

## **Analyzing Public Discourse: Using Media Content Analysis to Understand the Policy Process**

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*One of the most basic and obvious sources of data for education policy analysis is text. This article discusses content analysis as an important part of the methodological toolbox for elucidating patterns and trends about education policy. Focusing specifically on media, I show how media content analysis can produce nuanced insights about the ways in which educational ideas are understood in a local context. Drawing on a research project that analyzed thirteen years of media coverage of the Programme for International Student Assessment (PISA), I demonstrate the utility of media content analysis for understanding the way in which ideas and global trends influence national education policy on the ground.*

### **Introduction**

Much comparative education scholarship of the past decade has concerned itself with understanding how the global and the local interact to produce education policy. These studies have used a variety of methods to try and understand how actors, institutions, ideas and interests combine to influence education politics and policy. Empirically, this work has taken a variety of forms, from large-n quantitative studies to the deep exploration of a single case. One method that has recently been employed to understand a particular phenomenon across different contexts is content analysis. This is not surprising in that text is perhaps the most obvious source material in the study of education policy. In this article, I focus on one type of content analysis, namely media content analysis, and propose it as a fruitful method for understanding the construction of educational issues in public life. Drawing on contemporary comparative education research for examples, I show that media content analysis can help comparativists understand how public communication influences and reflects understandings about education in the public sphere.

The article proceeds in four parts. First, I define content analysis and discuss how it relates to other methods of textual analysis, namely discourse analysis. I then focus specifically on media analysis as a useful method for understanding policy context. I provide an overview of the role of media in the policy process generally and offer some recent examples of comparative education research that have used media content analysis to explore the impacts of international large-scale assessments. In the third section, I present an example of a media analysis of the Programme for International Student Assessment (PISA) in the United States, and share specific ideas about how a researcher might approach conducting a media content analysis of this nature, from theoretical framing through data analysis. The last section discusses limitations of media content analysis and concludes.

### What is Content Analysis?

Content analysis refers to a general set of techniques for analyzing collections of communications. In Lasswell's classic construction, content analysis examines "who says what through which channel to whom with what effect" (Lasswell, 1948, p. 117). Perhaps the most distinctive characteristic of content analysis as compared to other types of analysis is that its data derives from communicative practices. As such, it is most widely used to collect and analyze data to understand the meanings ascribed to an issue within a given context (Krippendorff, 1989, p. 403). This process involves discerning meaning about attitudes, symbols, cultures and institutions from which inferences are ultimately drawn. The analysis is often not of the literal description of the content, but rather the illumination of patterns and trends that are not immediately observable. Many different types of content may be used for analysis. Most content analysis is textual document analysis, which analyzes any type of printed materials, (e.g., newspapers, magazines, letters, books, testimony, governmental publications, statutes, etc.) but other sources (e.g., films, radio broadcasts, television programming, etc.) are also appropriate.

There is some disagreement about the place of content analysis in the methodological toolbox.<sup>1</sup> Content analysis is often juxtaposed with discourse analysis in terms of ontology and epistemology; while both examine textual sources, content analysis is seen as trying to uncover reality as it exists, while discourse analysis is seen as trying to uncover reality as it is produced (Hardy, Harley and Phillips, 2004). In this opposition, content analysis is positivist, objective, and quantitative while discourse analysis is interpretivist, intersubjective and qualitative. Generally, content analysis proceeds from an understanding that meaning can be counted and coded, and content analyses use a codebook with an *a priori* coding scheme that allows the researcher to map the patterns and meaning of particular content from which inferences can be drawn (Lowe, 2004). As with all empirical research, content analysis methods rely on systematic and replicable techniques to generate data for investigation. Advocates of content analysis highlight that the strength of the method is in its reliability and replicability; if the analytic categories and coding scheme are properly designed, anyone should be able to conduct the analysis (Krippendorff, 1989; Neuendorf, 2004). This constrains the degree to which an individual researcher's views can mediate the interpretation of data. A more moderate ground can be found with those who suggest a slightly relaxed understanding of the relationship between content and discourse analysis, whereby prior empirical work and the scholar's research questions provide the categories for research but additional valid analytical constructs can emerge as the data is collected and analyzed (Hardy, Harley and Phillips, 2004).

