Understanding Mexican immigrant students in American schools: A case study of two Preparatorias in México

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Abstract: English language learners are a diverse and fast-growing segment of the student population in the United States. Faced with the double challenge of keeping up with grade-level content while learning English as a new language in a new culture, many of them struggle. This article presents data from a three-phase qualitative study designed to learn about the most prevalent pedagogical and institutional practices in public schools in México, the largest source of immigrants to the United States. The study sought to answer the following overarching questions: (1) What are the most prevalent current teaching and institutional practices in Mexican schools at the senior high school level? and (2) What can we, educators in the United States, learn from these practices to facilitate the school experience and academic performance of Mexican-born students in US classrooms? Findings reported here correspond to the last phase of the study, which took place at two public senior high schools or preparatorias (US grades 10, 11, 12) in Guadalajara, Jalisco in 2011. These findings include (1) interactive lectures across content areas and grade levels, (2) warm relationships between teachers and students, (3) minimum infusion of technology in the classroom, and (4) discipline with dignity. New insights from this...
study contribute to the limited existing knowledge about the school culture typical of Mexican classrooms and can facilitate the work of US high school teachers as they design and implement instructional practices that help Mexican-born students adjust to the cultural norms, routines, and expectations of American classrooms.

Subjects: Social Sciences; Education; Humanities

Keywords: English language learners; Mexican immigrant students; schooling in México; cultural competence; culturally responsive pedagogy

1. Introduction
Recent demographic shifts have resulted in large increases in the number of English learners in classrooms throughout the country. Therefore, there is a pressing need for highly qualified teachers for these students who are faced with the double challenge of learning grade-level subject matter while developing academic proficiency in English, and in some cases, also adjusting to a new culture (Casteel & Ballantyne, 2010; Samson & Collins, 2012). The persistent achievement gap between economically disadvantaged, ethnically diverse students and their middle-class white counterparts has not improved in decades (Bok, 2003; Gándara, Maxwell-Jolly, & Rumberger, 2008; Genesse, Leary, Sounder, & Christian, 2005; Ladson-Billings, 2006). Research by Fry, Hirschman, and others whose work has focused on ethnic populations and trends in school enrollment revealed that Mexican immigrant teenagers have the highest dropout rates among all immigrant groups (Fry, 2003, 2005; Hirschman, 2001).

Presently, non-native English speakers account for 20% of the US population (Ryan, 2013; Shin & Kominski, 2010) and it is estimated that one in four students will be initially classified as English learners by 2025 (National Clearinghouse for English Language Acquisition, 2007). The majority of English learners are Spanish-speaking (Fry, 2007) and approximately 70% of them are of Mexican descent (Ramírez & de la Cruz, 2003). Mexicans account for approximately 30% of the US foreign-born population (Bravo, 2005; U.S. Census Bureau News, 2014), making México the main source of immigrants to this country. Hispanics are the largest minority group and the fastest growing population in the United States (American Council on Education, 2010; Gándara, 2009). Along with African-Americans and students from low-income households, Hispanic students in general and Mexican students in particular have the highest dropout rates (Cameron & Heckman, 2001; Greene, 2001; Lofstrom, 2007). Although school completion rates vary by country of origin, age at time of arrival, and immigration status, Mexican students in general lag behind (Ruiz-de-Velasco, Fix, & Clewell, 2000).

At the risk of stating the obvious, this student population needs continued special attention. In general, English learners’ performance on standardized tests is much lower than that of non-English learners, especially in content areas and language-related subtests such as reading where the linguistic demand is higher (Samson & Collins, 2012). English learners struggle when they read literature in English because it often is culture-bound. There is an abundance of idiomatic expressions and figurative language in English texts. Many words have connotative and denotative meanings. English learners may also experience difficulties when learning mathematics in English since they may be used to different processes to arrive at answers. They are also unfamiliar with our measurement system. Science-specific vocabulary also poses a challenge. Many concepts are usually explained on each science textbook, which often uses complex sentence structures and the passive voice. Social studies classes are probably the most difficult ones for foreign-born English learners because they have very little prior knowledge about the United States to activate.

Given these facts, a good understanding of typical Mexican schooling practices could help teachers in the United States be more receptive of the previous schooling experiences and ‘funds of knowledge’ (Moll, Amanti, Neff, & Gonzalez, 1992) that Mexican-born students bring to the classroom. This knowledge could help teachers ease these students’ transition from one educational
system to the other and improve their chances for academic success. Acquiring this type of information was the overarching goal of the study reported in this paper. The research was conducted at five escuelas primarias (US grades 1–6), one escuela secundaria (US grades 7–9), and two preparatorias (US grades 10–12) in Guadalajara (state of Jalisco), México in the springs of 2009, 2010, and 2011. Along with Guanajuato and Michoacán, this state off of the Pacific coast of México is one of the regions that have the highest migratory rates in the United States (Sañudo & Wilhelm, 2008), which is why it was chosen for the study. According to a report commissioned by the California Department of Education in 2007, nearly half of the Mexican migrant students who started public school in California during 2003–2004 had come from one of these three states. Guadalajara was selected on the basis of the researcher’s professional contacts in the area, and it is worth noting that she had no previous relationship to the school, its staff, the students or the administration before the start of the project. Findings presented in this paper correspond to the last phase of the study, which took place at two coeducational public senior high schools or preparatorias, hereafter referred to as Prepa 27 and Prepa 48 for the sake of maintaining confidentiality.

