

STUDENT RESEARCH REPORT – REEU PROGRAM 2022

Practical English as a Second Language Course for Spanish-Speaking Migrant Workers

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Abstract

About 90% of the 13,000 farmworkers in Massachusetts are immigrants. Many are seasonal workers, a group disproportionately composed of Latino workers who may speak little to no English. An inability to speak English can be socially challenging for workers as well as hinder their interactions with English-speaking coworkers and farm supervisors, which can in turn lead to labor inefficiencies and/or unsafe working conditions. Removing the English language barriers for these workers can create a more productive working environment and allow migrant workers to communicate with their wider community. We hypothesized that the English language needs of Spanish-speaking farmworkers in Massachusetts are not being currently met. We predicted a need for more accessible ESL classes for local, Spanish-speaking agricultural workers. To assess the English-speaking needs of farmworkers in Massachusetts, short surveys were conducted across three farms in Northfield, Holyoke, and Hadley. Our data showed that Spanish-speaking farmworkers have been unable to access English classes. The lack of local resources to better their English skills has forced them to rely on coworkers to translate, their supervisors to speak Spanish or to live and work with a language barrier. Giving farmworkers a basic understanding of English tailored to their profession will improve their skills and capabilities inside and outside work.

Introduction

In the United States, many agricultural employees work with a language barrier, meaning that either their coworkers or supervisors do not speak their language. Language barriers can lead to miscommunications resulting in labor inefficiencies and accidents, low morale, increased turnover of employees, and unsafe or hazardous work conditions (Scheufele, 2018), leaving the workers largely impacted. Farmworkers across Massachusetts plant and harvest fruits and vegetables, raise livestock, and tend to orchards and nurseries; work that is highly skilled and often physically demanding. On top of this, farmworkers face unique workplace hazards and health concerns that accompany long work hours and a fast-paced work environment (Connecticut River Valley Farmworker Health Program, 2021).

In Massachusetts, the agricultural industry is largely driven by Spanish-speaking farmworkers (Fairness for Farm Workers Coalition, 2021). According to current data from the Connecticut River Valley Farmworker Health Program, nearly 90% of CRVFP's Massachusetts-

based patients are born abroad (2021). Specifically, over 50% of these patients self-identify as being from Guatemala, 22.5% from Mexico, and 11% from Jamaica (CRVFHP, 2021). Further, a majority of the 13,000 farmworkers work seasonally, rather than year round: Approximately 60% are employed as farmworkers for fewer than 150 days each year (U.S. Dept of Agriculture, 2019). Many of these seasonal migrant workers may speak minimal or no English, so they may also not be able to effectively communicate with their English-speaking employers and coworkers, but also with their children's school administrators, bank tellers, or grocery shop employees.

While the acquisition of English would serve many farmworkers who experience a language barrier, it is not an easy process. Second language acquisition is challenging for all native speakers, especially when it comes to English (Renukadevi, D. 2014). Additionally, the spelling and pronunciation irregularities are challenging to learn for non-native speakers (Renukadevi, D. 2014). For Spanish speakers specifically, English pronunciation is often difficult (Farnen, 2019). Spanish is a phonetic language; meaning speakers can sound a word out simply by reading it (Delattre, P. 1945). Spanish has a strong relationship between spoken sounds and written sounds. Words are pronounced exactly how they are written.

Further, students learning English (especially in rural environments) may face a number of challenges. For instance, English classes are often based on the Grammar-Translation Method, a structure where students learn grammatical rules and apply them by translating sentences between their second language (or the language they are currently learning) and their native language (Kumar, 2017). This method could make them dependent on their native language and prevent them from being able to express themselves exclusively in the language they desire to learn. In turn, this may result in classes that lack proper training in pronunciation, spelling, and grammatical rules. Past research has shown that students of this method often lack the confidence to speak in English, which detracts their ability to communicate via speech (Ward Tannenbaum, 1974).

An alternative to the Grammar-Translation Method is an immersion-based approach; essentially, English-teaching based on the idea that if the learner is plunged into an environment where the language used is exclusively the language they desire to learn, the student will learn it faster than via other, traditional teaching methods (Griffiths, 2004). Immersion-based teaching methods are part of one of the most influential theories of second language acquisition, which explains that language acquisition happens through an unconscious process (Reyhner, 1998). Specifically, the comprehensible input theory states that language learners progress when they are studying language input that is slightly more advanced than their current level (Krashen, 1985). Research has found that students enrolled in language-immersion programs develop sophisticated second language skills and score as well as their non-immersion peers in reading and math, and they sometimes perform better than non-immersion students (Genesee & Jared, 2008). In general, immersive learning may allow students to learn English effectively through real-world scenarios in a comfortable and controlled environment.

