Educational and Labor Outcomes of the Texas Migrant Student Population

Aleksandra Malinowska
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What We Studied

The children of migrant workers are one of the most marginalized populations in the United States. Instability and poverty impact many aspects of most migrant students' lives, especially education. Migrant or seasonal workers travel between cities, states, and countries following employment in temporary and cyclical industries such as agriculture, logging, fishing, or manufacturing.[i] The migrant lifestyle is marked by adversity; workers and their families often endure severe hardships, including below-minimum wage pay, exploitation, inferior housing, long hours in extreme temperatures, and working with hazardous chemicals such as pesticides.[ii] As migrant children move with their families in pursuit of employment, little opportunity is left to consider the school calendar. Migrant students may leave school before the end of the semester or arrive after the school year has begun. Courses and graduation requirements may differ between schools and states and gradually, migrant students find themselves behind and become less motivated to continue.[iii]

In order to meet the educational needs of migrant students, President Lyndon B. Johnson created the Migrant Education Program (MEP) in 1966 as part of the War on Poverty. This program, included in the *Elementary and Secondary Education Act* (ESEA), is a federally funded plan that provides services to migrant children.[iv] Federal funding is administered to state educational agencies to manage state Migrant Education Programs. The goal of these programs is to ensure that migrant students graduate high school and are prepared for higher education and the workforce. Texas has the second largest population of migrant students in the United States and spends about $50 million annually on the Texas Migrant Education Program (TMEP). There has been limited evaluation of outcomes following participation in the TMEP (or in the MEP in general) and no research regarding labor outcomes of former migrant students has been conducted.

The purpose of this study is to estimate how educational and post-schooling outcomes of Latino students eligible to participate in the TMEP differ from those of the non-migrant Latino student population, controlling for various factors. Specifically, the study is guided by the following questions:

1) Does participation in the TMEP compensate for disadvantages faced by Latino migrant students?
2) Do Latino TMEP participants fare better or worse compared to the non-migrant Latino student population? What explains these differences?
3) Does program eligibility or participation improve academic or labor market outcomes?

The educational outcomes studied include total and chronic absenteeism, SAT score, odds of enrollment in a STEM major, and degree level awarded from public universities, career and technical schools, and community colleges. The primary labor market outcomes investigated are wages and odds of participating in the agricultural industry. OLS regression, logistic regression, ordered logit, zero inflated Poisson regression, and panel data with fixed effects were

used. Changes in migrant students' eligibility for services allows for an estimation of the intent-to-treat effect of the TMEP.

How We Analyzed the Data

Data comes from the Public Education Information Management System (PEIMS) from the Texas Education Agency (TEA), the Texas Higher Education Coordinating Board (THECB), and the Texas Workforce Commission (TWC). The PEIMS dataset provides data on K-12 outcomes for students; the THECB dataset provides data on higher education outcomes for students; and the TWC includes data on workforce outcomes in the state of Texas. This data is housed at the Education Research Center (ERC) at the University of Texas at Austin. The data for this study is de-identified student-level data, and contains the whole population of students and laborers in Texas between the years of 2003 and 2016. Datasets were combined across agencies and years by a student identification indicator. The PEIMS dataset includes a variable that flags students who are eligible for the Texas MEP in K-12 education and allows students to be tracked in postsecondary (THECB) and labor (TWC) data. TMEP eligibility is defined as students who meet the MEP eligibility criteria as set out by the program. However, not all eligible students participate in the program, in fact, only about 67% of eligible students participate overall in the US [v] and about 75% in participate in Texas.[vi]

Data **Latino Students Only**	**Total Observations**	**# of non-migrant Individuals**	**# of MEP obsv.**	**# of MEP Students**
TEA Data	30,907,536	5,191,405	728,951	217,437
TEA and THECB Data - University, community college, career/technical	4,468,843	1,044,038	213,996	55,127
TEA and THECB Data - University	1,498,964	460,188	69,595	24,700
TEA and THECB Data - Community College	2,765,552	885,393	135,303	45,995
TEA and THECB Data - Career/technical School	204,327	114,788	9,098	5,671
TEA and TWC Workforce Data	11,111,749	4,755,652	666,704	119,102
TEA/THECB/TWC Workforce Data	6,622,384	1,044,038	331,119	55,127

