Teaching Demographic Ignorance with the Correcting Misperceptions Exercise: A Replication and Extension of Previous Research

Daniel Herda
Merrimack College, herdad@merrimack.edu

Teaching Demographic Ignorance with the Correcting Misperceptions Exercise: A Replication and Extension of Previous Research

Abstract

Existing research from the social sciences indicates that misperceptions about immigrants are pervasive in American society and present consequences for intergroup relations. The classroom may be an arena in which to reduce this incorrectness. The current note provides a replication and extension of previous research on the effectiveness of the Correcting Misperceptions Exercise (CME) — an in-class demographic guessing game in which students provide their perceptions of some demographic reality and compare it to an objective data source. This analysis builds upon earlier work by 1) considering immigrants as a new demographic category of focus; 2) simultaneously analyzing cardinal misperceptions of the immigrant population size (population innumeracy) and ordinal mischaracterizations of immigrants' most common country of origin; and 3) by comparing low-tech and high-tech versions of the CME. Perceptions measured during the game are compared to those measured in a post-test occurring three weeks later. Results indicate that participation in the game improves both types of misperceptions. However, they technology-based CME utilizing student response systems (Socrative) does not provide any additional purchase beyond a low-tech, paper-and-pencil delivery.

Keywords

population innumeracy, demographics, immigrants, student response systems, misperceptions

Creative Commons License

Cover Page Footnote

Daniel Herda is an Assistant Professor of Sociology at Merrimack College in North Andover, MA. He received his Ph.D. from the University of California – Davis in 2013 and specializes in race/ethnicity, immigration, and social psychology. His work has appeared in *Public Opinion Quarterly*, *Social Forces*, *Social Science Research*, *Sociological Perspectives*, and *Ethnic and Racial Studies*. His current research examines misperceptions about the size and characteristics of immigrant populations in Europe and North America. His work also investigates the extent and consequences of experienced and anticipated interpersonal discrimination.

Introduction

Individuals frequently display ignorance about many demographic statistics (Ipsos MORI 2015). For instance, if one asks how many immigrants reside in their country, respondents generally over-estimate (Semyonov et al. 2004; Hjerm 2007; Sides and Citrin 2007; Citrin and Sides 2008; Semyonov et al. 2008). This ignorance, often dubbed population innumeracy, is concerning as it reveals how uninformed many Americans and Europeans are about their populations. Even more troubling is that some use this ignorance to motivate discriminatory actions against the groups being estimated. Research shows that more inflated perceptions are associated with stronger opposition to legislation designed to help the group in question (Semyonov et al. 2004; Alba et al. 2005; Sides and Citrin 2007; Herda 2013). Logically, some recommend the dissemination of correct information in an effort to combat this tendency (Nadeau et al. 1993; Sigelman and Niemi 2001; Alba et al. 2005; Sides and Cirtin 2007). The current note examines whether the classroom can be an effective arena for misperception reduction.

To test this possibility, this study examines the effectiveness of Herda's (2017) Correcting Misperceptions Exercise (CME). This innumeracy-motivated in-class activity involves a demographic guessing game in which students estimate the immigrant population size in the United States. These guesses are then compared to the actual statistics and used to motivate class discussion. The current study conducted this activity in 8 introductory sociology classes across 4 semesters, generating a sample of 157 respondents. The goal was to test whether the CME led to more accurate perceptions three weeks later.

This analysis replicates and extends Herda's (2017) original article by considering three new questions. First, is the CME effective for reducing misperceptions about a wide array of groups? Herda's (2017) original experiment focused only on religious population sizes. The current study considers the immigrant population size in a similar manner. In the United States, the topic of immigration has become highly polemical and is increasingly a subject of misperceptions (Herda 2019).

