



Which characteristics do religious school administrators value in teachers? Experimental evidence from the global Christian school sector

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Abstract

Research shows that teacher quality is the most important school-related input correlated with student success. In religious private schools, teachers do not merely influence academic outcomes; they may also play a role in spiritual formation. Religious school administrators report that their faith informs their hiring decisions. However, little research has examined the ways that religious school administrators choose individuals to place in teaching positions. In this study, we use conjoint analysis to experimentally examine the hiring preferences of 170 Christian school administrators. We find that having modest (compared to below-average) academic achievement and qualifications or extensive (compared to limited) experience each increases a teacher candidate's likelihood of being hired by 26 percentage points. Having strong (compared to modest) academics, being a graduate of a Christian (compared to secular) postsecondary institution, or being a graduate of the administrator's K-12 school (compared to a different school) produces smaller effects.

Keywords Christian schools · Administration · Teacher quality · Teacher hiring · Religious formation · Conjoint experiment

1 Introduction

Teachers exert significant influence over their students. During the course of K-12 schooling, the typical family entrusts their child to a school for at least 16,000 hours. Research has shown that teacher quality is one of the most important school-related inputs for student success, both in terms of short-term outcomes such as test scores (Rivkin et al., 2005; Rockoff, 2004; Whitehurst et al., 2013) and behavior (Jackson, 2018) as well as long-term outcomes such as college enrollment, teenage pregnancy, and adult salaries and wealth (Chetty et al., 2014). Public school administrators may indirectly influence student

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outcomes by hiring effective teachers (Grissom & Bartanen, 2019a, 2019b). However, research suggests that teacher hiring involves weighing trade-offs, as different teacher characteristics may signal different strengths (Bruno & Strunk, 2019) and administrators take many contextual factors into consideration when deciding whether a prospective teacher is a good fit for the position (Engel & Cannata, 2015; Harris et al., 2010; Ingle et al., 2011). These tradeoffs may explain why, even when given the opportunity, administrators do not always hire the teachers who will raise their students' academic test scores the most (Bruno & Strunk, 2019).

In religious private schools, teachers not only influence academic outcomes but may also play a role in the spiritual formation of students (Johnson & Lee, 2023a, 2023b; Lee et al., 2020; Revell, 2008; Sikkink, 2010, 2012). Therefore, religious private school administrators likely consider a prospective teacher's capacity to provide quality spiritual formation in the hiring process, as providing spiritual formation to students may be a key part of their schools' missions (Revell, 2008; Swaner et al., 2019). Because teacher hiring decisions in religious schools likely affect students academically, socioemotionally, and spiritually, it is important to understand these decisions and their implications.

Although a significant body of research has examined public school administrators' dispositions, thought processes, and preferences in terms of hiring teachers (e.g., Engel & Cannata, 2015; Giersch & Dong, 2018; Harris et al., 2010; Ingle et al., 2011), the nascent literature on these topics in religious schools is largely descriptive. Tamir (2021) found some qualitative evidence that both Catholic and Jewish private school administrators give strong consideration not only to prospective teachers' professional qualifications but also their personal character. On surveys, most Christian school administrators and teachers report that their school community's Christian faith has a strong influence on personnel decisions (Johnson & Lee, 2023a, 2023b; Lee et al., 2020), though research on what that finding specifically and practically means has yet to be conducted.

Although Christian schools report that their faith affects their personnel decisions, instructional practices in many Christian schools have become similar to those of public or secular private schools (Cooling et al., 2016; Smith & Smith, 2011; Smith et al., 2021). For example, even though Christian schools are not required to hire certified teachers with degrees in education—and research disputes the claim that teacher certification is predictive of teacher quality (Chingos & Peterson, 2011; Croninger et al., 2007; Goldhaber, 2019; Harris & Sass, 2011; Pelayo & Brewer, 2010)—85 percent of Christian school teachers in the United States are certified to teach (Johnson & Lee, 2023b). Forty-five percent of Christian school teachers are certified in their state,¹ and nearly half majored in education for their undergraduate degree (Johnson & Lee, 2023b).

In this study, we use experimental data from 170 Christian school administrators of Association of Christian Schools International (ACSI) schools to better understand their preferences for hiring teachers. All else equal, what effect do academic qualifications, schooling experiences, and work experience of teacher candidates have on their likelihood of being hired by Christian school administrators to fill teaching positions? In the following sections, we review relevant literature and establish a theoretical framework for our experiment, then describe the experiment design and data, explicate our results, discuss these results, and draw conclusions.

¹ Sixty percent of teachers in this sample reported holding certification through ACSI, which requires significant coursework through a postsecondary teacher preparation program.

2 Literature review

2.1 What makes a good teacher?

The body of quantitative literature on teacher quality in the public school sector has grown since 1966 when James Coleman's team released their "Equality of Education Opportunity" study (colloquially referred to as the "Coleman Report"). Coleman (1966) found that teachers are the school-related input most strongly correlated with student learning, especially for disadvantaged students. Since then, Rivkin et al. (2005), Rockoff (2004), and Whitehurst et al. (2013) have confirmed that teacher quality does indeed significantly affect students' test scores, and Jackson (2018) found teacher quality affects students' in-school behavior. Chetty et al. (2014) also found teacher quality influences long-term outcomes such as college enrollment, teen pregnancy, and adult salaries and wealth.

