

Equitable, Quality Education for Ethnic Minority Students? A Case of “Positive Deviance” in Vietnam

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Vietnam has achieved near-universal access to compulsory schooling over the past two decades. However, inequalities between ethnic majority and minority students are stark at post-compulsory levels, where progression is selective based on academic criteria and ability to pay. In this article, we adopt a mixed-methods approach to examine quality and equity for ethnic minority students in upper secondary education. Across five provinces, we find that ethnic minority students attend “less effective” upper secondary schools than ethnic majority students. However, an in-depth case study of an ethnic minority boarding school in Lao Cai province provides an example of positive deviance. Guided by a targeted affirmative action policy, the provincial government invests a relatively high level of resources to provide fee-free, high-quality schooling for gifted ethnic minority students. We consider the extent to which such policies can redress socioeconomic inequalities in Vietnam, and wider lessons for creating more equitable education systems.

Introduction

Equity and Quality in the Vietnamese Education System

Providing high-quality education for all, as promised by UN Sustainable Development Goal 4 (SDG 4), is an important step in mitigating socioeconomic inequalities. Ideally, education systems should counteract such inequalities—or, as an intermediate goal, they should not exacerbate them. However, in education systems across the world, marginalized groups typically achieve lower educational outcomes than more advantaged groups, and in many cases, attend poorer-quality schools. While education systems are unlikely to compensate entirely for differences in student backgrounds, if schools attended by disadvantaged students are systematically of lower quality than those attended by advantaged students, education systems can entrench inequality. Conversely, policies aimed at ensuring high-quality education for disadvantaged students

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may require affirmative action, a point made explicit as early as 1967 in the UK's Plowden Report (Central Advisory Council for Education 1967).

The Vietnamese education system is an exception to global trends, having expanded access to basic education while also improving quality over the past twenty years (Rolleson and Krutikova 2014; World Bank 2014). Recent PISA results indicate exceptional performance by Vietnam. Ranked sixteenth in mathematics in 2012 and eighth in science in 2015, Vietnamese 15-year-olds outperformed students in the United States, the United Kingdom, and in all other participating low- and middle-income countries (Dang et al. 2020). PISA results also suggest disadvantaged 15-year-old Vietnamese students are among the most “resilient” in the world, as they are more likely to overcome low socioeconomic status and achieve high learning outcomes (OECD 2016; Asadullah et al. 2020). This is strongly suggestive of an equitable education system, consistent with notions of meritocracy and impartiality (see “Conceptualizing Equity and Quality in Education” below). Vietnam's PISA success is nonetheless difficult to explain in precise terms. Potential drivers include the role of wider cultural and societal factors (Parandekar and Sedmik 2016), which may contribute to the greater “productivity” of the education system compared to other PISA countries (i.e., more productivity from each day of school attended; Dang et al. 2020).

Ethnic status is a key marker of socioeconomic inequality in Vietnam. 54 ethnic minority groups constitute approximately 14 percent of the population, but account for 40 percent of the country's poor (World Bank 2014). In the education system, there are substantial gaps in learning outcomes between ethnic minority and majority children. At primary level, ethnic minority students partially “catch up” with their Kinh peers in mathematics and literacy over the course of grade 5. This is likely linked to their learning of Vietnamese, which narrows learning gaps according to ethnic status (Rolleston et al. 2013). At upper secondary level, however, significant gaps in mathematics and English performance by ethnic status at the beginning of grade 10 widen over the course of the academic year, with ethnic minority students making less progress in both subjects (Rolleston and Iyer 2019).

Enrollment in upper secondary education (grades 10–12) is higher in Vietnam compared to other low- and middle-income countries. In 2014, gross enrollment at upper secondary level was 72.4 percent (Dang and Glewwe 2018), compared to 54.6 percent in India in 2014–15 (Ministry of Human Resource Development 2016) and 12.6 percent in Ethiopia in 2015–16 (Ministry of Education 2017).¹ Nevertheless, upper secondary education is not compulsory in Vietnam, and so is affected by rationing of access based on ability to pay fees and to meet academic criteria. As a result, “sorting” of students into

¹ Figures reflect gross enrollment ratio at senior secondary level in India and secondary second cycle in Ethiopia (two countries in the Young Lives study). Although attended by older students (17–18), these are the final grades of secondary education and therefore more comparable to upper secondary level in Vietnam.

schools becomes more significant than in earlier phases of education. This raises important questions of equity, particularly for ethnic minorities in remote and disadvantaged areas, and in light of the economic benefits of accessing post-compulsory education in Vietnam (Rolleston and Iyer 2019).

Mixed-Methods Approach to Measuring Equity and Quality

In this article, we examine the extent to which ethnic minority students in Vietnam have “equitable” access to quality post-compulsory education, guided by the following research questions:

1. Do ethnic minority students attend lower-quality schools than majority Kinh students?
2. In schools where ethnic minority students access high-quality education, how is this achieved?

We broadly understand equity in line with definitions of meritocracy and impartiality, and quality as related to learning outcomes, or in intrinsic and instrumental terms (see “Conceptualizing Equity and Quality in Education” below).

We adopt a mixed-methods approach, first measuring quality in terms of “school effectiveness,” or “the *relative* [academic] progress of students in a school over a particular period of time in comparison to students in other schools” (Scheerens et al. 2003, 303). We use linked test score data over one academic year (from the Young Lives 2016–17 Vietnam school survey) to identify learning progress at school level, which arguably provides a more robust, “fairer” measure of school quality than cross-sectional measures (see “Value-Added Analysis” below). Using a value-added framework to examine quality in terms of school effectiveness, we assess whether lower learning outcomes among ethnic minority students reflect only their poorer home backgrounds, or whether these lower outcomes additionally reflect a “double disadvantage” of access to less effective schools than those attended by Kinh students. This would indicate less than impartial and not entirely meritocratic effects of the schooling system.

Through our value-added analysis, we determine patterns of equity and school quality, and examine the extent to which ethnic minority status affects access to quality post-compulsory education. To gain a more in-depth understanding of our quantitative findings, we also employ qualitative methods through a sequential, explanatory mixed-methods approach (Cameron 2009). We adopt a case study approach to examine an example of “positive deviance,” an ethnic minority boarding school in Lao Cai province, identified through our value-added analysis as a particularly “effective” school despite serving a disadvantaged population. This allows us to consider what “equitable, quality education” looks like from the perspectives of disadvantaged ethnic minority

students, their teachers and local education officials responsible for implementing national government policy. These insights are particularly important given limited qualitative work to date exploring educational quality and equity in Vietnam (with DeJaeghere et al. [2021] as a notable exception), compared to the growing body of quantitative literature examining these factors. Overall, our mixed-methods approach offers a more in-depth examination of how, and how effectively, the Vietnamese education system adopts a redistributive approach to achieving equitable access to quality education.