What We Discovered

K-12 Outcomes

Findings indicate that when compared to the Latino non-TMEP student population, Latino TMEP students have a higher incidence rate of absenteeism (up to 27% higher annually) and have higher odds of chronic absenteeism (up to 87% higher annually), controlling for grade, bilingual/ESL/LEP status, immigration status, sex, economic disadvantage, and being classified at-risk of dropping out of school. The high opportunity cost of school influences

absenteeism rates for the TMEP population. Changes in federal funding in 2003 may have cut the services available to MEP and TMEP students. Findings of past studies[vii] indicate the importance of teachers and mentors who understand the experiences of migrant families. Mentors can provide resources that help students overcome the challenges they face. With budget cuts, schools may be able to retain mentors for migrant families, particularly in schools with small migrant populations. Although the impact of specific services has not been thoroughly investigated, such budgetary changes could be related to absenteeism rates.

It is possible to estimate whether the Texas Migrant Education Program is able to compensate for disadvantages faced by migrant students through an Intent-to-Treat (ITT) estimate. This estimate is calculated by taking the regression coefficient estimation and dividing it by the percentage of participants who did participate in the study (i.e. Lang, 2015 [viii]). While uncertainty remains about exactly how many migrant students eligible for the TMEP did not participate in the program, a reasonable appraisal is about 25%.[ix] ITT is estimated, and thereby program effects, by taking the coefficient of 5% (the increase in the odds of chronic absenteeism for Latino TMEP students), and dividing it by the number of participants who we know received treatment (75%). The ITT of the TMEP is calculated to be 6.7%; meaning that Latino migrant students when participating in the TMEP, have 6.7% higher odds of being chronically absent as compared Latino migrant students when they are ineligible to participate in the TMEP controlling for time invariant outcomes. As mentioned in the findings, the migrant student life is defined by frequent migration as students follow seasonal harvests, work alongside families, or help families at home. When students are considered eligible for the TMEP, they are by definition moving. Participation in the program is not able to lower odds of chronic absenteeism to the level of when students are ineligible for TMEP participation.

Understanding chronic absenteeism and how it impacts migrant students can help policymakers, scholars, and practitioners recognize the ways in which disadvantages faced by migrant students could be corrected. Migrant students deserve the attention of policymakers because this population is often overlooked in research on chronic absenteeism. High rates of chronic absenteeism are one challenge that migrant students face and addressing this may improve graduation rates and postsecondary outcomes. Graduation rates as reported by TEA (2017) for the class of 2014 indicated that Migrant students in Texas graduated at a rate of 88.9% in 2014. Comparatively, Latino students graduated at a 91.8% rate in 2014, while all students in Texas graduated at a rate of 93.4%. These outcomes indicate that with the help of TMEP services, migrant students are finishing at similar rates to other students in Texas. These services are essential to combat the many obstacles to graduation that migrant students face.

Postsecondary Outcomes

Estimates on differences in SAT scores between the Latino TMEP and non-TMEP population found that Latino TMEP students scored about 40 points lower than non-TMEP Latino students controlling for other factors in the analysis, and on average between 2003-2015 Latino TMEP students scored about 70 points lower than non-TMEP Latino students. Although these differences were statistically significant, such a small variance is surprising, and highlights that the Latino TMEP population admitted to universities are high achieving students. SAT and ACT scores signify to colleges the college readiness of students. They are also used to determine university admissions when students in Texas are not in the top 10% of their graduating class. One service that is supposedly readily provided by the TMEP is SAT/ACT tutoring, but it is unknown how many TMEP students have access to these services.

