  |

**Conclusion:**

Question #8 is not affected by Survey

**Question #9**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 12           | 16           | 1              | 0           | 1            |
| Proportion            | 0.400        | 0.533        | 0.033          | 0.000       | 0.033        |
| Cum Prop              | 0.400        | 0.933        | 0.966          | 0.000       | 1.000        |
| Cum Odds              | 0.667        | 14.000       | 29.000         | 29.000      | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 15           | 14           | 0              | 0           | 1            |
| Proportion            | 0.500        | 0.467        | 0.000          | 0.000       | 0.033        |
| Cum Prop              | 0.500        | 0.967        | 0.967          | 0.967       | 1.000        |
| Cum Odds              | 1.000        | 29.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.667</b> | <b>0.483</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.717</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |            |        |       |
|---------------|-------------------|----------|-----------|---------------------------|------------|--------|-------|
| Pearson       | 0.774             |          | 2         | 0.679                     |            |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio | 95% CI |       |
| Score (1)     | 0.01161           | 0.361391 | 0.03      | 0.974                     |            | Lower  | Upper |
| Score (2)     | 3.18224           | 0.660670 | 4.82      | 0.000                     |            |        |       |
| Score (3)     | 3.60631           | 0.777104 | 4.64      | 0.000                     |            |        |       |
| Survey        |                   |          |           |                           |            |        |       |
| Initial Resp  | -0.431785         | 0.508501 | -0.85     | 0.396                     | 0.65       | 0.24   | 1.76  |

**Conclusion:**

Question #9 is not affected by Survey

**Question #10**

| Score        | SA=1      | A=2      | Indif=3 | DA=4  | SDA=5      |        |       |
|--------------|-----------|----------|---------|-------|------------|--------|-------|
| Initial Resp |           |          |         |       |            |        |       |
| Frequency    | 14        | 16       | 0       | 0     | 0          |        |       |
| Proportion   | 0.467     | 0.533    | 0.000   | 0.000 | 0.000      |        |       |
| Cum Prop     | 0.467     | 1.000    | 1.000   | 1.000 | 1.000      |        |       |
| Cum Odds     | 0.875     | —        | —       | —     | —          |        |       |
| Second Resp  |           |          |         |       |            |        |       |
| Frequency    | 16        | 14       | 0       | 0     | 0          |        |       |
| Proportion   | 0.533     | 0.467    | 0.000   | 0.000 | 0.000      |        |       |
| Cum Prop     | 0.533     | 1.000    | 1.000   | 1.000 | 1.000      |        |       |
| Cum Odds     | 1.143     | —        | —       | —     | —          |        |       |
| Odds Ratio   | 0.766     | —        | —       | —     | —          |        |       |
|              |           |          |         |       |            |        |       |
| Predictor    | Coef      | SE Coef  | Z       | P     | Odds Ratio | 95% CI |       |
| Constant     | -0.133531 | 0.365963 | -0.36   | 0.715 |            | Lower  | Upper |
| Survey       |           |          |         |       |            |        |       |
| Initial Resp | 0.267063  | 0.517549 | 0.52    | 0.606 | 1.31       | 0.47   | 3.60  |

In this question there are only two response levels. In this case we used Binary Logistic Regression to determine if the factor, “Survey” is significant.

**Conclusion:**

Question #10 is not affected by Survey

**Question #11**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 12           | 16           | 0              | 2           | 0            |
| Proportion            | 0.400        | 0.533        | 0.000          | 0.067       | 0.000        |
| Cum Prop              | 0.400        | 0.933        | 0.933          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 14.000       | 14.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 14           | 14           | 0              | 2           | 0            |
| Proportion            | 0.467        | 0.467        | 0.000          | 0.067       | 0.000        |
| Cum Prop              | 0.467        | 0.934        | 0.934          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 14.000       | 14.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.762</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.921</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |        |       |
|---------------|-------------------|----------|-----------|---------------------------|-------------|--------|-------|
| Pearson       | 0.068             |          | 1         | 0.794                     |             |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI |       |
| Score (1)     | -0.15043          | 0.360389 | -0.42     | 0.676                     |             | Lower  | Upper |
| Score (2)     | 2.76382           | 0.584440 | 4.73      | 0.000                     |             |        |       |
| Survey        |                   |          |           |                           |             |        |       |
| Initial Resp  | -0.235675         | 0.503118 | -0.47     | <b>0.639</b>              | <u>0.79</u> | 0.29   | 2.12  |

**Conclusion:**

Question #11 is not affected by Response Time

**Question #12**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 14           | 14           | 0              | 1           | 1            |
| Proportion            | 0.467        | 0.467        | 0.000          | 0.033       | 0.033        |
| Cum Prop              | 0.467        | 0.934        | 0.934          | 0.967       | 1.000        |
| Cum Odds              | 0.875        | 14.000       | 14.000         | 29.000      | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 15           | 13           | 0              | 2           | 0            |
| Proportion            | 0.500        | 0.433        | 0.000          | 0.067       | 0.000        |
| Cum Prop              | 0.500        | 0.933        | 0.933          | 1.000       | 1.000        |
| Cum Odds              | 1.000        | 14.000       | 14.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.875</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.958</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |              |       |
|---------------|-------------------|----------|-----------|---------------------------|-------------|--------------|-------|
| Pearson       | 1.346             |          | 2         | 0.510                     |             |              |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI Lower | Upper |
| Score (1)     | -0.00379          | 0.360100 | -0.01     | 0.992                     |             |              |       |
| Score (2)     | 2.70276           | 0.579520 | 4.66      | 0.000                     |             |              |       |
| Score (3)     | 4.14129           | 1.04148  | 3.98      | 0.000                     |             |              |       |
| Survey        |                   |          |           |                           |             |              |       |
| Initial Resp  | -0.125695         | 0.501576 | -0.25     | <b>0.802</b>              | <u>0.88</u> | 0.33         | 2.36  |

**Conclusion:**

Question #12 is not affected by Survey



**Question #13**

| <b>Score</b>        | <b>SA=1</b>  | <b>A=2</b> | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|---------------------|--------------|------------|----------------|-------------|--------------|
| <b>Initial Resp</b> |              |            |                |             |              |
| Frequency           | 13           | 17         | 0              | 0           | 0            |
| Proportion          | 0.433        | 0.567      | 0.000          | 0.000       | 0.000        |
| Cum Prop            | 0.433        | 1.000      | 1.000          | 1.000       | 1.000        |
| Cum Odds            | 0.765        | —          | —              | —           | —            |
| <b>Second Resp</b>  |              |            |                |             |              |
| Frequency           | 17           | 13         | 0              | 0           | 0            |
| Proportion          | 0.567        | 0.433      | 0.000          | 0.000       | 0.000        |
| Cum Prop            | 0.567        | 1.000      | 1.000          | 1.000       | 1.000        |
| Cum Odds            | 1.308        | —          | —              | —           | —            |
| <b>Odds Ratio</b>   | <b>0.585</b> | —          | —              | —           | —            |

| Predictor    | Coef      | SE Coef  | Z     | P            | Odds Ratio  | 95% CI |       |
|--------------|-----------|----------|-------|--------------|-------------|--------|-------|
| Constant     | -0.268264 | 0.368438 | -0.73 | 0.467        |             | Lower  | Upper |
| Survey       |           |          |       |              |             |        |       |
| Initial Resp | 0.536528  | 0.521050 | 1.03  | <b>0.303</b> | <u>1.71</u> | 0.62   | 4.75  |

In this question there are only two response levels. In this case we used Binary Logistic Regression to determine if the factor, “Survey” is significant.