In the following section, we provide an overview of debates regarding definitions of educational equity and quality. We then review government policies and previous research on ethnic minority education in Vietnam, and literature on residential schooling for disadvantaged populations in other contexts. After describing our methodology, we present mixed-methods findings on equitable access to quality upper secondary education for ethnic minority students in Lao Cai province, with a specific focus on five ethnic minority groups (Hmong, Dao, Giay, Tay and Nung). We conclude by reflecting on the implications of Vietnam's ethnic minority boarding school policy for the equitable provision of quality education, in Vietnam and in other low and middle-income countries.

Conceptualizing Equity and Quality in Education

The notion of “fairness” or equity is contested; potential definitions of equitable opportunities and outcomes are political, philosophical and cultural in nature. While it is beyond the scope of this article to comprehensively review potential conceptualizations of equitable education, measurement of equity must be linked to a particular definition, which in turn depends on a value judgement. Rawls's (1971) seminal “Theory of Justice” provides a powerful argument for the notion of justice as fairness, comprising two basic principles: equal basic liberties, and fair equality of opportunity. Rawls argues that fair inequalities of outcome are only possible to the extent that there is equality of opportunity. More recently, Asadullah et al. (2020) note the fair inequality may be understood in relation to pupil effort, preferences and talent, while unfair inequality is related to circumstances. While there are debates regarding how best to model student effort and circumstance (Asadullah et al. 2020), ensuring fairness of outcomes in education requires “leveling the playing field” with respect to opportunities to learn. This may include school quality, resources, and broader support for learning at home or in the commune.

UNESCO et al. (2018) identify five broad definitions of equity in education: meritocracy, minimum standards, impartiality, equality of condition, and redistribution. The five conceptions overlap to some extent, but denote important differences which represent degrees of progressivity regarding the trade-off between liberty and equality (see Adler 1981). Of these conceptions, impartiality, redistribution and meritocracy aim toward the same “ideal”

distribution of outcomes, with different emphases. Impartiality is closely related to “equality of opportunity,” going beyond equality as a minimum set of criteria to a broader conception of educational opportunities. Redistribution emphasizes the extent to which education redistributes opportunity and resources, and redresses unfair inequality of outcomes. Finally, meritocracy emphasizes that educational progress should be related to “ability,” rather than socioeconomic characteristics. Given the difficulties inherent in defining “ability,” measures of meritocracy are inevitably contested. However, in principle, ensuring that unfair advantage does not predict educational success would ensure impartiality, and would require substantial redistribution.

As with equity, defining educational quality requires a value judgement regarding the fundamental purpose(s) of education. Education can be seen to have three types of benefits: intrinsic (education as an end in itself), instrumental (education as a means of development) and positional (the social and symbolic capital accrued through education; Barrett 2016). In current global education discourse, the emphasis on achieving “*relevant* learning outcomes” in SDG 4 (UNDP 2018) indicates a prevailing focus on the instrumental benefits of education. “Relevance” can be understood as the knowledge, skills and values required for socioeconomic participation (Tikly and Barrett 2011).

Understanding quality education in terms of its instrumental benefits therefore has important equity implications. Following the above definitions of equity in relation to meritocracy and impartiality, ensuring that specific groups do not have an unfair advantage in accessing the socioeconomic benefits of education is key to achieving more equitable education systems. As discussed below, Vietnam has had some success in ensuring “fair” access to the instrumental benefits of education. However, this success requires closer scrutiny in the case of marginalized ethnic minority groups.

Ethnic Minority Education in Vietnam

In this section, we review key policies which aim to improve access and quality at upper secondary level for ethnic minorities in Vietnam. After a brief overview of national policies, we focus on several policies implemented in Lao Cai province—one of the six poorest provinces in Vietnam,² where ethnic minorities account for 65.4 percent of the population (23.8 percent Hmong, 15.3 percent Tay, 14.4 percent Dao, and 11.9 percent from other groups).

Ethnic Minority Education Policies in Lao Cai Province

The right to education for all children is stated in Vietnam’s 2005 and 2009 Education Laws and its 2016 Law on Protection, Care, and Education for Children. There are provisions for investment in education in ethnic

² The poverty rate in Lao Cai in 2014 was 25.3 percent (UNICEF 2016). In total, 104 out of 164 communes in the province are classified as “extremely difficult” under Program 135 (1998).

minority and “extremely difficult” areas in each iteration of the country’s constitution (in 1992, 2001, and 2013) and multiple national and provincial policies and programmes focused on ethnic minority education.

The Lao Cai Department of Education and Training (DOET) issues criteria for upper secondary admissions each year, some of which aim to increase demand among ethnic minorities. Some lower secondary students are offered “straight access” to upper secondary schools (i.e., they are not required to sit the grade 10 entrance exam), based on disadvantage and/or academic performance. All other students are required to sit the grade 10 entrance exam.

Ethnic minority boarding schools were introduced in the 1970s, in one of the earliest initiatives to support ethnic minority participation in upper secondary education. These schools were originally introduced to provide high-quality education to gifted ethnic minority students and to produce a cadre of government officials in ethnic minority areas. There is one upper secondary boarding school in each district, and a province-level boarding school in Lao Cai city. Selection is based on the grade 10 entrance exam, and entry into these schools remains highly competitive. Only the best-performing ethnic minority students are selected to attend—unlike other upper secondary schools in the province, it is not possible to progress to district and province-level boarding schools via “straight access.” Boarding schools offer several advantages: they facilitate attendance for students who live in remote communes, there are no tuition fees, and students receive stationary, textbooks and a monthly food stipend of 1 million VND (43 USD) from the school.

To extend access to these benefits, “semi-boarding” schools were introduced in Lao Cai in 2013. These are available from primary to upper secondary level for ethnic minority students whose homes are in remote, mountainous areas. Semi-boarding schools provide weekday residential facilities during term time; as at full boarding schools, students are exempt from tuition fees, and receive a monthly food stipend of 500,000 VND (21.50 USD). At lower and upper secondary level, semi-boarding schools remain selective, but the larger number of semi-boarding schools means that they are more accessible than fully residential upper secondary schools.

Existing Research: Access, Outcomes, and Challenges for Ethnic Minority Students

Several studies highlight disparities in access to upper secondary education between ethnic minority and majority students across Vietnam. Nationally, upper secondary enrollment is 72.4 percent for ethnic majority students but 50.0 percent for ethnic minority students (Dang and Glewwe 2018). In terms of learning outcomes, ethnic disparities are evident from Ministry of Education and Training (MOET) national assessments. In recent grade 9 and 11 national assessments, attainment among the majority of ethnic minority students were classed as “below expected standards” in mathematics

(grade 9: 78 percent; grade 11: 72 percent; MOET 2016) and Vietnamese (grade 9: 56 percent; grade 11: 70 percent; MOET 2015).

Several studies have examined the factors behind these access and attainment gaps at secondary level. Socioeconomic barriers including low household income, the need for children to work and migration for employment are associated with late or nonenrollment in school, as are erratic attendance and dropout among ethnic minority students (MOET et al. 2008; Rolleston and Krutikova 2014). The physical accessibility of secondary schools also affects ethnic minority enrollment and attendance. While there is typically one primary school per village even in remote areas, lower secondary schools are located in commune centers, and upper secondary schools in district centers. In mountainous areas, this can mean long, difficult journeys between home and school, with poor-quality roads that become impassable during adverse weather conditions (MOET et al. 2008). Low levels of parental education and low perceived value of secondary education (particularly for girls) among some ethnic minority groups also lead to lower enrollment (MOET et al. 2008; Vu 2014).

