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Cover Page Footnote

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Measuring Students' Sense of School Catholic Identity

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Abstract: As a ministry of the Catholic Church, Catholic schools are charged with educating students' hearts and minds. Multiple standardized academic tests and other student assessments are available for monitoring both student and teacher outcomes in Catholic schools, but fewer measures exist for considering the school's faith-related mission. Although tests of student religious knowledge and benchmarks related to specific Catholic elements of the school are available, we do not yet have a robust set of instruments that provide teachers and leaders an understanding of their progress in providing a school environment permeated by Catholic culture and faith. To consider how students in Catholic schools perceive the Catholicity of their school and how these perceptions vary among different student groups, we developed, piloted, and validated the Sense of School Catholic Identity Survey (SSCI). This 20-item survey measures Grade 5 through 8 students' perceptions of their Catholic school as personal and invitational, sacramental, unitive, and eucharistic. Findings from the pilot study suggest that responses differ by student grade level, religious tradition, and gender. Future testing of the scale will examine school-level differences in Catholic identity.

Keywords: Catholic identity, survey, validation, measurement, student perceptions

Catholic schools are an essential ministry of the Catholic Church ([Congregation for Catholic Education, 2022](#)) charged with the mission to form students in the faith and provide them with an excellent academic education ([Canon Law, 1983](#); United States Conference of Catholic Bishops [USCCB], 2005). Although how individual Catholic schools live out their mission likely varies from school to school, the ideal integrates the two seamlessly, with an academic curriculum

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infused with faith in a community environment informed by faith (Groome, 1996; Heft, 2004; Joseph, 2004).

Within the larger educational field, school-level accountability has increased steadily over the last two decades (Mittleman & Jennings, 2018), and schools are encouraged to use data to inform school-wide decisions and improvement (Goldring & Berends, 2008). Although Catholic schools do not face the same level of accountability as public schools, they do face the need to demonstrate to the parish and diocesan community that they are fulfilling their mission. The use of student- and school-level data can provide evidence to consider what Catholic schools are doing well and where they may need additional support. Currently, standardized achievement and interim testing can provide some measure of how well the school is doing from an academic perspective, but Catholic schools still struggle to understand their progress on their religious mission.

Assessing the lived experience of religious mission in Catholic schools is important for several reasons. First, as a central ministry of the Catholic Church, faith formation is of primary importance—particularly for school leaders and teachers charged with providing an environment conducive to academic and spiritual growth as well as integrating faith into the academic curriculum (Congregation for Catholic Education [CCE], 1977, 1988). Second, research suggests that transmission of the faith continues to be important to religious parents, including Catholic parents (Smith et al., 2019), and that one of the main reasons parents choose Catholic schools is because of the religious instruction and environment that they provide (Cohen-Zada & Sander, 2008; Lockwood, 2014; Lopez Arends, 2021). In addition, recent demographic data on Catholic schools show that more non-Catholic students and families are choosing Catholic schools (Smith & Huber, 2022), making it increasingly important to understand how students of other faith traditions are experiencing the Catholic nature of the community to ensure that all students feel welcome and included.

While measuring academic outcomes in schools is fairly straightforward, measuring religious and spiritual growth in students can be difficult. Although quantitative measures of Church attendance and frequency of prayer offer some perspective on the personal religiosity of children and families, the faith formation that Catholic schools seek to provide goes beyond discrete checklists of practices. Similarly, tests of religious knowledge provide an assessment of what students have learned about their faith, but this information is more academic and speaks less to the entirety of the school environment. Other resources for Catholic schools focus on the décor, rituals, and symbols within the school. These tools get closer to defining the Catholic cultural elements within the school, but to grasp the extent of a school's Catholicity, we need to understand how students experience the Catholic nature of the school in its entirety. Measures that target student perceptions can help school leaders and teachers understand what aspects of their Catholic identity have an impact on students and where educators should focus further

attention. Finally, as Catholic schools begin to use school- and student-level data to monitor and track academic progress and operational health (Dallavis, [this issue](#)), Catholic school leaders have also expressed the desire to better assess and improve the religious environment and faith formation in their schools (Dallavis & Ponisciak, 2022).