A prominent form of content analysis is media analysis because media are generally acknowledged to play a key role in interpreting and disseminating ideas about public policy. Media content analysis can be an economical form of data collection, since much media data is available online or, for the academic researcher, through subscription

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<sup>1</sup> See Macnamara (2005) for a discussion of the tensions about whether media analysis is best suited to quantitative or qualitative use.

search services. Given the ubiquity of electronic data and archives, it is fairly easy to locate and collect primary data. Though social media are undoubtedly profoundly changing the way education policy communication happens (see Supowitz, Daly, & Del Fresno, 2015), this article focuses on the analysis of traditional print media (newspapers), in both their print and electronic forms, as these media have been the source of most comparative education media analysis to date.

### **Media Content Analysis**

Media are recognized in the policy studies literature as playing an important, perhaps key, role in the policy process, as both purveyors of information and as ciphers for competing ideas. Media are usually accorded a prime role in the process of policy agenda setting. Hallin and Mancini (2004) caution that most research about the media and the policy process treats media as a monolith, one that operates similarly in all contexts, when in fact the media are rooted in specific political and economic contexts and behave according to those local logics.

Research has demonstrated the key role that media play in political agenda setting by choosing which stories and issues are reported on, and then how those issues are covered (McCombs & Shaw, 1974; Gamson & Modigliani, 1989; Gamson, 1992). Media coverage is theorized to both reflect and create public policy and public opinion. While research suggests varying degrees to which media actually influence the policy process,<sup>2</sup> it is clear that media do affect how issues come to be understood as public issues, reflecting broader cultural, historical and institutional affinities.

Media operate in at least two ways to define public problems. The first is through framing. Framing refers to the ways in which issues are organized and understood in the public arena; that is, frames are the organizing ideas, words, images and themes that are used to describe and structure information about a public policy issue. Issue framing is a key element of political discourse and policymaking, and has been shown to have an impact on attitudes and policy preferences amongst voters, politicians and journalists (Chong & Druckman, 2007). The concept of framing is analytically useful in illuminating how ideas are generated, diffused and mobilized (Benford & Snow, 2000).

The second way media influence the policy process is in playing a gatekeeping role in whom is given status to comment on public problems and prescribe solutions. The conferral of status is captured in the concept of standing. As Ferree, Gamson, Gerhards & Rucht (2002) note:

“[Standing] refers to gaining the status of a regular media source whose interpretations are directly quoted. Standing is not identical to receiving any sort of coverage or mention in the news; a group may appear when it is described or criticized but still have no opportunity to provide its own interpretation and meaning to the event in which it is involved. Standing

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<sup>2</sup>For instance, as Henig points out, two of the most widely read books on the politics of agenda setting (Kingdon, 1995 and Baumgartner and Jones, 1993) disagree about the degree of the media's influence (Henig, 2008, p. 180, footnote 5).

refers to a group being treated as an actor with voice, not merely as an object being discussed by others.” (p. 13)

An analysis of standing views actors as signifying agents who are actively engaged in constructing meaning about social ideas. Standing, sometimes also referred to as ‘voice,’ is an essential component of policy discourse since it determines which actors have legitimacy and power. Standing can also reflect media convention, or editorial priorities, as well as media savvy. Not every actor has an equal chance of gaining standing; some actors are “better prepared and motivated to speak out on a particular topic, but the customary practices of news gathering make some speakers highly salient to the media while others are less so.” (Ferree, et.al, 2002, p. 86)

*Media content analysis in comparative education research*

Recently comparative education scholars have turned to media analysis as a route to understanding the ways in which historical, institutional, cultural and political contexts combine to influence education policy. For instance, as international assessment has become a topic of scholarship in comparative education, several researchers have turned to media analysis to expand their understanding of how, why and under what conditions international assessments are used across varying national contexts. Much of this work has focused on one specific assessment, the Programme for International Student Assessment (PISA). PISA is an international assessment administered every three years by the Organisation for Economic Cooperation and Development (OECD) to a representative sample of 15-year old students from participating countries. The assessment measures student performance in three subject areas, mathematics, and reading and science literacy.