The educational system in México consists of pre-school education (known as educación pre-escolar, ages 3–5), elementary education (known as educación primaria, grades 1–6, ages 6–14), junior high school education (known as educación secundaria, grades 7–9, ages 12–16), senior high school education (referred to as educación media superior, imparted at escuelas preparatorias to students between the ages of 15 and 18), and educación superior (which corresponds to US undergraduate and graduate education and consists of four levels: licensures, specializations, master’s, and doctoral degrees) (Secretaría de Educación Pública, 2012). Since the 2004–2005 school year, compulsory education in México encompasses schooling from the third level of pre-school to the completion of secondary education. At the preparatoria level, students receive the kind of specialized training they will need to succeed in college.

When immigrant children attend school in the United States, they need to learn English in order to perform well in academic tasks in content area classes while keeping up with grade-level curriculum. This challenge is compounded by having to adjust to a new sociocultural context that is different from the one they experienced in their home country. Many of these students find it difficult to make the transition. Teaching practices that are common to American-born students may be unfamiliar to them, causing them anxiety that can inhibit the learning process (Krashen, 1981, 1982). Not only do these students need to acclimate to the dominant culture, but they also must adjust to the particular culture of the school they attend. American mainstream culture has traditionally reflected European American values (Gay, 2006; Hollins, 1996), but many present-day immigrant students do not identify with those values. Cultural clashes and misunderstandings may occur as “cultural differences often bring with them different notions of how students learn best, how they behave, what kinds of interventions can help them meet the school’s expectations, and what roles teacher, student, and parent should play” (Trumbull & Rothstein-Fisch, 2008, p. 63).

Mexican immigrant students may also feel alienated and cognitively overloaded. As a result, they may shut down and withdraw from the realities of the classroom as a way to cope with their culture shock (McLaughlin, Hotch, & Sargent, 2002). Showing no regard for their home language and culture can exert additional stress (Grossman, 1995), which will negatively impact their learning. Therefore, teachers working with foreign-born English learners need to implement teaching practices that are in tune with these students’ cultures (Trumbull & Rothstein-Fisch, 2008) and that view their native language as an asset. Cadiero-Kaplan and Rodríguez (2008) argue that “teachers not only need, but deserve, to learn and develop processes that enable them to better understand and value languages and cultures their students bring with them and the pedagogical practices” utilized in the classroom environment (p. 384).

Over the past several decades, many teaching methods have been developed, field-tested, and implemented in an effort to design the most efficient approaches to the education of English learners. In the last decade, the model of Sheltered Instruction known as Sheltered Instruction Observation
Protocol (SIOP) has gained popularity as one of the most effective ways to scaffold grade-level instruction for English learners in content area classes by incorporating elements of differentiated instruction, cooperative learning, and principles of second language acquisition (Guarino et al., 2001). However, the validity of this method has recently come into question by numerous scholars, particularly Stephen Krashen, James Crawford, and Sharon Adelman Reyes (Crawford & Adelman Reyes, 2015).

Long before the SIOP was introduced, Specially Designed Academic Instruction in English (commonly referred to as SDAIE) was the pedagogical approach typically used to help intermediate-level English learners gain access to grade-level curricula (Eggington & Eggington, 2010; Moughamian, Rivera, & Francis, 2009). Based on theories of second language learning advanced by Stephen Krashen, Jim Cummins, and other renown applied linguists, SDAIE facilitates student comprehension of grade-level content and development of academic language through teacher speech adjustment, building on students’ prior knowledge, making connections to real-life experiences, incorporating realia (real life objects) and hands-on activities, purposeful grouping and many other strategies that must be implemented in a nurturing, low-anxiety environment where all students are held to high expectations and provided all necessary support.

No “one size fits all” instructional model will work for all English learners given the variability within this group of students. Besides, the use of the non-native English-speaking students’ first language as a means of instruction is restricted in states like California and Arizona since Propositions 227 and 203 were passed in 1998 and 2000, respectively, requiring that instruction be “overwhelming in English.” All in all, efforts have been made to improve achievement for English learners, and positive results have been achieved, yet these students continue to lag behind their middle-class, non-Hispanic White English-speaking counterparts.

It is essential that all teachers learn as much as they can about their students’ personal backgrounds and previous schooling experiences in order to avoid alienation, clashes, and misunderstandings that are often born out of misconceptions and insufficient knowledge. Through becoming increasingly culturally competent and providing culturally responsive instruction teachers can bridge cultures and connect with their students, thus helping them acclimate to the new school norms and expectations without identities being sacrificed. Cross, Bazron, Dennis, and Isaacs (1989) and his colleagues contend that to work successfully with students from different cultures, teachers must abandon “the belief that the approach used by the dominant culture is universally applicable regardless of race or culture” (p. 15). We must accept that what we refer to as “best practices” in the United States may not apply to classrooms in other countries.

The numerous challenges faced by English learners are well established in the literature. We must keep trying to find efficient ways to overcome obstacles to optimal learning for all students. One of these ways may be learning about the school culture Mexican English learners were used to before entering the American school system. With this knowledge, teachers may be better equipped to bridge cultural gaps that keep immigrant children from feeling connected to American school life. Much like Murrell suggests (2001), teachers must become “community teachers” by acquiring knowledge of the culture of the students they serve so they can “draw on this knowledge to create the core teaching practices necessary for effectiveness in diverse settings” (p. 52). An understanding of their students’ cultural norms can help teachers realize that what could be interpreted as “misbehavior” in the American classroom may be considered appropriate behavior in a student’s home school system.

The research reported in this paper was undertaken on the assumption that helping raise teachers’ cross-cultural competence may take us a step closer to achieving the goal of educating all students. There is no shortage of studies on English learners, many of whom are of Mexican origin; yet only a small number of educational researchers have focused on gaining a greater understanding of the teaching practices that are currently prevalent in Mexican classrooms, which underscores the importance of this study.
2. Literature review

English language learners continue to be the focus of ongoing research. The existing literature supports the implementation of culturally responsive pedagogy as one of the most important factors affecting the academic achievement of foreign-born students in our classrooms. However, research conducted in Mexican schools that can help us increase our cultural competence and work more effectively with Mexican-born students is limited (Santibañez, Vernez, & Razquin, 2005). At the time this study was conducted, a relatively small number of relevant studies were identified. What follows is a synthesis of findings from these studies.