To this end, this study considered the following two research questions: (1) How do middle-grade students perceive the Catholic identity of the Catholic school environment? (2) To what extent do these perceptions vary by different student characteristics, namely academic grades, student grade level, race/ethnicity, religion, and gender? To explore these questions and to provide additional metrics for use in Catholic schools and dioceses, we developed, piloted, and validated a set of student survey measures—the Sense of School Catholic Identity (SSCI)—drawing on writings related to the philosophy and mission of Catholic schools. In a pilot study using these measures, we found that student perception varies by grade level, religious tradition, and (in some cases) academic success and gender. Future use of the survey will investigate school-level aggregate differences in the perceptions of Catholic identity, with the goal of developing school-level metrics.

Review of Relevant Literature

Catholic School Identity

For several decades, the presence of vowed religious sisters, brothers, and priests in U.S. Catholic schools—individuals who had completed extensive religious formation within their respective orders or dioceses—ensured the Catholic identity of schools, a characteristic that went largely unexamined by Catholic school leaders, teachers, and families. Over the last 100 years, the composition of the national Catholic school teaching force has changed from 92% vowed religious men and women in 1920 to 97% lay men and women in 2022 (Smith & Huber, 2022). With the transition to a primarily lay teaching force and school leadership, Catholic school leaders and teachers have had to become intentional regarding what makes their school Catholic. The broader Catholic community can no longer take for granted that all of the adults in the building have the same level of knowledge and practice of the Catholic faith to share with students and to inform the culture of the school environment (Convey, 2012; Heft, 2004).

Despite a concerted focus, Catholic identity remains an elusive construct that researchers and practitioners struggle to conceptualize (Baker, 2019; Convey, 2012; Fuller & Johnson, 2013; Nuzzi, 2001). Catholic educators agree that Catholic identity is at the heart of a school and can be felt and experienced, even if it is not easily articulated (Schuttloffel, 2012). Convey (2012) surveyed over 3,000 Catholic school educators to explore their understanding of the concept of Catholic identity. In the survey data, school leaders and teachers identified the school's faith community and culture, religious content and elements, as well as student participation in prayer, liturgy, and service as most central to the Catholic identity of the school. Other Catholic writers

and educators discuss the Catholic nature of schools as more than its elements, with faith permeating every aspect of the Catholic school education and environment (Groome, 1996; Heft, 2004; Joseph, 2004).

Convey (2012) has conceptualized Catholic identity as made up of content and culture for which school leaders, teachers, clergy, and parents are responsible. Within content is the religion program and other curriculum, and culture is comprised of the school faith community, service to others, and rituals—including liturgy, prayer, and the sacraments. Beyond structure, however, documents from the Vatican (see CCE, 1977, 1982, 1988, 1997, 2022; Vatican II, 1965) and the U.S. Bishops (see National Conference of Catholic Bishops [NCCB], 1972/2012; USCCB, 2005/2012) suggest several common themes that should inform a Catholic school identity. These include a focus on the holistic formation of the individual that recognizes their human dignity; a robust faith community characterized by the norms and values of the Gospel; cooperation between leaders, teachers, clergy, and parents in the educational endeavor; and the integration of faith and reason, with faith infusing all elements of the school environment and curriculum.

Measuring Catholic School Effectiveness

Academic Achievement

Schools use a number of different instruments to measure academic progress. In Catholic schools, these include annual standardized achievement tests (e.g., the Iowa Test of Basic Skills or Terra Nova) and an increasing number of interim assessments taken two to three times per year (e.g., NWEA MAP Growth, Renaissance Star, and ACT Aspire). In some states, such as Indiana, students in Catholic schools also take the state standardized achievement test. A subset of Catholic schools participates in the National Assessment of Educational Progress (NAEP) and other national studies conducted by the National Center for Education Statistics (NCES). Although the availability of these instruments does not ensure comparable data among Catholic schools or between Catholic and other public, charter, and private schools (Dallavis, [this issue](#)), these standardized assessments do provide Catholic school educators some measure of how well Catholic schools are preparing their students academically. The assessment of a school's Catholic identity, however, is more difficult to measure in its totality.