For instance, Takayama (2010) uses media articles and other textual sources to examine how Japanese politicians and education actors use the media to construct an education “crisis” in Japan. Takayama, Waldow and Sung (2013; 2014) draw on media accounts in three countries to provide a comparative analysis of the responses to PISA results in Australia, Germany and South Korea. A team of European researchers used media accounts, along with other sources, to compare the effects of international assessments across six different country contexts ([www.knowandpol.eu](http://www.knowandpol.eu)), and other recent work (e.g., Martens and Niemann (2010); Fladmoe (2011); Dixon, Arndt, Mullers, Vakkuri, Englom-Pelkkala, and Hood (2013); Dobbins and Martens (2012) also analyzes press responses to rankings on PISA. The research findings are mixed, but each accentuates the role of the press in PISA reception and the analyses generally show the importance of national education politics and culture in shaping the press coverage of PISA.

**What Can We Learn From Media Content Analysis? PISA and U.S. Education Discourse**

In order to illustrate how a researcher might conduct a media content analysis and what such an analysis might expose, this section uses specific examples from my own work on a media content analysis of American media regarding the Programme for International Student Assessment (PISA) (Green Saraisky, 2015). This project sought to

understand the process of reception; that is, how PISA, as an internationally developed and administered assessment instrument, is understood in a local (in this case, national) context. The research grows out of the aforementioned academic literature that suggests that rankings and performance indicators can shape national education discourse in important ways. I was interested in evaluating how PISA is used in education policy debate, and in whether or how PISA has influenced American education policy.

The media analysis must first be located within a theoretical framework that situates the research questions and also provides a rationale for why media content analysis is an appropriate method for answering those questions. In this case, the research aimed to understand the ways in which PISA results were being used in American education discourse: who uses PISA, and to what end? When are references to PISA being activated? How are ideas about educational success constructed in the public arena? These research questions were based in theory from political science and political sociology, as well as an interpretive framework about reception from comparative education (Steiner-Khamsi, 2014). They provided the scaffolding for the analysis and guided the development of the coding protocol, which incorporated variables that captured both framing and standing elements.

Given the emphasis on understanding reception in a single country context and the focus on policy, media content analysis is a useful tool. While newspapers are not the only textual sources that could have been used, they are excellent sources for understanding public discourse. This is particularly true in the U.S., where journalists may play a stronger role in interpreting policy than in Europe, for instance, where political parties can have more influence on the discourse (Hallin and Mancini, in Ferree, et. al., 2002, p. 81).

#### *Developing a coding scheme*

A prior literature review of research on PISA reception informed the research questions and the construction of the coding scheme. Neuendorf (2002) argues that in order to minimize research bias, categories must be developed fully before the coding of data commences. However she suggests performing a literature review and a preliminary reading of a sample of texts to capture important variables before the codebook/codesheets are finalized. A similar process was used in the development of the codesheet for the analysis of PISA references in the American media. After reading the relevant scholarly literature (both theoretical and empirical), a list of variables for coding was developed. Then I scanned a small number of media articles to see if the initial list resonated, and if there were other important themes that had been inadvertently excluded and added them to the coding scheme.

It is important to note that the coding categories discussed herein are by no means exhaustive, either relative to this specific project or with regard to media content analysis in general. All aspects of the research design, from theory to conceptualization to operationalization and sampling, are specific to the research questions and the researcher's interests. The brief overview here is meant to merely be suggestive of the types of questions and categories one might ask when conducting media content analysis in a comparative education setting.