**Conclusion:**

Question #13 is not affected by Response Time

**Question #14**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 12           | 17           | 1              | 0           | 0            |
| Proportion            | 0.400        | 0.567        | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.400        | 0.967        | 1.000          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 29.000       | —              | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 12           | 17           | 1              | 0           | 0            |
| Proportion            | 0.400        | 0.567        | 0.033          | 0.000       | 0.000        |
| Cum Prop              | 0.400        | 0.967        | 1.000          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 29.000       | —              | —           | —            |
| <b>Odds Ratio</b>     | <b>1.000</b> | <b>1.000</b> | —              | —           | —            |
| <b>Avg Odds Ratio</b> | <b>1.000</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |            |                       |      |
|---------------|-------------------|----------|-----------|---------------------------|------------|-----------------------|------|
| Pearson       | 0.0000            |          | 1         | 1.0000                    |            |                       |      |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio | 95% CI<br>Lower Upper |      |
| Score (1)     | -0.40546          | 0.368453 | -1.10     | 0.271                     |            |                       |      |
| Score (2)     | 3.36730           | 0.763907 | 4.41      | 0.000                     |            |                       |      |
| Survey        |                   |          |           |                           |            |                       |      |
| Initial Resp  | 0.00000           | 0.515026 | 0.00      | 1.000                     | 1.00       | 0.36                  | 2.74 |

**Conclusion:**

Question #14 is not affected by Response Time

**Question #15**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 12           | 14           | 1              | 3           | 0            |
| Proportion            | 0.400        | 0.467        | 0.033          | 0.100       | 0.000        |
| Cum Prop              | 0.400        | 0.867        | 0.900          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 6.500        | 9.000          | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 12           | 15           | 1              | 2           | 0            |
| Proportion            | 0.400        | 0.500        | 0.033          | 0.067       | 0.000        |
| Cum Prop              | 0.400        | 0.900        | 0.933          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 9.000        | 14.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>1.000</b> | <b>0.722</b> | <b>0.643</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.788</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |       |            |        |       |
|---------------|-------------------|-----------|---------------------------|-------|------------|--------|-------|
| Pearson       | 0.210             | 2         | 0.900                     |       |            |        |       |
| Predictor     | Coef              | SE Coef   | Z                         | P     | Odds Ratio | 95% CI |       |
| Score (1)     | -0.367688         | 0.360033  | -1.02                     | 0.307 |            | Lower  | Upper |
| Score (2)     | 2.06271           | 0.474549  | 4.35                      | 0.000 |            |        |       |
| Score (3)     | 2.43645           | 0.530888  | 4.59                      | 0.000 |            |        |       |
| Survey        |                   |           |                           |       |            |        |       |
| Initial Resp  | -0.0770365        | 0.493229  | -0.16                     | 0.876 | 0.93       | 0.35   | 2.43  |

**Conclusion:**

Question #15 is not affected by Survey

**Question #16**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 12           | 16           | 1              | 1           | 0            |
| Proportion            | 0.400        | 0.533        | 0.033          | 0.033       | 0.000        |
| Cum Prop              | 0.400        | 0.933        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 0.667        | 14.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 13           | 15           | 1              | 1           | 0            |
| Proportion            | 0.433        | 0.500        | 0.033          | 0.033       | 0.000        |
| Cum Prop              | 0.433        | 0.933        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 0.765        | 14.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.872</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.957</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| Method       | Chi-Square |          | DF    | Pr > Chi-Square |       |        |       |
|--------------|------------|----------|-------|-----------------|-------|--------|-------|
| Pearson      | 0.017      |          | 2     | 0.991           |       |        |       |
|              |            |          |       |                 |       |        |       |
|              |            |          |       |                 | Odds  | 95% CI |       |
| Predictor    | Coef       | SE Coef  | Z     | P               | Ratio | Lower  | Upper |
| Score (1)    | -0.27740   | 0.361969 | -0.77 | 0.443           |       |        |       |
| Score (2)    | 2.69993    | 0.579933 | 4.66  | 0.000           |       |        |       |
| Score (3)    | 3.42816    | 0.765527 | 4.48  | 0.000           |       |        |       |
| Survey       |            |          |       |                 |       |        |       |
| Initial Resp | -0.118242  | 0.503524 | -0.23 | 0.814           | 0.89  | 0.33   | 2.38  |

**Conclusion:**

Question #16 is not affected by Survey

**Question #17**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 14           | 15           | 0              | 1           | 0            |
| Proportion            | 0.467        | 0.500        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.467        | 0.967        | 0.967          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 29.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 16           | 13           | 0              | 1           | 0            |
| Proportion            | 0.533        | 0.433        | 0.000          | 0.033       | 0.000        |
| Cum Prop              | 0.533        | 0.966        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 1.143        | 29.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.766</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.922</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |        |       |
|---------------|-------------------|----------|-----------|---------------------------|-------------|--------|-------|
| Pearson       | 0.035             |          | 1         | 0.852                     |             |        |       |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI |       |
| Score (1)     | 0.12571           | 0.363462 | 0.35      | 0.729                     |             | Lower  | Upper |
| Score (2)     | 3.50031           | 0.771004 | 4.54      | 0.000                     |             |        |       |
| Survey        |                   |          |           |                           |             |        |       |
| Initial Resp  | -0.250391         | 0.509629 | -0.49     | <b>0.623</b>              | <u>0.78</u> | 0.29   | 2.11  |

**Conclusion:**

Question #17 is not affected by Survey

**Question #18**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 14           | 14           | 0              | 2           | 0            |
| Proportion            | 0.467        | 0.467        | 0.000          | 0.067       | 0.000        |
| Cum Prop              | 0.467        | 0.934        | 0.934          | 1.000       | 1.000        |
| Cum Odds              | 0.875        | 14.000       | 14.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 17           | 11           | 0              | 2           | 0            |
| Proportion            | 0.567        | 0.367        | 0.000          | 0.067       | 0.000        |
| Cum Prop              | 0.567        | 0.934        | 0.934          | 1.000       | 1.000        |
| Cum Odds              | 1.308        | 14.000       | 14.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.669</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.890</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> |          | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |             |                       |      |
|---------------|-------------------|----------|-----------|---------------------------|-------------|-----------------------|------|
| Pearson       | 0.156             |          | 1         | 0.693                     |             |                       |      |
| Predictor     | Coef              | SE Coef  | Z         | P                         | Odds Ratio  | 95% CI<br>Lower Upper |      |
| Score (1)     | 0.24732           | 0.364106 | 0.68      | 0.497                     |             |                       |      |
| Score (2)     | 2.83282           | 0.590139 | 4.80      | 0.000                     |             |                       |      |
| Survey        |                   |          |           |                           |             |                       |      |
| Initial Resp  | -0.356003         | 0.505634 | -0.70     | <b>0.481</b>              | <u>0.70</u> | 0.26                  | 1.89 |

**Conclusion:**

Question #18 is not affected by Survey

**Question #19**

| <b>Score</b>          | <b>SA=1</b>  | <b>A=2</b>   | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|-----------------------|--------------|--------------|----------------|-------------|--------------|
| <b>Initial Resp</b>   |              |              |                |             |              |
| Frequency             | 13           | 15           | 1              | 1           | 0            |
| Proportion            | 0.433        | 0.500        | 0.033          | 0.033       | 0.000        |
| Cum Prop              | 0.433        | 0.933        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 0.765        | 14.000       | 29.000         | —           | —            |
| <b>Second Resp</b>    |              |              |                |             |              |
| Frequency             | 15           | 13           | 1              | 1           | 0            |
| Proportion            | 0.500        | 0.433        | 0.033          | 0.033       | 0.000        |
| Cum Prop              | 0.500        | 0.933        | 0.966          | 1.000       | 1.000        |
| Cum Odds              | 1.000        | 14.000       | 29.000         | —           | —            |
| <b>Odds Ratio</b>     | <b>0.765</b> | <b>1.000</b> | <b>1.000</b>   | —           | —            |
| <b>Avg Odds Ratio</b> | <b>0.922</b> |              |                |             |              |