Religious Knowledge

The immediate parallel to student academic test scores would be metrics that seek to assess student outcomes related to faith, including their knowledge of the faith. One such tool is the National Catholic Educational Association's (NCEA) Information for Growth (IFG) Assessment for Child/Youth Religious Education (ACRE), which is "a tool to help Catholic schools and parishes assess how well their religious education programs are forming committed Christian disciples" (NCEA, 2022). A helpful measure of religious content knowledge, this assessment

speaks to the quality of the religious courses and curriculum within the school, a primary objective that may not encompass student understandings concerning the full nature of their school's Catholic identity. Although this instrument also includes survey measures on attitudes, practices, and beliefs, it is a proprietary model of assessment that may not be available to all Catholic schools.

Religiosity

Other student-level metrics seek to quantify how religious individuals are in practice (e.g., how often they pray, attend religious services, etc.), measuring an individual's religious experience using a set of individual practices or devotions that may be subject to overreporting ([Christiano et al., 2008](#)). Several survey instruments currently exist to assess spirituality, religiosity, and religious identity (see [Austin et al. \[2018\]](#) for a scoping review of available measures) that could be used over time to consider the school's effect on individuals. However, children and adolescents' religiosity is greatly informed and influenced by their parents' level of religiosity ([Pearce & Thornton, 2007](#)), and parents and teens report sharing similar religious beliefs and service attendance ([Pew Research Center, 2020](#)). As parents who are more religious are more likely to choose a religious school for their children ([Cohen-Zada, 2006](#); [Greeley & Rossi, 1966](#); [Sander, 2005](#)), it can be difficult to separate out the school's effect from the family's effect on a student's own religiosity. In addition, some research suggests that family upbringing has a greater influence on children's religiosity than religious schooling ([Smith et al., 2014](#)). Thus, when considering the quality of the Catholic identity of the school environment, we are more interested in measuring students' experiences in their school rather than their levels of religiousness.

School Culture and Climate

In choosing to focus more on students' experiences in the Catholic school, we considered established school culture and climate measures within general education research. A large, secular literature demonstrates positive correlations between a strong school climate and student academic achievement. The U.S. Department of Education has placed a high priority on these measures, as the [Every Student Succeeds Act \(2015\)](#) requires federally funded schools to collect and report data related to school climate. Researchers have operationalized school climate to include safe and supportive environments and positive school cultures, and a plethora of instruments are available to measure school climate variables such as school connectedness, cultural competence, personal safety, trust in teachers, and many more ([National Center on Safe and Supportive Learning Environments, 2017](#)). While Catholic schools certainly care about all of these outcomes, and some school climate measures have been validated in Catholic school contexts ([Ponisciak, 2021](#); [Ponisciak & Kowalski, 2019](#)), these climate measures are not sufficient to encompass the uniquely Catholic culture present in Catholic schools. Research indicates that the school community experiences school climate and academic emphasis differently in religious schools compared to

public schools (Sikkink, 2012), which suggests that we need additional measures specific to the Catholic school environment to fully understand its Catholic identity.