Kalman and Rendón (2014) followed the professional development of a junior high school history teacher in Ciudad de México over two school years while she learned to incorporate technology in her classroom. Although the government had supplied computers, white boards, and connectivity, formal training on how to use and teach with these tools was not offered. The authors concluded that long-term in-service opportunities are needed for teachers to develop their digital literacies if technology is to transform education in ways that policies announce.

A research team composed of American teachers, aides, and administrators led by Escamilla, Aragon, and Fránquiz (2009) conducted a study at two public elementary schools in Puebla, México in 2003–2004. The lead researchers noticed that their team exhibited an air of superiority regarding the instructional practices that are implemented in the United States. This type of attitude and deficit view can keep a teacher from recognizing and utilizing the cultural knowledge that foreign-born students bring to the classroom.

Helgesen (2009) implemented a case study of a high school in Wisconsin and a junior high school in Guadalajara, México to examine the changes that affect immigrant students when they transition from school to school and culture to culture. Some of the differences between the two educational systems that the researcher points out are the length of compulsory education, the way schools are run, and homework load.

Blasco (2004) studied third-year secondary school students from three socioeconomically disadvantaged neighborhoods in Guadalajara, México to examine the affective dimension of schooling and its impact on students’ wellbeing and performance. The researcher observed that students were often singled out, reprimanded, or even sent home because of late arrival or missing uniform items. In turn, students responded well to teachers who maintained order in the classroom as long as they treated students fairly and with respect. She surmised that the affective climate in the school can be a decisive factor in retention.

At both a public elementary school in a working-class area and a Montessori school in a middle-class neighborhood in south central México, Jiménez, Smith, and Martínez-León (2003) looked at current literacy practices of teachers, students, and administrators both inside and outside the school. The researchers found a clear emphasis on their students’ written language and correctness of form as prescribed by the Real Academia Española (Spanish Royal Academy) and less of a concern with meaningful expression of original ideas.

During three years, McLaughlin and Bryan (2003) frequently visited two elementary schools in rural areas of México to learn how teachers increase their students’ social responsibility by implementing a curriculum based on a model of social work. The researchers concluded that it would benefit students in the United States if the teaching of positive attitudes and social values were incorporated into their curriculum.

Serrano Esquivias, Cantú, and Vila (2003) investigated the way that problem-solving is manifested in three pedagogical approaches: traditional public school teaching, Montessori schooling, and the Freinet classroom in five Mexican schools. They surmised that the optimal instructional approach for the stimulation and practice of complex thinking skills was the Freinet approach, which allows
students along with their teachers to decide what they are going to learn, making learning a democratic, cooperative, and experimental process.

In 2001, Nelson and her colleagues (2001) conducted a qualitative study in Monterrey, México, and Atlanta, Georgia to investigate cultural differences in attitudes, expectations, and behaviors exhibited by Mexican and American students and teachers. Data analysis from interviews with teachers and students in grades fourth to eighth revealed that Mexican educators were often perceived as “relatively authoritarian but loving” whereas American teachers were seen as “less personally involved with students’ but always encouraging students’ responsibility” (p. 463).

Overall, these studies help paint a picture of the Mexican educational system that teachers in the United States should be familiar with in order to better understand Mexican-born students so that they can provide effective, culturally responsive instruction to them. Important information include the length of compulsory education, the way schools operate, type and frequency of homework, most prevalent pedagogies (i.e. traditional, Montessori, and experiential), what constitutes effectiveness, and the benefit of ongoing professional development.

3. Theoretical framework

This qualitative study was conducted within the context of relevant information from related studies of Mexican schooling and the notion of funds of knowledge (Moll et al., 1992), which is underpinned by Sociocultural Learning Theory. Sociocultural theorists argue that students must be immersed in socially and culturally mediated meaningful activities in order to learn, a belief stemming from Vygotsky’s (1978) theory on cognitive development. As the study focused on observations of Mexican senior high school students in interaction with their teachers and peers in the classroom, the key principle that all knowledge is socially and culturally constructed was found very useful in contextualizing the observations.

A funds of knowledge lens was applied to this study with the goal of analyzing student engagement with the curriculum and interactions with both teachers and peers. Funds of knowledge is defined as “historically accumulated and culturally developed bodies of knowledge and skill essential for household and individual functioning and well-being” (p. 133). In other words, this concept refers to the home-based expertise and procedural knowledge that foreign-born students develop as they observe and assist family members when they perform household tasks. These bodies of knowledge include information, ways of thinking, approaches to learning, and practical skills. Examples include economics, such as budgeting and loans; repair, such as home appliances and cars; and arts, such as music, painting, and sculpture (Moll, 2000).

Moll and his colleagues suggest that by drawing on these specific abilities and deep-seated interests, teachers can ameliorate cultural differences, facilitate foreign-born students’ adjustment to their new school environment, and increase their likelihood of academic achievement in American classrooms. In order to provide meaningful, personally stimulating, and equitable educational opportunities for all students, teachers must recognize the importance of familiarizing themselves with their students’ funds of knowledge. Such practice would provide the necessary foundation to build upon the strengths if their students. Additionally, it would help counteract the cultural deficit thinking that still permeates our educational system, preventing it from becoming truly inclusive.