Second, can the CME also reduce other types of ignorance? While population innumeracy represents a cardinal misperception in which respondents incorrectly estimate a precise number, there are also many possible ordinal mischaracterizations regarding statistics like immigrants' most common reasons for being in the host country (asylum, education, work, etc.) or their most common legal status (documented or undocumented). The categories for these questions have a correct ranking that respondents may misperceive. Recent research focused on ordinal mischaracterizations argues that whom or what an individual imagines when they think of the typical immigrant is important for shaping their policy positions (Blinder 2015). A few studies establish that this type of ignorance is

widespread and even more consequential than population innumeracy (Blinder 2015; Herda 2015; Herda 2018). The current study tests whether the CME can alter an ordinal misperception (what is the most common country of origin for foreigners in the United States?) alongside population innumeracy.

Third, this analysis considers two different ways to deliver the CME and which is more effective. Specifically, how does a CME aided with a Student Response System (SRS)[1] compare to a low-tech, paper-and-pencil version of the exercise? SRS technology, which allows teachers to poll students and project responses live in front of the class, has grown in popularity among college teachers and has many purported benefits (see Ueltschy 2001; Cossgrove and Curran 2007; Keough 2012; Hoekstra 2015). Herda's (2017) experiment focused only on an SRS-aided version of the CME, however this high-tech delivery may yield different results than a low-tech alternative. For one, students may perceive greater anonymity from the SRS and thus offer more honest responses (Stowell and Nelson 2007). Additionally, the ability to display estimates for every member of the class through SRS, rather than soliciting a few responses from volunteers, may cause the exercise to have a greater impact. Alternatively, the physical act of writing an estimate in the low-tech condition may help students to remember their initial guess better (Mueller and Oppenheimer 2014). Thus, the current study compares the SRS results to experimental pre-tests and post-tests for a CME without the aid of technology.

Overall, the results indicate that the CME improves accuracy in both cardinal and ordinal misperceptions about immigrant populations. Moreover, similar improvements were observed among those students participating in SRS and the low-tech versions, suggesting that the technology provides no additional purchase.

The CME

In an effort to combat misperceptions and to present students with demographic facts in an interesting way, Herda (2017) developed the CME (see Townsley 2007 for a similar semester-long exercise). Depending on the number of demographic questions included and the amount of discussion generated, teachers can expect it to last about 15 to 25 minutes. The activity develops in four stages:

1) Question: The professor poses a question about a verifiable demographic reality (i.e., what is the percentage of foreign-born individuals living in the United States?)
2) Answer: Students take a few seconds to formulate and record their guesses. The professor examines the data to calculate a typical estimate for the class.

---

[1] These technologies are also called classroom response systems, audience response systems, personal response systems, etc. (Keough 2012). Readers may be familiar with "clicker" devices, but several such downloadable applications are now accessible via smartphone or tablet.

3) Reveal: The professor presents the actual size figures from an objective source and compares them to the class's typical estimate.

4) Discussion: The professor leads a discussion about what motivated students' guesses. Generally they identify personal experiences or the media as evidence.

The CME provides an interesting and interactive way to present demographic information, which is often relevant in social science courses. It gives students an opportunity to reflect on their perceptions, particularly if they were incorrect by a wide margin. It also gives the instructor an opportunity to relate these perceptions to actual findings in the social science literature. However, the CME may provide the added benefit of reducing these misperceptions if the information can be retained in the future.

The Initial Study

Herda (2017) tested whether the CME could improve the accuracy of students' perceptions of religious group population sizes. His sample of 75 undergraduates over-estimated Jewish- and Muslim-American populations by wide margins. Those students participating in an SRS version of the CME initially viewed Jewish-Americans as representing about 18 percent of the population and Muslim-Americans as about 14 percent (the actual sizes were 1.7 and 0.6 percent respectively (Pew 2008)). Three weeks later, students estimated the same populations as 5 percent and 4.5 percent on average respectively, which, while still inflated, constituted significant improvements relative to the initial measurements. The main conclusion was that the CME, aided with SRS, could be a way to combat demographic misunderstandings. The current study builds directly on this research with a focus on immigrant misperceptions, the addition of an ordinal mischaracterization alongside population innumeracy, and by comparing the SRS delivery to a low-tech, paper-and-pencil version of the CME.