Catholic School Characteristics

The National Standards and Benchmarks for Effective Catholic Elementary and Secondary Schools (NSBECS) articulate nine defining characteristics of Catholic schools, including being centered on Jesus Christ, contributing to evangelization, being steeped in a Catholic worldview, and being shaped by communion and community (Ozar & Weitzel-O'Neill, 2012; Ozar et al., 2019). The defining characteristics serve as the foundation for 13 standards and 70 benchmarks across 4 domains, 1 of which is entitled Mission and Catholic Identity (Ozar & Weitzel-O'Neill, 2012). The NSBECS effort has included the development of rubrics and surveys that can be used to measure alignment with the standards and benchmarks, such as the Defining Characteristics Survey. These are useful and well-designed tools that allow school leaders and teachers to assess their school's alignment with national standards related to Catholic identity. However, some items could be considered as an inventory of school practices rather than a measure of how students perceive Catholic identity enacted in the school (e.g., "There are crucifixes and other Catholic symbols in the school"). Beyond simple recognition of the tangible Catholic elements in the school, we are interested in how students experience the Catholic ethos or essence of the school. We believe such a measure would be distinct from but complementary to the instruments available through the NSBECS.

Student Sense of Catholic Identity Survey

Taken together, each of the aforementioned tools have strengths for measuring specific aspects of the Catholic identity of the school. To approach more closely a measure of the school's Catholic identity among multiple dimensions, we examined student perceptions. Students are the primary consumers of a school's expression of its Catholic identity. Although teachers and leaders experience the culture and community, they also play an integral role in shaping the school's Catholic identity. Students experience the Catholicity of the school in its entirety, so the survey instrument is designed for them.

The SSCI defines Catholic identity based on the written guidance of the Vatican (CCE, 1977, 1988, 1997, 2022) and U.S. Bishops (NCCB, 1972/2012; USCCB, 2005/2012), as well as a framework of the constituent elements of a Catholic education described in four domains: personal and invitational, sacramental, eucharistic, and unitive (DelFra et al., 2018). These writings express both the philosophy and the ideals on which Catholic schools are established. In this section, we describe each of the four identified domains translated to the student experience and share examples of the questions on the scale. The full set of questions is available in the Appendix.

Personal and Invitational

The *personal and invitational* dimension of Catholic education encompasses the extent to which a student senses a Catholic school and/or classroom as welcoming the individual student into a living relationship with Christ, and in doing so engaging the student in heart and mind. Questions in this domain seek to understand both the personal care of the teachers and leaders in the school (e.g., “Adults at my school care about me as a child of God”), as well as the school as a welcoming and invitational space (e.g., “My teachers invite me to build my relationship with God”).

Sacramental

The *sacramental* dimension refers to the extent to which students sense God in all things, such as the people, organization, activities, routines, and procedures of their school. This domain asks students to reflect on the adults in the building (e.g., “I can see God in the actions of the adults in my school”) as well as aspects of the school day (“There are daily events at my school that remind me of God’s presence”).

Eucharistic

The *eucharistic* dimension includes the extent to which students sense their school as a faith community dedicated to the common good and the dignity of the human person. These questions focus on students’ perception of the school community (e.g., “People in this school help each other”) and their preparation for helping others (e.g., “My school prepares me to help people in need.”)

Unitive

The *unitive* dimension encompasses students’ sense that faith and religion are integrated throughout their academic education and the school is dedicated to developing the whole person. Questions in this domain ask about their understanding of the relationship between academics and faith in the school (e.g., “In my school, academics and faith are important”; “At school, I am taught to use my heart and my mind”).

Catholic School and Student Context

Catholic schools enroll close to 1.7 million students in nearly 6,000 schools, and recently experienced an increase in enrollment for the first time in several decades (Smith & Huber, 2022). The student composition in today’s Catholic schools is both more and less diverse than previous generations of Catholic school students. From the perspective of religious tradition, in 1970, only 3% of students were non-Catholic whereas currently (in 2022), non-Catholic students comprise 20% of the Catholic school population (Smith & Huber, 2022). Over time, Catholic schools have gone from serving students from all social classes to serving fewer students at the middle of the socioeconomic distribution, likely due to rising tuition costs for Catholic schools and subsequent

school closures (Murnane et al., 2018). In some dioceses, state-funded parental choice options such as tax-credit scholarships and vouchers provide additional means for low-income students to attend Catholic schools. Currently, 20% of Catholic schools in the United States participate in parental choice programs and just over 7% of Catholic school students use these funds to attend Catholic schools. When considering racial diversity, roughly 22% of Catholic school students identify racially as other than White, an increase from just over 10% in 1970, and nearly 19% identify as Latinx (Smith & Huber, 2022).