In the past, several attempts have been made to offer English as a Second Language (ESL) classes in western Massachusetts (Wilmer, K. 2022) and there are many commercial pedagogic materials available (Ward Tannenbaum, 1974). However, these classes often use a

traditional grammar-based or monolingual English approach (Ward Tannenbaum, 1974). Additionally, much of the commercially available material is written for an extended period of study (Ward Tannenbaum, 1974). Many farmworkers do not have the time, means of transport, or child care they need to attend English classes consistently (Meade, n.d.). This means that these forms of English classes can often fail to meet the needs of the students (Ward Tannenbaum, 1974). There seems to be a need for more relevant teaching materials that are designed to meet the needs of farmworkers who, for several reasons, are unable to learn English with the current available opportunities.

To test this, we conducted surveys for English-speaking farm employers and Spanish-speaking workers. The surveys allowed us to understand the language challenges that Spanish-speaking agricultural workers face in Western Massachusetts. We predicted that Spanish-speaking employees are facing a language barrier at work. More specifically, we predicted that workers need a basic understanding of English for practical purposes but they often do not have the opportunity to study or learn an English that meets their language needs. In other words, the English language needs of Spanish-speaking agricultural workers are not currently being met. With the input from potential students, we hope that our survey data will be used to create an English course that is more useful for migrant farmworkers.

Methods

We conducted a survey for agricultural workers and a questionnaire for their employers with the purpose of gathering input from Spanish-speaking workers in the Western Massachusetts region. Specifically, we sought to understand the challenges they face while working in a foreign country (The United States) and talking in a foreign language (English). Survey data were used to gauge the English language needs of local workers.

Participant recruitment and farm visits

Survey data were used to gauge the English language needs of local workers. To recruit participants, 23 local farm owners were sent a short questionnaire via email, which allowed us to locate three farms interested in participating in the study and who currently employ Spanish-speaking workers. However, the majority of our employer questionnaire data (22 out of 25) were collected at the 2022 Massachusetts Fruit Growers Association summer meeting held on July 14th, 2022, in Belchertown, MA, while the remaining three surveys were conducted during the farm visits arranged via email. This initial questionnaire sought to establish possible Spanish-speaking employee participants, as well as gain an understanding of the farm owners motivations around hiring Spanish-speaking farmworkers.

Once the farms with eligible Spanish-speaking workers had been identified, farm visits were scheduled with the farm supervisors. All employee survey data were collected between July 5th, 2022 and July 26th, 2022. Twenty-eight surveys were filled entirely by the participants and were thus included in our dataset. Twenty of the survey responses were collected while in the field. The remaining eight surveys were distributed in person but were not conducted during the farm visit and were instead received electronically a week after the farm visit.

Three local farms were visited in Northfield, Holyoke, and Hadley, MA, respectively. Participants were selected based on the following criteria: 18 years of age or older, and Spanish

as their native language. The participants were advised not to expect compensation or disclosure of their private information.

Survey Design and Content

The employee survey and employer questionnaire were designed to be completed within ten minutes with no previous preparation. The employer questionnaire was written in English but the employee survey was translated to Spanish so respondents could complete it in their native language. The participants were given a printed sheet and enough time to complete it.

The employer questionnaire asked farm owners if they employed Spanish-speaking workers, how they communicate with them, and if they would be interested in letting their employees participate in the survey. The employee survey asked Spanish-speaking agricultural workers about how they communicate at work, their previous experiences with English classes, if they would be interested in improving their English skills, and what they would prefer to learn in an English class.

Once participants had completed the survey, their responses were collected and digitized. Google Forms (open-source August 2022; Google, Inc) was used to create both the questionnaire and survey. Once the survey was completed data analyses and graphs were produced using Microsoft Excel and Microsoft Word (Microsoft Excel for Microsoft 365 Version 2206).

Results

Employer Survey Results

Most (91%) of the employer survey results were collected at the 2022 Massachusetts Fruit Growers Association Summer Meeting. Twenty two of the participants in the survey were Massachusetts fruit growers. The remaining two surveys were conducted during farm visits where the farm supervisors completed the employer questionnaire. Of the questionnaire results, 16 out of 23 respondents said they do not employ any Spanish-speaking employees (Fig. 1). Three farm owners had previously employed such workers but had not recently. Four of them currently employed Spanish-speaking workers.

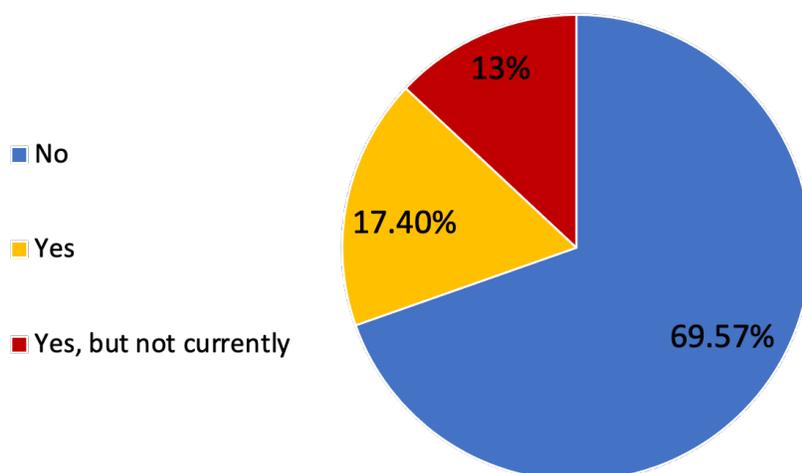


Figure 1 Employment of Spanish-speaking Workers (n= 24 surveys). Farm owners were asked if they employ any Spanish-speaking farmworkers.