The Current Study

The current author collected data from undergraduate respondents in eight sections of an introductory sociology class at a medium-sized, private, residential college in the Northeast. The institution has a roughly even gender distribution at 51 percent women and 49 percent men. Reflective of the region, the student body is mostly white (78.6 percent), with 17 percent identifying as persons of color. Most students are from New England, with 11 percent originating from outside the region.

Sections were randomly assigned to either participate in the SRS or the low-tech CME. Data collection took place across 4 consecutive semesters (Fall 2016 to

Spring 2018), with two classes each semester. Class sizes ranged from 11 to 26. Students were queried about their immigration perceptions during the CME and once again in a follow-up three weeks later.

SRS Condition: "Please Input Your Best Guess onto Your Smartphone"

In the four sections selected to take part in the SRS CME ($n = 63$), the teacher presented students with two questions via the Socrative[2] application after a brief introduction explaining the exercise. First, the professor asked: "Just your best guess, out of every 100 people living in the United States, what percentage was born in another country? Enter a number between 0 and 100." Students input their responses, which tallied anonymously on a screen. After all students responded, the professor identified the typical response, revealed the correct answer, and initiated a conversation about students' guesses.

Next, the instructor asked from where immigrants are most likely to originate. The prompt is as follows: "Which country is the most common place of origin for foreigners in the United States? Name the correct country." After receiving all student estimates, the professor displayed the responses, determined the most common perception, and then revealed the correct answer. A short discussion about student perceptions followed.

Low-Tech Condition: "Please Write Down Your Best Guess on a Sheet of Paper"

The instructor presented the same questions in the low-tech version of the CME ($n = 64$). Rather than inputting their responses into an app, students recorded them on a piece of paper. These responses could not be projected on a screen, so the instructor asked for volunteers to share their perceptions. Afterward, the professor revealed the correct answers in the same manner as the SRS condition, which motivated a similar discussion. The major difference between low-tech and SRS conditions was the manner in which student guesses were recorded: electronically versus paper-and-pencil.

Follow-Up Assessment

Three weeks later, the instructor queried all students again about their immigrant perceptions via bonus questions on the final exam. These questions were worded identically to those presented in class. The current analysis compares these responses to those gathered during the in-class CME.

---

[2] Socrative is a free SRS application for students and instructors. It is available for tablets and smartphones and is accessible via laptop computer. Similar apps include TopHat, Monocle, and Poll Everywhere.

Absentee Condition

Students who were absent on the date of the CME ($n = 30$) did not provide pre-test estimates. However, they had the opportunity to answer the bonus follow-up question. These individuals constitute a post-test control group that was not exposed to either version of the CME, which can be compared with the two experimental groups.

Ethical Considerations

Data collection began after Institutional Review Board approval from the college. During each CME, the professor informed students about the purpose of the study, ensured that responses would remain anonymous, and emphasized that participation was voluntary. At this point students either opted in or out of the study in writing. On the follow-up, the professor provided similar information and a second opportunity to opt out. Students received credit for the bonus questions regardless of accuracy or whether they opted in or out of the study.

Analytical Sample

The final analytical sample consists of 157 undergraduates. The gender distribution is roughly even with 50.96 percent identifying as women and 49.04 percent identifying as men. Given that data are from an introductory level class, freshmen are the most common class year with 69.43 percent of the sample. Sophomores are 17.20 percent, Juniors 7.01 percent, Seniors 5.10, and 1.27 percent classified as Other. The sample covers a wide array of majors as this sociology course satisfies a college-wide general studies requirement. Only 4 percent of the sample were declared sociology majors at the time of data collection.