Naturally, researchers next asked the question, "What makes a good teacher good?" Taken as a whole, the results of these studies indicate that observable teacher characteristics inconsistently and weakly explain any variation in teacher quality. Gaining experience appears to increase student gains when an individual begins teaching, although these gains seem to plateau a few years into a teacher's career (Boyd et al., 2006; Buddin & Zamarro, 2009; Pelayo & Brewer, 2010; Rivkin et al., 2005; Staiger & Rockoff, 2010). Additionally, professional knowledge—having taken specific coursework or performing well on a teacher licensure exam—seems to have a relationship with student outcomes in some contexts, particularly in math and science (Boyd et al., 2007; Clotfelter et al., 2006; Croninger et al., 2007; Harris & Sass, 2011; Pelayo & Brewer, 2010; Phillips, 2010; Shuls & Trivitt, 2015a, 2015b). However, the evidence does not clearly favor teachers having a degree in education, an advanced degree, or certification (Boyd et al., 2007; Croninger et al., 2007; Goldhaber, 2019; Harris & Sass, 2011; Pelayo & Brewer, 2010; Rivkin et al., 2005).

2.2 What makes a good Christian school teacher?

Christian schools are not simply designed to replicate secular school outcomes in a faith-based setting. As Swaner et al. (2019) explain,

"Christian schools are concerned with academic outcomes, but they are also concerned with the development of the whole student—as one who is made in God's image, created to do His good works...and called to grow as His disciple. This necessitates a focus on holistic learning that includes students' spiritual, ethical, emotional, and physical development, to name but a few. Failure to examine student outcomes in multiple domains would result in failure to capture the fullest picture of flourishing in the Christian school context"

(p. 7). This suggests that a concept of (as well as any measurement of) Christian school teacher quality should be multifaceted, attempting to capture this "fullest picture of flourishing" (p. 7).

While they share some overlapping goals, Christian education, relative to secular education found in public and nonreligious private schools, has a different mission, and thus different priorities and desired outcomes. Maitanmi (2019) explains that for the student being raised up in the Christian faith, the Christian school acts as one of the three "legs" of a stool—the home, the Church, and the Christian school—all of which contribute to

the student's discipleship. As one of the main inputs into carrying out the unique mission of Christian schools, Christian school teachers' theological views, personal faith, and religious practices affect their perspectives regarding the content they teach. For example, Mangahas (2017) found that biology teachers' Christian beliefs affected the way they taught students about evolutionary theory. Cheng (2019) considered the educational emphases of science teachers in different school sectors and found that teachers in Evangelical Protestant schools emphasized improving scientific reasoning and analytic skills more than their counterparts in public schools and further found that teachers in Evangelical Protestant schools emphasized practical implications of their discipline less than their counterparts in all other sectors.

Few studies have examined teacher quality in Christian schools, especially using quantitative methods. Christian schools employ a wide variety of metrics and assessments to track student progress, which can be challenging to compare. However, Clagg (2011) found that the share of Christian school teachers having graduate degrees was predictive of the school producing a National Merit Scholarship semifinalist. Moore (2014) examined which characteristics of teachers were most predictive of being intentional in student spiritual formation. However, the characteristics she found to be predictive are not always easily identifiable on a resume or in the hiring process: "exhibiting a Christ-like attitude," "creating a classroom climate that promotes spiritual growth," and "being intentional in the spiritual disciplines" (p. 255). Meanwhile, Fyock (2008) found that high school seniors' scores on a Christian worldview survey converged toward their teachers' scores over time. Since Christian school teachers not only pass on knowledge and skills from a faith-informed perspective but also create disciples of Jesus Christ, hiring academically and spiritually qualified teachers in Christian schools is crucial to achieving the goals of Christian schooling.

In the absence of literature on Christian school teacher quality and under the assumption that Christian school administrators understand what qualities of teachers are associated with desirable spiritual and academic outcomes, the premia school administrators place on specific teacher characteristics could serve as proxies for the efficacy (as pertains to academic and spiritual formation) of teachers with those characteristics. However, if administrators are not formally evaluating teachers based on their students' academic and spiritual outcomes, they may hold misinformed beliefs about which teacher characteristics are most important for students' flourishing. It is important to examine Christian school administrators' preferences to better understand their perceptions of what teacher quality in Christian schools looks like.

2.3 Do school administrators choose good teachers?

Prior research has also examined the ways in which administrators hire teachers. Harris et al. (2010), as did Ingle et al. (2011), found that public school administrators demonstrated a high valuation of teachers' care for students, pedagogical skills, and content knowledge. However, Bruno and Strunk (2019) found that administrators do not view teacher hiring as a straightforward decision but weigh trade-offs as different teacher characteristics may signal different strengths. Harris et al. (2010) and Ingle et al. (2011) additionally found grade level, content area, and the characteristics of teachers already employed in a school may affect administrators' hiring decisions. Additionally, Engel and Cannata (2015) found that teacher labor markets are highly localized and geographic location affects teacher hiring. This consideration of contextual factors may explain why Bruno and

Strunk (2019) found that, even when given the opportunity, administrators do not always hire the teachers who will raise their students' academic test scores the most.

