

## **The Public and International Assessments**

Oren Pizmony-Levy

Linh Doan

Jonathan Carmona

Erika Kessler

### **Abstract**

One of the rationales for conducting international large-scale assessments (ILSA) is to inform the public about the quality of education. Indeed, over the past decade both International Association for the Evaluation of Educational Achievement (IEA) and Organisation for Economic Co-operation and Development (OECD) have invested considerable efforts to disseminate information learned from their projects into the public domain. To date, however, we know very little about the extent to which ILSA affect the general public. This chapter begins to address this gap in the literature. After a brief review of the growing literature about public opinion and ILSA (mostly from the United State), we present analysis of a public opinion survey. While our survey draws on a non-probability sample in 21 countries, three initial findings emerge. First, respondents question the accuracy of ILSA and their role in improving schools, but nevertheless they support these assessments. Second, respondents report low engagement with news stories about ILSA and in many countries respondents are not well informed about the performance of students in their country. Third, respondents' knowledge of ILSA results is associated with confidence in education but not with attitudes toward public spending on education. Based on this initial survey, we argue for additional research on public opinion and international assessments.

### **Biographical Notes**

Oren Pizmony-Levy is an assistant professor in the Department of International and Transcultural Studies at Teachers College, Columbia University. His research and teaching focus on the intersection between education and social movements, such as the accountability movement and its role in the emergence of international large-scale assessments.

Linh (Phoebe) Doan is a PhD student in Comparative Education and Sociology of Education at Teachers College, Columbia University. Her research interests include international large-scale assessment, policy and planning, and academic dishonesty. Her dissertation research examines how social relations and interactions shape cheating behaviors among students in Vietnam.

Jonathan Carmona is a master's degree student in International Educational Development at Teachers College, Columbia University. His professional and academic focus includes issues of accountability, effectiveness, and responsiveness in the educational nonprofit sector. His current projects explore such issues by looking at frontline stakeholders and the experience of the people they serve.

Erika Kessler is a master's degree student in International Educational Development at Teachers College, Columbia University. Her research interests and academic focus include comparative educational policy studies, monitoring and evaluation, and civic and citizenship education. Her current projects inquire into Myanmar's educational policy reforms and implications for future citizenship education.

## The Public and International Assessments

International large-scale assessments (ILSA) are a public matter. At the most basic level, ILSA are funded with public money to inform stakeholders about the output of what is often considered a large component of the governmental sector (Howie & Plomp, 2005). The Trends in International Mathematics and Science Study (TIMSS), for example, aims to evaluate the extent to which the intended curriculum is actually implemented and attained. The Program for International Student Assessment (PISA) aims to evaluate the extent to which students can apply what they learned in school to “real-world” situations. Because education as a social institution has various societal effects (Meyer & Rowan, 1977), the impact of ILSA on the education system potentially could affect larger society (e.g., by altering what counts as school knowledge). Another aspect of the public nature of ILSA is the fact that their results attracted media attention as headline news and took on symbolic substance worldwide. Indeed, following the immense growth in ILSA, scholars have examined the public discourse around these assessments (Dixon et al., 2013; Hamilton in this volume; Pizmony-Levy, under review; Pons, 2012; Stack, 2007; Waldow, Takayama, & Sung, 2014). Steiner-Khamsi (2003), for example, categorized three types of discursive reactions to ILSA results: (1) scandalization, (2) glorification, and (3) indifference.

To date, however, scholars have paid little attention to the links between ILSA and public opinion. Although the term is commonly used, scholars do not agree on one single definition of the term public opinion. For our purpose, we define “public opinion” as opinions concerning social or governmental matters rather than on private matters (Clawson & Oxley, 2013). It comprises of opinions, attitudes, preferences, beliefs, and values. These opinions are held by individuals in society, but they become public through technical practices such as standardized representative surveys (Perrin & McFarland, 2011). The public nature of ILSA makes them an appropriate topic for public opinion research.

We posit that understanding public opinion toward ILSA is important for several reasons. First, public opinion plays an important role in the development of public policy. In their Advocacy Collation Framework, Sabatier and Jenkins-Smith (1999) argue that changes in public opinion represent external events that are a critical prerequisite to major policy changes. The premise of this argument is that public opinion can alter general spending priorities and the perceived seriousness of various problems (Berkman & Plutzer, 2005). The relative stability of public opinion is also seen as a key mechanism for the path dependency of social policy because it signals to policymakers what their constituents expect (Brooks & Manza 2006). Second, as stated above, one of the key objectives of ILSA is to inform stakeholders, including the general public, about the state of education in their country. Drawing on the initial framework of PISA, for example, Pizmony-Levy (2017) has demonstrated how the Organisation for Economic Co-operation and Development (OECD) sought to address information gaps regarding the performance of young adults among parents, students, the general public, and policymakers.

As the charge of this book is to investigate the choreographed rituals of ILSA and the associated discourse about education, this chapter focuses on the implications of ILSA on public opinion. Specifically, the chapter examines four research questions:

1. What does the general public think about international assessments?

2. To what extent is the general public engaged with results of international assessments?
3. To what extent is public engagement with international assessments linked to attitudes towards education?
4. To what extent is national performance on international assessments correlated with attitudes towards education?

The first two questions above assess public opinion toward and engagement with ILSA. The second two questions investigate the relationship between ILSA results and more general attitudes about educational policy.

### **Background**

Although scholars have called for more studies that examine public opinion about education (Jacobsen, 2009), this research remains limited. Therefore, it is not surprising to find very few publications about the intersection between ILSA and public opinion. Most of the publications rely on the work of think tanks and polling organizations that track public opinion about education on an annual basis. Thematically, we identify two lines of research.