For ethnic minority children who do attend secondary school, language issues are a potential barrier to learning. In mathematics and Vietnamese, ethnic minority children whose mother tongue is an ethnic minority language underperform compared to those whose mother tongue is Vietnamese (Glewwe et al. 2015). Teachers' beliefs and actions in the classroom have also been found to reproduce inequalities, resulting in poorer outcomes for ethnic minority students (DeJaeghere et al. 2021). Discrimination against ethnic minorities, early marriage, and limited relevance of the school curriculum also hinder ethnic minorities' participation in secondary education (Vu 2014).

Residential Schooling and "State-Building"

Residential schools targeting disadvantaged populations are not unique to Vietnam. In India, school hostels are provided for children from scheduled tribes and scheduled castes, while the Kasturba Gandhi Balika Vidyalaya (KGBV) scheme provides residential upper primary schools to "ensure access and quality to girls of disadvantaged groups" (Balagopalan 2010, 298; Shah 2016). Established with similar motivations to Vietnamese ethnic minority boarding schools—a lack of schools in rural areas and difficulties of the daily commute to school—it has also been argued that KGBVs serve as spaces within which poor girls are "removed" from their communes and transformed into "ideal modern citizen subjects" (Balagopalan 2010, 296). As Shah (2016) has noted, the KGBV model is "entrenched in . . . development discourses that frame education and empowerment in primarily instrumental terms that are access and outcome oriented" (2016, 19). Residential schools for disadvantaged groups are therefore not entirely neutral spaces. The underlying "logic of seclusion" of these schools can serve political as well as educational aims—not

least as a means for the state to depoliticize minority groups (Balagopalan 2010, 301–2).

There are similarly political dimensions to residential schools in Vietnam. As mentioned above, the original purpose of ethnic minority boarding schools was to produce a cadre of government officials in ethnic minority areas. Continued government support for these schools, along with the introduction of semi-boarding schools, is consistent with ethnic minority policies since the late 1980s. Following the *doi moi* (“economic renovation”) reforms, the Government of Vietnam began to invest in large-scale programs to support ethnic minority development. According to Baulch et al. (2008), government policy toward ethnic minorities in Vietnam is now characterized by a tension between “a willingness to accept difference”—such as ethnic minority sociocultural traditions and agricultural practices—and “a desire to promote assimilation or Vietnamization” (2008, 1165). While not discussed in detail here, it is important to note that the Government of Vietnam’s “assimilation” approach to ethnic minority development is not only driven by the Communist Party ideology of “equality, solidarity, and mutual support” (Government of Vietnam 2001) but also in response to historical and current political opposition by certain ethnic minority groups (Baulch et al. 2008; VCHR 2016).

Method

The Young Lives Survey and Methods

Young Lives is a longitudinal study of childhood poverty in Ethiopia, India, Peru, and Vietnam, which has followed 12,000 children since 2002. In Vietnam, the Young Lives sites are located in 14 districts across five provinces: Lao Cai, Hung Yen, Da Nang, Phu Yen, and Ben Tre.³ In 2016–17, a school survey was conducted in all upper secondary schools (52 in total) in the Young Lives districts, with 8,740 grade 10 students. Twelve percent of students ($n = 1,045$) were from ethnic minority backgrounds. Almost all of these students were enrolled in Lao Cai schools, with a small proportion enrolled in Phu Yen schools (fig. 1). Ethnic minority students in Lao Cai ($n = 976$) in the sample were largely from Hmong backgrounds (39 percent), with Dao (24 percent), Giay (14 percent), Tay (10 percent), and Nung (8 percent) groups also represented.⁴

During the 2016–17 school survey, students’ mathematics performance was assessed using two linked tests calibrated on a common IRT scale, administered at the beginning and end of grade 10. More details on the sampling, survey, and assessment design of the 2016–17 school surveys can be found in Iyer et al. (2017).

³ See Nguyen and Nguyen (2018) for more details on the Young Lives Vietnam sample.

⁴ Five percent of students recorded their ethnic group as “other.”

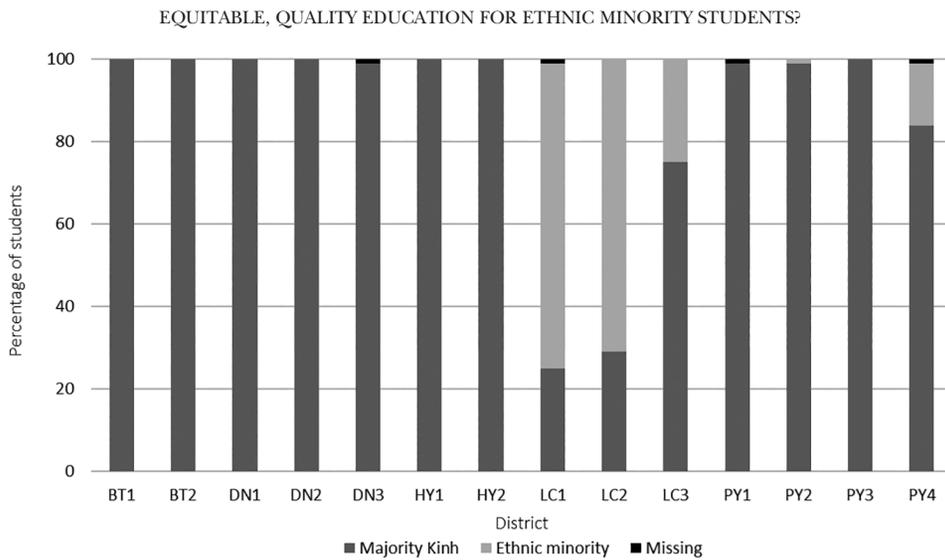


FIG. 1.—Student ethnic status by district, Young Lives 2016-17 school survey

Value-Added Analysis: The “Effectiveness” of Schools Attended by Ethnic Minority Students

To understand whether ethnic minority students’ lower learning outcomes are the result of attending lower-quality schools than Kinh students, we examine quality as measured by “school effectiveness,” conceived in a simple value-added framework (Rivkin et al. 2005; Perry 2016; Rolleston and Moore 2018). We make use of the linked test data described above to identify changes in test scores at the school level. Value-added measures are typically centered to have a mean of zero and thus identify “the *relative* progress of students in a school over a particular period of time in comparison to students in other schools” (Scheerens et al. 2003, 303). However, more advantaged students arguably have greater chances to make progress, even within 1 year and when controlling for their starting points. By controlling for differences between school intakes beyond differences in students’ prior attainment, value-added measures compare students “like-for-like” as much as possible, with the intention that any remaining differences in students’ progress are attributable to school-level factors (Perry 2016).