Boyd-Swan and Herbst (2018) performed a resume audit project in early childhood education settings, which share some similarities to Christian schools in that some are privately operated and they typically do not abide by the same teacher licensure requirements as K-12 schools. They found that a resume with a mid-range grade point average was more likely to garner an interview request relative to a lower GPA. However, a resume with a higher GPA was no more likely to garner an interview request relative to a 2.8 GPA. They also found that resumes with limited (six months) or more extensive (two years) early childhood education experience, relative to resumes with no experience, were more likely to garner an interview request. Yet resumes that listed six months of experience actually had a slight advantage over resumes that listed two years of experience.

Considering that prior research does not examine teacher hiring practices in private religious schools, our present study begins to close an important gap in the research literature.

2.4 Conjoint experiments and teacher hiring

A conjoint experiment is a research design in which survey respondents choose a preferred option from a set of options where each option possesses randomly assigned characteristics. Since the characteristics of each option are randomly assigned and all else is assumed to be equal, we can estimate how much each characteristic causally affects the likelihood that an option is selected. This type of experimental design has frequently been used in the fields of marketing (Chrzan & Orme, 2000; Green & Rao, 1971) and political science (Abramson et al., 2022; Hainmueller et al., 2014; Leeper et al., 2020). Conjoint experiments allow researchers to examine each facet of a multidimensional candidate, policy, product, or service individually and better understand consumers' or voters' preferences. For instance, in political science research, the survey presents respondents with a set of candidates, each with randomly assigned characteristics such as gender or political affiliation, to estimate how each characteristic causally affects voters' preferences (Abramson et al., 2022).

In their pioneering study, Giersch and Dong (2018) applied conjoint analysis to educational research, studying public school administrators' favorability toward teacher candidate characteristics. They found a preference for teachers with some experience (though there was no difference between five and fifteen years of experience, consistent with the implications of research on teacher quality) and with more education (although there was no difference between less education from a selective institution and more education from a nonselective institution). We extend this line of scholarly inquiry by conducting a conjoint experiment to understand administrators' hiring preferences in religious schools.

3 Experiment design

In the fall of 2022, the Association of Christian Schools International (ACSI) administered a survey to school administrators in 33 member schools in Cambodia, Nigeria, the Philippines, the United Republic of Tanzania, and the United States of America. Because this survey piloted the Flourishing Faith Index (FFI), a tool that ACSI designed to assess spiritual flourishing in Christian school communities, ACSI purposively sampled these schools

Table 1 Possible teacher attributes in the conjoint experiment

Academic achievement/qualifications	Strong academic achievement/qualifications Modest academic achievement/qualifications Below-average academic achievement/qualifications
K-12 institution	Graduate of the administrator's K-12 school Graduate of a different school
Postsecondary institution	Graduate of a Christian college/university Graduate of a secular college/university
Experience	Limited teaching/leadership experience Extensive teaching/leadership experience

to be broadly representative of ACSI membership. In total, 189 administrators completed the survey and 170 provided demographic information: the respondents' job title, school characteristics, sex, age, race and ethnicity, marital status, educational background, and teaching and leadership experience. As part of the survey separate from the FFI, the administrators participated in a conjoint experiment designed to capture information about which teacher characteristics they valued the most.

Each of the 170 administrators participating in the survey was assigned four sets of three fictitious teacher candidates in each group. For each set, which administrators assessed one at a time, the administrator was asked, "Consider the three applicants below. Which candidate would you prefer to hire for your school as a teacher?" The candidates in each set randomly varied across the following four characteristics (see Table 1): academic achievement and qualifications, whether they were a graduate of the administrator's school, whether they had graduated from a Christian or secular postsecondary institution, and whether they had limited or extensive experience. By the end of the experiment, school administrators had chosen to hire four fictitious teachers, one from each of the four sets.

We chose the teacher characteristics listed in Table 1 because they are all teacher characteristics that would plausibly appear on a resume or teaching application and be related, in perception or in actuality, to a teacher's ability to provide quality academic and spiritual formation. Research supports the idea that academic achievement and qualifications may be related to teacher quality under some conditions (Boyd et al., 2007; Croninger et al., 2007; Goldhaber, 2019; Harris & Sass, 2011; Pelayo & Brewer, 2010; Rivkin et al., 2005), as well as teacher experience in the early years (Boyd et al., 2007; Clotfelter et al., 2006; Croninger et al., 2007; Harris & Sass, 2011; Pelayo & Brewer, 2010; Phillips, 2010; Shuls & Trivitt, 2015a, 2015b). Therefore, we hypothesize that administrators would more strongly prefer a teacher with above-average academic achievement and qualifications than a teacher with below-average academics or even modest academics. Similarly, we hypothesize that administrators would more strongly prefer a teacher with extensive experience than one with limited experience.