Next, farm owners who did not currently employ Spanish-speaking workers were asked their reasons for not employing Spanish-speaking employees. The question had multiple options of reasons that we predicted farm owners would not be hiring Spanish-speaking workers. They were given the options of language barrier, sufficient local workers, did not wish to process visa requests, and an open response at the end for any reasons that were not included. Nine out of the 23 participants answered that there are enough local workers (Fig. 2). Five of them answered that a language barrier discouraged them to employ Spanish-speaking workers. Two participants did not want to deal with the visa requests that migrant workers require. One participant had a small operation that did not require the need for extra workers. One participant reported a history of interpersonal conflict with previously hired Spanish-speaking workers.

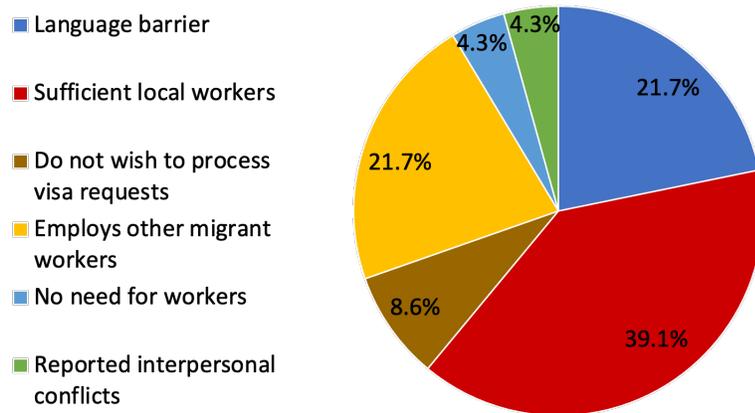


Figure 2 Reasons for Not Employing Spanish-speaking Workers (n=23 surveys). If farm owners did not employ any Spanish-speaking workers, they were asked to give reasons as to why they chose not to employ Spanish-speaking workers.

The next question addressed employers' views on their employees' English capabilities. For this question, we only received six responses from the farm owners. One participant rated their employees' English capabilities as poor. Two participants ranked their employees' English at 2. Two participants rated their employees as a 3. One participant rated their employees' English as proficient. Farm owners were asked to numerically assess their employees' English abilities on a scale of 1 (Poor) to 5 (Proficient).

Next, farm owners were asked if they would agree for us to visit their farms to conduct the employee surveys. The majority (14 participants) were disqualified from participating further because they reported to not currently employ Spanish-speaking workers. Two participants also reported that they were not interested in participating (Fig. 3). Two participants expressed interest in further research and farm visits, but we were not able to schedule a farm visit during the period of data collection.

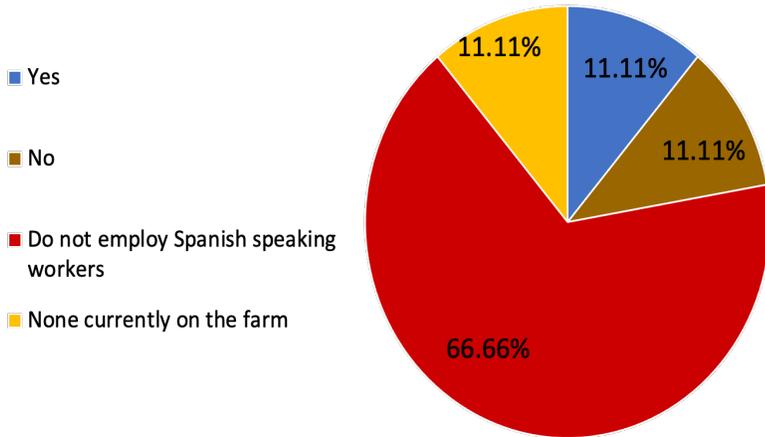


Figure 3: Farm owners interest to participate in Research study about employing Spanish-speaking farmworkers (n=18 surveys). Farm owners were asked if they were interested in participating the further Employee surveys. Majority of the participants did not employ Spanish-speaking workers. Two participants were not interested in participating in the study. Two expressed interest in further surveys with their employees but were not able to participate in our data collection.

Employee Survey Results

First, participants provided a numeric response to rate their English skills. Participants were given a scale of 1(Poor) to 5 (Proficient) to rate their English skills. Many explained that they rely on Spanish and have not had much experience learning English. The majority (51.7%) of the employees ranked their English skills as “poor” (Fig. 4).