We estimate two simple value-added models, employing two-level hierarchical linear models (HLM) to account for the clustered structure of the data (students nested within schools). Since student-level observations within schools are not independent, HLM is appropriate to address within-school homogeneity and correlated error-terms. School effects are modelled as random effects parameters.

Equation (1) denotes an “unconditional” school value-added model; equation (2) denotes a “conditional” model, conditioning on students’ home

backgrounds. In both models, y_{2ij} represents the end-of-year test score in mathematics for the i th child in the j th school. y_{1ij} represents the beginning-of-year test score for the same student in the same school, while the coefficient β represents “persistence” in test scores over the year. While α is the constant (intercept) term for all schools, each school’s individual (random) intercept is represented by u_j , the school-specific deviation from the overall intercept and our focus of interest. This is interpreted as the “school effect,” that is, the positive or negative deviance from expected outcome as predicted by the model at the school level, conditioning on prior performance (and in eq. (2), students’ backgrounds). The e_{ij} term represents unmeasured individual factors and idiosyncratic error at the student level. In both equations, we expect that much of students’ natural ability, prior educational experience and home background influence will be reflected in y_{1ij} , mitigating concerns about potential omitted variable bias. Equation (2) also includes $x_{ij}\gamma$, a vector of individual student background characteristics.

$$y_{2ij} = \alpha + \beta y_{1ij} + u_j + e_{ij}, \quad (1)$$

$$y_{2ij} = \alpha + \beta y_{1ij} + x_{ij}\gamma + u_j + e_{ij}. \quad (2)$$

Although u_j represents “school effects,” we do not interpret this as “causal” or as effects for which schools can be held accountable. The effects include all influences at the school level, not only those under the direct influence of schools, including peer-effects and other effects unobserved in the data (e.g., those linked to commune-level factors).⁵ Moreover, schools do not have equal resources and make different decisions when organizing available resources. Our estimates therefore are still likely to overestimate school effectiveness in advantaged areas and to underestimate it in disadvantaged areas.

The unconditional value-added model included end of grade 10 mathematics score as the outcome variable and the start of grade 10 mathematics score as the explanatory variable. The following, additional explanatory variables were included in the conditional value-added model: age, gender, mother’s education, father’s education, and wealth index.

The wealth index was developed based on data collected on assets and household consumer durables from each respondent. A composite score using principal component analysis (PCA) was used to estimate a proxy to measure background/wealth advantage of students (Iyer et al. 2017). See table A1 for descriptive statistics of data utilized in the analysis and table A2 for the results of our unconditional and conditional value-added models.

⁵ Our modeling approach does not include school-level variables. It is not our intention to identify the effects of particular school factors. Instead, we aim to identify schools which are associated with differing levels of progress.

Qualitative Case Study: Ethnic Minority Experiences at a Lao Cai Boarding School

Based on the value-added analysis described above, we identify a school in Lao Cai with a particularly high value-added estimate. We select this school—an ethnic minority boarding school—as the subject of a qualitative case study to understand how it provides quality education to disadvantaged ethnic minority students.

The school is located in Dong Giang district,⁶ where we conducted the case study in July 2018. This involved semistructured interviews with two Bureau of Education and Training (BOET) officials (one male, one female), and the following participants from the school: the vice principal, five teachers (four male, one female), and 11 grade 10 students (four male, seven female). The BOET officials, the vice principal, and three teachers were from Kinh backgrounds, while two teachers and all students were from ethnic minority backgrounds.⁷ Participants were selected using a combination of purposive and convenience sampling. Access was requested to grade 10 students and teachers from ethnic minority backgrounds to learn about their experiences. Interviews were conducted at the school but during the school holidays. Teachers and students invited to participate were therefore those who lived within an accessible distance (2–30 km) of the school. This approach meant that students living in more remote areas were excluded from the study, and so the sampled students may have been relatively more advantaged than the school’s general student population. However, a comparison of our qualitative sample with demographic data from the Young Lives 2016–17 school survey indicates similar backgrounds, at least in terms of parental education (see “Enabling Factors” below).

Each interview was conducted by one British researcher and one Kinh Vietnamese researcher with consecutive translation from English to Vietnamese, and vice versa (see table A3 for interview topics). As with all qualitative research, the authors’ positionalities as researchers—our “unique mix(es) of race, class, gender, nationality, sexuality and other identities” (Mullings 1999, 337)—inevitably affected the dynamics within and knowledge produced from our research encounters (Srivastava 2006). The research team, made up of the authors (British Indian, White British, and Kinh Vietnamese, respectively) and a Kinh Vietnamese research assistant, were all “outsiders” to the local context. The effects of “outsider” status on knowledge production is debated—it may inhibit openness, or conversely may encourage greater candour due to researchers’ temporary presence (Mullings 1999). Overall,

⁶ Pseudonyms have been used for the district, ethnic minority boarding school, and all participants. Ethical approval for the 2016–17 school survey and the 2018 qualitative substudy was granted by the Central University Research Ethics Committee (CUREC), University of Oxford.

⁷ Teachers: one Hmong, one Xa Pho. Students: six Hmong, two Tay, one Nung, one Dao, and one Phu La.

participants appeared to be comfortable describing their experiences during interviews. However, limited responses when certain issues were raised—such as discrimination against ethnic minorities—may have reflected a lack of ease when discussing more controversial topics.

All interviews were digitally recorded and transcribed, and data were analyzed using an inductive and deductive approach to thematic qualitative analysis (Srivastava and Hopwood 2009) in NVivo software. This involved developing analytic categories based on our research questions (e.g. challenges faced by ethnic minority students, programmes in place to support their education), while also paying attention to unanticipated patterns and themes which emerged from the data (e.g. the importance of instilling citizenship and moral values at the school).

Findings

Do Ethnic Minority Students Access More or Less Effective Schools Than Kinh Students?

Our analysis finds considerable variation in value-added estimates across the school sample, both within and between provinces. Figures 2 and 3 show estimates for unconditional and conditional value-added respectively for each school, with 95 percent confidence intervals for each estimate in both figures.