Christian schools also value teachers' spiritual leadership and formation capabilities. In our experiment, we assume that having received an education in a Christian setting (i.e., a Christian K-12 school and/or a Christian postsecondary institution) serves as a proxy for a teacher's ability to spiritually form their students. We recognize that many Christians attend secular schools or postsecondary institutions and receive spiritual formation during their career preparation years through their church, campus ministries, or interpersonal relationships (Johnson & Lee, 2023b). Therefore, having a Christian education may be a noisy proxy for spiritual leadership. Nonetheless, research has shown that teachers in Christian schools who did not attend Christian universities may feel underprepared to

contribute toward the unique missions of Christian schools (Cooling et al., 2016). Mitchell (1982, p. 6) notes that Christian educator preparation programs “should offer education courses that (a) provide the required distinctive content and approach; (b) allow for student teaching experiences at Christian schools; and (c) furnish information on topics deemed essential, such as Biblical integration procedures, personal commitment, classroom discipline, and purposes of Christian schools.”

In addition to each fictitious candidate’s higher education background, we assigned information about their primary and secondary schooling background. In particular, each was either a graduate of the survey participant’s school or not. We narrowed this variable for primary and secondary schooling to the administrator’s school, not just a Christian school, because this signals that the administrator would likely have personal knowledge of the teacher candidate’s spiritual leadership and overall character. It also signals that the teacher candidate would have a personal knowledge of the school culture, theoretically making that teacher’s transition into teaching at the school easier (a “homegrown” effect). Therefore, we hypothesize that being a graduate of a Christian college or university and a graduate of the administrator’s school will increase the likelihood of hire.

4 Data sample

The sample of 170 school administrators for which we have descriptive data is broadly representative of ACSI in terms of most school administrator characteristics. As the largest Christian school organization in the world, ACSI represents a large portion of the Christian school sector. Nineteen percent of school administrators reported being a head of school, 33 percent reported being a campus, upper-level, or lower-level principal, and 48 percent reported being in another leadership position such as an assistant or vice principal, a dean of students or academics, or a school chaplain (see Table 2). Forty-two percent of respondents reported being male and 58 percent reported being female. Ninety-five percent identified as white, with the remaining five percent identifying as Black, Hispanic, Asian, Native American, or some other ethnicity. The mean age was reported to be 49 years and the median age 50 years, with the sample ranging from age 22 to 73 years. Ninety-three percent of respondents reported being married.

With respect to administrator educational attainment and prior experience, 27 percent of survey respondents reported their highest degree was a bachelor’s degree, 54 percent a master’s degree, and 13 percent a specialist or doctoral degree. Survey respondents reported a mean of 10 years of teaching experience before becoming a school administrator, with a median of nine years. Respondents ranged from no teaching experience to 33 years of teaching experience. Similarly, they reported a mean of 10 years of school administration experience, with a median of six years and a range from one to 44 years of experience. As for years in their current role, survey respondents reported a mean of six years, with a median of three years and a range of one to 34 years in that role.

Finally, with respect to administrator school characteristics, administrators reported a mean school enrollment of 741 students, with a median of 602 students and a range of 117 to 1671 students. This sample skews toward larger schools; the average ACSI member school enrolls 200 students.² This skew toward larger schools is also reflected in the survey

² Statistic from NCES’ Private School Universe Survey: <https://nces.ed.gov/pubs2021/2021061.pdf>

Table 2 Sample demographic characteristics

	Mean	Median	SD	Min	Max	N
Administrator's role						
Head of school	0.19		0.39	0	1	155
Principal (campus, upper/lower)	0.33		0.47	0	1	155
Other role (Asst. Principal, Dean, Chaplain, etc.)	0.48		0.50	0	1	155
Administrator's characteristics						
Male	0.42		0.49	0	1	168
Nonwhite	0.05		0.23	0	1	167
White	0.95		0.23	0	1	167
Age	48.89	50	10.72	22	73	169
Married	0.93		0.26	0	1	169
Bachelor's highest degree	0.27		0.45	0	1	170
Master's highest degree	0.54		0.50	0	1	170
Specialist or doctorate highest degree	0.13		0.34	0	1	170
Degree in education	0.66		0.47	0	1	170
Years of teaching experience	9.78	9	8.22	0	33	170
Years in current role	6.25	3	6.83	1	34	170
Years of admin experience (total)	9.77	6	8.92	1	44	170
Characteristics of administrator's school						
School size (enrollment)	741.16	602	468.11	117	1671	152
School budget (in millions, US dollars)	\$6.27	\$5.31	\$4.34	\$1.04	\$13.44	152
Outside the US	0.10		0.30	0	1	170

While 189 administrators participated in the conjoint experiment section of the survey, only 170 participated in the demographic data collection section

respondents' reported school budgets, with a mean of \$6.3 million, a median of \$5.3 million, and a range of from \$1.0 million to \$13.4 million in US dollars. Ten percent of survey respondents reported working at a school outside of the United States. These differences warrant caution, as our findings may not generalize to schools with lower enrollments or smaller budgets.

5 Analytic strategy

We assume an administrator a will hire candidate t from among $t = 1, \dots, T$ options based on an unobserved utility model, which is a function of teacher candidate t 's academic qualifications (A_t) and experience (E_t), as well as whether the candidate is a graduate of the administrator's school (S_t) and a graduate of a Christian higher education institution (C_t). We assume the administrator's choice will maximize utility within a set.