**Test for Proportional Odds Assumption:**

| <b>Method</b> | <b>Chi-Square</b> | <b>DF</b> | <b>Pr &gt; Chi-Square</b> |              |             |        |       |
|---------------|-------------------|-----------|---------------------------|--------------|-------------|--------|-------|
| Pearson       | 0.067             | 2         | 0.967                     |              |             |        |       |
| Predictor     | Coef              | SE Coef   | Z                         | P            | Odds Ratio  | 95% CI |       |
|               |                   |           |                           |              |             | Lower  | Upper |
| Score (1)     | -0.01573          | 0.360089  | -0.04                     | 0.965        |             |        |       |
| Score (2)     | 2.76328           | 0.584133  | 4.73                      | 0.000        |             |        |       |
| Score (3)     | 3.49151           | 0.768935  | 4.54                      | 0.000        |             |        |       |
| Survey        |                   |           |                           |              |             |        |       |
| Initial Resp  | -0.234683         | 0.502036  | -0.47                     | <b>0.640</b> | <u>0.79</u> | 0.30   | 2.12  |

**Conclusion:**

Question #19 is not affected by Survey

**Question #20**

| <b>Score</b>        | <b>SA=1</b>  | <b>A=2</b> | <b>Indif=3</b> | <b>DA=4</b> | <b>SDA=5</b> |
|---------------------|--------------|------------|----------------|-------------|--------------|
| <b>Initial Resp</b> |              |            |                |             |              |
| Frequency           | 12           | 18         | 0              | 0           | 0            |
| Proportion          | 0.400        | 0.600      | 0.000          | 0.000       | 0.000        |
| Cum Prop            | 0.400        | 1.000      | 1.000          | 1.000       | 1.000        |
| Cum Odds            | 0.667        | —          | —              | —           | —            |
| <b>Second Resp</b>  |              |            |                |             |              |
| Frequency           | 13           | 17         | 0              | 0           | 0            |
| Proportion          | 0.433        | 0.567      | 0.000          | 0.000       | 0.000        |
| Cum Prop            | 0.433        | 1.000      | 1.000          | 1.000       | 1.000        |
| Cum Odds            | 0.765        | —          | —              | —           | —            |
| <b>Odds Ratio</b>   | <b>0.871</b> | —          | —              | —           | —            |

| Predictor    | Coef     | SE Coef  | Z    | P            | Odds Ratio  | 95% CI |       |
|--------------|----------|----------|------|--------------|-------------|--------|-------|
| Constant     | 0.26826  | 0.368438 | 0.73 | 0.467        |             | Lower  | Upper |
| Survey       |          |          |      |              |             |        |       |
| Initial Resp | 0.137201 | 0.524057 | 0.26 | <b>0.793</b> | <u>1.15</u> | 0.41   | 3.20  |

In this question there are only two response levels. In this case we used Binary Logistic Regression to determine if the factor, “Survey” is significant.

**Conclusion:**

Question #20 is not affected by Survey



APPENDIX E  
REQUEST LETTER TO SCHOOL ADMINISTRATORS

September 5, 2006

Dear \_\_\_\_\_,

My name is Bill Hambleton and I am a doctoral candidate at the University of San Francisco in the Catholic Educational Leadership Program. My dissertation focuses on the facilitation of Catholic identity to male students in Catholic secondary schools. I am comparing the perceptions of male students at single gender schools to the perceptions of male students at coeducational schools. I have randomly selected one single gender Catholic high school and one coeducational Catholic high school from each of the 13 regions of the National Catholic Education Association. My intent is to distribute my survey to 40 male students in the senior class at each of these 26 schools. I am asking for your permission to use your school in this study.

If you consent to allow your students to participate in this study, I will mail a packet to your school. This packet will contain forty copies of the Catholic Identity Student Survey, subject and parental consent forms, instructions for the proctor of the survey, and a self addressed stamped envelope in which to mail the completed surveys to me. I would ask that the survey be distributed to forty male students in the senior class. The survey will take five to ten minutes to complete.

I have attached a copy of the Catholic Identity Student Survey to this mailing so that you may examine it before you make a decision to allow your students to participate. Students will not write their name on the surveys and thus will be entirely anonymous. The identity of the schools will also be treated with confidentiality. School names will not be listed in any part of the dissertation.

This study will contribute to the body of knowledge about Catholic education and the facilitation of Catholic identity in Catholic schools. If you would like more information please feel free to call or email me at any time. You may reach me at [JD\\_Hamby@hotmail.com](mailto:JD_Hamby@hotmail.com) or (801) 463-2749.

If you have further questions about the study, you may contact the IRBPHS at the University of San Francisco, which is concerned with protection of volunteers in research projects. You may reach the IRBPHS office by calling (415) 422-6091 and leaving a voicemail message, by e-mailing [IRBPHS@usfca.edu](mailto:IRBPHS@usfca.edu), or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080. Participation in research is voluntary. You are free to decline to be in this study, or to withdraw from it at any point.

Thank you for your consideration of this request. May God bless you and your faculties for all of the good work you are doing in Catholic education.

Sincerely,

Bill Hambleton

APPENDIX F  
IRB APPROVAL

December 20, 2006

Dear Mr. Hambleton:

The Institutional Review Board for the Protection of Human Subjects (IRBPHS) at the University of San Francisco (USF) has reviewed your request for human subjects approval regarding your study.

Your application has been approved by the committee. (IRBPHS #06-099).

Please note the following:

1. Approval expires twelve (12) months from the dated noted above. At that time, if you are still in collecting data from human subjects, you must file a renewal application.
2. Any modifications to the research protocol or changes in instrumentation (including wording of items) must be communicated to the IRBPHS. Re-submission of an application may be required at that time.
3. Any adverse reactions or complications on the part of participants must be reported (in writing) to the IRBPHS within ten (10) working days.

If you have any questions, please contact the IRBPHS at (415) 422-6091.

On behalf of the IRBPHS committee, I wish you much success in your research.

Sincerely,

Terence Patterson, EdD, ABPP  
Chair, Institutional Review Board for the Protection of Human Subjects

APPENDIX G  
SUBJECT CONSENT FORM

## CONSENT TO BE A RESEARCH SUBJECT

### **Purpose and Background**

Mr. Bill Hambleton, a doctoral candidate in the School of Education at The University of San Francisco, is conducting a study on the facilitation of Catholic identity to male students in Catholic secondary schools. He is comparing the perceptions of male students at single gender schools to the perceptions of male students at coeducational schools.

I am being asked to participate because I am a male student attending either single gender or coeducational secondary school.

### **Procedures**

If I agree to be a participant in this study, the following will happen:

I will complete a short survey giving basic information about my perception of the Catholic identity of my school. I will not write my name on the survey instrument, and thus my responses will be anonymous.

### **Risks and/or Discomforts**

1. It is possible that some of the questions on The Catholic Identity Student Survey may make me feel uncomfortable, but I am free to decline to answer any questions I do not wish to answer or to stop participation at any time.
2. I will take the survey during a class period in my school, and thus may be distracted from course material.
3. The survey will contribute to Catholic identity in Catholic schools, which may bother me if I am ideologically opposed to Catholic identity.

### **Benefits**

There will be no direct benefit to me from participating in this study. The anticipated benefit of this study is an improvement in the facilitation of Catholic identity at Catholic secondary schools.

### **Costs/Financial Considerations**

There will be no financial costs to me as a result of taking part in this study.

### **Payment/Reimbursement**

I will receive no payment for my participation in this study.

## Questions

If I have any questions or comments about participation in this study, I should first talk with the researcher, Mr. Bill Hambleton. I can reach him at (801) 463-2749. If for some reason I do not wish to do this, I may contact the IRBPHS, which is concerned with protection of volunteers in research projects. I may reach the IRBPHS office by calling (415) 422-6091 and leaving a voicemail message, by e-mailing IRBPHS@usfca.edu, or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

## Consent

PARTICIPATION IN RESEARCH IS VOLUNTARY. I am free to decline to be in this study, or to withdraw from it at any point. My decision as to whether or not to participate in this study will have no influence on my present or future status as a student or employee at USF.

My signature below indicates that I agree to participate in this study.