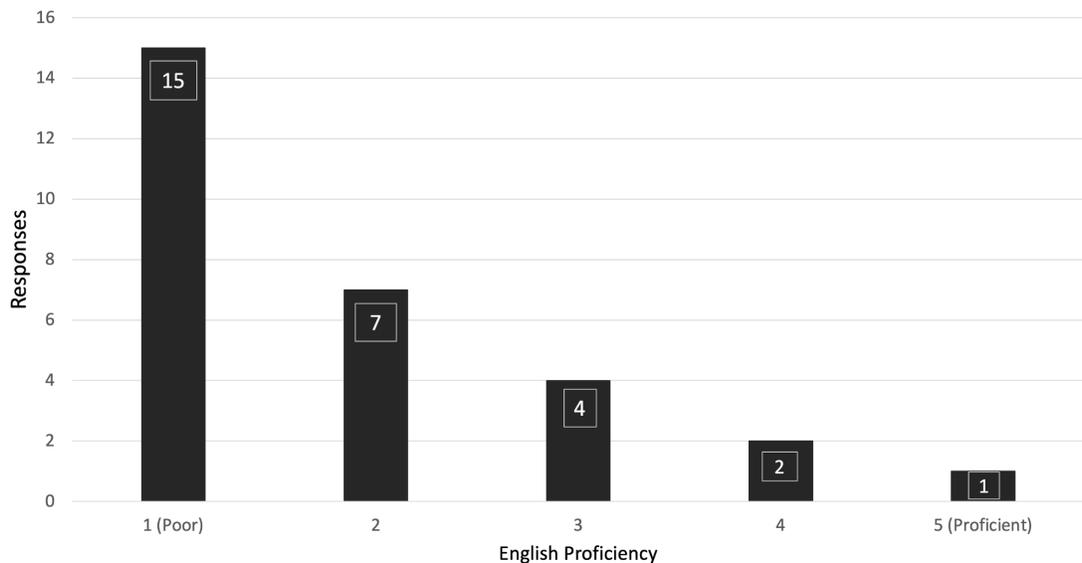


Figure 4: Self-Identified English Skills in Spanish-speaking farmworkers (n= 29 surveys). Numerical response from participants ranking their English abilities on a scale of 1 (Poor) to 5 (Proficient). Fifteen of the participants ranked their English dominion as “poor.”

Second, participants explained how they communicate with their coworkers and their supervisors. Most of the participants work in primarily Spanish-speaking environments. When communicating with their coworkers and supervisors they mostly rely on Spanish: When communicating with their supervisors 75.85% of the participants use Spanish (Fig. 5) while 70% of the participants use Spanish to communicate with their coworkers (Fig. 6). The survey responses also show that when they communicate with supervisors or coworkers who do not speak Spanish, they usually use a translator. Participants explained that this translator can be either other Spanish-speaking coworkers who have proficient English (4 participants), or a digital translator such as Google Translate (2 participants). Overall, employees use Spanish to communicate but face a language barrier when they must communicate with English speaking supervisors or coworkers.

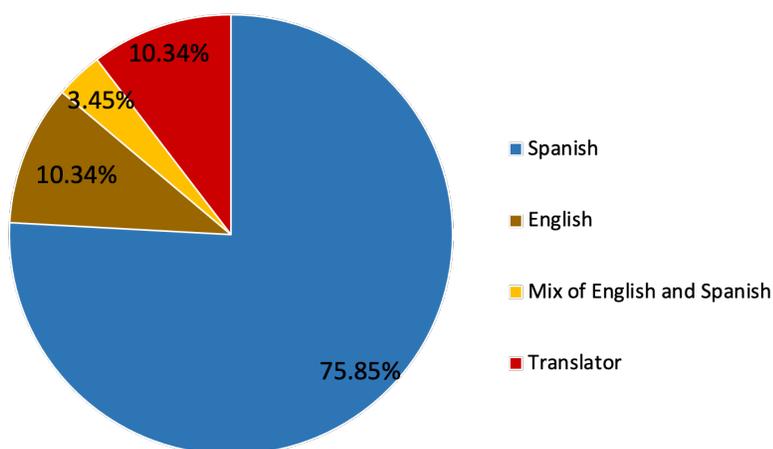


Figure 5: Means of communication between Spanish-Speaking farmworker and their supervisors (n=30 surveys). More than half of the employees rely on Spanish to communicate with their supervisors. However, some supervisors only speak English. In that case, employees rely on a digital translator or a coworker who is more proficient in English to communicate with their supervisor.