Following Hainmueller et al. (2014), since the qualities of the fictitious teachers within the sets in the experiment were randomly assigned, we can estimate the causal effect of

each teacher characteristic on the likelihood of being hired by administrators in our experiment. We do so using the *conjoint* package in Stata,³ employing the following model:

$$\text{hire}_{ast} = \beta_0 + A_{ast}'\beta_1 + \beta_2 S_{ast} + \beta_3 C_{ast} + \beta_4 E_{ast} + \epsilon_{as} \quad (1)$$

In Eq. 1, hire_{ast} represents a binary variable that equals one if administrator a chooses to hire teacher t in set s . This dependent variable is expressed as a function of teacher t 's characteristics. A_{ast}' represents a vector of teacher t 's academic qualifications and includes a dummy variable for whether the candidate has below average academic qualifications or strong academic qualifications, with modest academic qualifications as the omitted category. S_{ast} takes a value of 1 if candidate t is a graduate of the administrator's school and 0 otherwise. Similarly, C_{ast} takes a value of 1 if candidate t is a graduate of a Christian college or university and 0 otherwise. E_{ast} represents candidate t 's experience and takes a value of 1 if the candidate has extensive experience and 0 if limited experience. Lastly, ϵ_{as} represents the conventional error term. Because each respondent indicated preferences for four different choice sets of teachers, we cluster the standard errors at the respondent level to correct for the non-independence of observations in our data that originate from the same respondent. Because each characteristic is randomly assigned, β_1 , β_2 , β_3 , and β_4 capture the causal effect of each component on the likelihood a candidate will be hired.

In the following section, we present the estimated β -coefficients or average marginal component effects, which can be interpreted as the effect that a particular teacher characteristic has on the likelihood that teacher t is chosen to be hired.

6 Results

6.1 Overall results

We begin by presenting the average marginal component effects for the entire sample of school administrators for which we have both experimental and descriptive data ($n = 170$) in Table 3 and Fig. 1. These results are robust to expanding the sample to include all 189 administrators who participated in the conjoint experiment (see Appendix 1). We find that, relative to a teacher with modest academic achievement and qualifications, administrators are 26 percentage points less likely to hire a teacher with below-average academic achievement and qualifications. Furthermore, administrators are 19 percentage points more likely to hire a teacher with strong academic achievement and qualifications than a teacher with modest academic achievement and qualifications. We also find that administrators are 13 percentage points more likely to hire a teacher who graduated from their school, relative to a teacher who graduated from a different school. Administrators are 24 percentage points more likely to hire a teacher who graduated from a Christian college or university, relative to a teacher who attended a secular college or university. Finally, school administrators are 26 percentage points more likely to hire a teacher who has extensive teaching or leadership experience, relative to a teacher who has limited teaching or leadership experience. All of these differences are statistically significant at the 0.001 level.

³ We also use the "xtreg" command with random effects to calculate the F -statistic and R -squared.

Table 3 Average marginal component effects for teacher characteristics

	β	SE
Academic achievement/qualifications		
Below-average	- 0.255*	0.020
Strong	0.185*	0.025
Graduate of administrator’s K-12 school	0.126*	0.019
Graduate of Christian college/university	0.238*	0.020
Extensive teaching/leadership experience	0.261*	0.018
Constant	0.040	0.020
<i>N</i> observations		2,040
<i>N</i> respondents		170
<i>F</i> -statistic		1838.32
<i>R</i> -squared		0.291

* $p < .001$. Std. errors clustered by survey respondent and set. For academic achievement/qualifications, “modest” academic quality is the omitted category. “Extensive teaching/leadership experience” is a binary variable where the alternative is “limited experience.”

6.2 Results by administrator characteristics

Next, we examine whether administrator preferences differ by subgroup, requiring us to examine only administrators for whom we have descriptive data. We examined whether marginal means for each teacher characteristic differed according to administrators’

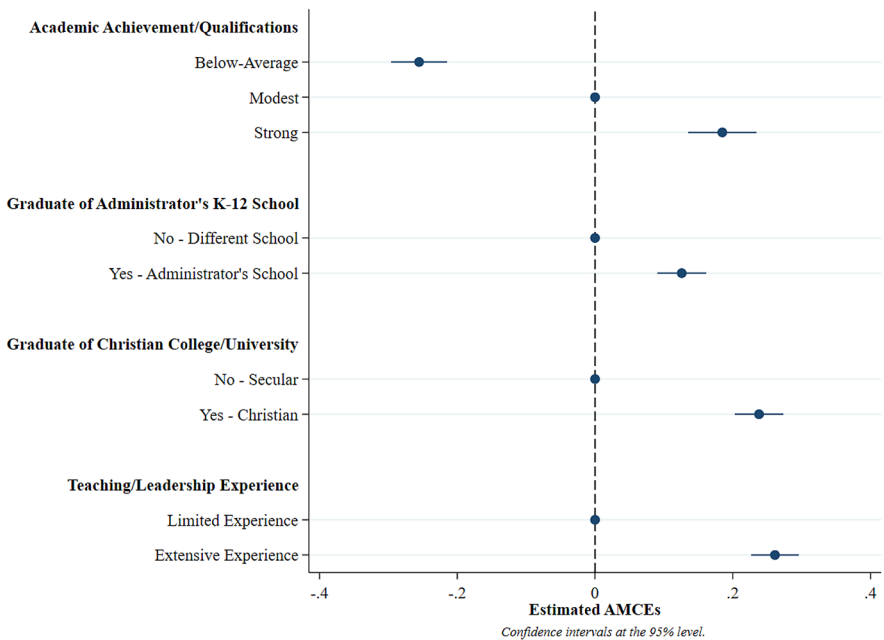


Fig. 1 Average marginal component effects for teacher characteristics. Figure created using the “conjoint” package in Stata