The first line of research examines public views towards ILSA (for review, see Pizmony-Levy, 2017). Surveys assess public knowledge about PISA results by asking respondents to indicate how 15-year-old students in their country perform on ILSA (e.g., bottom, middle, and top of a ranking table). In the United States and Israel, respondents underestimate the performance of students in their country. In both countries, college-educated respondents are more critical of their country's performance on PISA. In addition, surveys assess the level of engagement with ILSA results. According to a 2014 PDK/Gallup survey, for example, only one-third of Americans (30%) remember reading or hearing about PISA scores when they were released. The same survey reveals uncertainty about the accuracy of PISA and about the importance of PISA for helping improve schools. Nonetheless, Americans endorse PISA as reflected in the 2014 Education Next-PEPG survey. This line of research relies heavily on samples from the United States and Israel, and thus we have a limited perspective on the phenomena.

The second line of research explores how ILSA results shape public opinion about education. Using a national survey experiment in the United States, Morgan and Poppe (2012) show how framing educational policy with the goal of enhancing international competitiveness lowers the subjective evaluation of the quality of local schooling without increasing interest in additional spending to improve the nation's education system. Moving to Scandinavia, Fladmoe (2013) demonstrates how awareness of PISA could influence the effect of news consumption on subjective evaluation of the national education system. Specifically, in Norway and Sweden (but not in Finland), individuals who are aware of PISA express more negative evaluations of the national education system the more they consume certain sources of news. Cross-national research, using data from the International Social Survey Program (ISSP) from 30 countries, shows the link between country performance on PISA and public confidence in education (Pizmony-Levy & Bjorklund, under review).

### **Data & Methods**

To begin exploring public engagement with ILSA, we conducted a pilot study to investigate public opinion towards education and international assessments. The study was implemented

between November and December 2016. During that time, the IEA released the results of TIMSS 2015 (November 29) and the OECD released the results of PISA 2015 (December 6). By administering the survey during that timeframe, we intended to investigate the extent to which releases of new ILSA results—especially in a year when TIMSS and PISA are released simultaneously—affect public opinion and views.

We designed the survey as an online, self-administered questionnaire. It included questions gauging respondents' attitudes toward ILSA and general questions about education (e.g., confidence in education, and opinions regarding public spending on education). Most of the items about ILSA were adapted from the 2014 PDK/Gallup Poll of the Public's Attitudes Toward the Public Schools and the 2013 Pew Research Center's Public Knowledge of Science and Technology Survey (for review, see Pizmony-Levy, 2017). The general items about education were adapted from the 2006 Role of Government Module of the International Social Survey Program (ISSP). The survey contains detailed information on respondents' socio-demographic characteristics. The final question invited respondents to share open-ended comments about issues raised in the survey. The survey was written in English and then translated by native speakers into 16 languages: Arabic, Armenian, Bahasa Indonesia, Dutch, French, Hebrew, Hungarian, Japanese, Korean, Simplified Mandarin, Traditional Mandarin, Portuguese, Russian, Spanish, Turkish, and Vietnamese (for complete version of survey instrument, see Pizmony-Levy et. al. 2017). The majority of respondents completed the survey within 8 to 10 minutes.

The pilot study is based on a convenience sampling of adults. We recruited respondents through social media outlets including Facebook, Twitter, WeChat, and others. A research team of 61 individuals from 25 countries disseminated scripted announcements and reminders about the survey throughout the data collection period. While the advantages of convenience sampling are clear (e.g., simplicity and cost/effective), we should acknowledge two limitations. First, the sample is highly vulnerable to selection bias (see discussion of sample demographics below). Second, because this is a non-probability sample, the results are not generalizable. An additional caveat is that there is not equitable access to the internet across the globe (Pearce & Rice, 2013). These limitations are important; however, we believe that for the purpose of generating new hypotheses regarding public engagement with ILSA, this approach suffices. The final sample included 4,585 respondents from 78 different countries (including 80 respondents from 18 countries that did not participate in TIMSS or PISA 2015).

The analytical sample is slightly smaller than the full dataset and includes a total of 4,306 respondents. The sample is restricted to 21 countries in which at least 30 responses were recorded (see Appendix A). Further, the sample includes seven countries in which at least 30 valid responses were recorded before and after the release of TIMSS and PISA 2015. Table 1 presents the socio-demographic background of the sample. Two-thirds (66.7%) of the sample are women. Half (50.8%) of the sample are young respondents between ages 18 and 29. A vast majority of the sample holds an academic degree (88.9% hold an undergraduate degree, and 41.8% hold a graduate degree). Similarly, almost all respondents reside in urban or suburban communities (92.3%). Only one-quarter of the sample (25.2%) are parents to school-aged children. We found little variation related to socio-demographic background across countries.

Table 1 – about here

Because the sample is not representative and the sample size varies across countries, the analytical technique relies on descriptive statistics and bivariate analysis (e.g., cross-tabulation). In addition to the analyses reported here, we also analyzed the data with country weights that address the uneven sample sizes. All supplemental analysis is available upon request.

## Results

### *Attitudes toward ILSA*

We will first explore the descriptive statistics for attitudes towards ILSA. For the sake of simplicity, the survey used the term “international comparisons tests.” The survey paid particular attention to four factors: (a) perceived accuracy of ILSA; (b) perceived contribution of ILSA to improving schools; (c) perceived importance of good country performance on ILSA; and (d) support for country participation in ILSA.

A key premise of ILSA is the provision of high-quality comparable data across different countries and cultures. To help us measure the public’s perceived accuracy of ILSA, the survey prompted respondents to rate their agreement/disagreement with the following statement: “International comparisons tests such as PISA and TIMSS accurately measure student achievement across nations.” Overall, respondents reported that they doubt the accuracy of ILSA. Slightly more than one-third (36.0%) agreed with this statement, whereas the rest responded neither agree or disagree (41.6%) or disagree (22.4%). Perceived accuracy of ILSA varied across countries, as illustrated in figure 1. The majority of respondents in Australia and Hungary, for example, endorsed the notion that ILSA accurately measures student achievement cross-nationally. Conversely, a small minority of respondents in the United Kingdom and Denmark endorsed this idea. Importantly, the figure for the United States is similar to figures found in a national representative sample (PDK/Gallup, 2014).