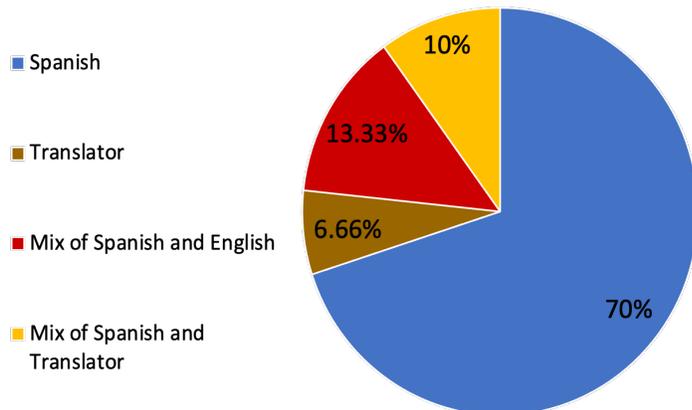


Figure 6: Means of communication between Spanish-speaking farmworkers and their coworkers (n=30 surveys). In terms of communication amongst coworkers, the majority (70%) of participants just speak Spanish. Most have Spanish-speaking coworkers that only communicate in Spanish. When they must communicate with coworkers who do not speak Spanish, they rely on a translator. They also use a mix of English and Spanish, or a mix of Spanish and a translator.

Participants also reflected on their previous experience with English classes. They were asked if they had taken English classes in the past and, if they had, how long they had taken the class for. Twelve (40%) of the participants had no experience with English classes (Fig. 6). Very few had the opportunity to learn English in a formal way or for a significant length of time. The respondents reported outside of the survey's scope that their demanding schedule made it challenging for them to attend classes. They also explained that farmworkers rarely have free time besides Sunday afternoons. When they are free, they report feeling exhausted from their physically demanding work. Many of the participants explained that they had not been able to take English classes because they simply did not have time.

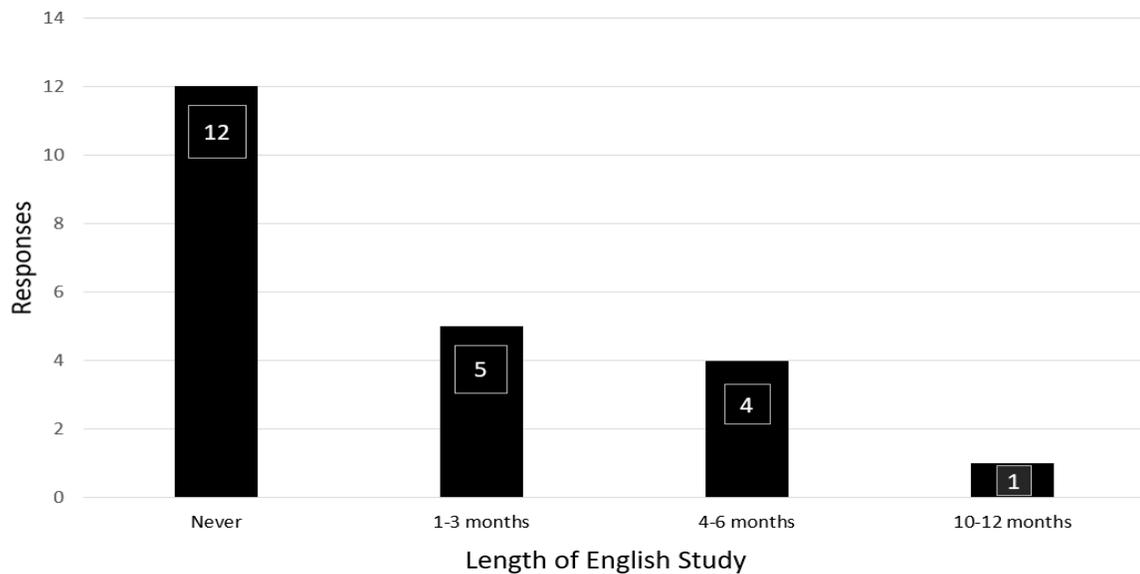


Figure 7: Spanish-speaking Employees' Previous English Class Experience (n=22 surveys). Many of the Spanish-speaking employees had none or minimal experience with learning English. More than half (54.5%) of the participants have had no experience with English classes. 16.6% of participants had taken English classes for 1 to 3 months. 13.3% had taken English classes for 4-6 months, and 3.3% had taken for 10-12 months.

Lastly, participants were asked what they like to learn in an English class. It was meant to have potential students reflect on the English that they use the most, or that they have been unable to learn from other resources. Our data shows that the participants' interests lies in English that they could use in daily social interactions, legal terminology, and vocabulary surrounding agricultural work. A large majority (63.3%) of the participants expressed an interest in learning vocabulary to improve English skills that could be used in daily social interactions and conversations (Fig. 8). The participants also reported that they wanted to learn the vocabulary needed to have daily interactions like visiting the doctor, buying groceries, or going to the bank.

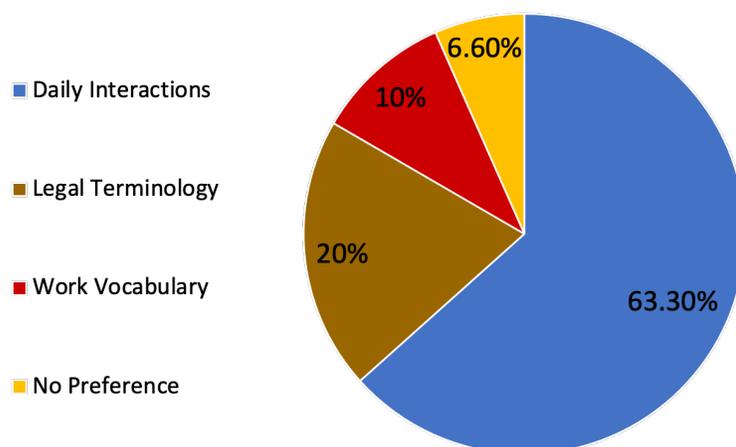


Figure 8 Spanish-speaking employees English vocabulary interests (n=24 surveys). The responses show that the participants' vocabulary interests mainly lie in English that they would use in daily interactions and legal talk, while vocabulary surrounding work ended up generating the least amount of interest.