location (in the United States versus international), sex (male versus female), highest degree attained (bachelor's master's, or advanced), degree area (whether they have an education degree), and teaching experience (none, one to five years, or more than five years). Across these sets of subgroups, the marginal means are clustered closely together, suggesting that administrator characteristics do not moderate hiring preferences or practices (see Appendix 2).

7 Discussion

In this study, we examined Christian school administrators' preferences for certain characteristics of teacher candidates being considered for employment at the administrators' schools. Educational researchers have recently applied the conjoint experimental design to study teacher hiring practices in public schools (Giersch & Dong, 2018). We extend the application of the conjoint experiment to examine teacher hiring in private Christian schools and build upon prior findings in the research literature. Specifically, we found that having extensive (compared to limited) teaching and/or leadership experience and modest (compared to below-average) academic achievements and qualifications increased the likelihood of a prospective teacher being hired, by about 26 percentage points for both characteristics. Having strong (compared to modest) academic qualifications increased the likelihood of being hired by about 19 percentage points. While teacher quality literature is inconclusive on nearly every predictor of teacher quality, teacher experience and academic achievement are most consistently shown to be somewhat important for student success across a large body of studies (Boyd et al., 2006; Buddin & Zamarro, 2009; Pelayo & Brewer, 2010; Rivkin et al., 2005; Staiger & Rockoff, 2010). Our findings seem to show that school administrators are hiring consistently with the findings of extant teacher quality literature in public schools. Our findings also seem consistent with Giersch and Dong (2018), who found that public school administrators value academic quality and work experience more than other teacher characteristics.

However, because Christian and other religious schools do not exist to simply replicate the results of secular public schools (Sikkink, 2012; Swaner et al., 2019) but to inculcate religious values in students (Mangahas, 2017), it is important to understand the value Christian school leaders place upon possible indicators of teachers' spiritual leadership capabilities. We assumed that Christian school administrators, who view Christian education as a vehicle for spiritual formation, may view having a Christian education as a proxy for spiritual quality. Christian school administrators do prefer to hire teachers who graduated from their K-12 school, relative to a different one (by 13 percentage points), and who graduated from a Christian postsecondary institution, relative to a secular one (by 24 percentage points).

Our research has a few limitations. First, given our relatively small sample size for the subgroup analysis, we may not have sufficient power to detect statistically significant differences across administrator subgroups. Our findings suggest that administrators have similar preferences with respect to teacher characteristics. Future studies may consider replicating our study in different contexts or oversampling administrators of underrepresented demographic categories in order to gain further insights. Moreover, our sample mostly included administrators working at schools within the United States and only included 17 administrators from four other countries. Therefore, our results should primarily be interpreted in the US context and caution should be taken if generalizing these results to contexts outside

of the US. Likewise, though efforts were made to create a sample that was representative of ACSI, the sample mostly includes white administrators and skews towards larger schools. Thus, it is not clear whether these results would generalize to more ethnically and racially diverse samples, let alone schools outside the ACSI network. Further research should examine this topic with larger samples reflecting more racial and ethnic diversity both internationally and within the United States.

Second, administrators may conceptualize “below-average,” “modest,” and “strong academic achievement and qualifications” differently. Researchers themselves have conceptualized teacher academics differently—for example, college GPA, teacher certification exam scores, and self-reported content knowledge (Burroughs et al., 2019; Pelayo & Brewer, 2010; Wayne & Youngs, 2003). Likewise, the definition of the experience variable is not very specific and may be interpreted differently by each school administrator: “limited” versus “extensive”. Additionally, the experience may not necessarily be teaching experience, as we defined experience as being in the fields of “teaching or leadership”.

In future research, we would recommend more specific definitions for teacher characteristics so that we can better ascertain what it is, exactly, about a teacher candidate’s experience or academic background that school administrators find attractive. Future research should also qualitatively examine how Christian school administrators value teachers to allow researchers and leaders in Christian education to better understand what variables school administrators consider as proxies for quality spiritual leadership. Additionally, researchers should investigate the extent to which teacher preparation in Christian colleges and universities differ from other colleges and universities. How different are the programmatic elements and do those differences have an effect on teacher quality, especially with respect to the capacity to form students spiritually? If spiritual formation is a central goal of Christian schools, improving the effectiveness of teachers—whether by pre-service training, professional development, or better screening during the hiring process—to attain this goal is paramount.

Appendix 1: Robustness check

See Table 4.