The analysis of postsecondary education trajectories found that between 2003-2016, about 25% of Texas Latino migrant students in K-12 data continued on to community college, career/technical school, or public university or college in Texas and about one-quarter of Latino migrant students received degrees. This is remarkably similar to the persistence rate of Latino non-migrant students in K-12 data, of whom about 26% continued on to postsecondary education in Texas, and from these, 30% graduated with a degree. Other sources report that over 40% of non-migrant students graduated with some type of degree [x], this percentage includes private universities, which was not incorporated into this study. The exception being out of state private schools that have been certified to provide services in Texas (and are part of the career and technical school data files). Contingent on attending community college, Latino migrant students had higher odds of obtaining degrees at community colleges than Latino non-migrant students, but lower odds of obtaining degrees at career/technical schools or universities. Compared to Latino non-migrant students, Latino migrant students in community college had up to 62% higher odds of obtaining a level of degree (curriculum, certificate, associates/bachelors), controlling for other factors in the analysis. Latino migrant

students attending public university or career/technical schools had lower odds of obtaining a degree than Latino non-migrant students. Depending on the year, Latino migrant students had up to 21% lower odds of obtaining a degree at a university or career and technical schools as compared to Latino non-migrant student. The majority of Latino TMEP and non-TMEP students earned bachelor degrees at university. At a career or technical school, the majority of TMEP Latino students and non-TMEP Latino students who earned degrees earned certificates.

There are many reasons why migrant students have higher odds of attending and receiving degrees at community colleges than other postsecondary institutions. First, community colleges are often public and students can benefit from lower tuition rates than at universities or private schools. Community colleges are found even in rural communities across the state and provide access to higher education without paying for the four-year college experience. Migrant students can obtain a certificate or complete a degree for transfer to another institution at community colleges. While higher degree attainment is beneficial, earning degrees such as certificates at technical colleges can provide migrant student with job opportunities (i.e. dental hygienist or technician) they might not be eligible for with only a high school degree.

In many fields (notably STEM), higher degrees are necessary to be competitive in the modern labor force.[xi] Latino migrant undergraduate students who attended public universities in Texas had up to 50% higher odds of majoring in STEM fields as compared to Latino non-migrant students, controlling for socioeconomic factors, SAT/ACT scores, parent's level of education etc. As with SAT score outcomes, the Latino migrant students in the sample who attend public university are a unique group of individuals. Immigrant students in the analysis also had higher odds of majoring in STEM fields, and 1.5 and 2nd generation immigrant students have higher outcomes than American students overall.[xii] Latino Migrant students are typically 1.5 or 2nd generation immigrant students. Majoring in STEM can provide migrant students with higher paying future job prospects as compared to other fields. Migrant students who invest money in a university education, which is typically more expensive than a community college or career school, are likely doing so with the expectation of being high achieving students.

Services for migrant students in postsecondary education can be instrumental in supporting positive long-term education outcomes. Higher wages and better career opportunities may be accessible with a higher quality of education and higher level of degree award. Within the data, only about 25% of Latino migrant students who attended any postsecondary education graduate with a postsecondary degree as compared to 30% of Latino non-migrant students in the data. For Latino students who attended public university, only about 28% of Latino TMEP students graduated with a degree as compared to 47% of non-TMEP Latino students between 2003-2016. From the Latino TMEP students who earn university degrees, 86% earn bachelor's degrees, and 14% obtain graduate degrees. Even though Latino migrant students seem to have parity with Latino non-migrants as far as the type of degree they earn, increasing the number of Latino migrant students who earn degrees represents an area of potential improvement for the TMEP. Access to postsecondary education could be expanded through services in the TMEP that target postsecondary attendance and completion. Funding for CAMP has been cut in recent years, and TMEP students who benefited from the services these programs provided no longer have access. For many Latino TMEP students, financial problems afford the largest barrier to success in postsecondary education. Many students have to give up studies to help their families or support themselves. Providing scholarships specifically targeting the migrant population can increase secondary and postsecondary completion rates of migrant students.

Furthermore, while current policy concentrates on increasing rates of STEM participation for Latinos, women, and socioeconomically disadvantaged students, no attention has been brought specifically to the migrant student population. While the small percent of Latino TMEP students who attend public universities have higher odds of majoring in STEM than do non-TMEP Latinos, a selection bias exists for this sample of students who are able to attend university. Expanding information to the Latino TMEP population on the opportunities of majoring in STEM fields can target a portion of Latino students who have been left behind. As labor options in STEM fields continue to grow, it is imperative to promote STEM opportunities for migrant students. Introducing after school programs, summer camps, and work site visits could ignite interest in STEM fields for the migrant student population. This untapped population can provide the US with a highly skilled and educated workforce, and help close the knowledge and skill gap that currently exists. Furthermore, expanding the portion of Latino students in STEM fields by targeting TMEP students can decrease the currently existing gap that exists for minority populations.