This theoretical framework also promotes valuing each student’s linguistic and cultural assets and aligns with the work of Jim Cummins and other eminent researchers in the field of second language acquisition. These scholars claim that language, culture and identity are closely intertwined and point out the advantages of utilizing the students’ home language in the process of developing English as a new language (Cummins, 1989; Cummins, Brown, & Sayers, 2006). It is imperative, therefore, that teachers be attuned to and engaged with all the forms of diversity that are present in the classroom in order to promote high achievement by all students. Cummins (2001) asserts that schools that accept and appreciate the home languages and cultures of students help them develop additive
bilingualism and strong identities, whereas schools that tolerate disrespect and discrimination hinder these students’ social and emotional development (as quoted in Díaz-Rico & Weed, 2010, p. 11).

4. Methodology

Data presented in this article constitute part of a three-phase study designed to learn about the pedagogical and institutional practices that are most prevalent in public schools in Guadalajara, México. Findings shown in this section correspond to the last phase of the study, which took place at two coeducational public senior high schools or preparatorias referred to as Preparatoria 27 and Preparatoria 48 in this article.

The overarching goal of the investigation was to explore two main questions: (1) What are the most prevalent current teaching and institutional practices in Mexican schools at the senior high school level? (2) What can we, educators in the United States, learn from these practices to facilitate the school experience and academic performance of Mexican-born students in US classrooms? Given the exploratory nature of this endeavor, a multi-site case study design was deemed to be the most suitable research method as it would “shed light on a phenomenon by focusing on selected cases” (Stake, 1995) while providing “a well-grounded sense of the local reality” in each school setting (Miles & Huberman, 1984, p. 151).

The majority of the data came from direct classroom observations that allowed the researcher to record nearly everything that teachers and students did during each class meeting that was observed. The observations were completed in two-hour segments in eleven classrooms at two school sites during the morning and afternoon shifts in mid-May to early June of 2011. While conducting these observations, the researcher assumed the role of unobtrusive observer, entering each classroom and sitting in one corner to collect field notes with minimal to no interaction with the students or the teachers during class time. Detailed notes were taken, from instructional materials, to teaching strategies, to teacher–student and student–student interactions. Case study research is done “to know exclusively and intensively” about a single case, seeking to understand human experience with the intent to produce a vivid description of the event under investigation (von Wright, 1971; as cited in Stake, 1995).

As Tom Good (1988) puts it, “one role of observational research is to describe what takes place in classrooms in order to delineate the complex practical issues that confront practitioners” (p. 337). Gaining new insights into the teaching practices that are most prevalent in Mexican schools could prove significant in helping teachers in the United States work more effectively with students of Mexican origin. Questions that arose from the classroom observations were pursued through informal, semi-structured interviews or “directed conversations” (Lofland & Lofland, 1984) with teachers, librarians, administrators, and support staff before and after school hours. This allowed for multiple perspectives and intensive collection of information. In addition to detailed field notes from each classroom observation and interviews with school personnel, various records and school documents such as policies and descriptions of special programs, were also collected. Being a native speaker of Spanish, the researcher did not need assistance with translation of written materials or interpretation of lectures and other forms of oral communication.

4.1. Setting

Preparatoria 27 and Preparatoria 48 offer both an academic track for students who are interested in pursuing a college education and technical or vocational training for those who want to join the workforce upon completing the twelfth grade. The curriculum at these two preparatory schools is determined and monitored by Universidad de Guadalajara. At Preparatoria 27, students can choose from several different study plans or modalidades de estudio known as bachillerato general por competencias, bachilleratos técnicos (técnico en administración, técnico en contabilidad), and bachilleratos politécnicos (técnico profesional en informática, técnico electricista industrial, técnico mecánico industrial). Similarly, students at Preparatoria 48 enroll in one of the four study plans: bachillerato general por competencias, bachillerato técnico en prótesis dental, bachillerato técnico en citología e
Histología, and bachillerato semiescolarizado. All these academic programs follow a humanistic and constructivist approach.

The communities that surround these schools are characterized by houses that are relatively simple in design and located approximately 30 minutes from the Centro Histórico of Guadalajara, the fifth most densely populated city in México (almost 1.5 million people) consisting of 2,300 colonias or barrios (neighborhoods).

4.2. Participants
The students who attend preparatorias often range in age between 15 and 18. The age of the students in the classes that we observed was 15–19. Most of them live in close proximity to the schools, and according to their teachers, are from lower middle class families. Their parents may or may not have formal education. When asked about their ethnicity, those interviewed identified themselves as either mestizos or morenos claros (mestizos of light complexion). Self-reported data indicate that approximately 50% of the teachers who work at these two preparatorias hold a master’s degree in addition to a baccalaureate, known in México as licenciatura.

Convenience sampling, also known as availability or non-probability sampling (Saunders, 2012), was used for this study. Participating teachers and students were identified on the basis of existing professional contacts in Guadalajara, who graciously facilitated access to the two preparatorias. One of these individuals, who happened to be a full-time faculty member at one of the schools, offered to inform the school administrators about the purpose of the study and its potential for benefitting Mexican youth that had immigrated to the United States. On the merit of the study, permission to visit the schools was granted and informed consent forms were secured from every teacher agreeing to participate in the study. In social science research, typical case sampling is an appropriate procedure when the goal of a study is to describe a program or its participants to people who are not familiar with either. Participants are selected with the cooperation of key informants, resulting in a non-random sample that does not allow for generalizations (Patton, 1990).

5. Data analysis
Class size ranged from 13 students (Statistics) to 47 students (Physics I) at Prepa 27, and from 15 students (Psychology) to 50 students (English) at Prepa 48. The total number of students at Prepa 27 was 6,840 whereas that number at Prepa 48 was 3,516. At the time this study was conducted, there were 391 teachers, 102 support staff, and 2 librarians at Prepa 27 while those numbers were 214, 37, and 2 at Prepa 48. The two schools operate from 7:00 in the morning until 6:00 in the evening and follow a block schedule.