Understanding how different student groups experience Catholic identity is important information that schools can use to assess their current school culture. As Catholic schools attempt to balance an atmosphere of inclusivity with the more overtly religious aspects of the school, such as Mass and religion courses, non-Catholic student perspectives can provide important insight. Similarly, understanding differences by student grade level and level of achievement as well as gender and race/ethnicity can help educators consider what aspects of the school's Catholic identity may need attention. At the school level, low aggregate scores in one or more domains may also provide important information for reflection and change.

Methods

We generated an initial list of 62 items based on document analysis of the guiding framework text (DelFra et al., 2018). Through internal discussions, redundant or potentially confusing items were eliminated, leading to a list of 30 items. These items were then assessed for construct validity in two ways. First, we conducted an expert review, consisting of a convening of faculty in a Catholic education program. The instrument was presented and faculty engaged in discussion of the items, at some points suggesting rewording or clarification. As a result of this review, six items were deleted, and several others had slight changes made to the wording.

Next, we conducted cognitive interviews (Willis, 2004) with 10 students at a Catholic school in the local area willing to partner with the researchers. Students were selected based on teacher recommendations for students who would be able to articulate their thought processes while taking the survey. We used a concurrent verbal probing method (Willis, 2004) in which a researcher asked questions like "What does this mean to you?" and "Can you explain your thinking?" as each student read the survey items aloud. This process was designed to confirm that students accurately comprehended the questions and that the items were measuring what was intended. Students in the pilot study included one student in each of second, third, fifth and seventh grades, and two students in each of Grades 4, 6, and 8. The cognitive interviews lasted between 11 and 25 minutes; these conversations were audio recorded and transcribed for analysis.

We first reviewed the cognitive interview transcripts by individual student to determine overall levels of comprehension. The data from students in Grades 2 through 4 had much lower overall

comprehension than older students, leading us to eliminate those responses and decide that the survey should be limited to Grades 5 and above. Next, we compiled the remaining transcripts together by item and coded each item as keep, revise, or delete based on whether or not students seemed to comprehend the item as intended. After this analysis, 16 items were deemed acceptable as written, 4 items were deleted, and 4 items were slightly revised. For example, an original item read, “My school encourages me to be part of the Church.” Cognitive interviews revealed that students associated the word “Church” with the physical building, thus interpreting this question to narrowly refer to serving as an altar server or otherwise being physically present in the building. The question was revised to “My school encourages me to be part of the Catholic community” to better reflect the invitational call to belong to the universal Church. The final revised instrument consisted of 20 items, included in the Appendix.

We then piloted the survey in the Diocese of Fort Wayne–South Bend. Principals of all schools were sent an email invitation to participate in the pilot study. Three schools volunteered to participate in spring 2021, and two in fall 2021. Four of the five schools had an academic performance in 2019 that was better than the state average, while the fifth was above average in reading and below average in math ([Indiana Department of Education, n.d.](#)). Schools ranged in size from 63 to 422 students in 2020–21. Four of the five schools had student populations that were 30 to 40% economically disadvantaged, while the remaining school had fewer than 5% of such students. One school had 15% of its population denoted as English Language Learners, while the other 4 each had fewer than 5%, and each school had between 6 and 10% of its students in special education programs.

Participating schools were provided with a letter to send home to parents, and then classroom teachers administered the survey through Qualtrics to students with parental consent. Teachers were instructed to read each survey question aloud as students responded on their devices. Students were promised anonymity in order to achieve the most accurate responses.

Schools participated at varying rates, with 184, 63, 41, 16, and 5 students, so we cannot yet determine the extent to which the survey is a good measure of differences between schools; however, we expect to examine that aspect of measurement in the next round of analyses. Our initial analysis was therefore focused on measuring differences between students.