Here I will highlight three aspects of the codesheet for the PISA media analysis: general descriptive categories, framing categories and standing categories. Each ultimately provided voluminous data that was used for both quantitative and qualitative analyses (see Pizmony-Levy, 2013 and Olafsdottir, 2007 for prior examples of this type of analysis). The coding process linked theory to operationalization, and underscored the quantity and quality of information media can provide about the national context of education politics and policy.

The first section of the codesheet gathers descriptive information about each newspaper article (Figure 1). Some data are responses to open-ended questions, with the exact language of the article recorded, and other data are coded numerically, depending on the variable type. After the article was given an identification code, the following data were recorded:

**Figure 1: Codebook categories for article description**

News Source	<input type="checkbox"/> New York Times <input type="checkbox"/> Wall Street Journal <input type="checkbox"/> Washington Post <input type="checkbox"/> USA Today
Publication date (Write in: Month/day/year)	
Author's name (Write in)	
Headlines/subheads (Write in verbatim)	
Article type	<input type="checkbox"/> News <input type="checkbox"/> Feature <input type="checkbox"/> Editorial <input type="checkbox"/> Op-ed <input type="checkbox"/> Other
Source type	<input type="checkbox"/> Print <input type="checkbox"/> Online
Section	<input type="checkbox"/> Front page <input type="checkbox"/> National <input type="checkbox"/> International <input type="checkbox"/> Business <input type="checkbox"/> Feature <input type="checkbox"/> Other
Visuals	<input type="checkbox"/> No <input type="checkbox"/> Yes If yes, write in what kind (e.g., photograph, chart, graph)_____

This information provides a wealth of important data, before the coder even looks at the content of the article. For example, these data show which news outlets are publishing articles about PISA, allowing for an analysis of whether the media outlet's political ideology correlates with PISA coverage. The language of article headlines and sub-headings can be analyzed for tone and for framing effects. The data on location of the article shows whether PISA is addressed simply as a news item around the release of results, or incorporated more broadly throughout educational discourse. Indications of whether and how media included visual representations of PISA, for instance with

graphics of ranking tables, add nuance to how PISA is understood by the media. These data are the basis for several findings, to which I return later.

Next, to analyze the article's content, I developed a two level coding scheme based on the concepts of framing and voice to help focus and deepen the analysis. Each article in the sample was coded for framing and then re-analyzed for standing and voice variables, as I discuss in greater detail below. The two levels of analysis allowed for a thorough understanding of how PISA was covered generally and more specifically elucidated who was given the authority and legitimacy to speak about PISA and its meaning.

**Article-level analysis.** Previous literature and pre-coding review had suggested three frames that were prominently used to understand PISA. The first was about the overall status of education in the United States; the second was about economic status; and the third was about the policy environment. I developed thirty-nine variables across the three categories to measure the strength of the various frames. Article level variables also included the extent to which the references to PISA were rather simple or were more detailed; whether or not international assessments other than PISA were referenced; and whether or not other country participants on PISA were referenced. Figure 2 is a snapshot of the coding scheme for the first frame, the overall status of education in the US. For each frame and each sub-category, I coded a dichotomous indicator of whether the article included that category.

Figure 2: Codebook framing categories for “US education status”

Frame	Variable
US education status	___ PISA reflects general education status
US education is in crisis	___ Low rank on PISA ___ Low rank on other assessments ___ Look at China ___ Achievement gap ___ US ‘not competitive’
US education needs improvement	___ Need to improve overall economic equity ___ improve equity of inputs ___ improve equity of outputs ___ Need to improve teachers ___ improve teacher recruitment ___ improve teacher training ___ improve teacher pay ___ Need to improve education culture ___ General calls for school reform
PISA does not reflect education status	___ PISA data has limits ___ Other variables are more important ___ US demographics ___ US culture ___ US politics/political system ___ Other (write in)

**Speaker-level analysis.** In addition to analyzing how educational policy issues were framed in relation to PISA, I explored the notion of standing; that is, which actors are given a voice in the public debate. In order to understand which actors have voice in the discussions about the importance of PISA for U.S. education policy, I coded every actor and every speech act in each article. Speech acts included only speech that is quoted directly, in quotations, in the articles; paraphrases or restatements of comments from people or reports are not included in the analysis. The speakers were categorized into eight main groups of affiliations, and then each individual speech act was coded for

PISA mentions, tone and framing themes. Figure 3 provides a snapshot of the codebook for speaker entries.