Analysis
Levels of Uncertainty across the Full Sample

For the two main perceptions of interest, students display the expected levels of ignorance. The bar chart on the left side of Figure 1 presents the mean estimate of the immigrant population size gathered during the in-class CME (this statistic includes follow-up results for absentees). Additionally, the chart displays the mean estimate from the 2015 Ipsos MORI "Perils or Perception" survey and the actual size as a reference. The typical student believes that immigrants constitute 34.57 percent of the country, which is nearly 1.5 times larger than the actual size of 14 percent. While this over-estimate is sizable, it is not out of the ordinary as the typical respondent in the Ipsos data estimated the same population to be 33 percent on average. In fact, a one-sample t-test indicates that this value is equivalent to the current point estimate ($t = 1.517$; $p = 0.1318$).
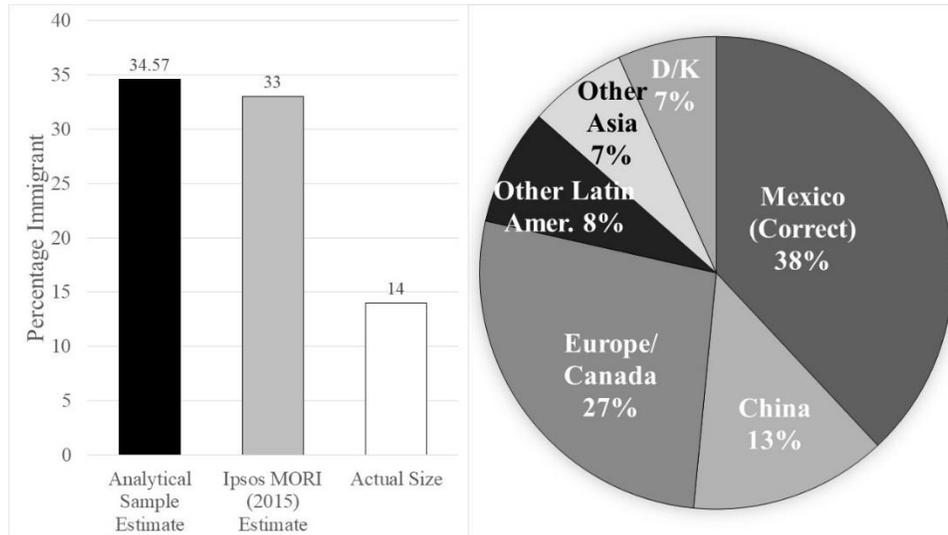
Figure 1. Pre-test immigrant population size perceptions in the United States and immigrant origin characterizations in the United States for the full sample (n = 157)

Regarding the perceived most common source of immigrants in the United States, most respondents perceive the reality incorrectly. These values appear in the pie chart on the right side of Figure 1. The correct response, Mexico, was selected by only 38 percent of participants. This response was the modal category, but still a minority of students. The next most common single country was China, at 13 percent. The remainder were a mix of countries that the author categorized into broad regions for display purposes. The most common of these regions was Europe/Canada, which 27 percent of respondents selected. Unfortunately, there are no studies documenting immigrant source misperceptions in the United States, precluding comparison with the general population.