Figure 1 – about here

Policymakers that evaluate their educational systems using ILSA believe these assessments would help them to improve education quality. International organizations responsible for ILSA (i.e., IEA and OECD) make similar claims. Therefore, the survey asked respondents to rate their agreement/disagreement with the following statement: “International comparisons tests are critical to helping improve schools in this country.” Respondents are split when it comes to the notion that ILSA is a critical tool for school improvement. Less than half (48.7%) agreed with this statement, whereas the rest neither agreed or disagreed (26.1%) or disagreed (20.3%). In further analysis (not reported), we found that the public’s view of the perceived contribution of ILSA to improving schools varied across countries.

Previous research on public discourse has suggested that in many countries policymakers take action in response to ILSA results (Figazzolo, 2009; Breakspear, 2012). By doing so, they advance the idea that good performance on TIMSS and/or PISA is desired and is an important pursuit. The survey asked respondents to rate their opinion on the following statement using a four-point scale: “How important is it that your country performs well on these tests compared to other countries?” Although respondents doubted the accuracy of ILSA and they reported being

unsure regarding the contribution of ILSA to improving schools, a large majority of them (79.7%) viewed good performance on ILSA as important (42.5% answered somewhat important, and 37.2% answered very important).

We found a similar pattern related to public support for its country's participation in further cycles of ILSA. The survey asked respondents: "Do you support or oppose the country's participation in international comparisons tests in science, mathematics, and reading in the coming years?" Slightly more than two-thirds (68.2) indicated they support participation in ILSA, with a small minority (9.5%) opposing this action.

Table 2 presents a correlation matrix of the four attitudes towards ILSA. Overall, we found positive and significant correlations between all the variables. The correlation between perceived accuracy of ILSA and perceived importance of good country performance is relatively weak ( $r=.27$ ,  $p<.001$ ). A similar correlation exists between the perceived contribution of ILSA to improving schools and the perceived importance of a country's good performance ( $r=.35$ ,  $p<.001$ ). Taken together, these correlations suggest that respondents appreciate good country performance on ILSA regardless of their views toward the measurement quality of these assessments or the contribution of these assessments to improvement of schools.

Table 2 – about here

In their open-ended comments, respondents reflected on their attitudes toward ILSA. Several respondents commented about the accuracy of ILSA and standardized tests more generally. A male respondent (age 54) from the United States, for example, argued that ILSA are exciting but not necessarily accurate because education is a context-dependent phenomenon: "Education is important, but it is also cultural and so comparisons between countries, while interesting, may not always be that accurate." A female respondent (age 22) from Turkey extended this point and argued that, in addition to culture, curricular policies also shape performance on ILSA:

"I find international tests very important for comparison but I think those international tests should be also approached carefully. I believe that they try to create objective questions but I do not think they can be able to take cultural factors into consideration. In one country, certain subjects are given more importance and in some other countries, these subjects may not be discussed at length."

A similar notion of engaging with ILSA with caution is reflected in a comment by a male respondent (age 32) from Australia:

"I generally believe in data-driven assessments of the ability of a given method to achieve a task. However, this is obviously more useful for those tasks easily quantified. For something as multifaceted, complex, and variable as the success and quality of an education, I am more skeptical of the efficacy of a standardized test to be a viable basis of comparison."

Other respondents briefly recognized their (limited) knowledge of ILSA accuracy and then expressed definitive confidence in the utility of ILSA. A male respondent (age 40) from Japan, for example, wrote:

“Although I'm not sure with [sic] the accuracy of the comparative tests, I think it definitely provides an objective measure backed up with certain data. It could provide the education policy makers a clue of what the issues are in the current system, something which they won't become aware of without the comparative test.”

Other respondents commented that ILSA are important because they put pressure on policymakers to initiate reform and change. A primary school teacher from Germany (female, 26), for example, wrote:

“I do think that international educational surveys like PISA and TIMSS are important in order to consider the actual educational system but I think the wrong people are interested in their outcomes. It should not be the parents and "normal" media talking about how good or bad "their" students performed. It should be the governments and politicians truly taking these outcomes as a sign saying: "Put more effort in this system!" I do not think that the German educational system is good. It is just old and it needs an update [...]"

And a female respondent from France (age 32) added:

“In France, there is a widespread attitude of resistance to change, self-evaluation, and learning and using best practices that deviate from tradition. The teaching profession and the national education system have been described as mammoths, very hard to budge. When the results of rigorous and reliable PISA testing and reports come out, this seems to be one way to at least point out that people need to question why the system and pedagogy is [sic] not effective, and that old ways need to be changed.”

### *Knowledge of ILSA results*

Next, we will examine respondents' knowledge of ILSA results in their respective country. Without specifying the name of the assessment (e.g., TIMSS or PISA), the survey asked respondents to indicate the ranking of 15-year-olds in their country on standardized tests of mathematics and science knowledge. The four response categories include: top, middle, bottom, and do not know.

Figure 2 shows the distribution of responses for ILSA math results, by country. The stacked bars are sorted by the country's ranking for PISA 2015. Overall, we have found that in top-performing countries, the level of performance and the public knowledge of ILSA results align. In five countries—China, Korea, Chinese Taipei / Taiwan, and Japan—the majority of respondents (more than 60%) reported that they believe students ranked at the top. A similar pattern is shown for Vietnam, which performed well on PISA 2012. In six countries, at least half of the respondents stated they believe that their students ranked at the middle (Hungary, Denmark, Australia, Germany, United Kingdom, and United States). And in four countries, at least half of the respondents indicated that they believe that their students ranked at the bottom of the league table (Turkey, Israel, Brazil, and Uruguay). In other countries, including those who

perform relatively well on PISA 2015, we found a less coherent pattern regarding the ranking of students on the international league table. In Canada, for example, about two-fifths (37%) responded that they believe that students ranked at the top, and half (49%) believe that students ranked at the middle.