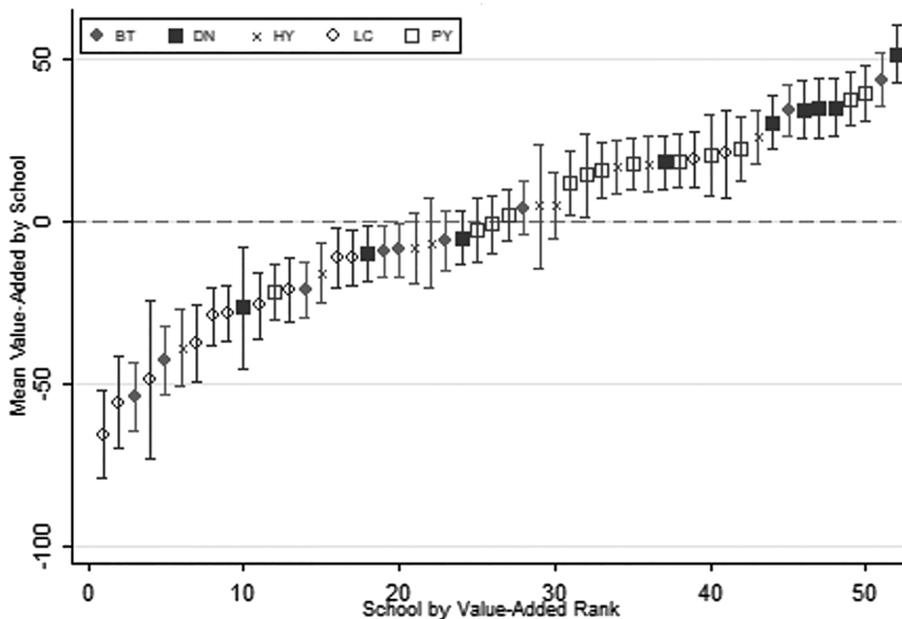


FIG. 2.—Unconditional value-added by province

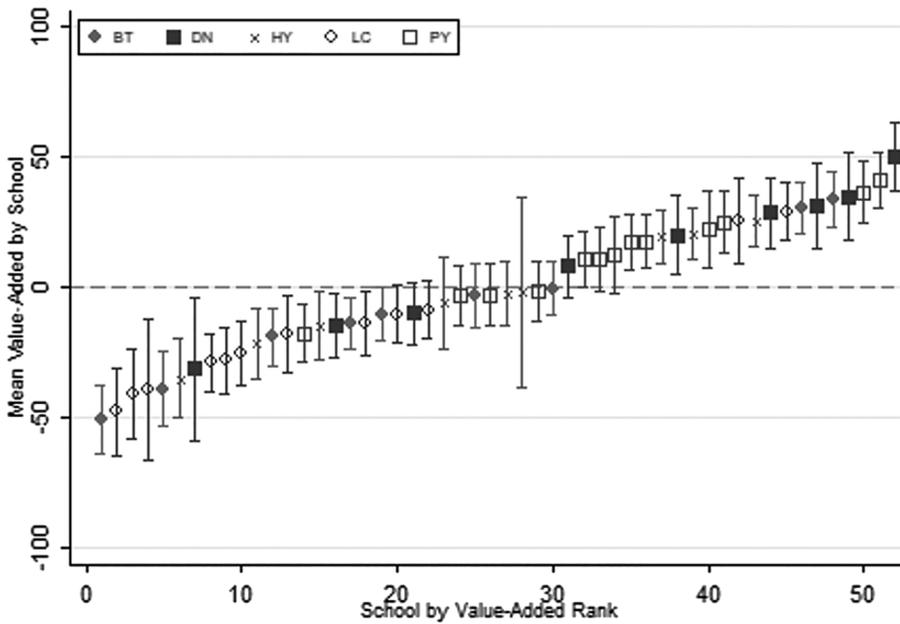


FIG. 3.—Conditional value-added by province

The estimates are centered on zero, with zero representing average value-added. Schools whose estimated confidence interval does not cross zero are either significantly more or less effective than the mean.

Figure 2 indicates that schools in Da Nang, the most economically advantaged province in the survey, are typically more effective than schools in other provinces. Most schools in Phu Yen and Hung Yen are also more effective than average. However, it should be noted that schools in these provinces typically operate in more favorable conditions. There is notable variation within provinces, with schools ranging from below to above average value-added in each province. Lao Cai schools, where ethnic minority students in the sample are concentrated, are among the least effective—10 out of 12 schools have significantly lower than average value-added estimates. There are two Lao Cai schools, however, which add higher than average value even when estimated unconditionally (i.e., without accounting for the poorer home backgrounds of students in Lao Cai).

When we control for student background, the pattern does not change markedly (fig. 3). Schools in economically disadvantaged areas such as Lao Cai show some improvement in value-added and rank, but 9 out of 12 schools in Lao Cai still have significantly lower estimated value-added than the sample average. However, the two high value-added schools in figure 2 move further

up the ranking, with one Lao Cai school now in the top ten most effective schools in the sample. Given the likely under-estimation of value-added attributable to schools in very disadvantaged areas, the results for these two schools are particularly noteworthy. To perform at comparable levels to schools in wealthier areas, these schools must overcome significant barriers to educational progression and performance.

To look more closely at these results, table 1 reports the estimates of unconditional and conditional value-added for the most and least effective schools in the sample, the “average” school in the sample, and the most effective school in Lao Cai (Dong Giang boarding school). While the confidence intervals are relatively wide, there is a clear separation between the highest and the average value-added schools, and between the lowest and the average. Notably, the lowest value-added school is one with low initial test-scores and is in the disadvantaged province of Lao Cai, while the highest value-added school has initially high scores and is in the more advantaged urban site of Da Nang. Accordingly, when conditioning on the backgrounds of the students in these schools, the effectiveness of the Lao Cai school rises and that of the Da Nang school falls. The estimate of effectiveness for the selected boarding school is 0.42, equivalent to a gain in test scores of two-fifths of a standard deviation, which may be considered substantial. The effect is somewhat imprecise owing to the relatively small student sample in the school.

Our value-added analysis suggests that students in Lao Cai typically attend less effective schools than students in the other Young Lives provinces, even when we account for Lao Cai students’ less advantaged backgrounds. Figure 4 confirms that, when looking at all five provinces, students from ethnic minority backgrounds are more likely to attend less effective schools. When focusing on the Lao Cai sample (fig. 5), we see a less dramatic (but still statistically significant) difference in school effectiveness according to ethnic status, even when controlling for student background.⁸

Overall, across the five Young Lives provinces in Vietnam, our value-added analysis indicates that access to quality upper secondary education is not particularly equitable. Ethnic minority students and those from poorer families typically attend less effective schools than Kinh students and those from richer families. This is the case across the full sample and within Lao Cai. However, figures 2 and 3 indicate that one Lao Cai school performs at comparable levels to the most effective schools in much wealthier provinces—suggesting that quality upper secondary education is available to at least some disadvantaged ethnic minority students. In the following section, we report qualitative findings on the provision of education at this school, an ethnic minority boarding school in Dong Giang district.

⁸ The *t*-test of difference in means: $p < .01$.

TABLE 1
SCHOOL VALUE-ADDED ESTIMATES FOR SELECTED EXAMPLE SCHOOLS

School	Province	School Average Starting Mathematics Score	Unconditional Model				Conditional Model			
			Unconditional "School Effect"	SE	95% CI Lower Bound	95% CI Upper Bound	Conditional "School Effect"	SE	95% CI Lower Bound	95% CI Upper Bound
Dong Giang boarding school	Lao Cai	456.16	21.06	6.76	7.80	34.31	25.46	8.42	8.97	41.96
"Average" value-added	Phu Yen	472.01	-63	4.49	-9.43	8.18	-3.09	5.72	-14.29	8.12
Lowest value-added	Lao Cai	368.22	-65.29	6.95	-78.92	-51.65	-47.58	8.42	-64.07	-31.08
Highest value-added	Da Nang	556.71	51.87	4.48	43.09	60.65	50.16	6.82	36.79	63.54

NOTE.—CI = confidence interval; SE = standard error.