Discussion

The results from a survey of 30 local Spanish-speaking farmworkers helped us understand how English-language barriers impact them both inside and outside of work. Our survey asked participants to rate their own English abilities as well as consider skills that they like to learn. Our data also helped us evaluate the English skills that local workers have, as well as understand their previous experiences with English courses. Overall, farmworkers may not have abundant opportunities to learn English. The Spanish-speaking farmworkers have the desire to learn the language and express interest in learning English to help them in daily interactions (Fig. 8), but few of them had ever taken classes before (Fig. 7). The participants acknowledged that learning English would help them navigate their lives living in Massachusetts. They had a variety of experiences where their language barrier had inconvenienced or injured them in some way (which were not explicitly addressed by the survey questions but were recorded as anecdotal data). Participants identified specific challenges when trying to accomplish daily interactions using English as a means of communication. Many workers struggle to communicate while at doctor appointments, others struggle to read their mail, or go to the grocery store, among many other otherwise simple, daily tasks.

Importantly, we were able to measure an approximate number of participants who have to live and work with a language barrier (Figs. 5 and 6). Spanish-speaking farmworkers also reported the ways in which they communicate with their supervisors and coworkers. Twenty two (75.8%) of the workers (Fig. 5) depend on their supervisors to speak and understand Spanish. Five of the participants (6.66%) depend on their coworkers being able to translate to Spanish for them (Fig. 6). This question revealed that these farms are bilingual environments. Farmworkers, their coworkers and supervisors use a combination of English and Spanish for communication. Another important result from the survey was that all of the participants expressed a desire to learn English (Fig 8). Initially, we had predicted that the language barrier was creating issues within their working environment so we thought that the workers who had a language barrier would want to learn English vocabulary that would serve them in agricultural settings and eliminate communication challenges in the workplace. However, they are most eager to learn vocabulary that would serve them in daily interactions (Fig. 8), which may have to do with the fact that, lacking opportunities for local English courses, they rely on bilingual

work environments and other roundabout solutions to the language barriers they experience at work.

Notably, the participants did not lack the desire to learn English. However, they seem unable to take part in the classes. Participants explained that they are often unable to attend English classes that they know of. They said that the classes are scheduled when they are working, and that their only free day is Sundays. The willingness to take English classes is present, but it seems as if none of the current English language classes have reached or had an impact on the farmworkers.

Originally, we had predicted that there were a significant number of Spanish-speaking farmworkers struggling with a language barrier at the farms that employ them. The results of the employee survey show that many employees want to learn English but 54.4% of participants have not been able to attend any English classes despite having often worked in the United States for a substantial number of years. The survey results helped us gain an understanding of what are the language challenges that Spanish-speaking workers face in Western Massachusetts agriculture.

Although the employer questionnaires were pooled from a large number of participants across the state, our farm visits were restricted to three farms that responded via email scheduling. The farm visits that were conducted stretch from Northern to Southern Western Massachusetts on a variety of farms. One of the farms was a small organic farm largely supported by their Community Supported Agriculture (CSA) shares. Another was much more of an urban agriculture set up, meant to empower small farmers to grow crops on rented land. Lastly, a local family owned a farm that produces a variety of vegetables. So, despite having conducted the surveys at different kinds of farms, the majority of the participants shared similar experiences, reflected in both the survey results and in the stories that they shared with us.

One limitation of this study is the geographic diversity and demographic representation: Although I reached out to 30 farms all over Massachusetts, only three farm visits were conducted. This may be because all of the outreach for our study was conducted during the summer; a very busy time of year for farms. Additionally, many farmers seemed hesitant to have the survey conducted and/or were unwilling or unresponsive to participating. The lack of farm visits impacted our sample size which was smaller than initially desired. With more surveys conducted all over the state, the results would have been more inclusive and reflective of the needs of agricultural workers across Massachusetts.

Another possible limitation was our primary collection of the Employer surveys at the 2022 Massachusetts Fruit Growers Association meeting. Unlike other farmers, fruit growers often rely less on Spanish-speaking workers and typically use local labor or Jamaican workers with H-2A visas; the seasonal agricultural worker visa for the United States (Scheufele, 2018). Additionally this means that the results Table 1 are not representative of all Massachusetts farmers and instead represent a niche group of Massachusetts Fruit Growers.