Correcting Population Size Misperceptions

The results of the experimental test for the immigrant population size perceptions appear in Figure 2. This bar chart displays the mean estimated size for the two pre-test conditions on the left and the three post-test conditions on the right. Also included with each bar is the 90 percent confidence interval estimated using bootstrapped standard errors with 1,000 replications. This nonparametric approach is preferable when dealing with a non-random sample as it requires fewer assumptions regarding the distribution shape (Efron 1981).
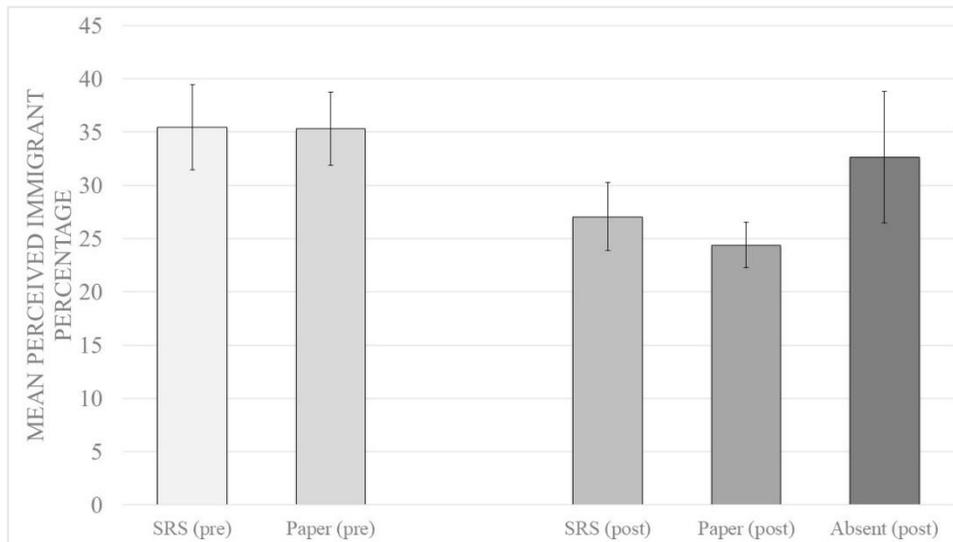
Figure 2. Mean perception of immigrant population sizes in the United States during the CME (pre) and final exam (post) with 90 percent confidence intervals

Based on a two-sample t-test, the two pre-test conditions are statistically equivalent ($t = 0.050$; $p = 0.9626$). For the SRS condition, the typical respondent estimated the immigrant population to be 35.45 percent and the low-tech condition estimated 35.3 percent on average, a difference of only 0.15 percentage points. These differences are also statistically equivalent to the absentees' post-test estimate of 32.67 ($t = 0.731$; $p = 0.466$).

The post-test follow-up results for both experimental conditions suggest reductions in the mean level of population innumeracy displayed by the sample. For the SRS condition, the mean estimate drops to 27.06 percent, which is 8.39 percentage points lower than the pre-test. The low-tech condition estimated the mean to be 24.4 percent, which is 10.9 percentage points lower than the pre-test. Both pre-test versus post-test differences are statistically significant, based on the two-sample t-tests (SRS: $t = 2.467$; $p = 0.015$; Paper: $t = 4.536$; $p = 0.000$).

Interestingly, the point estimates suggest greater improvement in the low-tech condition compared to the SRS condition. The two begin in the pre-test at roughly the same starting point, yet those in the low-tech condition estimate on average 2.66 percentage points closer to the correct answer. However, this difference is not statistically significant in a two-sample t-test ($t = 1.390$; $p = 0.167$).[3]

---

[3] The current study also considered the proportion of students who guessed within three researcher-defined zones of correctness. These zones were set at +/-2 points from correct, +/-5, and +/-10. All cases yield results similar to those presented (available upon request). In all, participation in the CME generated more accurate perceptions in the post-test relative to the pre-test. Additionally, the SRS condition yielded improvements that were statistically equivalent to the low-tech condition.

