# Multilingual Linguistic Landscapes of New York City as a Pedagogical Tool in a Psychology Classroom

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**Abstract** The chapter describes the utilization of Linguistic Landscapes (LL) as a pedagogical tool in an undergraduate research methods course in psychology and demonstrates how studying urban multilingualism can be harnessed in the service of five comprehensive learning goals of the *American Psychological Association Guidelines for the Undergraduate Psychology Major* (American Psychological Association, APA guidelines for the undergraduate psychology major. Retrieved from http://www.apa.org/ed/precollege/about/undergraduate-major.aspx, 2013). Fourteen students in their second year of college took a seminar titled *Science and Technology in New York City* with the theme of urban multilingualism, where they investigated how and why languages other than English are used in public signage in ethnic neighborhoods of New York City. Students were assigned to five groups; three groups had members with prior exposure to a second language (Spanish, Russian, Hebrew) to conduct the project, whereas the other two groups recruited bilingual friends to assist them (Greek, Chinese). The groups visited five ethnic neighborhoods in New York City and took photographs of 267 bilingual public signs. They collected responses to a small-scale survey (6–10 questions) or interviewed local bilingual residents. Students categorized signs, analyzed survey and interview responses, contributed to a class poster, and wrote a group research report in APA-format and an individual reflections essay. This course is an example of how LL can be used to promote an international perspective on psychology by exploring immigration and cultural diversity.

**Keywords** New York City · Pedagogy · Sociocultural awareness · Cross-cultural competence · Urban multilingualism · Psychology

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# 1  Introduction

*Linguistic Landscapes* (LL) was first introduced as a research methodology in applied linguistics in the mid-1990s in a pioneering series of studies of language usage apparent in public signage on the streets of Québec, Canada (Bourhis, 1992; Landry & Bourhis, 1997). This methodology, serving as a means of investigating multilingualism in contemporary society, has been adapted to provide a pedagogical tool for classes in second language (L2) learning, applied language studies (Shohamy et al., 2010), and other social sciences. LL extends language learning beyond the classroom by inviting students to explore language usage in the natural environment of the street and has become especially popular in teaching English as a second language (ESL) abroad, both in secondary schools and universities. Sayer (2010) and Rowland (2013, 2016) successfully carried out LL projects with ESL students in Mexico and Japan, respectively, that investigated the function of public signage in English. Malinowski (2013, 2016) extended the LL pedagogy into an American university classroom by implementing a LL project with students at the University of California, Berkeley, focusing on the role of East Asian languages in the dominant English context of San Francisco. L2 learners and bilingual speakers have found LL projects to be beneficial in allowing them to study the functions of English as a global language (Rowland, 2013) and the role of minority heritage languages in their local communities (Malinowski, 2016).

Although pedagogical LL projects may be particularly effective in language learning and applied language courses (e.g., Aladjem & Jou, 2016; Burwell & Lenters, 2015; Chern & Dooley, 2014; Malinowski et al., 2020), there is no reason why they should be restricted to these disciplines. In fact, LL projects have been used in a variety of fields including economics, geography, teacher education, and sociology (e.g., Hoffman, 2017; Sterzuk, 2020; Trinch & Snajdr, 2017; Weyers, 2016). LL projects provide myriad opportunities to internationalize the undergraduate curriculum. These include having students observe how people negotiate multilingual identities and, thus, provide ideal contexts for discussions about immigration, globalization, and the cultural diversity of contemporary society—all topics of interest to students in psychology. It has been argued that internationalizing the content of psychology courses might help students gain awareness about their own place in the global community (Simon & Nolan, 2017). Similarly, Mak (2012) emphasized the need for psychology students to develop empathy and awareness of the stress associated with immigration and the strategies used to help newcomers adapt to new cultures and cope with changing circumstances.

Recognizing the importance of helping students develop cultural awareness, intercultural competence, and empathy in order to adapt to the impact of globalization, the American Psychological Association (APA) issued a call for action for educators to internationalize the psychology curriculum (American Psychological Association Task Force on Internationalizing the Undergraduate Psychology Curriculum, 2005). Subsequently, in a related effort, the APA put forth a set of guidelines for the undergraduate psychology major that encompassed five comprehensive learning goals to be addressed in all psychology coursework (American

Psychological Association, 2013). These pertained to developing an adequate knowledge base, scientific inquiry and critical thinking skills, ethical and social responsibility in a diverse world, communication and professional skills. This chapter describes a LL project, implemented in a psychology research methods course, that engaged college students in exploring ethnic communities of New York City (NYC) where minority languages are visibly in use. To the best of our knowledge, this is the first implementation of LL pedagogy specifically designed to align with APA guidelines for undergraduate coursework.

## 2  New York City as a Location for the LL Framework

Innovative LL research and pedagogical studies have been conducted in a variety of multilingual settings. For example, for the edited volume by Shohamy and colleagues (Shohamy et al., 2010), data were collected in Tel-Aviv (Israel), Kiev (Ukraine), Washington, D.C., Hong Kong, and other major cities. Pedagogical LL studies have also been based in Oaxaca, Mexico (Sayer, 2010), Calgary, Canada (Burwell & Lenters, 2015), San Francisco (Malinowski, 2013, 2016), Chiba, Japan (Rowland, 2013, 2016), Taiwan (Chern & Dooley, 2014), and numerous other locales (see chapter "Introduction: Spatializing Language Studies in the Linguistic Landscape", this volume). For our LL project, we took advantage of the linguistic diversity of NYC where multilingual ethnic communities offer ample opportunities to observe public signage in a language other than English (LOTE).

NYC has been referred to as "the most multilingual city in the world" (García, 2001, p. 3) and provides an ideal venue for teaching with the linguistic landscape. According to demographic data from the official website of New York City, as of 2017, 38% of New Yorkers (i.e., 3.1 million out of 8.4 million) were immigrants. Among them, approximately one-third (32%) were from Latin American countries, another third (29%) from China, India and other Asian countries, followed by immigrants from non-Hispanic Caribbean countries (18%), Europe (15%), and Africa (5%). Half of New Yorkers speak a LOTE at home, with more than 150 different languages documented (NYC Population, 2015).