Results

We used Rasch analysis to create aggregate measures of Catholic identity in each of the five domains described earlier. Rasch analysis is a method of combining survey, assessment, or other data that is flexible to the possibility of missing data, and places items (“difficulty”) and respondents (“agreeability”) on the same scale, represented by the following equation:

$$\log\left(\frac{p_{ijk}}{p_{ij(k-1)}}\right) = B_i - D_{jk}$$

where

p_{ijk} = probability of individual i responding to item j in category k

$p_{ij(k-1)}$ = probability of individual i responding to item j in category $k-1$

B_i = estimated agreeability of individual i

D_{jk} = difficulty of responding to item j in category k compared to $k-1$.

This is known as the “partial credit” model (Masters, 1982), as the D_{jk} term allows for differences in categories between survey items.

We implemented the Rasch model so that we do not have to assume that the difference between “agree” and “strongly agree” is the same as the difference between “neutral” and “disagree” (for example)—so that we measure the underlying “latent” agreeability of the person and difficulty of the item. We want to combine items to produce a scale that is reliable, that allows us to measure meaningful differences between respondents, between schools, and between other groupings of respondents. The Rasch model generates a measure of reliability, the degree to which the ordering of the measures is reproducible; it is a ratio of the true variance to the observed variance. An accurate measure of changes over time requires a stable measure of item difficulty, which the Rasch model can provide. The Rasch model also provides an indication of the relative precision of each measure, in the form of a standard error.

Very few students responded “strongly disagree” and only slightly more responded “disagree.” We therefore combined “strongly disagree” and “disagree” for all items. For most items, we also had to combine “strongly disagree” and “disagree” with “neutral” so that we did not estimate disordered or poorly measured category cutoffs, due to low frequencies of response in some categories (Linacre, 2002). Using the TAM package in R software (Robitzch et al., 2018), we combined survey responses into measures for each student. We then used the SIRT package in R (Robitzch et al., 2018) to examine the results of the Rasch analyses.

As described above, we theorized that our items would fit into four measures: personal and invitational, sacramental, eucharistic, and unitive. We included items from a fifth measure, connectedness, that was previously validated and used in several school districts and dioceses (Goodenow, 1993; University of Chicago, 2018), in order to examine the consistency of the new measures with an existing measure of school climate and culture.

When we combine items into measures as described theoretically, we find that one measure does not fit well, as shown in Table 1. The fit statistic that we use is a mean-squared residual,

measuring the ratio of observed to expected variance in the survey items, so values above 1 indicate more than expected variation, while those below 1 indicate less than expected variation (Wright and Linacre, 1994). Values greater than one present more of a concern than those less than one, although values far below one—especially those below 0.5—indicate items that do not provide additional information, and are not helpful for measurement. Measures with fit that we labeled as “poor” had values of 0.5 or less for the fit statistic for all or most of their items.

Table 1*Model Fit for Initial Measures*

Measure	Reliability	Fit
Personal and invitational (6 items)	0.76	Acceptable
Sacramental (4 items)	0.63	Acceptable
Eucharistic (7 items)	0.70	Acceptable
Unitive (3 items)	0.38	Poor
Connectedness (5 items)	0.73	Acceptable

Due to the poor fit and unreliability of the “unitive” measure, we sought to keep these items, but include them in other measures if appropriate. We therefore examined the correlations among these measures. We found that the highest correlation of “unitive” was with “eucharistic” (0.65). However, a measure that combined “unitive” with “eucharistic” also suffered from poor model fit. We therefore combined with “unitive” with “sacramental,” as these measures had a correlation of 0.58. The resulting combined measures improved reliability, and acceptable model fit. The combined “unitive + sacramental” measure had a reliability of 0.71. This combination is consistent with the theoretical framework, as well, as the measures cover similar rhetorical ground. Our resulting final measures are shown in Table 2. While these reliabilities are not objectively high, this is likely due to the relatively small size of the sample.