Correcting Population Source Mischaracterizations

The results of the second experimental test, involving misperceptions of the main source of immigrants to the United States, appear in Figure 3. The layout is similar to Figure 2, except the bars correspond to the proportion selecting Mexico (the correct answer) rather than a sample mean. The first two bars on the left represent the pre-test values for both experimental conditions. Interestingly, the SRS condition was initially more inaccurate than the low-tech condition with only 27 percent of the former selecting Mexico, while 47 percent of the latter did the same. The difference is statistically significant in a two-sample proportion z-test ($z = -2.321$; $p = 0.020$). Identical to those in the low-tech condition, 47 percent of absentees selected Mexico in the post-test.
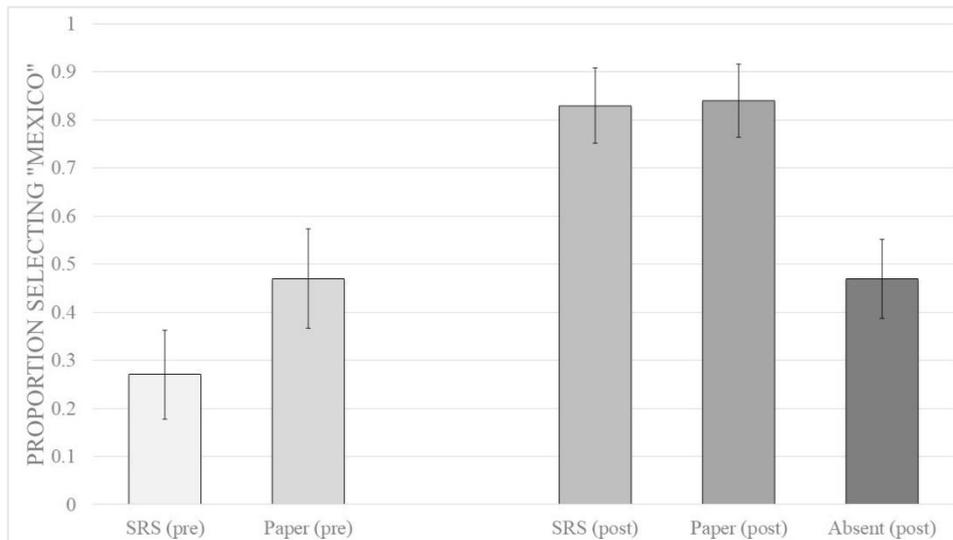

Figure 3. Proportions of respondents selecting Mexico as the most common origin for immigrants in the United States during the CME (pre) and final exam (post) with 90 percent confidence intervals

The post-test results for the SRS and low-tech groups are similar with 83 percent of the former and 84 percent of the latter selecting Mexico. This difference is not statistically significant ($t = -0.276$; $p = 0.783$), but both constitute substantial improvements over the initial assessment. The proportion answering correctly increased by 37 percentage points for the low-tech group and 56 percentage points for the SRS group. Both post-test proportions are significantly larger than their pre-test counterparts (SRS: $z = -6.265$; $p = 0.000$; Paper: $z = -4.466$; $p = 0.000$), suggesting that the CME exercise did improve the accuracy of this perception three weeks later. However, the similar post-test perceptions indicate little difference between the SRS and low-tech delivery methods.

Summary and Discussion

In the era of "alternative facts" and "fake news," it is unsurprising that so much variation exists in respondents' perceptions of demographic realities. As teachers, we are well-suited to work toward improving these pervasive misperceptions with the goal of generating a more well-informed public. The current study examined one such strategy, the CME, which provides an interactive way to present statistical facts that may help students retain the information. This analysis replicated and extended Herda's (2017) original research by considering a new category of focus (immigrant populations), two forms of ignorance (cardinal population innumeracy and ordinal mischaracterizations) and two delivery methods (SRS and low-tech versions). The major findings from the current analysis are as follows:

CMEs Reduce Immigrant Population Innumeracy

The current results demonstrate that the CME is useful for altering immigrant population innumeracy, as Herda (2017) found with religious groups. Perceptions of the percentage of immigrants in the United States grew significantly more accurate three weeks after the CME. There are likely many other populations that would be of interest to teachers that could be included in a CME. Racial categories, socioeconomic class categories, occupational categories, political party membership, and many others could all be easily used as part of the guessing game.

CMEs Can Alter both Cardinal and Ordinal Misperceptions

Additionally, the current study went beyond replication by considering an ordinal form of ignorance. Researchers have only recently emphasized such mischaracterizations, while population innumeracy has been widely studied for two decades. Interestingly, research suggests that ordinal mischaracterizations are actually more consequential (Blinder 2015; Herda 2015). Regardless, the current study finds that the CME can also reduce ordinal ignorance, as a significantly larger proportion of students identified Mexico as the most common immigrant origin three weeks after the CME. This pattern opens up a wide array of ordinal forms of ignorance that are verifiable and can be incorporated into the CME. Possible topics could include: What is the most common family type in the United States? What is the typical legal status for immigrants? What is the most common education level for individuals in the upper middle class? Professors can make the CME relevant across social science disciplines and perhaps beyond.