New immigrants to NYC tend to settle in ethnic neighborhoods where prior generations of immigrants from the same country already live. By settling together, immigrants enjoy the benefits of a safety net and the comforts of living among neighbors who share language, food, and social connections. Immigrants to NYC have established ethnic neighborhoods in all five boroughs (Manhattan, Brooklyn, Queens, the Bronx, and Staten Island). Although gentrification in Manhattan is rapidly erasing the ethnic composition of many of its old neighborhoods, such as in the Lower East Side (formerly Jewish), East Village (formerly Polish and Ukrainian), and Little Italy, several locations continue to host concentrated ethnic enclaves, such as in Chinatown, Spanish Harlem (Puerto Rican), and Washington Heights (Dominican). In the outer boroughs, large ethnic populations remain in Brooklyn (e.g., the Russian community in Brighton Beach and the Hasidic Jewish communities in Borough Park and South Williamsburg), Queens (e.g., the Greek community

in Astoria, the Taiwanese community in Flushing, and the Korean community in Sunnyside), and the Bronx (e.g., Spanish Bronx, Irish community in Woodlawn, Jamaican community of Wakefield, Dominican and Puerto Rican communities of Soundview). Meanwhile, new ethnic micro-enclaves that represent more recent waves of immigration have appeared: French-speaking Little Senegal in Harlem, the Guyana community in Richmond Hill and Little India in Jackson Heights (Queens), Little Pakistan in Coney Island (Brooklyn), and Little Sri Lanka in Tompkinsville (Staten Island) (Geier, 2015).

To date, only a few LL research studies have targeted NYC, most of which have focused on the sociolinguistic practices of Russian and Spanish-speaking ethnic communities (Angermeyer, 2005; Hassa & Krajcik, 2016; Litvinskaya, 2010; Trinch & Snajdr, 2017). Some multilingual ethnic communities of NYC have served as contexts for classroom projects in secondary schools and universities, such as the *Introduction to Sociolinguistics* course taught by Michael Newman at Queens College in 2009 (Newman, 2009); see also the chapters by Jiménez-Caicedo "Uncovering Spanish Harlem: Ethnographic Linguistic Landscape Projects in an Advanced Content-based Spanish Course" and Vinagre & Llopis-García "Multilingual Landscapes in Telecollaboration: A Spanish-American Exchange" in this volume. However, to the best of our knowledge, there are no published implementations of LL pedagogy based in NYC to enhance learning of research methods in a psychology classroom.

## 3   Developing a LL Project for a Psychology Course in Research Methods

Course Description. The LL project was implemented in Macaulay Honors College (MHC, https://macaulay.cuny.edu/) Seminar 3: *Science and Technology in New York City*, taught by the first author in Fall 2016. This course is the third course in a four-semester sequence of required seminars for students enrolled in the MHC at the various City University of New York (CUNY) campuses. MHC Seminar 3 is taken by sophomores in the fall semester and has the following generic description (1):

(1)  The third seminar introduces students to scientific and technological top-ics that have had an impact on contemporary New York. These may include technology and the computer, urban health issues, the environ-ment, and energy. Students read scientific literature related to their topic and learn the fundamentals of science necessary to understand their read-ings. The seminar also engages students in the process of scientific inquiry, while giving attention to the historical, ethical, legal, social, and economic ramifications of the topic. […] The culminating event of this seminar is the exhibit of collaborative scientific posters.

Faculty members who teach sections of MHC Seminar 3 have considerable flexibil-ity in selecting its theme. Often it is taught as a discipline-specific research methods

course with connections drawn to the faculty members' areas of research expertise, e.g., bilingualism (Sekerina) and language acquisition (Brooks). To align our LL project with the APA call to internationalize the psychology curriculum (APA, 2005), we added one additional sentence to the original course description: "*We will approach these issues from the interdisciplinary point of view, e.g., that of psychological science and linguistics, with an emphasis on linguistic diversity and linguistic landscapes of New York City.*" The seminar culminates in the presentation of scientific posters at a CUNY-wide MHC exhibition, attended by over 400 students enrolled in 30 sections of MHC Seminar 3 at eight CUNY campuses.

As taught by the first author, MHC Seminar 3 emphasized mastery of basic concepts critical for conducting research in psychology, i.e., research ethics, hypothesis testing, variables and their relationships, methods (observation, survey, interview, and experimental), and APA format for research papers. The LL project was the second group project of a 15-week semester; it was introduced in Week 7, spanned eight weeks, and accounted for 50% of the course grade. In developing the LL project, we aligned it with the five following comprehensive APA learning goals (APA, 2013) that our students had to meet. For each goal, we describe how it was addressed through our LL project.

- Goal 1: *Knowledge Base in Psychology*. Students will examine sociocultural contexts that influence language usage in order to strengthen their recognition of the power of context in shaping conclusions about human behavior.
- Goal 2: *Scientific Inquiry and Critical Thinking*. Students will incorporate several appropriate levels of complexity (e.g., individual, group, societal/cultural) in interpreting residents' attitudes about multilingualism within their communities.
- Goal 3: *Ethical and Social Responsibility in a Diverse World*. Students will exhibit respect for members of ethnic communities and identify interpersonal challenges that often result from diversity and context.
- Goal 4: *Communication*. Students will write a formal research report using APA style.
- Goal 5: *Professional Development*. Students will collaborate successfully on a complex class project to enhance their capacity for teamwork.

## 4 Method

### 4.1 Students

Fourteen sophomores (12 female, 2 male; mean age: 19 years), representing different majors (nursing, computer science, education, business, and psychology), were enrolled in the course. Students provided demographic information at the start of the semester via a short questionnaire. All of the students were born and raised on Staten Island. None were immigrants or identified as bilingual speakers, which

stands in contrast to the diversity evident in the CUNY undergraduate population as a whole in which 44% speak a LOTE at home (Office of Institutional Research, 2016). Most students studied Spanish as L2 in high school, although none indicated that they had achieved intermediate or advanced competence in the language. Only two students stated that they had developed intermediate-level knowledge of a LOTE (one studied Russian for 4 years at a selective high school and another learned Hebrew while attending a religious school). Students were randomly arranged into five language-based groups for the LL project.

## 4.2   Preparation for the LL Project

To orient students to LL research, we provided them with two required readings: an overview article on the application of the LL framework in multilingual settings (Gorter, 2013) and an article about multilingualism in NYC (García, 2001), along with a general description of the LL Project as follows (2):

> (2) The *LL Project* is designed to give you hands-on experience in conducting an interdisciplinary study of urban linguistic diversity. By completing this assignment, you should gain some understanding of the procedures associated with collecting, analyzing and writing about real data in the context of multilingual NYC.