Table 2*Reliability of Final Measures*

Measure	Reliability
Personal and invitational (6 items)	0.76
Unitive + sacramental (7 items)	0.71
Eucharistic (7 items)	0.70
Connectedness (5 items)	0.73

The resulting survey measures were positively related to each other, but not perfectly—suggesting that they are measuring somewhat different aspects of Catholic identity. Each of the pairwise correlations among the three Catholic identity measures was at least 0.72, while each of the Catholic identity measures had a correlation of at least 0.56 with connectedness, as shown in [Table 3](#).

Table 3*Correlations among Measures*

Correlation	Eucharistic	Personal/Invitational	Sacramental/Unitive
Connectedness	0.58	0.56	0.58
Eucharistic		0.76	0.72
Personal/Invitational			0.74

We then examined differences in these measures by student grades, school opening status, grade level, race/ethnicity, religion, and gender. Nearly all students reported their school was primarily open in person, so we were unable to make useful comparisons of measures across school opening status. We used *t*-tests for dichotomous variables, and ANOVA (followed by paired *t*-tests when needed) for polytomous variables. We found significant associations between student grade level and each survey measure. Students in eighth grade reported the lowest levels of all measures (including connectedness), while students in fifth grade reported the highest levels. Differences between fifth graders and eighth graders were at least 0.88 for each of the new measures, as shown in [Table 4](#); because these are measured in standard deviation units, these differences are quite large. There was no association between student race/ethnicity and the survey measures. The association between student grades and the eucharistic measure was significant; students who reported that their grades were Bs and Cs, or Cs and lower (who are combined into “Bs and lower” due to the small number of students reporting Cs and lower), reported lower levels of the eucharistic measure than students who reported their grades as “Mostly As” or “As and Bs.” Non-Catholic students reported significantly lower levels of all measures than Catholic students. The only significant association between a survey measure and schools attended was for the eucharistic measure; this association was driven by one large difference of more than half a standard deviation between two schools. Differences between male and female students were minimal, but the nine students who did not report a gender indicated lower levels of all measures than students who did report their gender, and the eucharistic measure for these students was significantly lower than for those who reported a gender.

Table 4*Differences Between Groups, in Standard Deviation Units (Standard Errors in Parentheses)*

Variable	Levels	Personal/ Invitational	Sacramental/ Unitive	Eucharistic	Connectedness
Grade Level	7–8	0.63 (0.15)*	0.55 (0.16)*	0.61 (0.16)*	0.41 (0.16)
	6–8	0.56 (0.16)*	0.56 (0.16)*	0.42 (0.17)	0.10 (0.17)
	6–7	0.06 (0.15)	0.01 (0.16)	0.18 (0.15)	0.31 (0.15)
	5–8	1.18 (0.15)*	0.88 (0.16)*	1.09 (0.15)*	0.61 (0.17)*
	5–7	0.55 (0.13)*	0.33 (0.15)	0.48 (0.13)*	0.20 (0.16)
	5–6	0.62 (0.15)*	0.32 (0.16)	0.67 (0.15)*	0.51 (0.16)*
Religion	Catholic-Not Catholic	0.41 (0.17)*	0.45 (0.18)*	0.44 (0.18)*	0.41 (0.17)*
Grades	As vs. As and Bs	NA	NA	0.05 (0.13)	NA
	As vs. Bs and lower	NA	NA	0.46 (0.18)*	NA
	As and Bs vs. Bs and lower	NA	NA	0.41 (0.17)*	NA
Schools	1 vs. 2	NA	NA	0.52 (0.16)*	NA
Gender	Has gender–No gender	0.50 (0.31)	0.55 (0.29)	0.57 (0.24)*	0.25 (0.18)

* indicates significance at $p=0.05$ for single comparisons, or $p=0.05/n$ for multiple comparisons (e.g., grade level)

Discussion

In an increasingly competitive educational marketplace, Catholic schools seek to demonstrate their value to potential families ([Foundations and Donors Interested in Catholic Activities, 2018](#)). While many Catholic schools are distinguished by academic excellence, which can be quantified via student achievement outcomes, the Catholic identity of the school may be just as important to highlight. Existing tools and surveys measure specific aspects of Catholic identity in schools, but a publicly available, validated measure of how Catholic identity is experienced by students has been lacking. We sought to create a measure of student perceptions of a school's Catholic identity among multiple dimensions. We successfully piloted and validated a survey covering four domains of Catholic identity, and found that students' responses differed across domains and by student grade level, religion, and gender.