Figure 2 – about here

In addition, we found variation in the share of respondents answering that they “do not know” the ranking of 15-year-olds in their country on ILSA. In majority of the countries, more than 10% of respondents used this response category. In Portugal and the United Kingdom, more than one-fourth of the respondents indicated that they “do not know” the ranking of 15-year-olds in their country on ILSA (26% and 30%, respectively). Note that the sample is composed of highly educated respondents, and thus it is safe to assume that the sample underestimates the share of respondents stating that they “do not know.”

Although country rankings in math and science are highly correlated, respondents appear to be more optimistic and confident about achievement in mathematics than science. Three-fifths of respondents (59.3%) provided the same answer to the questions about math and science. Slightly more than one-third (34.8%), however, ranked the performance of 15-year-olds in their country in math higher than in science. A small fraction (5.9%) ranked the performance in science higher than in math. This pattern is stronger among respondents in China where more than half (52.4%) of respondents ranked the performance of 15-year-olds in their country in math higher than in science and slightly more than two-fifths (44.5%) provided the same answer to the questions about math and science.

Public knowledge of ILSA results appears to change over time. In countries with sufficient sample sizes before and after the release of TIMSS and PISA 2015 (at least 30 respondents) we compared responses over time. In China and Indonesia, we found that following the release, respondents reported lower rankings in math and science. In Indonesia, for example, the share of respondents who ranked the performance of 15-year-olds in the top or middle dropped from 70.5% to 42.8%. In Japan and Vietnam, we found that following the release, respondents reported higher rankings in math and science. In Vietnam, for example, the share of respondents who ranked the performance of 15-year-olds in the top or middle increased from 85.4% to 96.8%.

#### *News habits in the context of ILSA*

In the weeks following the release of TIMSS and PISA 2015, we asked respondents to indicate how closely they followed the news stories about these tests. Slightly more than one-fourth (27.3%) responded that they closely follow these news stories (22.0% said somewhat closely; 5.35% said very closely). About two-fifths (42.95) said they did not follow closely these news stories, and about one-third (29.8) said they did not follow at all. This pattern varies across countries. In Brazil and Indonesia, for example, more than half of respondents indicated that they closely follow these news stories (52.1% and 56.3%, respectively). And in the Republic of Korea and China, less than one-fifth of respondents reported that they closely follow these news stories (14.3% and 18.8%, respectively).

The relatively low engagement with ILSA is surprising, especially given the respondents' patterns of following news stories about what is happening in education in their country in the newspaper, radio, TV, and websites. More than two-fifths (41.1%) of respondents said that they often follow news stories about education, and similar share (39.9%) said they sometimes follow these stories. Indeed, the correlation coefficient between following news on education and following the news stories about TIMSS and PISA 2015 is weak ( $r=.31$ ,  $p<.001$ ).

Similar to previous research, we found that parents followed news stories about TIMSS and PISA 2015 more closely than non-parents (40.7% vs. 23.4%). We also found that respondents with graduate degrees followed these news stories more closely than others (35.9% vs. 21.0%).

### *Engagement with ILSA and policy attitudes*

So far, we have examined how the general public engages with ILSA. We described public opinion towards ILSA, knowledge of ILSA results, and exposure to news stories. In the final part of the analysis we will explore the links between engagement with ILSA and policy attitudes. Specifically, we will examine respondents' confidence in education and attitudes toward public spending on education.

Respondents show a moderate level of confidence in the education system in their country. One-fourth (24.6%) of respondents reported having a low level of confidence ("no confidence" and "very little confidence"). Slightly less than one-third (30.0%) of respondents reported having a high level of confidence ("a great deal of confidence" and "complete confidence"). The rest (45.4%) of respondents reported "some confidence."

Figure 3 presents the cross-tabulation of knowledge of ILSA results and confidence in education. The first panel presents patterns relating to knowledge of math results, and the second panel presents patterns relating to knowledge of science results. Overall, the patterns across both domains are similar.

Among respondents who believe their country is ranked at the top of the international league table, we noticed higher levels of confidence than among respondents who said they believe their country is ranked at the middle or the bottom. Importantly, the correlation between national performance on PISA and average confidence in education is positive, relatively weak (below .30), and does not reach statistical significance.

Figure 3 – about here

Respondents expressed strong commitment for public spending on education in their country. More than four-fifths (86.0%) of respondents indicated they would like to see more governmental spending on education (46.8% said "spend more", and 39.3% said "spend much more). Interestingly, we found almost no association between knowledge of ILSA results and attitudes toward public spending on education. Regardless of how respondents viewed the performance of their country on international leagues, they indicated support for increased public spending on education. Nonetheless, among respondents who said they believe their country is ranked at the bottom of the international league table, we found higher rates of respondents supporting less governmental spending on education (4.4% vs. 2.2% and 1.7%). Importantly, we

find a negative, medium-strength, and significant correlation between actual national performance on PISA and average attitude towards public spending on education ( $r = -.60$ ,  $p < .001$ ). As performance on PISA increases, support for public spending on education decreases.