## 4.3   Data Collection

Data collection for the LL project had two main components: Students were required to take digital photos to create a small database of public signs in a NYC neighborhood where a sizeable ethnic community uses another language in addition to English on a daily basis. They also had to conduct a short structured interview or a survey to explore residents' attitudes toward multilingual public signs.

The LL project was introduced in Week 7 of a 15-week semester, after students had already learned the basics of survey and interview research methods. Students were told that the purpose of the LL project was to find out how and why a LOTE is used on signs in ethnic neighborhoods of NYC. They received a set of guiding questions (3), loosely modeled after Rowland (2013, p. 498), for their self-guided exploration. Other than these questions, students were given considerable latitude in selecting a site for the LL project, and in deciding which signage to photograph and what members of the community to interview or survey.

> (3) Consider the following:
>
> - What type of public signs should you select?
> - Where and when will you take pictures? How will you be sure that you do so as unobtrusively as possible? (You must not intervene in any way, and

      you should not invade the privacy of your participants. The signs should be public and clearly visible.)

- How will you select the sample of signs you will photograph (e.g., randomly, every third one, everyone on a selected street, etc.)? This will be especially important if you are in a setting in which there are more signs than you can feasibly tally.
- How will you select and recruit a person for an interview or people for a survey? The interview should be 10–15 min long, and you should prepare your questions ahead of time. Record the interview with the person's consent. It will be especially useful if the interviewee is the author of a multilingual sign (e.g., a restaurant owner). Alternatively, you could survey 10 local residents on their attitudes toward multilingual signs in their neighborhood. The survey should contain no more than 10 questions and take about 5 min to administer.
- How much time will be needed for your data collection? As a general rule of thumb, each student should plan to spend at least 1 h for both components, with some variation allowed as appropriate for the needs of your study. You will record the time you spend in your field notes.

## 4.4 Developing a Course Website

Collecting digital photographs of public signage for the five LL projects required considerable online storage. With the assistance of a graduate technology fellow with expertise in digital technology, we created a course website using WordPress (Sekerina, 2016), where students in each group archived materials for their project (i.e., digital photos of public signage in a LOTE, transcribed interviews, answers to survey questions). The technology fellow conducted a one-hour in-class workshop (Week 7 of the semester) to teach students how to upload materials onto the course website, and was available throughout the semester to answer questions and provide technical support as students created their digital galleries.

Procedure. Table 1 presents steps required to complete the LL Project, as listed in the course syllabus.

During Week 7, the five groups engaged in a brainstorming session using the website *18 Ethnic Micro Neighborhoods in the 5 Boroughs of NYC* (Geier, 2015) posted to untappedcities.com. Students were asked to browse the 18 neighborhoods to identify possible sites for their LL project. The two students with some knowledge of Russian or Hebrew felt confident to lead groups focusing on the Russian and Hebrew-speaking communities in Brooklyn. Using self-assessment, the Spanish group felt that they could comfortably read signs in Spanish and subsequently chose a Spanish-speaking community in Staten Island. The remaining two groups (i.e., Greek and Chinese) did not feel confident enough to pursue any language-related data collection on their own; after a classroom discussion about the requisite knowledge needed to collect and analyze language data, both groups elected to recruit

**Table 1** Breakdown of steps for the LL project starting in Week 7 of the 15-week semester

| Weeks | Steps |
| --- | --- |
| 7 | Brainstorm: Select language and neighborhood |
| 8 | Identify an area and pilot methods: First visit to the neighborhood |
| 9–10 | Collect data: Second and third visits to the neighborhood |
| 11 | Organize data for analysis |
| 12 | Analyze data: Categorize signage, code interview/survey responses |
| 13 | Work on the APA-style research report |
| 14 | Submit APA-style research report; work on the poster; write reflections essay |
| 15 | Poster presentation |

another MHC student to serve as a language consultant, and focused their investigations on a Greek-speaking community in Queens and a Chinese-speaking community in Brooklyn. Having identified an ethnic community where residents spoke one of the five languages for their projects, students were instructed to search the Internet for articles written from the LL perspective for use in the introduction section of their research reports. Students found suitable articles for Chinese (Leung & Wu, 2012), Russian (Litvinskaya, 2010), and Spanish (Hult, 2014). The Greek and Hebrew groups did not find any LL articles on their languages and were advised to use LL articles on unrelated languages (Levine, 2016; Troyer et al., 2015).

During Week 8, the groups conducted a pilot visit to their neighborhoods selected during the brainstorming session to identify a commercial district with sufficient bilingual public signage for their LL project. While visiting the neighborhood, students were also asked to decide whether they would conduct an interview or a survey. Students then focused on an area within the neighborhood, estimated the time and effort it would require to take photos, and divided labor among the members. Students were told that each group had to photograph a minimum of 30 signs and not spend more than 1 h doing so. Figure 1 shows the location of the five neighborhoods.

Table 2 lists the language, neighborhood, borough, and area selected by each group.

During Weeks 9 and 10, the students were instructed to take photos of public signs with their mobile devices, to put the location of each sign on a Google map, and write a one-sentence description of it. Public signs were defined as any signage in a LOTE, including text on buses, flyers, billboards, shops, schools, or restaurants. In addition to collecting the photos, the groups were required to conduct an interview or survey. Each group made one or two visits to the neighborhoods on their own free time. It was not feasible to collect data during the class time due to the remote location of the College of Staten Island (where the class took place) in relation to LL project sites in Brooklyn and Queens.