An additional limitation was the survey length. The decision to make a quick, five question survey allowed us to capture data rapidly but it also did not allow us to cover other content that we were also curious about. For instance, questions that inquire about availability for English classes, although some farmers did tell us that their only free days were Sundays.

Further, it would have been useful for participants to provide their age and employment experience. This would have helped have more specific data to associate language barriers across a farm worker's career. As we surveyed, we realized there were many factors contributing to language barriers. Adding information about age and employment experience to the survey would have helped give a deeper understanding to the results we gathered.

One strength of this report is the interpersonal experience of conducting in person surveys as well as having conversations with participants. Workers were very welcoming despite the busy summer schedule. They were very helpful and willing to share their experiences and challenges they faced while living in Western Massachusetts. These conversations gave context to their surveys and gave us an understanding that we could gain from just conducting surveys.

Based on my findings, I believe there is a need for a more geographically diverse survey. All farms are individual and every worker's experiences have been different; however, there is a pattern of challenges that they share. With more geographic diversity within Western Massachusetts would give us a deeper understanding of local Spanish-speaking agricultural workers. These results also introduce the question of how local resources work to meet the needs of these employees better. Not only with their language barrier, but also with legal issues, medical challenges, and other challenges they may be dealing with.

Overall, our findings allowed us to gauge the English language needs of local Spanish-speaking agricultural workers. It is meant to be the primary step for a grassroots attempt to create a curriculum that meets the needs of local Spanish-speaking farmworkers in order to eliminate the language barrier that impacts them inside and outside of work. The next phase of research would be creating an English as a Second Language (ESL) curriculum tailored to meet the language needs of migrant agricultural workers which is paramount to social and economic integration in an English-speaking area.

Conclusions

As I predicted, this study found that farmworkers who mostly rate their English skills as poor do not lack the desire to perfect their English, yet the participants have not been inclined to attend local classes. The surveys also found local farms are often bilingual environments. Spanish is primarily used for employee communication with both supervisors and coworkers. When supervisors or coworkers do not speak Spanish, participants rely on translators to communicate with them. The results of the survey establish a need for more accessible ESL classes for local Hispanic agricultural workers. Creating an English as a Second Language (ESL) curriculum tailored to meet the language needs of migrant agricultural workers is paramount to social and economic integration in an English-speaking area.

Acknowledgments

I would like to express my gratitude for all the farms and employees who participated in my survey. Their responses are so valuable. I appreciate their hospitality and willingness to share their experiences and challenges with me. This paper and the research behind it would not have been possible without the support of my mentor, Mateo Rull Garza. His assistance with farm visits, writing, and comments have greatly improved the research paper.

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References

- Agricultural Resources Facts and Statistics. (2017). Mass.gov. Retrieved July 29, 2022, from <https://www.mass.gov/info-details/agricultural-resources-facts-and-statistics>
- Choudhury, A. S. (2013). Spoken Grammar Isn't Broken Grammar: A Case for Teaching Spoken Grammar in ESL/EFL Contexts. Retrieved from July 15, 2022 from <https://search.ebscohost.com/login.aspx?direct=true&db=ufh&AN=92018061&site=ehost-live&scope=site>
- Connecticut River Valley Farmworker Health Program. (2021, March 1). Connecticut River Valley Farmworker Health Program Demographics Report. Connecticut River Valley Farmworker Health Program. Retrieved July 15, 2022, from <https://www.crvfhp.org/>
- Delattre, P. (1945). Spanish Is a Phonetic Language. *Hispania*, 28(4), 511–516. <https://doi.org/10.2307/333798>
- Fairness for Farmworkers Coalition. (2021, August). The Fruits of the Past-Fairness for farmworkers Act. Mass Legal Services. Retrieved July 15, 2022, from <https://www.masslegalservices.org/system/files/library/ResearchPaper.pdf>
- Farnen, K. (2019, May 10). Common English Difficulties For ESL Spanish Students. The Classroom. Retrieved August 4, 2022, from <https://www.theclassroom.com/common-english-difficulties-for-esl-spanish-students-12081873.html>
- Renukadevi, D. (2014). The role of listening in language acquisition; the challenges & strategies in teaching listening. *International journal of education and information studies*, 4(1), 59-63. Retrieved July 15, 2022 from https://www.ripublication.com/ijeisv1n1/ijeisv4n1_13.pdf
- Reyhner, Dr J. (1998, August 1). Immersion Education. English for the Children. Retrieved August 5, 2022, from <https://www.onenation.org/opinion/immersion-education/>
- Genesee, F., & Jared, D. (2008). Literacy development in early French immersion programs. *Canadian Psychology / Psychologie canadienne*, 49(2), 140–147. <https://doi.org/10.1037/0708-5591.49.2.140>
- Griffiths, C. (2004, February). Language learning strategies: Theory and research. *Academia*. Retrieved July 29, 2022, from https://d1wqtxts1xzle7.cloudfront.net/67955185/Language_Learning_Strategies_Theory_and_20210709-24262-19h979q-with-cover-page-v2.pdf?Expires=1659123132&Signature=NBEAROThvnfAYAvS2bqG6gL8H9CIBlayOSbDse3f2DYQEawlVHgctXtxcBSG0ze3vULMXLsAqls45LT7557j5kE4kiGvbW