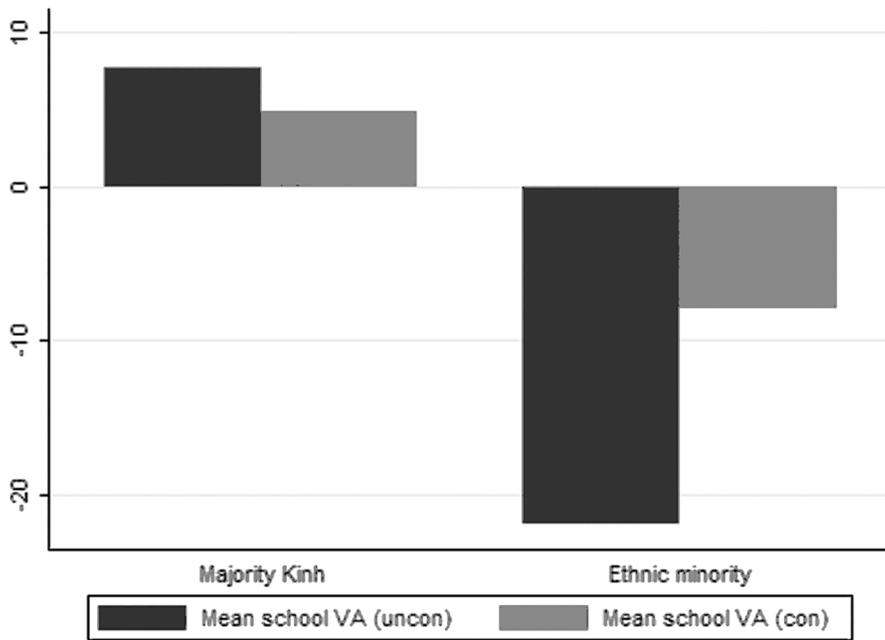


FIG. 4.—Mean value-added by ethnic status (whole sample)

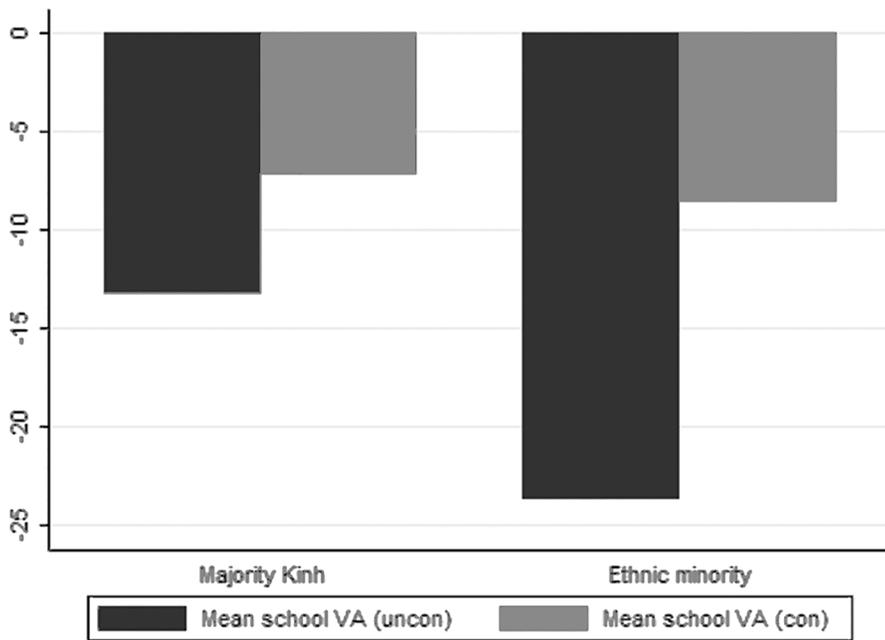


FIG. 5.—Mean value-added by ethnic status (Lao Cai province)

Case Study: An Ethnic Minority Boarding School in Dong Giang District, Lao Cai

Education in Dong Giang district.—Dong Giang is a mountainous, maize-growing district in Lao Cai and one of the 62 poorest districts in Vietnam.⁹ Eighty percent of the population are from ethnic minority backgrounds, of which 40 percent are from the Hmong ethnic group. While farming is the main source of employment, the construction of the Hanoi to Lao Cai highway in 2014 has contributed to a steady growth in tourism and economic development in the district.

There are three upper secondary schools and one vocational training center in the district. Of these, Dong Giang ethnic minority boarding school is the only full-boarding upper secondary school. Selection into all three upper secondary schools is based on performance in the grade 10 entrance exam. In 2017–18, the ethnic minority boarding school had over 200 applicants for 70 places in grade 10; 75 percent of these places were allocated based on students' exam results, and 25 percent were allocated based on "priority criteria," that is, for those from very small ethnic minority groups and those from areas with low levels of enrollment.

Enabling factors: Who attends Dong Giang boarding school?—Young Lives 2016–17 school survey data indicate that most grade 10 students in Dong Giang boarding school come from families with low levels of education,¹⁰ which was also the case for grade 10 student participants in our case study. Eight out of 11 students reported that their mothers had never been to school; two reported this for their fathers, and five students' fathers were educated to primary level. Eight students came from families where both parents worked as farmers; one student's father worked as a police officer; one as a commune official; and one student had parents who both worked as primary school teachers.

Almost all students reported that, in spite of their parents' limited experiences of schooling, education was highly valued by their families: "My parents encourage me to study. Although they are illiterate, they said to me that I need to try my best in studying. Otherwise, I will have to go back home and do farming like them" (Hoan, male Tay student). The value of education in Hoan's family was typical for student participants from farming families; education was seen as essential for improved economic opportunities and to avoid the hardships experienced by earlier generations. While previous studies in Vietnam have indicated that low levels of parental education may explain limited ethnic minority participation in upper secondary education (MOET et al. 2008; Vu 2014), student participants' parents placed a high value on education due to their own low levels of schooling, and encouraged students to progress to higher levels of education than their own. This is consistent with findings on

⁹ This is according to Resolution no. 30a/2008/NQ-CP. Dong Giang is one of three districts in Lao Cai identified under Resolution no. 30a.

¹⁰ For 63.8 percent of grade 10 students, their mother's highest level of education was primary or below ($n = 44$); the same was true of father's education for 62.5 percent of students ($n = 40$).

high educational aspirations among low-income and minority groups in other contexts, including Peru (Guerrero et al. 2016) and Ethiopia (Tafere 2014).

Beyond their families, students described enabling factors during their early experiences of school: “Apart from my parents, I also received very special encouragement from my former teacher in primary school. . . . I remember when I was in grade 4 and she was my teacher, when I attended contests for gifted students, she even tried to wash clothes for me. She was a very kind teacher who supported me a lot . . . [She also used to] teach me extra lessons for gifted students” (Tien, male Phu La student).