---

Subject's Signature

Date of Signature

---

Signature of Person Obtaining Consent

Date of Signature

APPENDIX H  
PARENTAL CONSENT FORM



## PARENTAL CONSENT FOR RESEARCH PARTICIPATION

### **Purpose and Background**

Mr. William Hambleton, a graduate student in the School of Education at The University of San Francisco is doing a comparative study on the facilitation of Catholic identity to male students in coeducational Catholic high schools and male single gender Catholic high schools. The researcher is interested in understanding the affect that each educational model will manifest for male students. My child is being asked to participate because he is a senior male student at a coeducational or a single gender Catholic high school.

### **Procedures**

If I agree to allow my child to be a participant in this study, the following will happen:

1. He will complete a brief survey about my perception of Catholic identity at his high school.
2. He will complete the survey at his high school in one of his regular scheduled classes.

### **Risks and/or Discomforts**

1. It is possible that some of the questions on the Catholic Identity Student Survey may make my child feel uncomfortable, but he is free to decline to answer any questions he does not wish to answer or to stop participation at any time.
2. My child will take the survey during a class period in my school, and thus may be distracted from course material.
3. The survey will contribute to Catholic identity in Catholic schools, which may bother me if I am ideologically opposed to Catholic identity.

### **Benefits**

There will be no direct benefit to me or my child from participating in this study. The anticipated benefit of this study is a better understanding of the facilitation of Catholic identity to male students at Catholic high schools.

### **Costs/Financial Considerations**

There will be no financial costs to me or my child as a result of taking part in this study.

### **Payment/Reimbursement**

There will be no financial payment to me or my child as a result of taking part in this study.

## Questions

This study has been described to my child by the proctor at his school. If I have further questions about the study, I may call Mr. Hambleton at (801) 463-2749.

If I have any questions or comments about my child's participation in this study, I should first talk with the researcher. If for some reason I do not wish to do this, I may contact the IRBPHS, which is concerned with protection of volunteers in research projects. I may reach the IRBPHS office by calling (415) 422-6091 and leaving a voicemail message, by e-mailing IRBPHS@usfca.edu, or by writing to the IRBPHS, Department of Psychology, University of San Francisco, 2130 Fulton Street, San Francisco, CA 94117-1080.

## Consent

PARTICIPATION IN RESEARCH IS VOLUNTARY. My child is free to decline to be in this study, or to withdraw from it at any point. My decision as to whether or not to allow my child to participate in this study will have no influence on his present or future status as a student or employee at USF.

My signature below indicates that I agree to allow my child to participate in this study.

---

|  |                   |
|--|-------------------|
| Signature of Subject's Parent/Guardian | Date of Signature |
|--|-------------------|

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|                                       |                   |
|---------------------------------------|-------------------|
| Signature of Person Obtaining Consent | Date of Signature |
|---------------------------------------|-------------------|

APPENDIX I  
INSTRUCTIONS FOR THE PROCTOR OF THE SURVEY

Dear \_\_\_\_\_,

Thank you for agreeing to distribute the Catholic Identity Student Survey to members of your student body. You should find included in this mailing forty subject consent forms, forty parental consent forms (to be used if a subject is not yet 18 years old), forty copies of the survey instrument and a self-addressed stamped envelope.

Please distribute the parental consent forms to students prior to the day they will take the survey. Ask them to obtain a parental signature and return the form to you. On the day you decide to distribute the survey, first distribute the subject consent forms and ask the students to sign them. Collect the forms and then distribute the Catholic Identity Student Survey. The surveys should be anonymous, so please instruct students that they should not write their names on the paper. The surveys should take five to ten minutes to complete. When the students have completed the surveys, please collect them and mail them to me along with all consent forms in the enclosed envelope.

This study will contribute to the body of knowledge about Catholic education and the facilitation of Catholic identity in Catholic schools. If you would like more information please feel free to call or email me at any time. You may reach me at [JD\\_Hamby@hotmail.com](mailto:JD_Hamby@hotmail.com) or (801) 463-2749.

Gratefully,

Bill Hambleton

APPENDIX J  
RESPONSES IN SG1

*Student Responses in School SG1*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0  | 1  | 22 | 27 |
| 2. Students respect teachers in the high school  | 1  | 8  | 8  | 31 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1  | 2  | 15 | 32 |
| 4. Classes begin with prayer in this high school   | 0  | 10 | 7  | 31 | 2  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 9  | 15 | 12 | 12 | 2  |
| 6. Teachers respect students in this high school   | 0  | 7  | 2  | 30 | 11 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 4  | 23 | 16 | 7  |
| 8. Mass is celebrated regularly at this high school  | 0  | 6  | 4  | 29 | 11 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 12 | 4  | 20 | 14 |
| 10. I would describe this high school as a caring community  | 0  | 5  | 2  | 24 | 19 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 3  | 5  | 24 | 18 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 5  | 8  | 15 | 22 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 3  | 5  | 28 | 13 |
| 14. Non-Catholic students are accepted in this high school   | 1  | 1  | 4  | 24 | 20 |
| 15. This high school teaches that people should be of service to others  | 0  | 1  | 2  | 27 | 20 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 9  | 13 | 18 | 8  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 1  | 6  | 27 | 15 |
| 18. I feel accepted in this high school  | 1  | 1  | 3  | 17 | 28 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 4  | 1  | 28 | 17 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 13 | 8  | 22 | 7  |

APPENDIX K  
RESPONSES IN CE1

*Student Responses in School CE1*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 2 | 2  | 34 | 5  |
| 2. Students respect teachers in the high school  | 1  | 3 | 1  | 34 | 3  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 7 | 3  | 17 | 16 |
| 4. Classes begin with prayer in this high school   | 0  | 1 | 1  | 6  | 35 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 0  | 3 | 10 | 23 | 7  |
| 6. Teachers respect students in this high school   | 0  | 4 | 3  | 32 | 4  |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 3 | 16 | 21 | 3  |
| 8. Mass is celebrated regularly at this high school  | 1  | 5 | 7  | 21 | 9  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 1  | 1 | 10 | 22 | 9  |
| 10. I would describe this high school as a caring community  | 0  | 4 | 4  | 29 | 6  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 0 | 2  | 29 | 12 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 2 | 5  | 23 | 13 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 1 | 8  | 27 | 7  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0 | 5  | 24 | 14 |
| 15. This high school teaches that people should be of service to others  | 0  | 1 | 2  | 28 | 12 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 2 | 18 | 18 | 3  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1 | 8  | 27 | 7  |
| 18. I feel accepted in this high school  | 0  | 1 | 2  | 28 | 12 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 3 | 3  | 30 | 7  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 3 | 15 | 14 | 10 |



APPENDIX L  
RESPONSES IN SG2

*Student Responses in School SG2*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 3  | 3  | 33 | 12 |
| 2. Students respect teachers in the high school  | 5  | 17 | 10 | 16 | 3  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 5  | 3  | 24 | 19 |
| 4. Classes begin with prayer in this high school   | 0  | 3  | 1  | 35 | 11 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 5  | 19 | 11 | 11 | 5  |
| 6. Teachers respect students in this high school   | 1  | 6  | 9  | 28 | 7  |
| 7. This high school offers resources to help students deal with family problems                                | 1  | 17 | 7  | 23 | 3  |
| 8. Mass is celebrated regularly at this high school  | 0  | 20 | 4  | 19 | 8  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 4  | 4  | 4  | 24 | 15 |
| 10. I would describe this high school as a caring community  | 1  | 12 | 6  | 25 | 7  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 6  | 4  | 26 | 14 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 2  | 5  | 5  | 27 | 12 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 8  | 6  | 26 | 10 |
| 14. Non-Catholic students are accepted in this high school   | 1  | 0  | 2  | 23 | 25 |
| 15. This high school teaches that people should be of service to others  | 2  | 5  | 4  | 32 | 8  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 6  | 9  | 11 | 20 | 5  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 9  | 6  | 26 | 8  |
| 18. I feel accepted in this high school  | 0  | 1  | 3  | 33 | 14 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 3  | 9  | 8  | 24 | 6  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 9  | 16 | 15 | 8  | 3  |