Table 4 Average marginal component effects

	β	SE
Academic achievement/qualifications		
Below-average	- 0.250*	0.019
Strong	0.187*	0.025
Graduate of administrator's K-12 school	0.118*	0.019
Graduate of Christian college/university	0.241*	0.019
Extensive teaching/leadership experience	0.262*	0.018
Constant	0.039	0.019
<i>N</i> observations		2,268
<i>N</i> respondents		189
<i>F</i> -statistic		1920.57
<i>R</i> -squared		0.289

***p* < .001. Std. errors clustered by survey respondent and set. For academic achievement/qualifications, "modest" academic quality is the omitted category. "Extensive teaching/leadership experience" is a binary variable where the alternative is "limited experience."

Appendix 2: Subgroup analyses

See Figs. 2, 3, 4, 5, and 6.

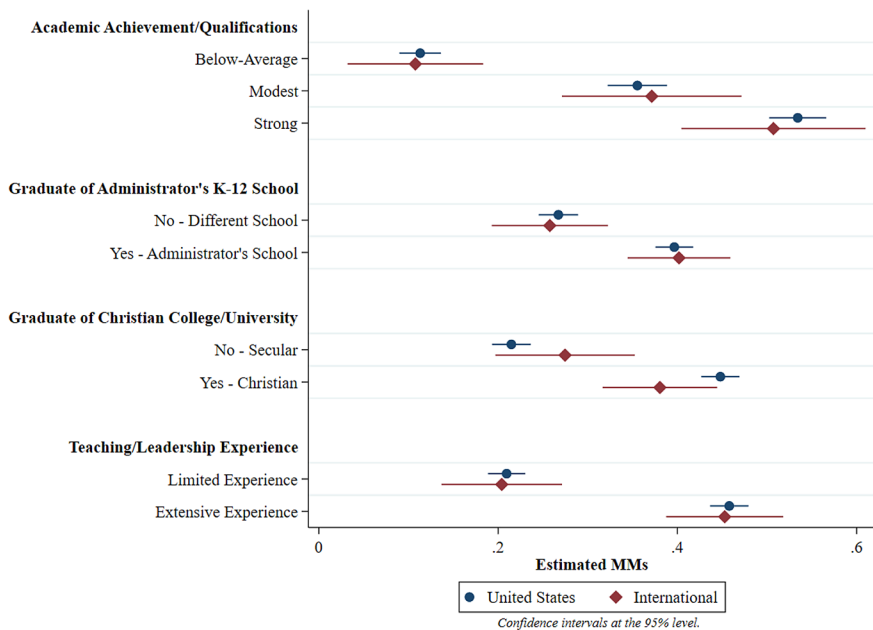


Fig. 2 Marginal means by school location. Figure created using the “conjoint” package in Stata

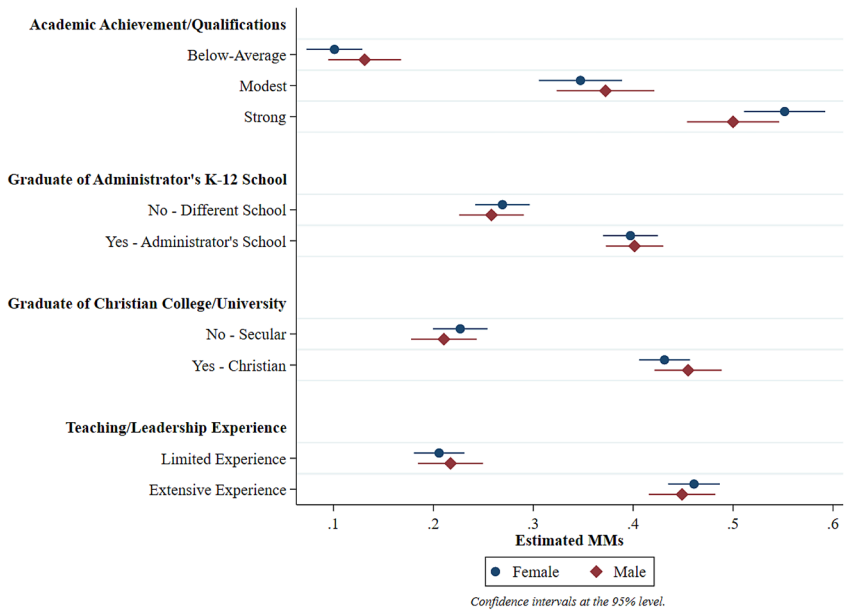


Fig. 3 Marginal means by administrator sex. Figure created using the “conjoint” package in Stata