## **Discussion**

In this chapter, we presented findings from a pilot study of public opinion about international large-scale assessments. Using a convenience sample from 21 countries, we have demonstrated that public engagement with international assessment is a complex social phenomenon. On the one hand, respondents question the premise that ILSA accurately measure student achievement cross-nationally and also question the necessity of ILSA for school improvement. Furthermore, respondents show little engagement with news stories following the release of new ILSA results. On the other hand, respondents endorse the importance of performing well on ILSA and support their country's participation in future cycles. This counterintuitive pattern is consistent with previous studies in the United States and Israel (for review, see Pizmony-Levy, 2017).

One possible explanation for this pattern is national pride. Respondents seek to see their country performing well on ILSA for the same reason people cheer their national team during the Olympics or the Eurovision Song Contest. A more nuanced explanation is a common global competition mindset, within which individuals view the world as a competition over resources, power, and legitimacy. Fueled by growing uncertainty, risk, and transnational challenges such as security and sustainability (Beck, 2009), this mindset frames ILSA (and maybe other international indicators) in the context of rivalry where top-performing countries can leverage their position in the global economy. Indeed, this causal link is common in scholarly and policy debates (see Hanushek & Woessmann, 2012; Kamens, 2015; Ramirez, Luo, Schofer & Meyer, 2006).

Respondents prioritize participation in ILSA and country performance on international league tables, even if they disagree with the key premise of international assessments. In other words, ILSA are taken for granted as “good practice” to be adopted by countries worldwide. The institutionalization of ILSA among the general public, therefore, reflects and creates the legitimacy of ILSA.

The study also demonstrates that respondents in top-performing countries (i.e., the top ten) are more knowledgeable about their country's performance in ILSA. In these contexts, more respondents have said that their country is ranked at the top of the international league table. Respondents in other countries, even in well-performing countries such as Canada, Denmark, and Germany, are more likely to underestimate the performance of their country. In other words, initial evidence reveals that respondents in various countries are misinformed about ILSA results. This pattern is especially important given that one of the OECD and the IEA's primary objectives is to inform educational stakeholders, including the general public.

Public discourse, specifically news stories about ILSA results, may explain this pattern. Previous research on public discourse has shown that news stories often use ILSA results to highlight the weaknesses of one's own educational system (i.e., scandalization). In countries ranking below a certain cut point (below 10<sup>th</sup> place in the international ranking table, for example), there is more room for interpretation and framing of the results in a negative fashion. In other words, we argue

that in the context of ILSA, the “winner takes all”: a good performance on ILSA and a shared knowledge of the performance by the general public. More research is needed to better understand the link between public discourses and public opinion in the context of ILSA results (see Fladmoe, 2013; Pizmony-Levy et.al. 2017). To this end, it is important to note that our sample includes only respondents from top-performing countries in Asia. More research is needed in other top-performing countries, such as Estonia and Finland.

Finally, the study shows that ILSA results have indirect multilevel policy implications. On the individual-level, we found that respondents who ranked their country performance on ILSA at the top of the league table also expressed high levels of confidence in the education system in their country. On the national-level, we found that national performance on ILSA correlates to attitudes toward public spending on education. In low-performing countries, there is more support for increased spending on education. Taken together, these initial patterns suggest that ILSA results have the potential to affect policymakers not only through top-down (normative) pressures, but also through bottom-up demands from citizens. For example, citizens in low-performing countries may use ILSA results to signal to elected officials—through voting in elections, social movements, or other forms of collective actions—to change governmental priorities and to invest more public money in education.

Future research on the link between public opinion and international assessments could develop in at least three directions. First, scholars could replicate and extend this study with probability and representative samples from different countries and education systems worldwide. This could be done through existing collaborative networks such as the ISSP, World Values Survey and the European Values Survey. Collecting high-quality data on public opinion towards education and international assessments is meaningful not only for scholars interested in public opinion, but also to international donors and organizations responsible for ILSA (e.g., IEA and OECD), and to policymakers. Public opinion research is also a useful means to increase public awareness of assessments and standardized testing.

Second, scholars could investigate the ways in which the public “makes sense” of ILSA. More specifically, scholars could examine *why* the public is enthusiastic about ILSA, and how individuals navigate the cognitive dissonance we reported in this chapter. This direction will require a qualitative approach with open-ended, semi-structured interviews. More specifically, a cognitive interviewing approach, which refers to techniques to garner verbal feedback about survey questions to improve their quality, is particularly useful for understanding how individuals process and answer questions about ILSA (Beatty & Willis, 2007).

Third, scholars could examine public opinion using social media (e.g., Twitter, Facebook, etc.). Online interactions generate massive amount of data on human behavior and social interaction on a global scale (Golder & Macy, 2014). By harnessing online data, researchers will address questions about changes in the public’s engagement with ILSA, the diffusion of this engagement across groups, and how findings from previous cycles of ILSA resurface and are reused overtime. Social media could also serve as window for the political use of ILSA by social movements and activists.

In sum, the general public is an integral but unrecognized and understudied part of the “assessment machine.” It is time to pay attention to how the general public engages with ILSA and the implications of this engagement on educational politics (through attitudes, policy preferences, and daily interactions with schools). By doing so, this research has the potential to illuminate gaps and offer ways to ensure that the general public contributes to the political accountability of ILSA. More broadly, this exciting line of research also has the potential to advance our understanding of the complex interconnections between the global and the local.