**Figure 3: Codebook speaker categories**

Speaker ID	
Speaker name (write in)	
Speaker affiliation	<input type="checkbox"/> Government <input type="checkbox"/> US President <input type="checkbox"/> US Secretary of Education <input type="checkbox"/> Federal official <input type="checkbox"/> State level education leader <input type="checkbox"/> OECD <input type="checkbox"/> NGO <input type="checkbox"/> University <input type="checkbox"/> Teacher           or           teachers organization/union <input type="checkbox"/> Parent or parent organization <input type="checkbox"/> Student or student organization <input type="checkbox"/> School leadership <input type="checkbox"/> OTHER (WRITE IN)

*Sampling*

Next, the researcher must address her sampling parameters. As in any research design, sampling is critical to answering the research questions of interest. In the United States, the most commonly analyzed media sources include the major national newspapers of record. In the PISA research example, four of these leading US newspapers, all dailies and each considered a paper of record from across the political spectrum, were purposefully sampled (see Figure 4). These sources are known for their influence and are often used in studies of American discourse (e.g., Fiss and Hirsch, 2005). Sampling these sources makes sense, as they are well-known, proffer high editorial standards, and are recognized as important news sources for educational elites. However, focusing exclusively on these media outlets produces elite bias in the sample. While this may be appropriate, as educational elites play an outsized role in policy formation (Domhoff, 2006) such sampling does not capture the discourse in many other sources (e.g., online news feeds, educational blogs, specialized trade publications, smaller regional newspapers). The researcher needs to be aware of the ways in which her sampling procedures affect her research findings and think carefully about which media sources are most appropriate.

**Figure 4: Overview of media sources**

Source	Frequency of publication	Political orientation <sup>1</sup>	Circulation <sup>2</sup> (includes both print and digital circulation)
New York Times	Daily	Left/liberal	1,865,318
Wall Street Journal	Daily	Right/conservative	2, 378,827
Washington Post	Daily	Left of center	473,462
USA Today	Daily	Centrist	1,674,306

<sup>1</sup>Political orientation of media coverage can be contested. My categorizations are drawn from a variety of sources, including Swanson and Barlage (2006), McGann (2013) and Yettick (2009).

<sup>2</sup>Circulation figures from Alliance for Audited Media, 2013.

Using Factiva, a subscription-based search engine owned by the Dow Jones Company, I was able to search all four newspapers' databases. I searched for "PISA," "Programme for International Student Assessment" and "OECD PISA." Unsure that Factiva was actually capturing all articles and blog posts from each media source, I searched the online archives of each media source manually, using the same search terms. This uncovered several more articles that included the search terms but had not been retrieved in the initial searches. The time period for all searches was delimited from January 1, 2000 through December 31, 2012.

After the search was completed and articles downloaded, each article was coded by hand by the researcher. There are many software packages that perform content analysis. For this analysis, given the size of the sample and the nature of the analysis, human coding was an appropriate method. All data were managed in Excel and statistical analyses were run using STATA 12.0.