Some students described being identified as “promising” students through formal selection processes at their primary schools; in Tien’s case, his grade 4 teacher not only identified him as a “gifted” student but provided him with academic and pastoral support so he could continue to excel. This support from his teacher meant that, in spite of his disadvantaged background, Tien continued beyond compulsory education and eventually gained access to the boarding school.

While student participants were typically from disadvantaged families, several participants noted that the most disadvantaged students were unlikely to access Dong Giang boarding school. Those who did were exceptional cases, as indicated in the following: “[My friend] is a Hmong student, [and] his family is very poor. . . . But he tried his best to gain very high scores. He obtained the “excellent” level from grade 6 to 9. . . . He is the only student in this school who passed the entrance exam to enter the upper secondary school for gifted students in Lao Cai city. . . . Because he is from ethnic minority group, he got a scholarship and he is reserved a place in the school dormitory” (Xuan, female Tay student). As previous research has shown, children from the poorest ethnic minority families typically do not access upper secondary education (Dang and Glewwe 2018). When they do, as in the case of Xuan’s friend, it seems key enabling factors include a combination of exceptional ability, high levels of effort, support from key individuals such as families and teachers, and affirmative action initiatives from the government.

An “all-round” education at Dong Giang boarding school.—Student participants had evidently overcome significant barriers to attend the boarding school, but many reported challenges that they continued to face. For example, parents’ low levels of schooling meant they received little academic support at home. The school’s residential facilities directly overcame this barrier, allowing students to spend most of the year in an academically supportive environment. Moreover, many students noted that without the pressures of housework or farming and without long, daily journeys between home and school, they could devote more time to academic work. The boarding school also allowed students more time to study compared to day or semi-boarding upper secondary schools. In addition to eight shifts of formal teaching and

three shifts of self-study during the day from Monday to Saturday, students at the boarding school had six evening shifts of self-study per week, which were not available to students at other schools in the district.

Almost all students described their teachers as highly supportive, in terms of pastoral care and academic work. During self-study periods, classmates were also an important source of support: “When I have difficulties with my homework, I can ask the class monitoring board for help. If they cannot help, I ask other students in class 10A for help. . . . Only after this we telephone the class teacher for their advice. This is the approach teachers encourage us to take during self-study” (Trang, female Tay student).

These self-study and peer learning structures also reflected the emphasis on “soft skills” at the school. Several teachers explained that this “all-round education” was central to the school’s ethos: “The main goal of studying here is to become equipped with knowledge and skills, which may help students adapt with any challenge in their lives and society later. . . . [They should develop] communicative skills . . . being a self-independent student and problem-solving” (biology teacher, female, Kinh).

According to other teachers, students were encouraged to develop these skills through extra-curricular activities and pastoral support. Soft skills were seen to have important benefits beyond school: “I think the life skills that we train for our students here will be very useful for students when they enter the wider society. . . . Our ethnic minority students, when they . . . enter a higher education institution, they are very confident. They can quickly get used to the new environment. This is because they have good training and experience [from here]” (chemistry teacher, male, Kinh). According to the chemistry teacher, due to skills developed at the boarding school, ethnic minority students were better prepared for higher education than their Kinh peers. The development of soft skills at the school was therefore framed, at least by this teacher, as a mechanism to counteract wider disadvantages.

Teachers also encouraged the development of soft skills within the classroom. Lao Cai is one of six provinces where Vietnam’s new “competency-based” curriculum has been piloted in recent years, and Dong Giang boarding school has participated in this pilot.

I ask students to read some lessons and make preparations [before class]. I divide the class in different groups and each group will prepare their own topic. Then, they will make presentation in front of the class. . . . I coordinate the presentation sessions and summarize the presentation made by students. (geography teacher, male, Xa Pho)

We integrate . . . life skills into our teaching content in class . . . we have the responsibility to teach them the way of thinking, the right things in life. (history teacher, male, Kinh)

The geography teacher described a pedagogical approach that encourages self-study, teamwork, and communication. Meanwhile, the history teacher

emphasized the moral dimension of life skills at the school, in which students were taught about the “right things in life.” Among the moral values described by teachers, a sense of Vietnamese citizenship was the most notable. While students celebrated their ethnic minority cultures at school—for example, by wearing traditional dress on special occasions—they were encouraged to see themselves as Vietnamese first, and ethnic minority second. This is consistent with the wider “assimilation” of ethnic minorities in Vietnam (Baulch et al. 2008). Within this understanding of citizenship, teachers and students referred to a duty to return to their home communes after their education: “The teachers [talk to us] about the expectation of coming back to serve the commune and village” (Nhi, female Dao student).

Teachers linked this expectation to “pay back” their education with the original purpose of the boarding school—“training the high-quality human resources in ethnic minorities for the Government” (geography teacher, male, Xa Pho). However, several noted that such employment opportunities were no longer guaranteed: “In the past, it was easier. When you finished studying here, you [could] go back to the communes and you [would] be appointed as [an official] in the communes. But recently, this phenomenon has gone” (geography teacher, male, Xa Pho). Even if there was an expectation that students should return home and serve their communes as government officials, the geography teacher and others acknowledged that this was not necessarily realistic. Some teachers attributed this to a mismatch in demand and supply—the number of graduates had increased, while the number of provincial government jobs remained unchanged. According to the vice principal, an additional factor was the rising cost of university education, which meant that boarding school graduates chose vocational college as a less expensive and more promising option in terms of future employment. Students’ own aspirations reflected these changes in labor market opportunities. Of the eight students who talked about their future careers, three hoped to work in government jobs as teachers or police officers; three were considering the tourism industry; and two hoped to join vocational college and then find work. Most students hoped to remain in the district, if not their home communes.

Overall, Dong Giang boarding school overcame several challenges that typically limit ethnic minority access and learning outcomes at the secondary level. The fee-free, residential model meant students from disadvantaged families in remote, mountainous areas could access an academically supportive environment. Through the competency-based curriculum and extracurricular activities, the school aimed to develop academic and soft skills that would benefit ethnic minority students after graduation. However, as a school exclusively for the most academically able ethnic minority students, the “quality education” at Dong Giang boarding school reflected both its teachers and students. In the final section, we consider the wider implications of the

boarding school model for quality, equitable secondary education in Vietnam and in other low- and middle-income countries.

Conclusion

We have examined questions of equity and quality for ethnic minority students at the upper secondary level in Vietnam, with Young Lives 2016–17 school survey data and an in-depth qualitative case study. We have considered equity in terms of meritocracy and impartiality (UNESCO et al. 2018), and quality in terms of school effectiveness.

Our value-added analysis indicates that ethnic minority students attend less “effective” upper secondary schools than their Kinh peers, both when comparing school effectiveness across the five Young Lives provinces and within Lao Cai, where most ethnic minority students in the sample were enrolled. However, not all of this effectiveness may be causally attributable to schools, and may partly reflect common student backgrounds and peer effects at the school level. Accordingly, these measures are not interpreted in terms of school accountability. Moreover, schools are not equally well resourced in Vietnam; those in wealthier areas receive considerably more income from parents and communes. Nonetheless, we find that students in less effective schools make less progress, and these students are typically from ethnic minority backgrounds, indicating a “double disadvantage.” Consistent with previous studies, this suggests inequitable access to quality upper secondary education in Vietnam. Even if ethnic minority students do overcome significant barriers to access post-compulsory education, they are systematically attending less effective schools. This suggests that national policies to counteract the effects of home disadvantage through education are at best partially effective.