APPENDIX M  
RESPONSES IN CE2

*Student Responses in CE2*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0  | 0  | 31 | 14 |
| 2. Students respect teachers in the high school  | 0  | 4  | 4  | 27 | 10 |
| 3. Students are encouraged to be involved in community service in this high school                             | 3  | 5  | 2  | 25 | 10 |
| 4. Classes begin with prayer in this high school   | 0  | 1  | 1  | 24 | 19 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 1  | 10 | 7  | 21 | 6  |
| 6. Teachers respect students in this high school   | 0  | 3  | 5  | 27 | 10 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 3  | 1  | 29 | 12 |
| 8. Mass is celebrated regularly at this high school  | 0  | 2  | 1  | 29 | 13 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 6  | 9  | 4  | 21 | 5  |
| 10. I would describe this high school as a caring community  | 0  | 6  | 0  | 30 | 9  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 2  | 0  | 32 | 10 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 11 | 3  | 22 | 9  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 0  | 1  | 34 | 10 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0  | 0  | 23 | 22 |
| 15. This high school teaches that people should be of service to others  | 0  | 0  | 1  | 35 | 9  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 4  | 3  | 29 | 9  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1  | 1  | 34 | 9  |
| 18. I feel accepted in this high school  | 1  | 0  | 0  | 29 | 15 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 4  | 0  | 33 | 8  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 7  | 2  | 31 | 4  |

APPENDIX N  
RESPONSES IN SG3

*Student Responses in School SG3*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 2  | 2  | 11 | 5  |
| 2. Students respect teachers in the high school  | 0  | 10 | 3  | 8  | 0  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 4  | 0  | 13 | 4  |
| 4. Classes begin with prayer in this high school   | 0  | 1  | 0  | 11 | 9  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 4  | 6  | 2  | 7  | 2  |
| 6. Teachers respect students in this high school   | 2  | 4  | 1  | 11 | 3  |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 6  | 4  | 8  | 3  |
| 8. Mass is celebrated regularly at this high school  | 1  | 8  | 0  | 10 | 2  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 2  | 8  | 2  | 7  | 2  |
| 10. I would describe this high school as a caring community  | 1  | 3  | 2  | 13 | 2  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 2  | 6  | 0  | 10 | 3  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 5  | 2  | 12 | 2  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 6  | 1  | 12 | 2  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0  | 0  | 13 | 8  |
| 15. This high school teaches that people should be of service to others  | 0  | 3  | 1  | 12 | 5  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 3  | 7  | 3  | 8  | 0  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 2  | 2  | 3  | 12 | 2  |
| 18. I feel accepted in this high school  | 0  | 1  | 1  | 10 | 9  |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 4  | 1  | 12 | 4  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 5  | 2  | 11 | 3  |

APPENDIX O  
RESPONSES IN CE3

*Student Responses in School CE3*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 1  | 3  | 25 | 11 |
| 2. Students respect teachers in the high school  | 1  | 14 | 2  | 23 | 1  |
| 3. Students are encouraged to be involved in community service in this high school                             | 3  | 0  | 0  | 19 | 19 |
| 4. Classes begin with prayer in this high school   | 0  | 0  | 0  | 16 | 25 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 4  | 6  | 8  | 16 | 7  |
| 6. Teachers respect students in this high school   | 1  | 6  | 2  | 29 | 2  |
| 7. This high school offers resources to help students deal with family problems                                | 1  | 4  | 7  | 27 | 2  |
| 8. Mass is celebrated regularly at this high school  | 3  | 1  | 0  | 23 | 14 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 2  | 4  | 4  | 21 | 10 |
| 10. I would describe this high school as a caring community  | 2  | 4  | 4  | 24 | 7  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 6  | 3  | 22 | 9  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 2  | 4  | 1  | 24 | 10 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 1  | 2  | 29 | 8  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 0  | 30 | 10 |
| 15. This high school teaches that people should be of service to others  | 1  | 3  | 2  | 28 | 5  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 12 | 7  | 15 | 6  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 2  | 1  | 3  | 31 | 4  |
| 18. I feel accepted in this high school  | 3  | 1  | 1  | 19 | 17 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 3  | 7  | 3  | 23 | 4  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 2  | 8  | 9  | 19 | 3  |



APPENDIX P  
RESPONSES IN SG4

*Student Responses in School SG4*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1  | 0  | 25 | 23 |
| 2. Students respect teachers in the high school  | 1  | 4  | 0  | 41 | 3  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 0  | 1  | 10 | 38 |
| 4. Classes begin with prayer in this high school   | 1  | 7  | 1  | 36 | 4  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 1  | 6  | 8  | 19 | 15 |
| 6. Teachers respect students in this high school   | 2  | 2  | 2  | 34 | 9  |
| 7. This high school offers resources to help students deal with family problems                                | 3  | 13 | 3  | 27 | 3  |
| 8. Mass is celebrated regularly at this high school  | 0  | 3  | 2  | 30 | 14 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 3  | 5  | 27 | 14 |
| 10. I would describe this high school as a caring community  | 0  | 2  | 2  | 20 | 25 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 6  | 1  | 22 | 19 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 2  | 7  | 26 | 14 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 2  | 1  | 27 | 18 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 0  | 26 | 22 |
| 15. This high school teaches that people should be of service to others  | 0  | 0  | 0  | 14 | 35 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 23 | 7  | 17 | 0  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 0  | 2  | 33 | 13 |
| 18. I feel accepted in this high school  | 1  | 1  | 2  | 18 | 27 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 1  | 3  | 22 | 22 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 14 | 4  | 26 | 4  |

APPENDIX Q  
RESPONSES IN CE4

*Student Responses in School CE4*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0 | 3  | 23 | 16 |
| 2. Students respect teachers in the high school  | 1  | 4 | 5  | 29 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 2 | 0  | 8  | 32 |
| 4. Classes begin with prayer in this high school   | 0  | 1 | 4  | 19 | 18 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 6  | 6 | 7  | 16 | 6  |
| 6. Teachers respect students in this high school   | 1  | 1 | 2  | 26 | 11 |
| 7. This high school offers resources to help students deal with family problems                                | 4  | 7 | 3  | 18 | 9  |
| 8. Mass is celebrated regularly at this high school  | 0  | 2 | 2  | 27 | 11 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 6  | 5 | 5  | 19 | 7  |
| 10. I would describe this high school as a caring community  | 2  | 1 | 4  | 22 | 13 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 3 | 3  | 16 | 20 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 1  | 1 | 2  | 22 | 16 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 3 | 3  | 22 | 13 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1 | 1  | 13 | 27 |
| 15. This high school teaches that people should be of service to others  | 2  | 0 | 1  | 16 | 23 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 2 | 4  | 21 | 14 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 3  | 2 | 5  | 13 | 19 |
| 18. I feel accepted in this high school  | 1  | 0 | 1  | 19 | 21 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 0 | 0  | 23 | 19 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 5 | 10 | 13 | 13 |

APPENDIX R  
RESPONSES IN SG5

*Student Responses in School SG5*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 0  | 1  | 22 | 15 |
| 2. Students respect teachers in the high school  | 0  | 7  | 1  | 24 | 7  |
| 3. Students are encouraged to be involved in community service in this high school                             | 2  | 1  | 0  | 7  | 29 |
| 4. Classes begin with prayer in this high school   | 0  | 0  | 1  | 13 | 25 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 3  | 17 | 5  | 11 | 3  |
| 6. Teachers respect students in this high school   | 0  | 2  | 6  | 23 | 8  |
| 7. This high school offers resources to help students deal with family problems                                | 2  | 7  | 7  | 15 | 8  |
| 8. Mass is celebrated regularly at this high school  | 0  | 1  | 0  | 19 | 19 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 6  | 6  | 1  | 18 | 8  |
| 10. I would describe this high school as a caring community  | 1  | 2  | 2  | 22 | 12 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 1  | 0  | 13 | 25 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 1  | 4  | 4  | 20 | 10 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 4  | 1  | 25 | 8  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 4  | 4  | 19 | 12 |
| 15. This high school teaches that people should be of service to others  | 0  | 0  | 1  | 21 | 17 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 7  | 5  | 19 | 7  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1  | 4  | 17 | 17 |
| 18. I feel accepted in this high school  | 2  | 3  | 3  | 17 | 14 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 2  | 2  | 19 | 16 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 5  | 4  | 22 | 8  |