Data analysis was a recursive, analytic process. Categories for analysis were shaped by information gathered from observations, interviews, and school documents. Observational data were analyzed within and across data-sets to develop tentative themes. These were then compared to each other and across data-sets. Interviews were conducted as questions emerged from the classroom observations, and information gleaned from the observations was cross-referenced with insights from interviews to test emergent understandings. Themes were subsequently revised, combined, and ultimately labeled. The integration of these two data-sets helped develop a more complete picture of the schools under study. The individual reports about each school were then synthesized into one case study report per school to provide ‘a well-grounded sense of the local reality’ in that setting (Miles & Huberman, 1984, p. 151). The two case studies were then analyzed in order to compare perceived realities across these schools. Tables 1 and 2 show the classes that were observed, the number of students per class, the topics covered in each class, and the main instructional strategies being implemented. For the purpose of confidentiality, only the teachers’ first initials are given. Data source triangulation was the method used to address credibility. Data were collected mainly through systematic classroom observations whereas school documents, teaching materials, and interview data constituted additional sources of valuable information that helped gauge the
Table 1. Participants, classes, and teaching methods at Prepa 58

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Time</th>
<th>Grade</th>
<th>Subject</th>
<th>Teacher</th>
<th>Number of students</th>
<th>Topics</th>
<th>Teaching methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>24 May 2011</td>
<td>7:00–9:00 AM</td>
<td>5th</td>
<td>Psychology</td>
<td>Prof K</td>
<td>20</td>
<td>Proyecto Plan de Vida: ¿Quién Soy? Project: Life’s Plan, Who Am I?</td>
<td>Individual written questionnaire; whole-group discussion; homework assignment</td>
</tr>
<tr>
<td>2</td>
<td>24 May 2011</td>
<td>9:00–11:00 AM</td>
<td>1st</td>
<td>English</td>
<td>Prof M</td>
<td>35</td>
<td>Illnesses Should and shouldn’t</td>
<td>Vocabulary check; roleplays; workbook exercises in pairs; homework assignment</td>
</tr>
<tr>
<td>3</td>
<td>24 May 2011</td>
<td>2:00–4:00 PM</td>
<td>1st</td>
<td>Mathematics</td>
<td>Prof N</td>
<td>30</td>
<td>Linear equations</td>
<td>Practice exercises; teacher-led discussion; homework assignment</td>
</tr>
<tr>
<td>4</td>
<td>24 May 2011</td>
<td>4:00–6:00 PM</td>
<td>5th</td>
<td>Dentistry</td>
<td>Prof S</td>
<td>20</td>
<td>Dentures</td>
<td>Making dentures; individual work supervised by the teacher</td>
</tr>
</tbody>
</table>

Table 2. Participants, classes, and teaching methods at Prepa 27

<table>
<thead>
<tr>
<th>#</th>
<th>Date</th>
<th>Time</th>
<th>Grade</th>
<th>Subject</th>
<th>Teacher</th>
<th>Number of students</th>
<th>Topics</th>
<th>Teaching methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>25 May 2011</td>
<td>2:00–4:00 PM</td>
<td>4th</td>
<td>History</td>
<td>Prof R</td>
<td>17</td>
<td>Treatises of Córdoba; bases for the Constitution; the American continent</td>
<td>Review of material covered during previous classes; interactive lecture; use of graphic organizers to summarize new information</td>
</tr>
<tr>
<td>2</td>
<td>25 May 2011</td>
<td>4:00–5:00 PM</td>
<td>4th</td>
<td>Biology</td>
<td>Prof A</td>
<td>25</td>
<td>Classification of seres vivos</td>
<td>Teacher-led discussion; homework assignment</td>
</tr>
<tr>
<td>3</td>
<td>26 May 2011</td>
<td>9:00–11:00 AM</td>
<td>2nd</td>
<td>Physics I—Lab Section</td>
<td>Prof D</td>
<td>47</td>
<td>Experimentation Unit: Measurement errors</td>
<td>Experiments done in small groups</td>
</tr>
<tr>
<td>4</td>
<td>26 May 2011</td>
<td>2:00–4:00 PM</td>
<td>4th</td>
<td>Biology</td>
<td>Prof I</td>
<td>40</td>
<td>Evolution, form, and function of animal and vegetal cells</td>
<td>Review of key concepts and vocabulary; whole-class discussion; use of a Venn diagram</td>
</tr>
<tr>
<td>5</td>
<td>26 May 2011</td>
<td>4:00–6:00 PM</td>
<td>2nd</td>
<td>Physics II—Lab Section</td>
<td>Prof P</td>
<td>37</td>
<td>Cambios del estado material</td>
<td>Group work</td>
</tr>
<tr>
<td>6</td>
<td>27 May 2011</td>
<td>2:00–4:00 PM</td>
<td>3rd</td>
<td>Statistics</td>
<td>Prof C</td>
<td>13</td>
<td>Tabla de frecuencia relativa Tabla de frecuencia acumulada</td>
<td>Lecture; practice exercises: individual and small group activities</td>
</tr>
<tr>
<td>7</td>
<td>27 May 2011</td>
<td>4:00–6:00</td>
<td>4th</td>
<td>Biology I</td>
<td>Prof E</td>
<td>30</td>
<td>The evolution of species</td>
<td>Review of key terms; small group activity; discussion of questions assigned in previous class; lecture; homework assignment</td>
</tr>
</tbody>
</table>

accuracy of the findings. Member checks were performed by the participant who was instrumental in securing access to the school sites.
6. Findings

Four major themes emerged from the data: (1) interactive lectures across subject areas and grade levels; (2) warm relationships between teachers and students; (3) minimum integration of technology in the classroom; and (4) discipline with dignity. With the exception of the third one, these findings are consistent with those resulting from the first two phases of the study.