However, a case of “positive deviance” from our value-added analysis suggests that quality upper secondary education is not necessarily “only for the wealthy” (World Bank 2014, 92). While almost all schools in Lao Cai were less effective than average in the sample, our analysis highlighted one school that was more effective than many schools in wealthier provinces. This school is an example of Vietnam’s ethnic minority boarding school policy, in which the government invests a high level of resources to provide fee-free, residential schooling for gifted ethnic minority students.

The affirmative action inherent in this model—with selection based on the academic performance and effort of disadvantaged students—can be understood as a redistributive approach to achieving an equitable system, where “equity” is understood in meritocratic terms. Our quantitative analysis attempts to separate school-level factors from student background factors to understand school quality. However, our qualitative case study indicates the

complexities inherent in this assumption, given the importance of parental and school-level support to students' educational outcomes. Nevertheless, even with high levels of ability, effort, and the value placed on education by their families, it seems unlikely that student participants attending Dong Giang boarding school would have been able to access a mainstream upper secondary school of comparable quality without the formal government interventions from which many of them had benefited. This indicates the importance of school factors (and policy context, which is not captured by our value-added models) as distinct from home factors when aiming to redress wider inequalities facing disadvantaged groups.

However, the ethnic minority boarding school policy is not necessarily "scalable" to the rest of the country. There would be significant cost implications to such expansion. Moreover, expanding access to ethnic minority boarding schools would be inconsistent with the original purpose of the model—to educate gifted ethnic minority students and produce a cadre of government officials in remote areas. This highly selective mode of education is perhaps consistent with a certain conception of meritocracy, but a more comprehensive approach to redistribution might require that all disadvantaged students—not just the most academically able—are given the opportunity to attend such schools.

With increased access to upper secondary education and a rapidly changing labour market, the original promise of attending an ethnic minority boarding school—a secure government job—is no longer guaranteed. Nevertheless, it is still likely that boarding school graduates will have access to better jobs than other ethnic minority graduates. Higher levels of academic achievement will allow access to more prestigious higher education opportunities, while the soft skills developed at the boarding school also offer potential benefits. This reflects the economic, social and cultural hierarchies that may present themselves within disadvantaged groups as a result of apparently "equitable" interventions. The "Vietnamese first, ethnic minority second" approach to assimilation in ethnic minority boarding schools may also have an effect on the ethnic identities of individual students, and by extension, their communes when they return home (Balagopalan 2010; Shah 2016). While not explored in our study, this is an important area for further research in Vietnam.

Even if it is unlikely that the exact instrumental and positional benefits of boarding schools can be extended to more ethnic minority students—since it is essentially an elite model—other government initiatives in Lao Cai offer more scalable equity-related interventions at the secondary level. Semi-boarding primary and lower secondary schools address many of the challenges preventing ethnic minority progression through the education system, and these schools can be provided at a much lower cost than full boarding schools. Further research is required to examine educational and socioeconomic outcomes for ethnic minority students who attend semi-boarding and full boarding

schools, both in Lao Cai province and in other parts of the country, to better understand their longer-term quality and equity implications.

While Kinh students continue to access better-quality upper secondary education across the country, we find that government initiatives do aim to compensate for socioeconomic disadvantage and to improve access and outcomes for ethnic minorities. A residential model may not be the most relevant approach to compensate for disadvantage in all education systems. But the “logical approach” (McAleavy et al. 2018) adopted by the Vietnamese education system in its affirmative action for ethnic minorities in Lao Cai offers valuable lessons for other countries. These include identifying key challenges facing disadvantaged students, implementing interventions to address these challenges, and perhaps most importantly, having the political and economic motivations to compensate for disadvantage through the education system. From an equity perspective, these efforts have not yet gone far enough at post-compulsory levels of education in Vietnam. In part, this may be because redressing societal inequalities through education is a herculean task, but the case of Dong Giang boarding school suggests it is perhaps not an impossible one.

Appendix

TABLE A1
SUMMARY STATISTICS FOR VARIABLES USED IN VALUE-ADDED ANALYSIS

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
End of grade 10 mathematics score	7,581	509.6904	104.3172	260.9068	787.3807
Start of grade 10 mathematics score	8,128	483.6652	97.49906	216.5566	768.7922
Student's age	8,376	15.31411	.5102615	14	19
Student's gender	8,425	.5032641	.500019	0	1
Mother's education: primary	2,107	.3615926	.4805029	0	1
Mother's education: secondary	2,739	.470052	.4991452	0	1
Mothers education: higher	981	.1683542	.3742126	0	1
Father's education: primary	1,665	.3090774	.462156	0	1
Father's education: secondary	2,522	.4681641	.4990318	0	1
Father's education: higher	1,200	.2227585	.4161361	0	1
Wealth index	8,740	-.0098163	2.306209	-8.28903	3.090824

TABLE A2
RESULTS OF VALUE-ADDED MODELS

Variable	Unconditional Value-Added Model		Conditional Value-Added Model	
	Coefficient	Standard Error	Coefficient	Standard Error
Start of grade 10 mathematics score ^a	-1.301	.350***	-1.001	.457**
	.004	.001***	.003	.001***
Student's age			-1.448	1.795
Student's gender			4.327	1.859**
Mother's education: secondary			6.478	2.296***

TABLE A2 (Continued)

Variable	Unconditional Value-Added Model		Conditional Value-Added Model	
	Coefficient	Standard Error	Coefficient	Standard Error
Mother's education: higher			1.151	3.330
Father's education: secondary			1.928	2.353
Father's education: higher			5.422	3.085*
Wealth index			2.016	.700***
Constant	517.091	58.945***	476.782	80.854***
N	7,450		4,225	
Number of schools	52		52	

^a Quadratic and cubic terms for the prior test score were also included in the models, with quadratic terms showing a positive coefficient indicating a curvilinear relationship.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE A3
TOPICS COVERED IN QUALITATIVE INTERVIEWS

Participant Group	Interview Topics
Bureau of Education and Training (BOET) officials Vice principal	<ul style="list-style-type: none"> • Provision of education in Dong Giang district
Teachers	<ul style="list-style-type: none"> • History of Dong Giang ethnic minority boarding school • Selection processes at the boarding school • Challenges facing ethnic minority students in the district/province • Experiences of teaching and learning at the boarding school • Pastoral support at the boarding school • The "ethos" of the boarding school • Previous teaching experience (in ethnic minority and "mainstream" schools) • Challenges facing ethnic minority students in the district/province
Students	<ul style="list-style-type: none"> • Family background (including family members' education experiences and attitudes toward education) • Earlier experiences of education • Factors influencing the transition to grade 10, and to the boarding school • Current experiences at the boarding school • Future aspirations and expectations • Barriers and facilitators that had affected their access to education

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