**Fig. 1** Five ethnic neighborhoods (Chinese, Greek, Hebrew, Russian, and Spanish) selected for the project

**Table 2** Language, neighborhoods, boroughs, and geographical location

| Language | Neighborhood | Borough | Location of Bilingual Signage |
|---|---|---|---|
| Chinese | Bensonhurst | Brooklyn | 86th St. from Bay 14th St. to Bay Parkway and 18th Av. from 86th St. to 17th Av. |
| Greek | Astoria | Queens | Ditmars Boulevard, Steinway St., and 31st St. |
| Hebrew | Borough Park | Brooklyn | From 36th St. to 62nd St. and from 9th Av. to 18th Ave./McDonald Av. |
| Russian | Brighton Beach | Brooklyn | From Ocean Parkway to Corbin Pl. and from Shore Parkway to the Riegelmann Boardwalk |
| Spanish | Port Richmond | Staten Island | From Broadway to Willow Rd. West and from Forest Av. to Kill Van Kull |

**Table 3** Procedures employed by the students for data collection

| Language group | Mode | # of signs | Interview or survey (N) |
|---|---|---|---|
| Chinese | Walking and driving | 39 | Survey: 4 employees of a nail salon |
| Greek | Walking | 46 | Interview: Owner of a butcher shop |
| Hebrew | Walking | 41 | Interview: A elderly resident who had lived in the community for 70 years |
| Russian | Walking and driving | 70 | Survey: 10 passersby |
| Spanish | Walking | 71 | Survey: 10 passersby |

## 5 Results

Altogether the five groups took 267 digital photos of public signs and conducted three short paper-and-pencil surveys and two structured interviews. The surveys were written in English, and respondents wrote their answers to the questions on the paper copies of the survey. The two interviews were conducted in English and recorded on smartphones. Table 3 summarizes the specifics of each group's LL project.

In four groups, the public signs were written in languages (Chinese, Greek, Hebrew, and Russian) that use an unfamiliar (non-Roman) orthography. Students did additional readings to familiarize themselves with basic features of the respective writing systems (Chinese: Perfetti & Liu, 2006; Russian: website *Everyday Russian Language*, https://everydayrussianlanguage.com/en/home/; Greek: Lo, http://www.ancientscripts.com/greek.htm; Hebrew: Ravid, 2014). The Hebrew, Russian, and Spanish groups managed the translations on their own whereas the Chinese and Greek groups relied on their bilingual language consultants to translate the signs.

## 5.1 Data Analysis: Public Signs

During class time, the instructor taught students how to organize their photos into broad categories based on Hult (2014), who developed a simple-to-implement coding scheme with signs grouped according to the language used (see Table 4) and function (Table 5).

Overall, 54.3% of the signs were bilingual, 31.1% were written in a LOTE, 4.5% were transliterated (i.e., LOTE letters were represented by Roman letters), and 10.1% were in English only. Students practiced calculating descriptive statistics and learned how to conduct a simplified Chi-Square non-parametric statistical analysis to compare the frequency of signs written in the LOTE with signs written in English. With regard to function, signs were classified as advertising services

**Table 4**  Classification of the signs (N = 267) according to the language used

| Language group | Bilingual | LOTE only (original orthography) | LOTE only (transliterated) | English only |
|---|---|---|---|---|
| Chinese | 38 | 0 | 0 | 1 |
| Greek | 17 | 9 | 9 | 11 |
| Hebrew | 10 | 13 | 3 | 15 |
| Russian | 39 | 30 | 0 | 1 |
| Spanish | 41 | 30 | n/a | 0 |

**Table 5**  Classification of the signs (N = 267) according to the function

| Language group | Services | Food | Religion/education | Other Ads |
|---|---|---|---|---|
| Chinese | 19 | 14 | 5 | 1 |
| Greek | 12 | 13 | 9 | 12 |
| Hebrew | 11 | 8 | 14 | 8 |
| Russian | 41 | 9 | 1 | 19 |
| Spanish | 22 | 26 | 3 | 20 |

(39.8%), food (26.5%), religion/education (12.1%), or other (21.6%), which is a simplification of Hult's (2014) scheme. Across the different language communities, students observed some divergent patterns; for example, religion and education signs in Hebrew were prevalent in the Jewish community in Borough Park, whereas Russian signage for services was the most frequent category observed in Brighton Beach (see Table 5). The full set of the public signs photographed by each language group is available at the Open Science Framework project page: https://osf.io/7zgxt/.

## 5.2    Data Analysis: Interview/Survey

In addition to creating online photo galleries of public signs, the students conducted a structured 10–15 min interview or administered a simple 10-question survey of 10 randomly selected local residents. Our goal was to provide students with hands-on experience in collecting and working with their own data (a requirement for our undergraduate research methods courses). The Institutional Review Board reviewed the project and granted exemption because it constituted part of a classroom practicum and data were fully de-identified. As indicated in Table 3, two groups opted to conduct an interview while the other three groups conducted pencil-and-paper surveys.

The Greek group conducted an interview with a bilingual butcher, a man in his 60s who came to the United States when he was 23. He owns a meat shop in Astoria, which relies heavily on business from local Greek residents. Interestingly, as all of his employees are Hispanic he has taught them some rudimentary Greek for use with customers. Although his store sign was in English only, in the window, there were

several flyers advertising Greek music festivals, the signs for various meats inside were written in Greek, and Greek flags hung from the ceiling. The owner stressed the importance of Greek in his community because the majority of his customers speak only Greek, but he also acknowledged the importance of knowing English in the United States. He strongly believed that the Greek language would continue to dominate in Astoria, as locals pass down the Greek language and culture to their children.

The Hebrew group interviewed an elderly female Borough Park resident ("Mrs. M.") who served as the treasurer of an Orthodox synagogue. The group prepared eight general questions for the interview, such as *So if all these signs in Hebrew are for the Jewish people, are there people who aren't Hebrew that ask questions about the signs in Hebrew?* and *In shul, do you see that people speak Hebrew, English, or Yiddish?* Mrs. M. reported that she was born in Belgium and emigrated with her family to the United States in 1940. She had lived in Borough Park for more than 70 years and had seen the progression of the community from first- to second- to third-generation immigrants. During the interview, she remarked on community development and population shifts that had occurred over the years. According to Mrs. M., English was becoming the primary language for Borough Park, but Hebrew continued to play a vital role in the religious life of the Jewish residents. The students also learned about an interesting diglossia in Borough Park: Hebrew was used as the written language on the public signs, but Yiddish was also alive as a language of spoken communication, especially among older residents. Over the years, the linguistic landscape of Borough Park had transitioned from primarily Yiddish to a mixture of Yiddish, Hebrew, and English, with each having its own unique purpose and reason for continued use. The audio recording of the interview (15 min) and its transcript are available at the Open Science Framework project page: https://osf.io/7zgxt/.