6.1. Interactive lectures across subject areas and grade levels

Although instances of Cooperative Learning (Kagan, 1986) were present in the classes that were observed, most teachers resorted to interactive lectures both to review material and to introduce new information. Interactive lectures are classes in which the instructor breaks the lecture to have students participate in an activity that lets them work directly with the material. The main purpose of this type of lecture is to keep students actively involved in the learning process by way of regular teacher–student, student–student, student–content, and student–self (via reflections) interactions.

Through reflective questions, teachers helped students figure out the correct solution to a problem, translate a problem into an equation, and make hypotheses. These questions were intended to promote both critical and analytical thinking as well as relevant connections between newly presented material and what students already knew about the topic. Examples of those questions include “Ahora explíquenme” (now explain to me), “¿Se les ocurre algo más?” (Can you think of anything else?), “¿Quién nos puede ayudar?” (Who can help us?), and “Quiero escuchar otra voz. Omar, me gustaría que te ganaras unos puntos” (I want to hear another voice. Omar, I would like to see you earning some points). When a student got distracted and off task, teachers helped them refocus their attention using comments like “Creo que nos estamos perdiendo…” (I think we are getting lost...), “Presten atención a la compañera que está compartiendo una muy buena idea” (Pay attention to your classmate who is sharing a very good idea), and “Vamos a repetir para desenpolvar ese sistema nervioso que se llama memoria” (Let’s repeat so as to dust off the nervous system that we call memory).

Teachers made frequent comprehension checks to identify areas of student misunderstanding. As needed, they would give demonstrations or step-by-step directions on how to solve math problems, repair a denture, or start an essay. When students were assigned to table groups, discussion with their classmates helped bring depth to the subject in question and gain new insights from multiple perspectives. A variety of grouping configurations were observed. Pairs, triads, and small groups allowed for student–student interactions, encouraged collaboration, and promoted multiple views on the topic under study. Teachers demonstrated strong content knowledge and respect for their students’ intellectual abilities. They provided extra support or variation of work when necessary.

Seven of the eleven classes observed exemplified interactive lectures. Group work was observed particularly in the labs. The following data sample illustrates a typical class. “T” indicates teacher whereas “St” stands for student and “Sts” for students.

6.1.1. Observation # 7: Biology class

T: Vamos a continuar con lo que quedó pendiente de la clase anterior. Ustedes contestaron tres preguntas. Primero vamos a repasar las respuestas y después ustedes se van a ubicar en mesa redonda para sacar sus conclusiones. Deben elaborar un resumen de sus reflexiones para entregar. Pregunta número 1: ¿Cuáles son los factores responsables por las diferencias entre los organismos de la misma especie?

St: La situación geográfica.

T: Por ejemplo, en los climas áridos, los cactus. ¿Qué otros ejemplos me pueden dar?

St: Los matorrales, los nopales ...

T: En Puerto Vallarta la vegetación es totalmente diferente. Es muy abundante. ¿Qué animales se encuentran en el centro del país?
Sts: Pájaros carpinteros, gorriones, zamates ...
T: ¿Qué pájaros viven en la selva?
Sts: Tucanes, guacamayos ...
T: Si lo transportáramos al ser humano, hay variación, gente con características más específicas. Otras diferencias incluyen la alimentación. Por ejemplo, hay gente que se alimenta de conejos y ardillas, pero otras personas no pueden imaginarse comer a estos animalitos. ¿Qué otros ejemplos se les ocurre?
St: Las tortas ahogadas y el pozole son características de Jalisco.
St: El taco huitlacoche es típico del DF.
T: Muy bien. ¿Cuál es otro factor para tener en cuenta?
St: Los hábitos.
St: Los genes.
T: Pregunta número 2: ¿De qué manera ha sido posible la evolución de las especies?
St: Mediante mutaciones para adaptarse a un medio ambiente.
T: Correcto. La variación de genes. Hay aquí un factor que se llama la selección natural. Modificaciones ocurren sin la intervención del hombre tanto en el caso de los animales como del ser humano. Comparen con la manipulación del hombre en el caso de injertos, hibridación, clonación. ¿Alguna pregunta? Entonces pasemos a la pregunta número 3: ¿Cómo piensan que ha sido posible la conservación de algunas características biológicas en una especie?
St: Algunas características se heredan.
St: Características que se pasan de generación en generación.
T: Puede ser. ¿Quién más nos puede ayudar? A ver compañera ... A ver compañera ... ¿Quién más quiere agregar algo?
St: Se puede decir que una variedad de factores influyen en las transformaciones. La herencia, el medio en el que la especie habita, la alimentación ...
T: Muy bien. Ahora sí cada quien va a elaborar su propia conclusión. La tarea para el día de mañana va a ser traer el resumen impreso para entregar.