## References

- Beatty, P. C., & Willis, G. B. (2007). Research synthesis: The practice of cognitive interviewing. *Public Opinion Quarterly*, 71(2), 287-311.
- Beck, U. (2009). World at risk. Polity.
- Berkman, M. & Plutzer, E. (2005) *Ten thousand democracies: Politics and public opinion in America's school districts*. Georgetown University Press.
- Breakspear, S. (2012). The policy impact of PISA: An exploration of the normative effects of international benchmarking in school system performance. *OECD Education Working Papers* 71.
- Brooks, C., & Manza, J. (2006). Social policy responsiveness in developed democracies. *American Sociological Review*, 71(3), 474-494.
- Clawson, R. A., & Oxley, Z. M. (2013). *Public opinion: Democratic ideals, democratic practice*. Sage Publication.
- Dixon, R., Arndt, C., Mullers, M., Vakkuri, J., Engblom-Pelkkala, K., & Hood, C. (2013). A lever for improvement or a magnet for blame? Press and political responses to international educational rankings in four EU countries. *Public Administration*, 91(2), 484–505.  
<https://doi.org/10.1111/padm.12013>
- Education Next. (2014). Results from the Education Next - Program on Education Policy and Governance 2014 Survey. Available online:  
<http://educationnext.org/files/2014ednextpoll.pdf>
- Figazzolo, L. (2009). Impact of PISA 2006 on the education policy debate. *Education International*.
- Fladmoe, A. (2013). Education in the news and in the mind: PISA, news media and public opinion in Norway, Sweden and Finland. *Nordicom Review*, 33(1), 99–116.
- Hamilton, M. See this volume.
- Hanushek, E. A., & Woessmann, L. (2012). Do better schools lead to more growth? Cognitive skills, economic outcomes, and causation. *Journal of Economic Growth*, 17(4), 267-321.
- Howie, S., & Plomp, T. (2005). International comparative studies of education and large-scale change. In *International handbook of educational policy* (pp. 75-99). Springer Netherlands.
- Jacobsen, R. (2009). The voice of the people in education policy. In Sykes, G., Schneider, B., & Plank, D. N. (Eds.). *Handbook of education policy research*. Routledge.

- Kamens, D. H. (2015). A Maturing global testing regime meets the world economy test scores and economic growth, 1960–2012. *Comparative Education Review*, 59(3), 420-446.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83(2), 340-363.
- Morgan, S. L., & Taylor Poppe, E. S. (2012). The consequences of international comparisons for public support of K-12 education: Evidence from a national survey experiment. *Educational Researcher*, 41(7), 262–268. <https://doi.org/10.3102/0013189X12455217>
- PDK International. (2014). Try it again, Uncle Sam. 46<sup>th</sup> Annual PDK/Gallup poll of the public's attitudes about the public schools. *Phi Delta Kappan*, 96 (1), K8-K20. Arlington, VA: Author.
- Pearce, K. E., & Rice, R. E. (2013). Digital divides from access to activities: Comparing mobile and personal computer internet users. *Journal of Communication*, 63(4), 721-744.
- Perrin, A. J., & McFarland, K. (2011). Social theory and public opinion. *Annual Review of Sociology*, 37, 87-107.
- Pew Research Center (2013). Public's Knowledge of Science and Technology. Research Report.
- Pizmony-Levy, O. & Bjorklund, P. (under review). International Assessments of Student Achievement and the Erosion of Public Confidence in Education: Evidence from a Cross-National Study.
- Pizmony-Levy, O. (2017). Big comparisons, little knowledge: Public engagement with PISA in the United States and Israel. In A.W. Wiseman, C. Stevens Taylor (Eds.) *The OECD's Impact on Education Worldwide*. (International Perspectives on Education and Society, Volume 31) Emerald Group Publishing Limited, pp. 123-154.
- Pizmony-Levy, O. (under review). Compare globally, interpret locally: international assessments and news media in Israel.
- Pizmony-Levy, O., Doan, L., Carmona, J., & Kessler, E. (2017). The public and international assessments: Findings from a multicounty study. New York: Teachers College, Columbia University.
- Pons, X. (2012). Going beyond the 'PISA shock' discourse: An analysis of the cognitive reception of PISA in six European countries, 2001–2008. *European Educational Research Journal*, 11(2), 206-226.
- Ramirez, F. O., Luo, X., Schofer, E., & Meyer, J. W. (2006). Student achievement and national economic growth. *American Journal of Education*, 113(1), 1-29.
- Sabatier, P. & Jenkins--Smith, H.C. (1999). The advocacy coalition framework: An Assessment. P. 117-168. In: P.A. Sabatier (Ed.) *Theories Of The Policy Process*. Westview Press.

Stack, M. (2007). Representing school success and failure: Media coverage of international tests. *Policy Futures in Education*, 5(1), 100-110.

Steiner-Khamsi, G. (2003). The politics of league tables. *Journal of Social Science Education*, 2(1): 1-5.

Waldow, F., Takayama, K., & Sung, Y. K. (2014). Rethinking the pattern of external policy referencing: media discourses over the 'Asian Tigers' PISA success in Australia, Germany and South Korea. *Comparative Education*, 50(3), 302-321.

**Table 1**

Sample demographics (n=4,306)