APPENDIX S  
RESPONSES IN CE5

*Student Responses in School CE5*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 1  | 2  | 21 | 20 |
| 2. Students respect teachers in the high school  | 0  | 2  | 1  | 34 | 8  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1  | 1  | 28 | 15 |
| 4. Classes begin with prayer in this high school   | 0  | 6  | 3  | 24 | 12 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 2  | 6  | 13 | 15 | 9  |
| 6. Teachers respect students in this high school   | 1  | 4  | 5  | 19 | 16 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 3  | 3  | 24 | 14 |
| 8. Mass is celebrated regularly at this high school  | 2  | 13 | 5  | 15 | 10 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 3  | 5  | 2  | 21 | 14 |
| 10. I would describe this high school as a caring community  | 1  | 3  | 5  | 23 | 12 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 1  | 2  | 21 | 21 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 8  | 6  | 16 | 15 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 5  | 1  | 29 | 10 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 1  | 18 | 25 |
| 15. This high school teaches that people should be of service to others  | 0  | 2  | 2  | 26 | 15 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 8  | 5  | 19 | 11 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 5  | 3  | 21 | 15 |
| 18. I feel accepted in this high school  | 1  | 3  | 1  | 16 | 24 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 3  | 0  | 15 | 27 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 5  | 7  | 20 | 12 |



APPENDIX T  
RESPONSES IN SG6

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*Student Responses in School SG6*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 2  | 4  | 37 | 27 |
| 2. Students respect teachers in the high school  | 0  | 3  | 4  | 57 | 6  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1  | 1  | 24 | 44 |
| 4. Classes begin with prayer in this high school   | 0  | 1  | 0  | 31 | 38 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 0  | 14 | 11 | 34 | 11 |
| 6. Teachers respect students in this high school   | 0  | 3  | 1  | 49 | 17 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 21 | 12 | 21 | 16 |
| 8. Mass is celebrated regularly at this high school  | 0  | 7  | 2  | 32 | 29 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 1  | 6  | 5  | 39 | 19 |
| 10. I would describe this high school as a caring community  | 0  | 2  | 2  | 34 | 32 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 3  | 8  | 38 | 21 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 1  | 12 | 10 | 29 | 18 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 5  | 6  | 41 | 17 |
| 14. Non-Catholic students are accepted in this high school   | 1  | 2  | 2  | 35 | 30 |
| 15. This high school teaches that people should be of service to others  | 0  | 3  | 4  | 44 | 18 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 10 | 10 | 42 | 6  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 2  | 2  | 2  | 40 | 24 |
| 18. I feel accepted in this high school  | 0  | 2  | 1  | 30 | 37 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 3  | 0  | 47 | 20 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 2  | 14 | 9  | 32 | 13 |

APPENDIX U  
RESPONSES IN CE6

*Student Responses in School CE6*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1  | 1  | 14 | 8  |
| 2. Students respect teachers in the high school  | 1  | 5  | 0  | 17 | 1  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 0  | 0  | 9  | 15 |
| 4. Classes begin with prayer in this high school   | 6  | 9  | 0  | 7  | 2  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 2  | 12 | 4  | 5  | 1  |
| 6. Teachers respect students in this high school   | 0  | 3  | 0  | 18 | 2  |
| 7. This high school offers resources to help students deal with family problems                                | 3  | 1  | 7  | 12 | 1  |
| 8. Mass is celebrated regularly at this high school  | 0  | 1  | 0  | 15 | 8  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 6  | 1  | 12 | 5  |
| 10. I would describe this high school as a caring community  | 2  | 3  | 0  | 15 | 4  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 0  | 0  | 17 | 7  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 3  | 0  | 14 | 7  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 5  | 2  | 13 | 4  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0  | 0  | 14 | 10 |
| 15. This high school teaches that people should be of service to others  | 0  | 0  | 0  | 17 | 7  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 1  | 0  | 16 | 7  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 2  | 2  | 2  | 13 | 5  |
| 18. I feel accepted in this high school  | 2  | 2  | 0  | 12 | 8  |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 1  | 1  | 14 | 8  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 4  | 4  | 11 | 4  |

APPENDIX V  
RESPONSES IN SG7

*Student Responses in School SG7*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 1  | 0  | 20 | 28 |
| 2. Students respect teachers in the high school  | 0  | 1  | 2  | 39 | 7  |
| 3. Students are encouraged to be involved in community service in this high school                             | 1  | 0  | 0  | 9  | 39 |
| 4. Classes begin with prayer in this high school   | 3  | 12 | 2  | 25 | 8  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 3  | 6  | 7  | 16 | 17 |
| 6. Teachers respect students in this high school   | 0  | 4  | 1  | 26 | 19 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 0  | 1  | 27 | 22 |
| 8. Mass is celebrated regularly at this high school  | 0  | 1  | 0  | 15 | 34 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 3  | 8  | 4  | 16 | 19 |
| 10. I would describe this high school as a caring community  | 0  | 1  | 0  | 20 | 29 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 1  | 2  | 19 | 28 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 1  | 1  | 7  | 17 | 23 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 3  | 2  | 16 | 29 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 4  | 3  | 19 | 24 |
| 15. This high school teaches that people should be of service to others  | 0  | 0  | 1  | 9  | 40 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 7  | 3  | 26 | 13 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 6  | 6  | 20 | 17 |
| 18. I feel accepted in this high school  | 0  | 4  | 1  | 19 | 26 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 3  | 0  | 21 | 25 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 11 | 9  | 25 | 4  |

APPENDIX W  
RESPONSES IN CE7

*Student Responses in School CE7*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1  | 4  | 22 | 15 |
| 2. Students respect teachers in the high school  | 0  | 9  | 1  | 29 | 3  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 0  | 0  | 17 | 25 |
| 4. Classes begin with prayer in this high school   | 0  | 7  | 1  | 28 | 6  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 1  | 5  | 7  | 23 | 6  |
| 6. Teachers respect students in this high school   | 0  | 4  | 2  | 25 | 11 |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 7  | 15 | 18 | 2  |
| 8. Mass is celebrated regularly at this high school  | 0  | 2  | 0  | 17 | 23 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 8  | 2  | 24 | 8  |
| 10. I would describe this high school as a caring community  | 0  | 4  | 1  | 24 | 13 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 0  | 0  | 18 | 24 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 0  | 2  | 12 | 28 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 2  | 2  | 24 | 14 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 0  | 13 | 28 |
| 15. This high school teaches that people should be of service to others  | 0  | 2  | 1  | 22 | 16 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 9  | 4  | 26 | 3  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 3  | 0  | 29 | 10 |
| 18. I feel accepted in this high school  | 0  | 1  | 3  | 19 | 19 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 2  | 1  | 35 | 4  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 2  | 14 | 4  | 19 | 3  |



APPENDIX X  
RESPONSES IN CE8

*Student Responses in School CE8*

| Question   | SD | D | NO | A | SA |
|--|----|---|----|---|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0 | 0  | 5 | 0  |
| 2. Students respect teachers in the high school  | 0  | 0 | 1  | 4 | 0  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 0 | 1  | 4 | 0  |
| 4. Classes begin with prayer in this high school   | 0  | 1 | 1  | 3 | 0  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 0  | 0 | 0  | 4 | 1  |
| 6. Teachers respect students in this high school   | 0  | 0 | 0  | 4 | 1  |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 1 | 1  | 2 | 1  |
| 8. Mass is celebrated regularly at this high school  | 0  | 0 | 0  | 0 | 5  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 0 | 0  | 1 | 4  |
| 10. I would describe this high school as a caring community  | 0  | 0 | 0  | 4 | 1  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 1 | 1  | 1 | 2  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 1 | 1  | 3 | 0  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 0 | 0  | 1 | 4  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0 | 0  | 3 | 2  |
| 15. This high school teaches that people should be of service to others  | 0  | 0 | 0  | 3 | 2  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 0 | 2  | 3 | 0  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1 | 0  | 1 | 3  |
| 18. I feel accepted in this high school  | 0  | 0 | 0  | 4 | 1  |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 0 | 0  | 1 | 4  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 0 | 0  | 2 | 3  |