6.1.2. Translation

T: We'll continue with what we didn't finish last class. You answered three questions. First, we are going to go over the answers, and then you will draw your own conclusions. You must write a summary of your reflections to turn in. First question: Which factors are responsible for the differences among the organisms of a species?
St: The geographic location.
T: For example, cacti in arid climates. What other examples can you give me?
St: Shrubbery, nopales ...
T: In Puerto Vallarta the vegetation is completely different. It is very abundant. What animals can be found in the Midwest?
Sts: Woodpeckers, sparrows, zamates ...
T: What birds live in the jungle?
Sts: Toucans, macaws ...
T: If we translated this to the human being, there would be variation, people with more specific characteristics. Other differences include nutrition. For example, there are people who eat squirrels and rabbits, but other people could note even imagine eating these small animals. What other examples can you think of?
St: Tortas ahogadas and pozole are typical of Jalisco.
St: The taco huitlacoche is typical of El Distrito Federal.
T: Very good. What other factors are to be taken into account?
St: Habits.
St: Genes.
T: Question #2: How has the evolution of the species been possible?
St: Through mutations to adapt to the environment.
T: Correct! The variation of genes. This factor is known as natural selection. Modifications take place without man's intervention in either animals or human beings. Compare this with man's manipulation in the case of grafts, hybridization, cloning. Any questions? Let's move on to question #3 then. How has the conservation of certain biologic characteristics been possible in a species? What do you think?
St: Some characteristics are inherited.
St: Characteristics are passed down from generation to generation.
T: That could be. Who else can help us? Let's see this class member... Who has anything else to add?
St: We could say that a variety of factors influence these transformations: Heredity, the environment, nutrition.
T: Very good. Now you can work on your own conclusions. The homework for tomorrow is to have a typed summary to hand in.

In this lesson, discussion of questions was embedded in the teacher's lecture. The teacher validated students' answers and encouraged quiet class members to participate more actively. Some students took notes and everyone appeared to be fully engaged. Throughout the period, the students were well behaved and remained on task, raising their hand before asking a question or making a comment. This teaching method emphasized cooperation and collaboration while promoting critical thinking.

Evidence from these classroom observations support findings of Mindel and colleagues (1998) in that conversational boundaries are not rigid, student interruptions while teacher is lecturing is not seen negatively, and getting to the point is spiral rather than linear. Clearly, this is not the norm in American classrooms and knowing about this difference can prevent conflict between teachers and their Mexican-origin students (as cited in de Souza, xxxx).

6.2. Warm relationships between teachers and students
Mexican culture encourages a warm relationship between teachers and students. Teachers are highly regarded and referred to as “profes” (short for “professors”) at the preparatoria level. In most of the classrooms where observations were conducted, teachers implemented a nurturing teaching style and addressed their students using affectionate terms such as “cielito,” “jóvenes,” “mi rey/reina,” and “mi vida,” some of which have no equivalent translations in English.

Students at the two prepas were expected to do their best at all times. This expectation was conveyed through expressions like “a ustedes seguramente les va a salir este gráfico mejor que a mí” (your graph will most likely look better than mine) and “espero un plan de vida muy reflexivo y bien escrito” (I expect your life plan to be very reflective and well-written). Strong work ethics were both modeled and expected by the teachers, whose academic and behavioral expectations were reasonably high. Nevertheless, they frequently praised their students on their efforts and accomplishments.
Student expectations and classroom routines were clear in all observed classrooms. Students seemed to apply themselves and to accept help when needed. A sense of community and responsibility for the entire group was apparent in every classroom. Students responded well to the responsibilities placed upon them and the teacher’s genuine praise helped reinforce a healthy self-concept. Although the focus of each class was on academic learning, the student–teacher relationship was warm. Students seemed fully engaged and intently trying to learn the lessons presented to them. It was apparent that these teachers believe that creating a positive, welcoming classroom environment and building a relationship with their students on mutual trust and respect are essential for true learning to occur.

6.3. Minimum infusion of technology in the classroom

As it was observed in escuelas primarias and secundarias during the first two phases of this investigation (de Souza, xxxx), classes at the two preparatorias took place in classrooms that were very plain in design. No posters, student papers or decorations lined the walls. The spatial structure of the classroom was not always the same, but in most cases individual student chairs with a sidearm for writing were organized either in rows facing the front of the classroom or in a semi-circle. The teacher’s desk was often off to the side of the room facing the students, but teachers spent little to no time at their desks. On every front wall there was either a whiteboard or a blackboard, and in most rooms there was a ceiling fan. In most classes textbooks were used. These remain in the school and are distributed at the start of class and collected before the period is over. Neither bookshelves nor any type of space to store items were observed in these classrooms.

It seems that limitations of the classroom space allowed for positive bonds to form between teacher and students. When this happens, the classroom becomes a supportive environment in which students can engage both socially and academically, resulting not only in academic gains, but also, in socio-emotional development, including increased self-concept and motivation to learn. Positive teacher–student interactions are characterized by closeness and warmth (Hamre & Pianta, 2001). The positive influence of an affective teacher is well documented in the literature (Gallagher, 2017; Hamre & Pianta, 2001; Lei, Cui, & Chiu, 2014; Liberante, 2012; Roorda, Koomen, Spilt, & Oort, 2011), and although all students can benefit from positive teacher-student relationships, youth from high-poverty urban schools, at-risk students as well as students who are transitioning from elementary to middle school and from middle school to high school are among those who can gain the most (Blasco, 2004; Cataldi, Laird, & Kewalramani, 2009; Murray & Malmgren, 2005).

The fact that classrooms in Mexican schools tend to have very little on the walls may result in sensory overload when these students are placed in American classrooms where literally every space on the walls is covered with posters, other educational materials, and/or student work (Mount-Cors, 2008). Another difference to keep in mind involves changing classrooms at the middle school and high school levels. In Mexican schools, teachers change classrooms. In the United States, students do (as cited in de Souza, xxxx).

The teachers who were observed made good use of instructional time and taught meaningful lessons with minimal teaching and learning resources. In order to provide visual support for learning as needed, teachers improvised drawings or charts on the board. Despite the simplicity of the physical environment, the teachers strove to make it a nurturing place and facilitated positive teaching and learning interactions. Except for a few teachers who brought their laptops to class, no integration of technology was observed in these classrooms. This finding contrasts with what appears to be a common practice in escuelas primarias and secundarias, where a nationwide program known as “Habilidades Digitales para Todos” (Digital Skills for All) has been implemented since 2008–2009 (Secretaría de Educación Pública, 2008), enabling teachers and students to access the Internet, and with it, countless resources and possibilities to extend in-class learning.