The Russian group surveyed 10 passersby in front of a subway station on Brighton Beach Avenue. Half of the participants mentioned coming to the Brighton Beach area for a particular service, e.g., Russian pharmacy and specialty foods. Although none of the participants self-reported discomfort in patronizing businesses with monolingual English-speaking staff, 60% of them expressed feelings of convenience towards stores with Russian-speaking staff, and 50% acknowledged that Russian signage served as an indication of the staff's ability to accommodate monolingual Russian speakers. The Chinese group conducted a 9-question survey with four women who worked at a Chinese nail salon in Bensonhurst. This location was chosen because a group member knew a bilingual Chinese speaker who worked there. When asked about their perception of the bilingual Chinese-English signs in the neighborhood, participants indicated that the presence of the two languages promoted business and also shared with the neighborhood the Chinese language and culture. The Spanish group administered a 12-question survey to 10 bilingual residents of Port Richmond. The respondents indicated that bilingual store signs served to accommodate Spanish speakers and allowed people to get around Port Richmond without knowing English. They reported that bilingualism was beneficial for businesses; it served to preserve cultural identities while promoting diversity. An example survey from the Spanish group is provided in Appendix A.

## 5.3   Research Reports, Reflections Essays, and Poster Presentation

As a group, students worked collaboratively in preparing APA-style research reports summarizing their LL projects. Students learned the intricacies of APA style through in-class, low-stakes writing exercises. The APA-style research reports had six required sections: *Introduction, Linguistic Landscapes Methodology, Study 1: Public Signs, Study 2: Interview/Survey, Discussion, References*, with an optional *Appendix* for supplementary materials (e.g., the interview transcript or a copy of their survey instrument). In the *Study 1* section, students were required to include a Google map of the area on which the locations of the photographed signs were marked; images of the submitted Google maps are provided in Appendix B. The research reports contained figures illustrating the various types and functions of the signs, with each report ranging from 12 to 17 pages (double-spaced). The reports were submitted electronically prior to Week 14.

After submitting their reports, students were asked to write individual essays reflecting on their experiences conducting LL research. Essays were approximately 1000 words in length and emphasized themes such as the value of multilingual signage in creating a sense of community, bilingualism as an aspect of one's identity, immigration patterns in NYC, and community strategies for helping newcomers adjust and cope with potential discrimination. The reflections essay prompts and essays written by 12 students in response to the prompts are available at the Open Science Framework project page: https://osf.io/7zgxt/.

Students then worked collaboratively as a class to convert the content of their group reports into scientific posters for the CUNY-wide MHC Seminar 3 poster session. The students created two posters (36″ x 48″ dimensions), with Poster 1 exhibiting photographs and Poster 2 summarizing information from the APA-style research reports (see Fig. 2). Both posters are available at the Open Science Framework project page: https://osf.io/7zgxt/. The CUNY-wide MHC Seminar 3 poster session lasted for 2 h with 300 people in attendance. Each group manned the
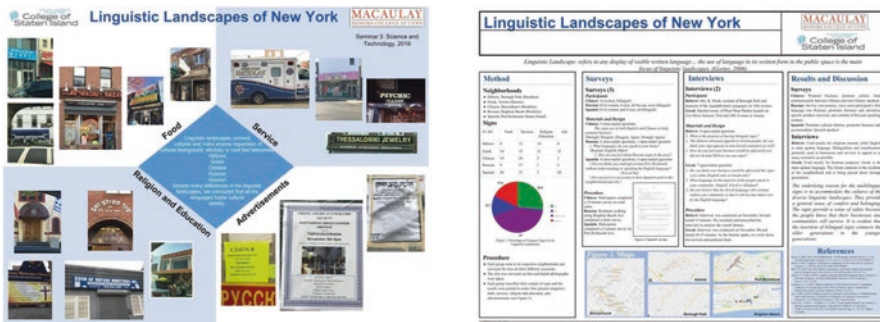


**Fig. 2**   Class poster on linguistic landscapes of New York City

posters for 20 min, and members took turns presenting the posters, explaining the methods, findings, and conclusions drawn from the LL research to the interested audience.

# 6 Discussion

This chapter has described a LL project implemented in a semester-long research methods course with an enrollment of 14 sophomore students from various majors. The LL project was organically integrated with the content of psychology that relied on naturalistic observation, surveys, and interviews as the most accessible data collection methods for undergraduate students. Although we had only 14 students, the LL project could be scaled up for a medium-size class (e.g., 40–50 students) and adapted for research methods courses in other social sciences besides psychology, such as anthropology, sociology, and social work. Practical modifications made the LL project flexible enough to accommodate monolingual students, while acknowledging the valuable contributions of minority language speakers to its success.

Our implementation of LL pedagogy aligned with five comprehensive learning goals outlined in the *Guidelines for the Undergraduate Psychology Major* (APA, 2013). We will discuss students' achievements in relation to each of the five goals through representative excerpts of their research reports (collaborative group work) and comments from their essays (individual reflections), as presented below in their original written form.

## 6.1 Goal 1: Knowledge Base in Psychology

The LL project fostered discussions of immigration patterns within NYC and strategies immigrants utilize to preserve their cultural and social identities through language usage. In the process of collecting and analyzing digital photographs of public signage and data on local residents' attitudes towards multilingualism, students focused on examining sociocultural contexts that influence language usage, with the aim of strengthening their recognition of the power of context in shaping conclusions about human behavior.

In their research reports, students discussed how bilingual neighborhood signage served to attract people from different ethnic groups—including English speakers who do not speak the minority language, but believe that its presence attests to authenticity of the food, imported products, and/or services offered inside the store. Students emphasized that the extensive use of bilingual public signs was a reflection of how local residents valued their cultural identities. For example, the Chinese group wrote:

> The bilingual signs are found outside of businesses as well as restaurants in order to increase the different kinds of customers the storefront will attract. If a sign is in two languages, rather than one, it will attract people amongst different ethnic groups. Because one of the two languages was Chinese, it also shows the need and want to preserve the large Chinese culture within the neighborhood. Chinese immigrants have adapted from prejudice due to racial markers and have developed successful socio-economical businesses that preserve both their culture and profit.

The Russian group remarked on how the pervasive use of Russian in Brighton Beach resonated with perceived strength of the community:

> The bilingual public signage is used for a variety of reasons, but mostly to accommodate the large Russian-speaking population of Brighton. Businesses may feel that incorporating Russian signage is vital because of how strongly Brighton Beach residents identify with their culture.