CMEs with or without SRS Are Equally Effective for Reducing Misperceptions

While significant improvements in ordinal and cardinal misperceptions were observed for students participating in the SRS and low-tech versions of CME, neither produced significantly greater improvement relative to the other. This finding suggests that the CME exercise, regardless of how it is implemented, explains the increasingly accurate perceptions and that there is little additional benefit for the use of SRS technology.

This is not to say that using SRS is bad in any way. To the contrary, the use of the technology can make the exercise more enjoyable for students (Keough 2012). SRS also allows for greater flexibility as it permits the anonymous display of student responses to the class almost immediately, which can motivate discussion and allow for the calculation of a typical class estimate (i.e., class mean). It is the opinion of the current researcher that, despite no added misperceptions-reduction benefit, the CME is best presented with SRS.

However, the current results should be encouraging to instructors who would prefer to avoid technology in the classroom or in situations where students do not have smart devices. The CME can be easily adapted to suit instructors' preferences and student needs, and according to the current data, it can be done without sacrificing the exercise's ability to alter incorrect perceptions. This finding shows the CME to be adaptable across a wide array of teaching styles and preferences. Ideally, this adaptability will permit wider adoption of the CME, which may eventually help us move toward a more accurately informed public.

Acknowledgments

References

Alba, Richard, Ruben G. Rumbaut, and Karen Marotz. 2005. "A Distorted Nation: Perceptions of Racial/Ethnic Group Sizes and Attitudes Toward Immigrants and Other Minorities." *Social Forces* 84, no. 2: 901–19. https://doi.org/10.1353/sof.2006.0002

Blinder, Scott. 2015. "Imagined Immigration: The Impact of Different Meanings of 'Immigrants' in Public Opinion and Policy Debates in Britain." *Political Studies* 63, no. 1: 80–100. https://doi.org/10.1111/1467-9248.12053

Citrin, Jack and John Sides. 2008. "Immigration and the Imagined Community in Europe and the United States." *Political Studies* 56 no. 1: 33–56. https://doi.org/10.1111/j.1467-9248.2007.00716.x

Cossgrove, Kirsten, and Kristen L. Curran. 2007. "Using Clickers in Nonmajors- and Majors-Level Biology Courses: Student Opinion, Learning, and Long-Term Retention of Course Material." *CBE–Life Sciences Education* 7, no. 1: 146–154. https://doi.org/10.1187/cbe.07-08-0060

Efron, Bradley. 1981. "Nonparametric Estimates of Standard Error: The Jackknife, the Bootstrap and Other Methods." *Biometrika* 68, no. 3: 589–599. https://doi.org/10.1093/biomet/68.3.589

Herda, Daniel. 2013. "Too Many Immigrants?: Examining Alternative Forms of Immigrant Population Innumeracy." *Sociological Perspectives* 56, no. 2: 213–240. https://doi.org/10.1525/sop.2013.56.2.213

-----. 2015. "Beyond Innumeracy: Heuristic Decision-Making and Qualitative Misperceptions about Immigrants in Finland." *Ethnic and Racial Studies* 38, no. 9: 1627–1645. https://doi.org/10.1080/01419870.2015.1005643

-----. 2017. "Correcting Misperception: An In-Class Exercise for Reducing Population Innumeracy Using Student Response Systems and a Test of Its Effectiveness." *Teaching Sociology* 45, no. 2: 152–160. https://doi.org/10.1177/0092055X16681647

-----. 2018. "Comparing Ignorance: Misperceptions about Immigrants in the United States and Western Europe." *Societies Without Borders*. 12, no. 2.