Labor Force Outcomes

Migrant students face many obstacles in their educational journey, such as financing their education, dealing with cultural barriers to attend schools farther away from home, and resisting temptation of entering the labor market early. Labor market and wage outcomes highlight how migrant students continue to endure greater burdens than non-migrant Latino students; through TMEP services, these may be ameliorated by increasing postsecondary attainment as much as possible, even beyond non-migrant rates.

In every analysis conducted, the annual wages of Latino migrant students were estimated to be lower than non-migrants after controlling for multiple factors (including demographics, socioeconomic status, sector, graduation, and college attendance). The expected difference in wages for Latino migrant students who completed K-12 and went into the workforce versus wages for non-migrant Latino students who completed K-12 were about 12% lower annually. The difference in wages for Latino migrant versus non-migrant Latino students who went on to postsecondary education before entering the workforce was about 11% annually net of other factors. Furthermore, Latino migrant students had much higher odds of working in the agricultural sector than non-migrant Latino students. Depending on the particular year, for students who attended K-12 education in Texas and continued into the workforce (regardless of postsecondary attendance or graduation) Latino migrant students had up to 7.7 times higher odds of working in the agricultural sector than non-migrant Latino students. Even for Latino migrant students who attended postsecondary education, the odds remained over 7 times higher than for non-migrant Latino students. Wages in agriculture were much lower than for other sectors. Workers in agriculture, even those who attended university, earned up to 77% less than industries such as mining, oil, gas, and water - controlling for other factors. Lower long-term wages and higher odds of working in traditional migrant labor such as agriculture highlight the extra support needed by Latino migrant students in Texas. The TMEP has an opportunity to boost secondary, postsecondary, and labor preparation of Latino migrant students. Exposing students to high achieving mentors, job opportunities, and career training can support the growth and long-term outcomes of Latino migrants in Texas. Creating educational programs and training that will specifically focus on STEM opportunities can be beneficial for both TMEP students and the state of Texas which will be supplied with a skilled workforce. Studies in this dissertation have highlighted the gap that exists between the Latino TMEP and non-TMEP populations. Many opportunities exist to provide further support for TMEP students.

Policy Recommendations

Each state determines the type and quality of services provided by their migrant education program. In Texas, services vary substantially by district and school; some offer a comprehensive selection including counseling, test preparation, and distance courses, whereas others districts fail to maintain a program despite a migrant presence. (The Austin Independent School District is a notable example of the latter.) The state should establish consistency across educational entities to ensure that migrants have access to the same set of quality resources regardless of their geographic location. Evaluation of specific services is necessary to determine service effectiveness. Since Texas has the second largest population of MEP students in the US, expansion of funding for the TMEP from the state level could help bridge the current gap that exists. Latino students constitute almost 50% of students in Texas, and assistance for the migrant student population who are made up of 98% Latino students should be emphasized. On a broader level, conducting a deeper evaluation of the MEP in each state with a migrant population is important to adequately evaluate the MEP and attain funding for the program.

Migration may inherently be a cause of unequal outcomes. To counteract this, providing families with a scholarship or a conditional cash transfer in addition to MEP services may raise attendance and school completion. Further, this could subsidize a more stable environment and increase the opportunity cost of migration. Improving outcomes such as school attendance, K-12 graduation rates, postsecondary persistence, and career attainment is instrumental to providing migrant students with better prospects in life. Increased financial support and access to effective mentorship programs can facilitate positive results. For instance, counseling for migrant students can provide them with information on postsecondary education that help them take advantage of financial assistance programs or encourage them to pursue higher-tier postsecondary schools. Promoting STEM education and STEM career preparation could be a promising strategy to reducing recidivism to agricultural labor.

The migrant student population is arguably the most marginalized group of students in the United States. In addition to structural inequities, language differences, and cultural barriers, these students frequently change schools, live in poverty, and do not have access to knowledge about navigating long-term opportunities. The MEP was developed to correct disadvantages that migrant students face. Yet, Latino migrant students continue to have lower outcomes than non-migrant Latino students. Resources should meet the needs of the migrant population. A revitalized program with a working budget that provides more effective services may enable migrants to pursue the same opportunities as their non-migrant peers.

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