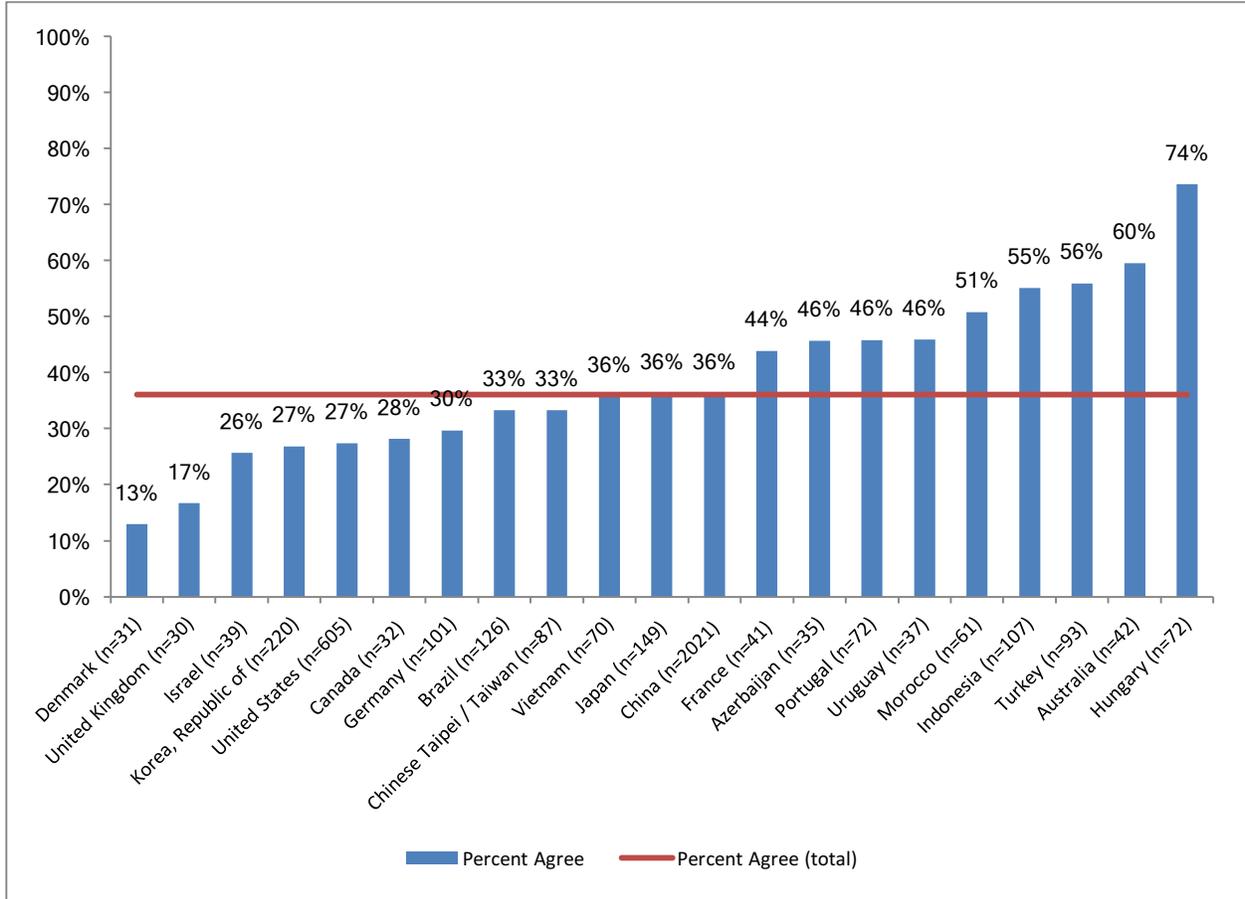
<b>Characteristics</b>	<b>Percent</b>
Gender	
Men	33.3
Women	66.7
Age group	
18-29	50.8
30-49	37.8
50-64	9.9
65+	1.5
Education	
High school or less	11.1
University/College degree	47.1
Graduate degree	41.8
Employment status	
Not employed	22.7
Part time	18.2
Full time	59.1
Social class	
Lower class	3.6
Working class	11.0
Lower middle class	32.3
Upper middle class	47.1
Upper class	6.0
Community	
Rural (fewer than 15K people)	7.7
Town or suburban (15K to about 1M people)	44.2
A large city (with over 1,000,000 people)	48.1
Parental status	
Non parent	74.8
Parent	25.2

**Table 2**

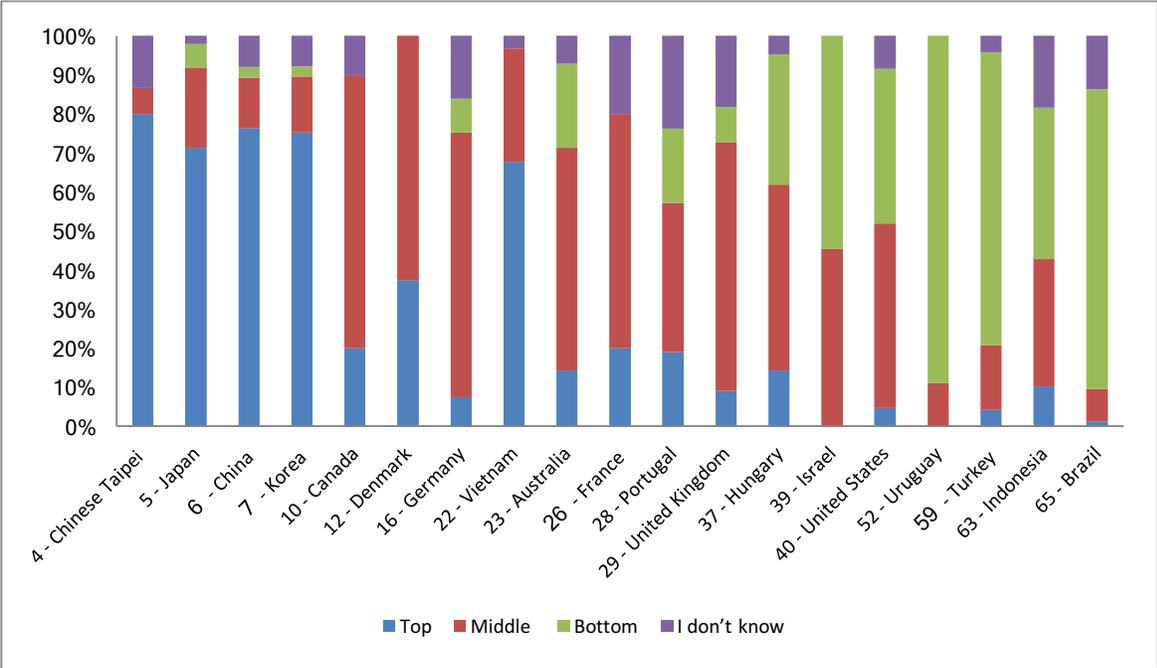
Correlation matrix for attitudes toward ILSA (n=4,306)