-----. 2019. "Tracking Ignorance: Examining Changes in Immigrant Population Innumeracy in the United States from 2005 to 2013." *Migration Letters* 16, no. 2: 329-339. https://doi.org/10.33182//ml.v16i2.745

Hjerm, Mikael. 2007. "Do Numbers Really Count? Group Threat Theory Revisited." *Journal of Ethnic and Migration Studies* 33, no. 8: 1253–75. https://doi.org/10.1080/13691830701614056

Hoekstra, Angela. 2015. "Because You Don't Realize How Many People Have Different Experiences Than You: Effects of Clicker Use for Class Discussions in Sociology." *Teaching Sociology* 43, no. 1: 53–60. https://doi.org/10.1177/0092055X14556054

Ipsos MORI. 2015. "Perils of Perceptions 2015: A 33 Country Study." *Ipsos MORI*. Last Modified December 1, 2015. https://www.slideshare.net/IpsosMORI/the-perils-of-perception-in-2015-ipsos-mori.

Keough, Shawn M. 2012. "Clickers in the Classroom: A Review and a Replication." *Journal of Management Education* 36, no. 6: 822–847. https://doi.org/10.1177/1052562912454808

Mueller, Pam A., and Daniel M. Oppenheimer. 2014. "The Pen Is Mightier than the Keyboard: Advantages of Longhand Over Laptop Note Taking."

Psychological Science 25, no. 6: 1159–1168.
https://doi.org/10.1177/0956797614524581

Nadeau, Robert, Richard G. Niemi, and Jeffrey Levine. 1993. "Innumeracy about Minority Populations." *The Public Opinion Quarterly* 57, no. 3: 332–47. https://doi.org/10.1086/269379

Pew Research Center. 2008. "U.S. Religious Landscape Survey: Religious Affiliation." *The Pew Forum on Religions and Public Life*. Last Modified February 1, 2008. https://www.pewforum.org/2008/02/01/u-s-religious-landscape-survey-religious-affiliation/

Semyonov, Moshe, Rebeca Raijman, and Anastasia Gorodzeisky. 2008. "Foreigners' Impact on European Societies: Public Views and Perceptions in a Cross-National Comparative Perspective." *International Journal of Comparative Sociology* 49, no. 1: 5–29. https://doi.org/10.1177/0020715207088585

Semyonov, Moshe, Rebeca Raijman, Anat Yom-Tov, and Peter Schmidt. 2004. "Population Size, Perceived Threat and Exclusion: A Multiple-Indicators Analysis of Attitudes Toward Foreigners in Germany." *Social Science Research* 33, no. 4: 681–701. https://doi.org/10.1016/j.ssresearch.2003.11.003

Sides, John, and Jack Citrin. 2007. "European Opinion about Immigration: The Role of Identities, Interests and Information." *British Journal of Political Science* 37, no. 3: 477–504. https://doi.org/10.1017/S0007123407000257

Sigelman, Lee, and Richard G. Niemi. 2001. "Innumeracy about Minority Populations: African Americans and Whites Compared." *The Public Opinion Quarterly* 65, no. 1: 86–94. https://doi.org/10.1086/320039

Stowell, Jeffrey R., and Jason M. Nelson. 2007. "Benefits of Electronic Audience Responses Systems on Student Participation, Learning, and Emotion." *Teaching of Psychology* 34, no. 4: 253–258. https://doi.org/10.1080/00986280701700391

Townsley, Eleanor. 2007. "The Social Construction of Social Facts: Using the U.S. Census to Examine Race as a Scientific and Moral Category." *Teaching Sociology* 35, no. 3: 233–238. https://doi.org/10.1177/0092055X0703500302

Ueltschy, Linda C. 2001. "An Exploratory Study of Integrating Interactive Technology into the Marketing Curriculum." *Journal of Marketing Education* 23, no. 1: 63–72. https://doi.org/10.1177/0273475301231008