In addition to what was learned from direct observation, useful information was gathered from interviews with teachers and administrators. A summary is presented below.
6.3.1. Teacher certification
Unlike the United States, a teaching credential is not required to teach at a senior high school or preparatoria in México. An individual who holds a bachelor’s degree (known as licenciatura) or a master’s degree that can verify subject matter competency may qualify for this position. Kindergarten and elementary school teachers who have completed a licenciatura en educación may obtain a specialization at an Escuela Normal Superior in order to be able to teach at this educational level.

6.3.2. Student services
Students have access to academic and non-academic or support programs such as tutorial service and counseling sessions on issues ranging from vocational aptitude and stress management to sexual orientation. Teachers and students are paired in mentoring activities, which helps strengthen the personal connections that faculty cultivates with their students. Those from low-income backgrounds who perform well academically qualify for a monthly stipend of $1,000 for transportation.

6.3.3. Discipline with dignity
The two participating schools implement a discipline approach based on Curwin and Mendler’s (1988) classroom management conceptual framework first published in 1988. These two renown educators maintain that students should be disciplined in such a way that it will not have a negative impact on their dignity or motivation to learn. In this empowerment-based discipline model, genuine hope for and expectation of success are prerequisites for good student behavior in the classroom. Students do not experience intimidation or humiliation. From his in-depth analysis of existing models of school discipline, Charles (2008) concluded that best results can be achieved when this approach is enforced throughout the entire school and not just individual classrooms. The philosophy that Mexican teachers and administrators referred to as disciplina con dignidad was palpable in every classroom. It may explain the mutual respect between teachers and students that was clearly apparent both inside and outside the classrooms. It may also account for the fact that practices such as after-school detention or Saturday school are not necessary.

At the participating schools teachers were observed implementing a number of practices that helped maintain a stress-free academic environment. Examples of those instances include encouraging students to work independently, allowing them to make decisions, offering the possibility to revise and resubmit their work to improve their grades, showing a sense of humor, taking time to tell students what they did that the teacher liked, and spending a few moments to ask about or address something pertinent about the students’ day.

7. Conclusions
Extensive research on English language learners highlights the impact sociocultural factors can have on the academic achievement of this ever-growing student population. These research efforts have mostly taken place in the United States. To address this gap in the literature, a qualitative study was conducted in public elementary, junior high, and senior high schools in Jalisco, México, a region from which we have received large numbers of students over the years. Data reported in this article correspond to classroom observations at two preparatory schools known as preparatorias. Findings indicate that (1) these schools foster positive, warm student–teacher and student–peer relationships; (2) interactive lectures are implemented across subject areas and grade levels; (3) technology integration in the classroom is minimal, and (4) teachers follow a “discipline with dignity” approach to classroom management.

The findings in this study have implications for teachers, administrators, and support staff who work with immigrant students, particularly those of Mexican origin. A better understanding of Mexican students’ cultural norms can be useful in lesson planning, developing teaching materials, creating assessment tools, and implementing culturally responsive teaching practices that maximize learning for these students. It can lead to improved teacher–student interactions, which in turn can positively affect the learning environment and increase student academic outcomes. Just like it is a teacher’s job to assess their students’ prior knowledge in order to tailor instruction to their
needs, it is a teacher’s responsibility to understand the background of every single student in the classroom. Connecting with students from similar backgrounds will be easier than relating to students who have had very different lived experiences due to their heritage, immigration status, socio-economic standing, or ability to communicate in English. Funds of knowledge offers one way for teachers to connect with diverse students, their families, and their communities.

Specific cultural information derived from the study can also help orient immigrant Mexican adolescent students to the American school culture and acclimate to the demands placed upon them. For example, in México students can choose to attend school either in the morning or in the afternoon, which may explain why some Mexican students may struggle with the morning hours if they are used to the afternoon shift. It is teachers who change classrooms, not students, so in the United States, these students may need help the first weeks of classes as they learn to navigate the hallways. Conversational boundaries are not rigid and students may interrupt teachers while lecturing, a practice that is not favored in our classrooms. Students who are accustomed to this interaction style may be perceived as rude when they interject in the middle of a lecture.

With an ever-increasing number of English learners in general education classrooms across the nation, it is essential that all teachers possess the content knowledge, pedagogical skills, and professional dispositions that are necessary to provide effective instruction and equitable learning opportunities for these students, including those who completed some of their formal schooling in México. This is particularly important now that the Common Core State Standards have raised the bar even higher. We must continue to find ways to build stronger connections with students who are learning English as a new language to help them feel more connected with their non-Mexican teachers and peers. Learning about immigrant students’ previous school experiences can bring us a step closer to that end because it is not until we understand our students that we can provide meaningful, effective instruction for them.

8. Limitations of the study and directions for future research

The findings reported in this paper are based on observational and interview data gathered at two public senior high schools or preparatorias in Guadalajara, México. While these public schools are like many others in urban communities of Guadalajara, they may be in some ways different from other comparable schools. Consequently, generalizations cannot be made to all preparatorias in México.

Future research efforts could be geared toward replicating the study in other elementary, junior high, and senior high schools in and around the city of Guadalajara in order to gather additional information-rich data that can strengthen the findings in this study. Another possibility could be to compare teaching practices in schools from urban areas to those from rural areas. Yet another valuable alternative would be to conduct a similar study in other regions with high migratory rates to the United States, such as Guanajuato and Michoacán.

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