The Spanish group discerned the deep cultural roots of Spanish merely by looking at a small slice of a very large Spanish-speaking community in NYC:

> Having Spanish signs in this neighborhood allows those who are of Hispanic descent to feel a sense of belonging within the community and that their culture is accepted. It may even create a sense of nostalgia for Spanish speakers who immigrated to New York and reminds them of their home country.

The Greek group mentioned that the minority usage was especially important for older residents:

> Inclusion of the minority (i.e., Greek) language is important to target local seniors who live in the community in large numbers and who prefer to shop in the stores close to where they live and where their language is spoken because of limited proficiency in English.

In their reflections essays, students stated that the LL project increased their appreciation of how languages can provide unique insight into cultural values and traditions. For example, a student remarked on how the Hebrew language serves to promote religious affiliation:

> Languages can be a vehicle for more than social and literal meanings because some languages, such as Hebrew, have a large association to religion. Languages can be used to connect other cultures to one another as well and possibly attract newcomers into certain religions.

Another student emphasized how multilingualism is essential to the diversity that makes America unique:

> I believe that the languages other than English are an important part to our society. They promote cultural identity and diversity. Diversity is an essential aspect to American society; it is what makes America so unique. They help immigrants assimilate to America and accommodate those speakers who speak a language other than English.

After learning to decipher Cyrillic script, a student from the Russian group described how the LL project contributed to her own identity development:

> The Linguistic Landscape assignment made me feel like a more cultured New Yorker. I learned so much about the Russian language and the Russian immigrants of Brighton Beach. The feeling of being able to identify certain words after being in the neighborhood for only an hour was extremely gratifying because it involved studying a lively landscape and obtaining relevant information at the same time.

## 6.2  Goal 2: Scientific Inquiry and Critical Thinking

We required students to conduct fieldwork in five ethnic neighborhoods of NYC using staple methods from the social sciences, i.e., naturalistic observation, interviews, and surveys. In guiding their research, we encouraged students to incorporate several appropriate levels of complexity (e.g., individual, group, societal/cultural) in interpreting local residents' attitudes about multilingualism within their communities. Students appreciated designing and conducting their own interviews and surveys, as emphasized in the following excerpt from a student reflection:

> Another pro is that the data collection is actually done by us: we're the ones making the trips to the areas, taking pictures and talking to the residents. These trips to other parts of the city could be time-consuming, but they're worth it in the end, as we get a much better feel for the area by spending those hours familiarizing ourselves with it. Designing our own experimental procedures and collecting our own data made us care more and feel more connected with our research.

Given that the students were sophomores, their surveys were limited in scope. As expected, there were gaps in their findings, which provided opportunities for the instructor and students to critique the methodology.

In writing the discussion section of their APA reports, students were asked to relate their findings to other LL studies in the published literature. For example, the Chinese group reasoned that the numerical difference in bilingual public signs reported in a previous study by Leung and Wu (2012), when compared with their findings, had to do with the greater ethnic diversity evident within the Bensonhurst community of Brooklyn in comparison to the Chinatown community of Philadelphia:

> The setting for Leung and Wu was a six-block radius in Chinatown in Philadelphia, collecting 330 photos of public signs. Our group had a similar size radius stretching out a little farther, but collecting less photos (39). A reason for the large difference of the number of signs is that Bensonhurst's diversity is apparent on the streets, with not as many Chinese signs as other Chinatowns due to the many different ethnic groups in the neighborhood.

The Russian group compared their investigation of the LL of Brighton Beach, Brooklyn—a neighborhood often referred to as Little Odessa (Miyares, 1998)—to those from Litvinskaya (2010) and noted that:

> Litvinskaya (2010) examined the linguistic landscape of Brighton Beach within the same boundaries that our study focused on as well. However, Litvinskaya's quantitative study measured the number of signs in the area other than Russian […] English-Japanese, English-Urdu, English-Spanish, and various trilingual signs as well. Litvinskaya also conducted a qualitative analysis in a Russian restaurant, examining forms of signage including menu items. Although we were unable to examine the Russian menus, the results from both studies highlighted the prominence of the Russian language in Brighton through the utilization of public signage.

## 6.3   Goal 3: Ethical and Social Responsibility in a Diverse World

The LL project required students to interact directly with bilingual members of each community. By including this component of the project, we were focusing on students' ability to develop and exhibit respect for members of diverse groups and to identify interpersonal challenges that often result from diversity and context (on ethics and language learning in the LL, see the chapter by Zimmerman, Noodin, Mayes, and Perley "Indigenous Conceptual Cartographies and Landscape Pedagogy: Vibrant Modalities Across Semiotic Domains", this volume). Although initially apprehensive about the assignment and the requirement to travel outside of Staten Island, students overcame their own personal barriers and remarked on the benefits of this experience. One student from the Greek group remarked:

> Prior to doing this project I did not realize the prevalence of LOTEs on public signs. The project opened my eyes to the multilingualism that characterizes New York as a melting pot, which is not as common on Staten Island. Conducting an interview with a business owner in the area gave great insight.

## 6.4   Goal 4: Communication

The LL project was especially well-suited for developing students' written and oral communication skills. They submitted research reports in APA style and prepared and orally presented their scientific posters for the CUNY-wide MHC conference.

APA formatting has been described as a story schema for empirical research reports (Madigan et al., 1995); as such it provides an organizational template that guides reading as well as reporting research findings. APA format requires the use of citations to draw connections to relevant prior work. In referencing ideas taken from sources, authors paraphrase information and minimize the use of direct quotes. Teaching APA format effectively introduces students to psychology as a discipline with its own conventions for conducting and disseminating empirical research on human behavior within larger framework of social sciences (Madigan et al., 1995). (Note also that APA format is used in a number of disciplines in addition to English, including applied linguistics.)

APA papers are often co-authored due to the collaborative nature of research within the field of psychology. Hence, our students co-authored research reports rather than produced individual papers. Collaboration helped students complete their work in sufficient time to meet deadlines for presenting their LL projects at the MHC conference while offering opportunities for them to engage in peer review/editing of classmates' writing.

## 6.5   Goal 5: Professional Development

The LL project provided myriad opportunities for students to meet APA goal 5 by developing their capacity for teamwork as they supported each other in completing a complex project and preparing for the poster session of the CUNY-wide MHC conference. Students remarked on the advantages of collaborating with peers in making it feasible to complete their work within the time constraints. For example, students wrote:

> We were able to contribute different ideas and opinions about different aspects of the project. And we were also able to get the project done faster and more efficiently than we would have been able to do working on our own. We were also able to help each other understand certain aspects of the project if one of us did not understand something.