APPENDIX Y  
RESPONSES IN SG9

*Student Responses in School SG9*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1 | 0  | 18 | 7  |
| 2. Students respect teachers in the high school  | 1  | 2 | 4  | 17 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1 | 0  | 2  | 23 |
| 4. Classes begin with prayer in this high school   | 0  | 1 | 1  | 8  | 16 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 1  | 7 | 5  | 10 | 3  |
| 6. Teachers respect students in this high school   | 0  | 4 | 1  | 18 | 3  |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 5 | 3  | 14 | 4  |
| 8. Mass is celebrated regularly at this high school  | 1  | 3 | 0  | 18 | 4  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 6 | 2  | 14 | 4  |
| 10. I would describe this high school as a caring community  | 0  | 2 | 2  | 14 | 8  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 0 | 3  | 15 | 8  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 2 | 1  | 12 | 11 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 2 | 0  | 16 | 8  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 4 | 0  | 13 | 9  |
| 15. This high school teaches that people should be of service to others  | 0  | 0 | 0  | 12 | 14 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 4 | 6  | 11 | 4  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 3 | 0  | 17 | 5  |
| 18. I feel accepted in this high school  | 2  | 1 | 2  | 10 | 11 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 3 | 3  | 13 | 7  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 8 | 2  | 10 | 6  |

APPENDIX Z  
RESPONSES IN CE9

*Student Responses in School CE9*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 2 | 1  | 19 | 23 |
| 2. Students respect teachers in the high school  | 2  | 4 | 1  | 31 | 7  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 0 | 0  | 10 | 35 |
| 4. Classes begin with prayer in this high school   | 0  | 6 | 1  | 25 | 13 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 0  | 6 | 4  | 22 | 13 |
| 6. Teachers respect students in this high school   | 2  | 2 | 0  | 29 | 11 |
| 7. This high school offers resources to help students deal with family problems                                | 1  | 3 | 12 | 20 | 9  |
| 8. Mass is celebrated regularly at this high school  | 0  | 3 | 1  | 30 | 11 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 1 | 1  | 15 | 28 |
| 10. I would describe this high school as a caring community  | 0  | 2 | 2  | 18 | 23 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 0 | 2  | 14 | 29 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 4 | 1  | 16 | 24 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 1 | 2  | 19 | 23 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1 | 0  | 18 | 26 |
| 15. This high school teaches that people should be of service to others  | 0  | 0 | 1  | 23 | 21 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 4 | 3  | 21 | 16 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1 | 2  | 23 | 19 |
| 18. I feel accepted in this high school  | 1  | 1 | 1  | 15 | 26 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 2 | 1  | 15 | 26 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 7 | 2  | 24 | 11 |

APPENDIX AA  
RESPONSES IN SG10

*Student Responses in School SG10*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 1  | 2  | 33 | 22 |
| 2. Students respect teachers in the high school  | 1  | 12 | 8  | 32 | 6  |
| 3. Students are encouraged to be involved in community service in this high school                             | 2  | 0  | 2  | 18 | 37 |
| 4. Classes begin with prayer in this high school   | 1  | 9  | 2  | 25 | 20 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 4  | 17 | 4  | 26 | 8  |
| 6. Teachers respect students in this high school   | 3  | 6  | 6  | 32 | 12 |
| 7. This high school offers resources to help students deal with family problems                                | 6  | 17 | 13 | 17 | 6  |
| 8. Mass is celebrated regularly at this high school  | 1  | 7  | 3  | 28 | 19 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 2  | 6  | 3  | 32 | 16 |
| 10. I would describe this high school as a caring community  | 0  | 9  | 6  | 30 | 13 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 2  | 1  | 32 | 23 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 3  | 1  | 6  | 24 | 24 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 6  | 3  | 30 | 20 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 2  | 29 | 27 |
| 15. This high school teaches that people should be of service to others  | 0  | 2  | 2  | 33 | 22 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 7  | 11 | 34 | 7  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 3  | 7  | 34 | 15 |
| 18. I feel accepted in this high school  | 1  | 1  | 3  | 28 | 26 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 3  | 6  | 36 | 13 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 11 | 8  | 25 | 14 |



APPENDIX BB  
RESPONSES IN CE10

*Student Responses in School CE10*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0 | 1  | 14 | 3  |
| 2. Students respect teachers in the high school  | 0  | 4 | 4  | 8  | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1 | 1  | 10 | 6  |
| 4. Classes begin with prayer in this high school   | 0  | 5 | 2  | 5  | 6  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 2  | 4 | 3  | 8  | 0  |
| 6. Teachers respect students in this high school   | 1  | 1 | 3  | 11 | 2  |
| 7. This high school offers resources to help students deal with family problems                                | 2  | 5 | 7  | 4  | 0  |
| 8. Mass is celebrated regularly at this high school  | 0  | 0 | 0  | 5  | 13 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 1  | 1 | 1  | 9  | 6  |
| 10. I would describe this high school as a caring community  | 0  | 1 | 3  | 11 | 3  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 0 | 2  | 15 | 0  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 3  | 6 | 5  | 4  | 0  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 1 | 2  | 12 | 2  |
| 14. Non-Catholic students are accepted in this high school   | 0  | 0 | 1  | 8  | 9  |
| 15. This high school teaches that people should be of service to others  | 0  | 1 | 1  | 13 | 3  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 8 | 2  | 7  | 1  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 1 | 1  | 13 | 3  |
| 18. I feel accepted in this high school  | 0  | 1 | 2  | 9  | 6  |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 1 | 2  | 8  | 7  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 1  | 6 | 3  | 7  | 1  |

APPENDIX CC  
RESPONSES IN SG11

*Student Responses in School SG11*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 1  | 2  | 2  | 29 | 7  |
| 2. Students respect teachers in the high school  | 3  | 6  | 2  | 28 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 1  | 2  | 0  | 13 | 25 |
| 4. Classes begin with prayer in this high school   | 22 | 15 | 2  | 2  | 0  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 5  | 15 | 10 | 10 | 1  |
| 6. Teachers respect students in this high school   | 3  | 8  | 2  | 24 | 4  |
| 7. This high school offers resources to help students deal with family problems                                | 2  | 12 | 6  | 20 | 1  |
| 8. Mass is celebrated regularly at this high school  | 4  | 10 | 1  | 24 | 2  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 2  | 9  | 2  | 25 | 3  |
| 10. I would describe this high school as a caring community  | 2  | 1  | 1  | 28 | 9  |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 3  | 0  | 32 | 6  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 2  | 7  | 3  | 28 | 1  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 3  | 5  | 4  | 27 | 2  |
| 14. Non-Catholic students are accepted in this high school   | 1  | 5  | 2  | 19 | 14 |
| 15. This high school teaches that people should be of service to others  | 0  | 4  | 0  | 26 | 10 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 2  | 14 | 2  | 21 | 2  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 4  | 8  | 10 | 16 | 3  |
| 18. I feel accepted in this high school  | 2  | 4  | 3  | 20 | 12 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 3  | 2  | 22 | 13 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 3  | 7  | 7  | 20 | 4  |