	Mean	SD	Min-Max	V1.	V2.	V3.
V1. International comparisons tests such as PISA and TIMSS <u>accurately</u> measure student achievement across nations.	3.14	.89	1-5	-		
V2. International comparisons tests are <u>critical</u> to helping improve schools in this country.	2.26	1.02	1-5	.54**		
V3. How <u>important</u> is it that this country performs well on these tests compared to other countries?	.314	.79	1-4	.27**	.35**	
V4. Do you <u>support</u> or <u>oppose</u> the country's participation in international comparisons tests in science, mathematics, and reading in the coming years?	3.8	.95	1-5	.43**	.51**	.44**

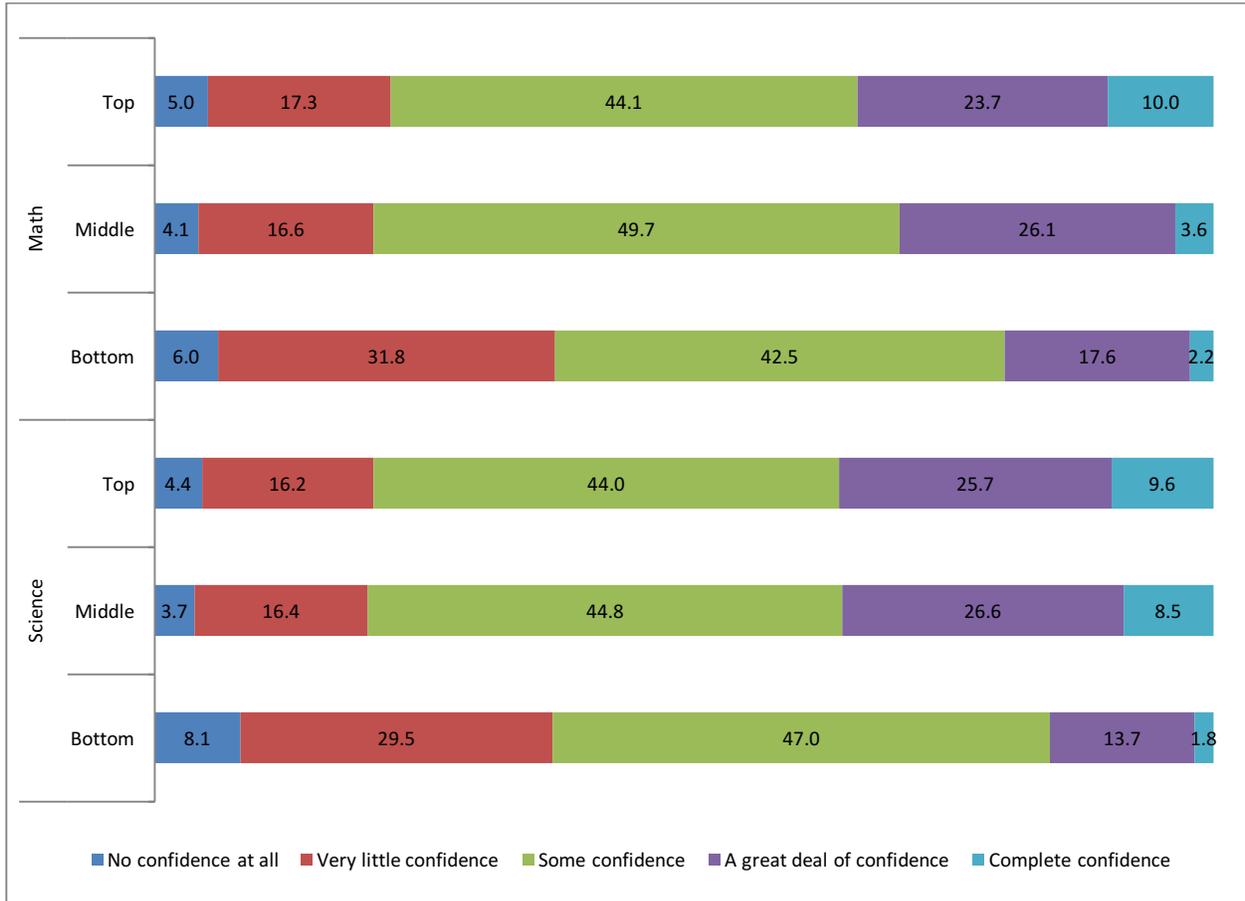
**Figure 1.** International comparisons tests such as PISA and TIMSS accurately measure student achievement across nations, by country.



**Figure 2.** Public knowledge of ILSA math results, by ranking in PISA 2015.



**Figure 3.** Public knowledge of ILSA results and confidence in education.



Appendix A  
Survey respondents, by country and time (n=4,306)

<b>Country</b>	<b>Before release</b>	<b>After release</b>	<b>Total</b>	<b>TIMSS 2015</b>	<b>PISA 2015</b>
Azerbaijan	3	36	39		
Australia	30	14	44	x	x
Canada	25	10	35	•	x
Chinese Taipei / Taiwan	79	15	94	x	x
Denmark	27	8	35	•	x
France	43	5	48	•	x
Germany	11	94	105	•	x
Hungary	57	21	78	x	x
Indonesia	61	50	111	•	x
Israel	29	11	40	x	x
Japan	105	49	154	x	x
Republic of Korea	144	77	221	x	x
Morocco	65	5	70	x	
Portugal	62	21	83	•	x
Turkey	77	24	101	x	x
United Kingdom	20	11	31	x	x
United States	415	237	652	x	x
Uruguay	30	9	39		x
Vietnam	42	31	73		x
China	1,386	734	2,120	•	x

Note:

x = participation in TIMSS 2011 eighth grade and PISA 2015

• = participation in TIMSS 2011 fourth grade