This initial phase of analysis has yielded reliable individual measures in a small sample of Catholic schools. However, due to the small sample, we were unable to determine whether the school-level aggregate measures can reliably distinguish between Catholic schools. To address this issue, and others presented by the small sample, we hope to examine survey results from a larger number of Catholic schools in future years. In a larger sample, survey measures are likely to be more precise; school-level results should be more reliable; and it would be possible to analyze a

wider range of student outcomes in a more comprehensive manner. When we are able to reach more schools, we will be able to examine the extent to which the survey items fit in the same way in different types of schools (whether by region, level of student achievement, student demographics, etc.); how these measures change over time; and potentially how these survey measures are related to student and school outcomes (pending data availability). We will also be able to further explore the differences between student groups. Of particular interest will be differences between Catholic and non-Catholic students. For instance, the framework—based on the evangelizing mission of Catholic schools—assumes that all students should perceive the school as personal and invitational, regardless of their religion. If there are significant differences between the way that Catholic and non-Catholic students perceive the invitation to be part of the Catholic community, for example, schools may want to refine their messaging to the school community, to ensure that all students are consistently told that they are invited to belong.

Catholic schools and programs partnering with Catholic schools, such as through universities or foundations, may wish to use the SSCI as part of a comprehensive strategy to assess school effectiveness. Those already using the NSBECS may want to supplement the Defining Characteristics Survey with the SSCI to gain a more robust understanding of student perceptions related to their experience of a school's Catholic identity. Through determining how students experience the Catholic identity of the school, schools and programs can identify specific areas of strength and needs for improvement to create targeted initiatives and interventions. For instance, a school that students rate low in the Personal and Invitational domain may consider increasing their emphasis on student–teacher relationships or adding professional development opportunities related to adult faith formation to enhance adult faith modeling, aligned with the results of the survey.

In the near future, the SSCI can be used to compare individual schools and to assess changes over time when used longitudinally. With more data, researchers can develop additional tools and resources, such as a guide for interpreting results. Catholic schools exist in order to form children in the faith, and this formation is strengthened when students perceive their school as an environment permeated by Catholic culture and faith. The development and validation of the SSCI represents a step toward helping Catholic schools better demonstrate their success in achieving their common mission.

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Appendix

SSCI Survey Items

Personal and invitational school (6 items)	<p>Adults at my school care about me as a child of God.</p> <p>Adults at my school care about all students as children of God.</p> <p>My teachers invite me to learn.</p> <p>My teachers invite me to build my relationship with God.</p> <p>My school encourages me to be part of the Catholic community.</p> <p>Adults at my school model how to live out their faith.</p>
<hr/>	
Eucharistic school (7 items)	<p>My school teaches that we are called to use our gifts and talents.</p> <p>In my school, we are taught that we are all children of God.</p> <p>My school teaches me that serving others is important to being part of a Catholic community.</p> <p>Our school works together to help other people in our local community.</p> <p>Every single person in my school is important to the school community.</p> <p>People in this school help each other.</p> <p>My school prepares me to help people in need.</p>
<hr/>	
Unitive and sacramental school (7 items)	<p>My school teaches me that God is present everywhere.</p> <p>I can see God in the actions of the adults at my school.</p> <p>There are daily events at my school that remind me of God's presence.</p> <p>I feel God's presence during Mass.</p> <p>I hear about God in my classes outside of Religion.</p> <p>In my school, academics and faith are both important.</p> <p>At school, I am taught to use both my heart and my mind.</p>