> It taught time management, communication skills and understanding what each group member does best so the work can be divided up and accomplished to the best of everyone's ability. My group got lucky in that we had someone fluent in the language, but for other groups it was a little more challenging. The amount of work done and elaboration of the work led to everyone learning a lot.

Another student emphasized the social benefits of the LL project:

> One of the main pros of this project was working with other students who I usually did not work with and making new friends along the way. I also took a step into the culture of another language that was completely new to me. I also believe a pro was the presentation, which helped me continue to face my public speaking anxieties.

## 7   Conclusions

Incorporating LL pedagogy into our research methods course dovetailed with the five comprehensive APA learning goals for the undergraduate psychology major (APA, 2013). Student work provided evidence of gains in knowledge (Goal 1), scientific inquiry and critical thinking (Goal 2), ethical and social responsibility in a diverse world (Goal 3), communication skills (Goal 4), and professional development (Goal 5). In addition, the LL project directly addressed the APA mandate to internationalize the teaching of psychology by providing multiple opportunities for students to engage in substantive investigations of language use in relation to immigration in NYC. Class discussions around the project were of critical value in fostering students' understanding of migration and movement of people as a key aspect of globalization (Buskist et al., 2012). The LL project also created a context for students to engage with multilingual community members. For this aspect of the project, we emphasized the importance of developing sociocultural awareness and cross-cultural competence—two of the learning outcomes emphasized in the 2005

APA taskforce report (APA, 2005). Projects, such as LL research, that promote positive interactions with diverse groups of people, might serve as a first step towards developing students' intellectual curiosity around global and international issues. Such interests might lead students to pursue capstone experiences such as study or work abroad, engagement in research on international issues, or participation in international conferences and organizations (Takooshian et al., 2016).

## Appendices

### *Appendix A: Survey*

**Spanish: From Broadway to Willow Rd. West and from Forest Av. to Kill Van Kull (Staten Island)**

1. Gender:          M          F
2. Age:
3. Do you understand or speak languages other than English?
   If so, which languages?
4. Do you live in a bilingual community?
5. What are your opinions about bilingual communities in New York City?

6. What languages do you primarily communicate inside your home? Outside your home?

7. Do you think you could get around Port Richmond without understanding or speaking the English language?

8. Why do think the store signs in Port Richmond, Staten Island, are written in two languages?

9. Do you feel that it is necessary to have Spanish used in this neighborhood and why?

10. Do you find yourself meeting store owners and restaurant employees who only speak Spanish?

11. Do you wish there were more bilingual signs and/or texts in your community?

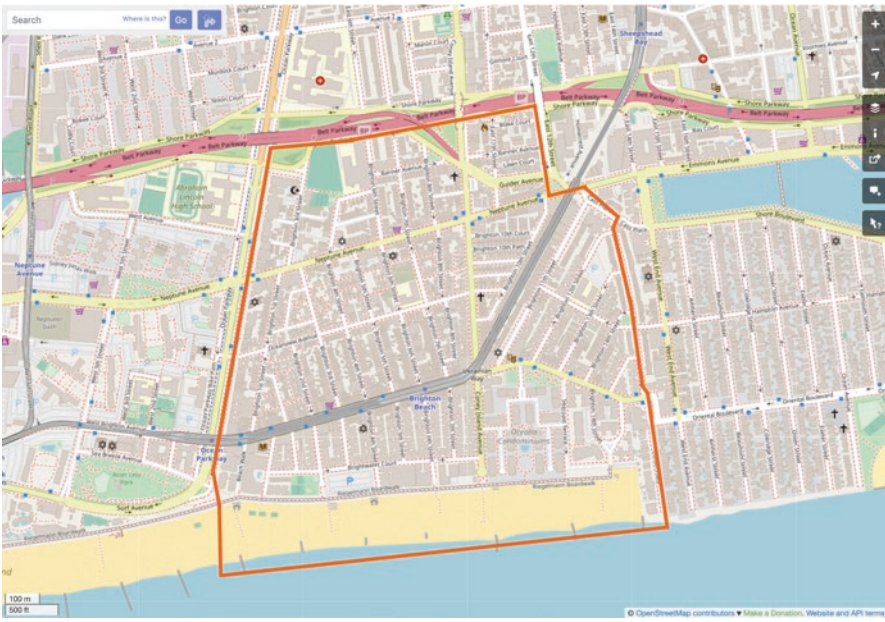## Appendix B: Maps of the Neighborhoods

Spanish (Port Richmond, Staten Island). Map data from OpenStreetMap ([https://www.openstreetmap.org/copyright](https://www.openstreetmap.org/copyright))
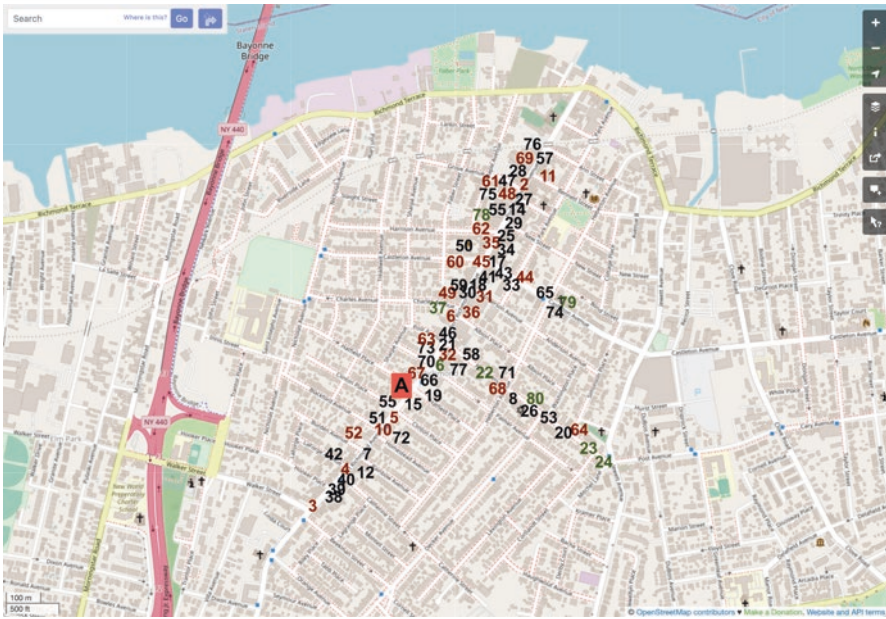