- Krashen, S. (1985). *The Input Hypothesis: Issues and Implications*. New York: Longman.
- Meade, M. (n.d.). *Who Feeds the Farmworkers?* Green America. Retrieved August 4, 2022, from <https://www.greenamerica.org/building-people-first-economy/who-feeds-farmworkers>
- Kumar, T. Vijaya, and Dr I.S. Malekar. (2017, March). *Difficulties in Teaching English to Rural Students*. *International Journal of Research and Analytical Reviews*. Retrieved July 15, 2022 from <https://ijrar.org/papers/IJRAR1903996.pdf>
- Scheufele, Susan. (2018). *Growers Spanish Survey*. University of Massachusetts Stockbridge. Retrieved June 7, 2022
- U.S. Dept of Agriculture. (2019, February 14). *2017 CENSUS OF AGRICULTURE MASSACHUSETTS STATE AND COUNTY*. United States Department of Agriculture National Agricultural Statistics Service. Retrieved July 15, 2022, from https://www.nass.usda.gov/Publications/AgCensus/2017/Online_Resources/County_Profiles/Massachusetts/index.php
- Wilmer, Kristen. (2022, July 20). *Community Involved in Sustaining Agriculture (CISA) Program Manager*. Interview by Lily Harris-Hendry.

Supplemental Material

Table 1 Summarized Employer Questionnaire results

Data collected from the Employer Questionnaire conducted at the farm visits as well as the 2022 Massachusetts Fruit Growers Association meeting. Our 24 survey results found that 69% of farm owners do not hire Spanish-speaking workers. The data also showed that 17% of the farm owners hire Spanish-speaking workers. If the farm has decided not to employ them, the farm owners have a variety of reasons including sufficient local workers, a language barrier, etc. stopping them from hiring Spanish-speaking workers on their farm. The data asked farm owners to numerically rank their employees' English capabilities. They also were asked how they communicate with those employees as well as if they would be interested in further surveys.

Question	Question Type	Responses Summary
Do you employ any Spanish-speaking workers?	Multiple Choice	Yes (4) No (16) Yes, but not currently (3)
What are the reasons that you do not employ Spanish-speaking workers?	Checkbox	Language barrier (5) Sufficient local workers (9) Do not wish to process visa requests (2) Employs other migrant workers (5) No need for workers (1) Reported interpersonal conflicts (1)
How do farm employers rate their employees' dominion of English?	Linear scale	Poor 1 2 3 4 5 Proficient N/A (1) (2) (2) (0) (1)
How do farm employers primarily communicate with their Spanish-speaking employees?	Open response	Employees understand English proficiently (2) Employees communicate via a translator (1) Employees communicate via a digital translator (1) Employees communicate with me in Spanish (1) N/A (18)
Would you be interested in participating in a research survey where I would visit your farm to ask workers about some of the challenges they face communicating in a foreign language?	Multiple Choice	Yes (2) No (2) Do not currently employ Spanish-speaking workers (14)

Supplemental Table 2 Employee Survey

Data collected from thirty Employee Surveys conducted at three farms in Western Massachusetts.

Question	Type	Summary												
How would you classify your dominion of English?	Linear	<table style="width: 100%; border: none;"> <tr> <td style="text-align: center;">Poor</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5 Proficient</td> </tr> <tr> <td style="text-align: center;">(15)</td> <td></td> <td style="text-align: center;">(7)</td> <td style="text-align: center;">(4)</td> <td style="text-align: center;">(2)</td> <td style="text-align: center;">(1)</td> </tr> </table>	Poor	1	2	3	4	5 Proficient	(15)		(7)	(4)	(2)	(1)
Poor	1	2	3	4	5 Proficient									
(15)		(7)	(4)	(2)	(1)									
In the case that your English is not sufficient, how do you communicate with your boss or supervisor?	Open	<p>They speak Spanish (22)</p> <p>They speak English (3)</p> <p>Mix of English and Spanish (2)</p> <p>Use of a translator (3)</p>												
In the case that your English is not sufficient, how do you communicate with your English-speaking coworkers?	Open	<p>They speak Spanish (21)</p> <p>Mix of English and Spanish (4)</p> <p>Mix of Spanish and Translator (3)</p> <p>Use of a translator (2)</p>												
Have you previously taken classes to learn English? If yes, for how long?	Open	<p>Never (12)</p> <p>1-3 months (5)</p> <p>4-6 months (4)</p> <p>10-12 months (1)</p>												
What type of English would be most helpful to you day to day?	Open	<p>Daily interactions- targeting daily situations like the bank, grocery store, children's school (19)</p> <p>Legal Terminology-documents around official documents like documentation, insurance, medical issues (6)</p> <p>Work Vocabulary- relevant agricultural words (3)</p> <p>No preference (2)</p>												