APPENDIX DD  
RESPONSES IN CE11

*Student Responses in School CE11*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 2  | 1  | 26 | 7  |
| 2. Students respect teachers in the high school  | 1  | 7  | 5  | 21 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 2  | 1  | 24 | 9  |
| 4. Classes begin with prayer in this high school   | 0  | 5  | 2  | 24 | 5  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 7  | 15 | 7  | 5  | 2  |
| 6. Teachers respect students in this high school   | 1  | 2  | 3  | 21 | 9  |
| 7. This high school offers resources to help students deal with family problems                                | 0  | 11 | 5  | 16 | 4  |
| 8. Mass is celebrated regularly at this high school  | 1  | 5  | 0  | 26 | 4  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 6  | 6  | 5  | 14 | 5  |
| 10. I would describe this high school as a caring community  | 1  | 4  | 3  | 17 | 11 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 2  | 4  | 20 | 9  |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 3  | 8  | 6  | 12 | 7  |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 3  | 4  | 4  | 21 | 4  |
| 14. Non-Catholic students are accepted in this high school   | 1  | 0  | 2  | 13 | 20 |
| 15. This high school teaches that people should be of service to others  | 0  | 2  | 1  | 24 | 9  |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 6  | 6  | 18 | 5  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 3  | 2  | 5  | 23 | 3  |
| 18. I feel accepted in this high school  | 2  | 3  | 6  | 12 | 13 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 5  | 3  | 20 | 8  |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 3  | 14 | 3  | 10 | 6  |

APPENDIX EE  
RESPONSES IN SG12

*Student Responses in School SG12*

| Question   | SD | D | NO | A  | SA |
|--|----|---|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1 | 1  | 19 | 26 |
| 2. Students respect teachers in the high school  | 3  | 3 | 2  | 37 | 2  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 4 | 5  | 18 | 20 |
| 4. Classes begin with prayer in this high school   | 0  | 0 | 3  | 18 | 26 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 2  | 6 | 9  | 24 | 6  |
| 6. Teachers respect students in this high school   | 0  | 3 | 3  | 25 | 16 |
| 7. This high school offers resources to help students deal with family problems                                | 1  | 8 | 9  | 19 | 10 |
| 8. Mass is celebrated regularly at this high school  | 0  | 5 | 5  | 21 | 15 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 1  | 3 | 4  | 20 | 19 |
| 10. I would describe this high school as a caring community  | 1  | 0 | 3  | 21 | 22 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 0  | 2 | 3  | 27 | 15 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 3  | 7 | 7  | 20 | 10 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 0  | 3 | 5  | 19 | 20 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1 | 1  | 19 | 26 |
| 15. This high school teaches that people should be of service to others  | 0  | 2 | 3  | 22 | 19 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 7 | 7  | 25 | 7  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 0 | 2  | 22 | 22 |
| 18. I feel accepted in this high school  | 2  | 2 | 0  | 16 | 27 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 1  | 2 | 1  | 26 | 17 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 4 | 6  | 25 | 12 |



APPENDIX FF  
RESPONSES IN CE12

*Student Responses in School CE12*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 1  | 0  | 28 | 14 |
| 2. Students respect teachers in the high school  | 0  | 3  | 3  | 34 | 3  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1  | 0  | 17 | 25 |
| 4. Classes begin with prayer in this high school   | 4  | 21 | 3  | 13 | 2  |
| 5. The activities of the campus ministry department help me to develop my faith                                | 1  | 6  | 5  | 18 | 13 |
| 6. Teachers respect students in this high school   | 0  | 1  | 2  | 29 | 11 |
| 7. This high school offers resources to help students deal with family problems                                | 2  | 7  | 3  | 25 | 6  |
| 8. Mass is celebrated regularly at this high school  | 0  | 1  | 0  | 7  | 35 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 0  | 3  | 0  | 20 | 20 |
| 10. I would describe this high school as a caring community  | 0  | 1  | 0  | 22 | 20 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 3  | 4  | 24 | 11 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 0  | 3  | 3  | 25 | 12 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 1  | 1  | 23 | 17 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 1  | 0  | 17 | 25 |
| 15. This high school teaches that people should be of service to others  | 0  | 1  | 0  | 21 | 21 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 5  | 2  | 26 | 10 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 3  | 3  | 26 | 11 |
| 18. I feel accepted in this high school  | 0  | 1  | 0  | 17 | 25 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 3  | 1  | 20 | 19 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 3  | 15 | 1  | 22 | 2  |

APPENDIX GG  
RESPONSES IN SG13

*Student Responses in School SG13*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 0  | 0  | 0  | 23 | 28 |
| 2. Students respect teachers in the high school  | 0  | 7  | 3  | 32 | 8  |
| 3. Students are encouraged to be involved in community service in this high school                             | 0  | 1  | 1  | 10 | 39 |
| 4. Classes begin with prayer in this high school   | 2  | 16 | 0  | 23 | 10 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 6  | 14 | 4  | 15 | 12 |
| 6. Teachers respect students in this high school   | 0  | 3  | 1  | 33 | 14 |
| 7. This high school offers resources to help students deal with family problems                                | 3  | 14 | 13 | 16 | 5  |
| 8. Mass is celebrated regularly at this high school  | 1  | 5  | 1  | 35 | 9  |
| 9. Theology classes are an important part of the curriculum of this high school                                | 2  | 4  | 1  | 22 | 22 |
| 10. I would describe this high school as a caring community  | 0  | 3  | 2  | 18 | 28 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 1  | 0  | 23 | 26 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 1  | 5  | 4  | 20 | 21 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 2  | 1  | 3  | 31 | 14 |
| 14. Non-Catholic students are accepted in this high school   | 0  | 3  | 0  | 28 | 20 |
| 15. This high school teaches that people should be of service to others  | 0  | 1  | 0  | 20 | 29 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 0  | 5  | 5  | 30 | 11 |
| 17. The values of this high school represent the values of the Catholic Church                                 | 0  | 5  | 7  | 29 | 10 |
| 18. I feel accepted in this high school  | 0  | 0  | 0  | 22 | 29 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 1  | 4  | 32 | 14 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 2  | 13 | 7  | 24 | 5  |

APPENDIX HH  
RESPONSES IN CE13

*Student Responses in School CE13*

| Question   | SD | D  | NO | A  | SA |
|--|----|----|----|----|----|
| 1. I understand the beliefs and values of this high school   | 2  | 3  | 1  | 23 | 15 |
| 2. Students respect teachers in the high school  | 1  | 5  | 1  | 33 | 4  |
| 3. Students are encouraged to be involved in community service in this high school                             | 1  | 0  | 0  | 22 | 21 |
| 4. Classes begin with prayer in this high school   | 4  | 10 | 1  | 15 | 14 |
| 5. The activities of the campus ministry department help me to develop my faith                                | 11 | 12 | 1  | 17 | 2  |
| 6. Teachers respect students in this high school   | 2  | 7  | 0  | 28 | 7  |
| 7. This high school offers resources to help students deal with family problems                                | 1  | 6  | 2  | 27 | 8  |
| 8. Mass is celebrated regularly at this high school  | 1  | 5  | 1  | 26 | 11 |
| 9. Theology classes are an important part of the curriculum of this high school                                | 8  | 9  | 1  | 15 | 11 |
| 10. I would describe this high school as a caring community  | 1  | 3  | 0  | 27 | 13 |
| 11. This high school sponsors clubs and service groups that perform community service                          | 1  | 5  | 0  | 23 | 14 |
| 12. A high school chaplain or campus minister is always available to talk to students                          | 2  | 5  | 0  | 27 | 10 |
| 13. This high school encourages students to live their faith as much as it encourages them to know their faith | 1  | 4  | 1  | 29 | 9  |
| 14. Non-Catholic students are accepted in this high school   | 2  | 1  | 0  | 27 | 14 |
| 15. This high school teaches that people should be of service to others  | 1  | 1  | 2  | 28 | 12 |
| 16. Students are involved in planning religious ceremonies at this high school                                 | 1  | 8  | 2  | 24 | 9  |
| 17. The values of this high school represent the values of the Catholic Church                                 | 1  | 2  | 3  | 29 | 9  |
| 18. I feel accepted in this high school  | 2  | 1  | 1  | 25 | 15 |
| 19. Faculty members work hard to offer students the best possible education in this high school                | 0  | 1  | 1  | 25 | 17 |
| 20. All faculty members participate in the religious ceremonies of this high school                            | 0  | 6  | 3  | 24 | 10 |