Greek (Astoria, Queens). Map data from OpenStreetMap ([https://www.openstreetmap.org/copyright](https://www.openstreetmap.org/copyright))
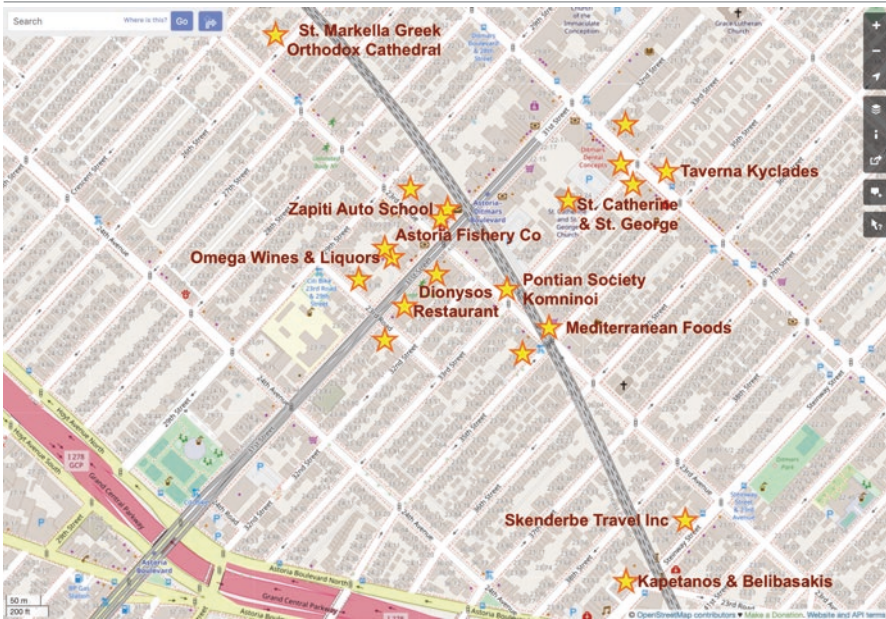
Russian (Brighton Beach, Brooklyn). Map data from OpenStreetMap (https://www.openstreetmap.org/copyright)



Hebrew (Borough Park, Brooklyn). Map data from OpenStreetMap (https://www.openstreetmap.org/copyright)
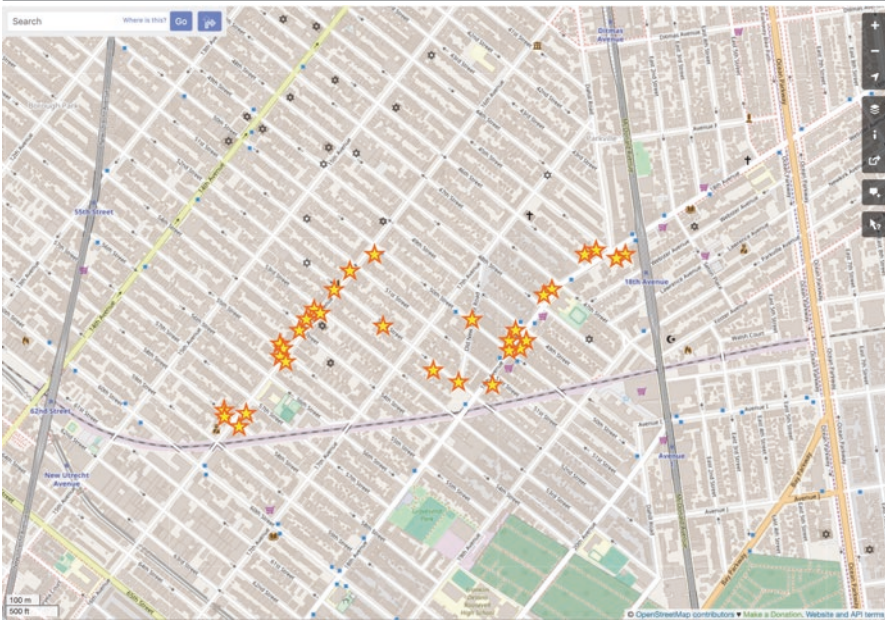
Chinese (Bensonhurst, Brooklyn). Map data from OpenStreetMap (https://www.openstreetmap.org/copyright)
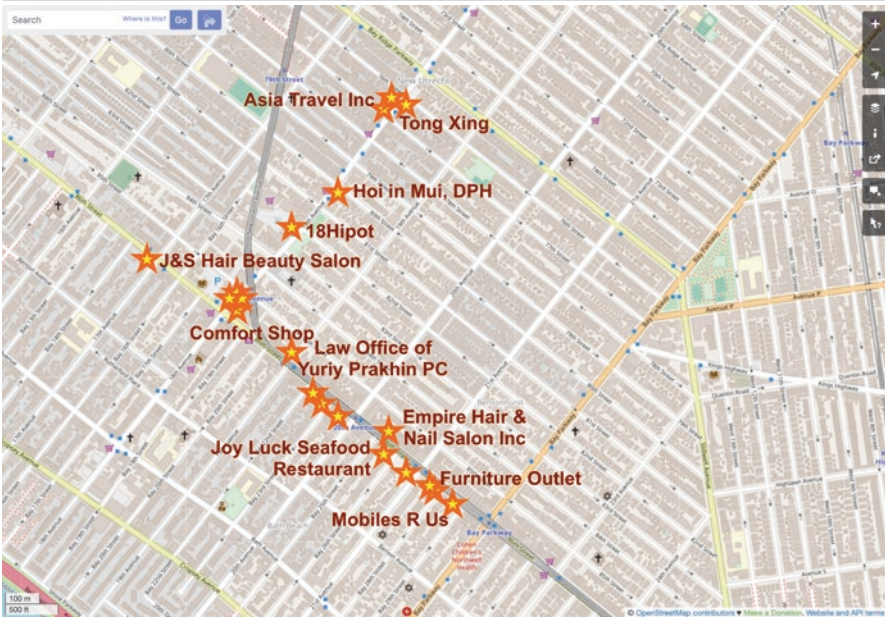


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