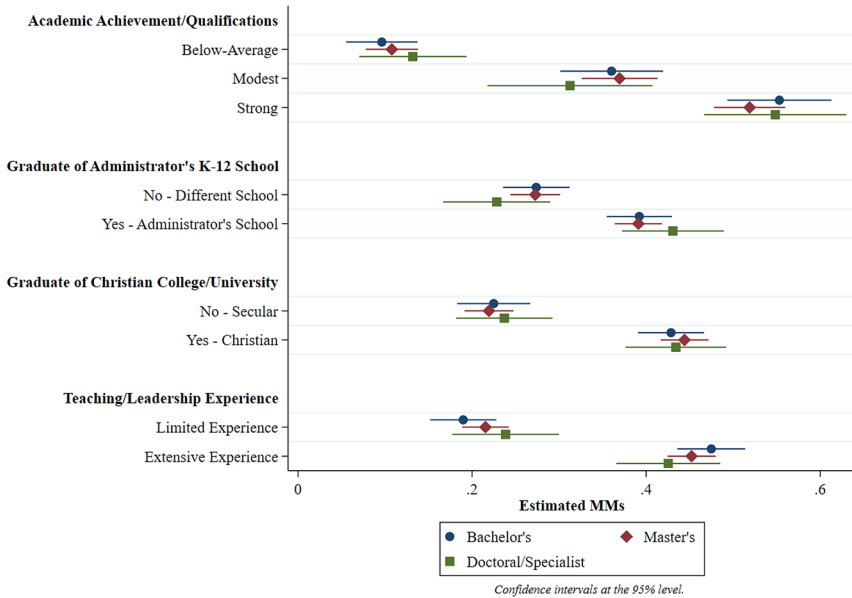


Fig. 4 Marginal means by administrator's highest degree. Figure created using the “conjoint” package in Stata

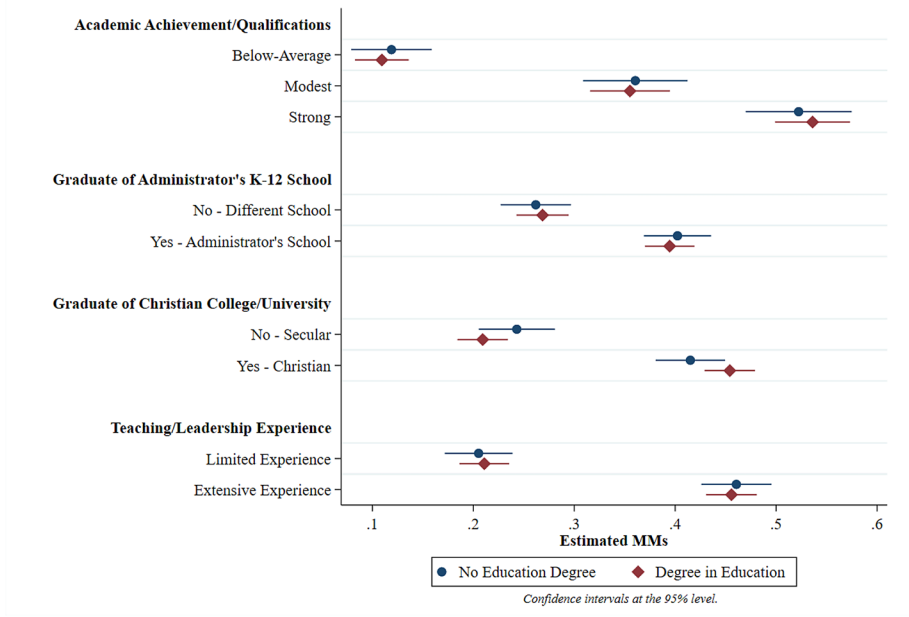


Fig. 5 Marginal means by administrator degree area. Figure created using the “conjoint” package in Stata

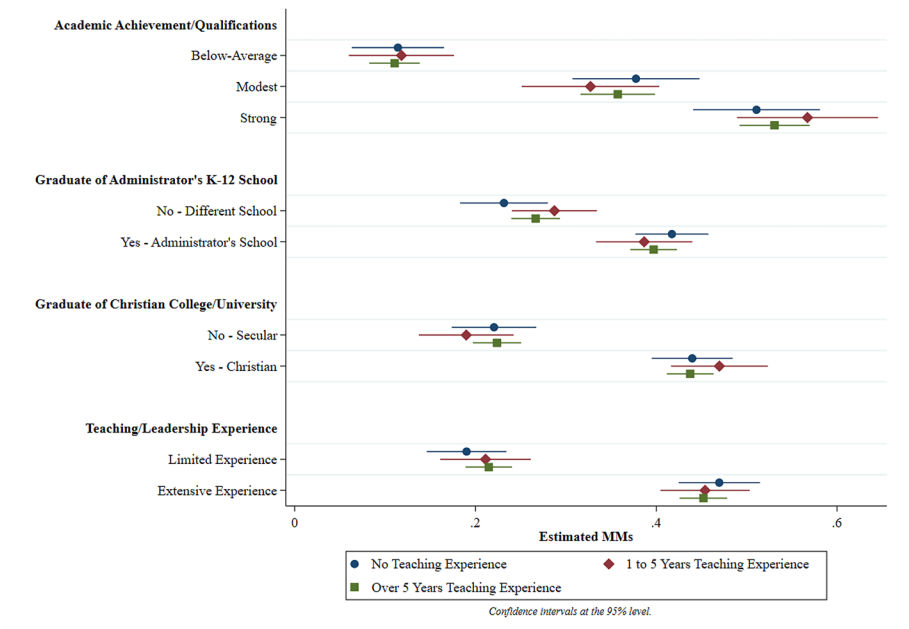


Fig. 6 Marginal means by administrator's teaching experience. Figure created using the “conjoint” package in Stata

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Declarations

Conflict of interest The authors declare there are no conflicts of interest. Survey respondents affirmed their informed consent to participation in this research. Per our data-sharing agreement with the Association of Christian Schools International, data are not available for replication.

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