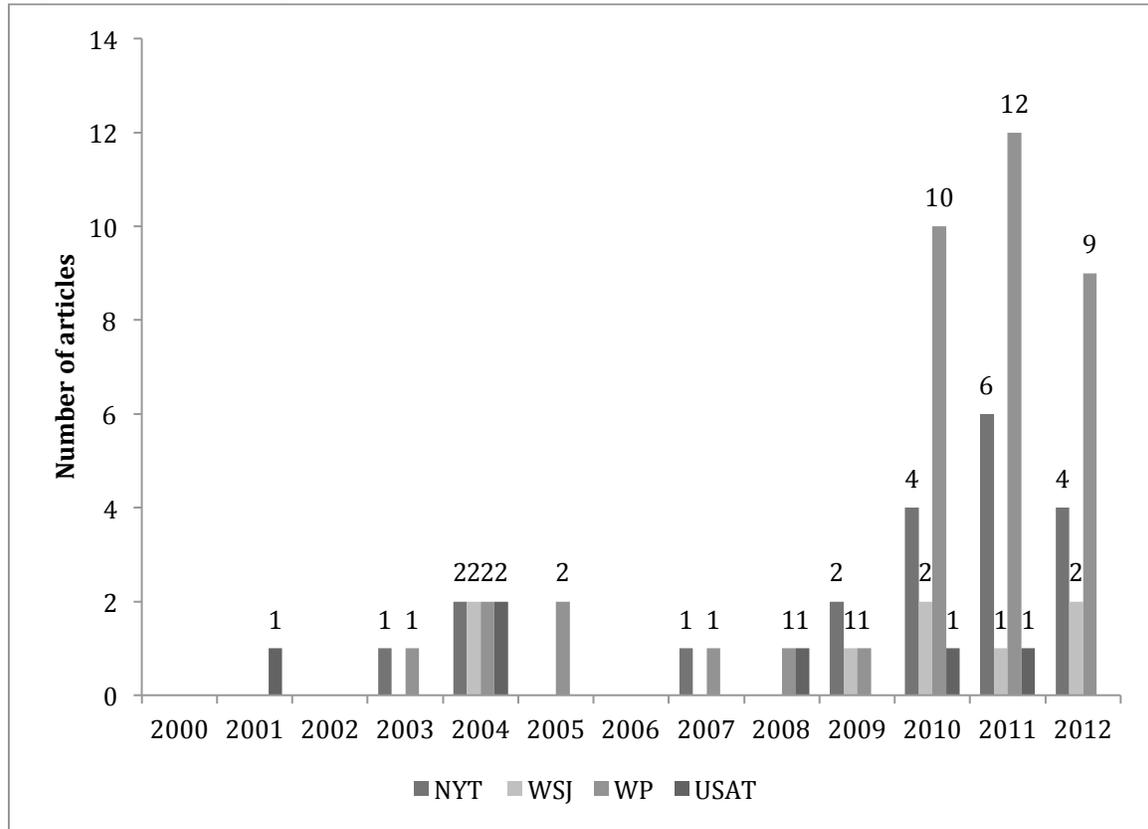
#### *Analysis of media content*

Media content analysis provides a fascinating window into the construction of PISA as a measure of educational excellence in the United States. Looking at public discourse over time allows for a systematic yet nuanced understanding of the ways in which PISA is being used in educational discourse and educational policy. Some of the most interesting findings were unexpected and might have otherwise gone unnoticed, if one was simply an interested observer of international assessment results reading the newspaper in the United States.

Take the issue of time. Previous accounts of PISA reception tended to look at newspaper coverage of PISA immediately before and immediately after the release of results, which happens every three years. Instead, I coded all articles over an entire thirteen-year period, 2000-2012, using two temporal variables. By analyzing PISA reception over a thirteen year period, the data show that media coverage, and thus PISA reception, is not constant. Rather, it shows periods of greater and lesser activity. Using the publication dates of the articles in the sample, Figure 5 shows the dramatic increase in media coverage by year throughout the first decade of testing. There is a dramatic

increase in the sheer number of articles referencing PISA in the American press from 2010-2012, when fifty-three articles, or 72% of the sample, were published. This was an average of more than 17 articles per year, up from 2.3 articles per year through 2009. Identifying this pattern was the basis for some of the most informative findings of the research.

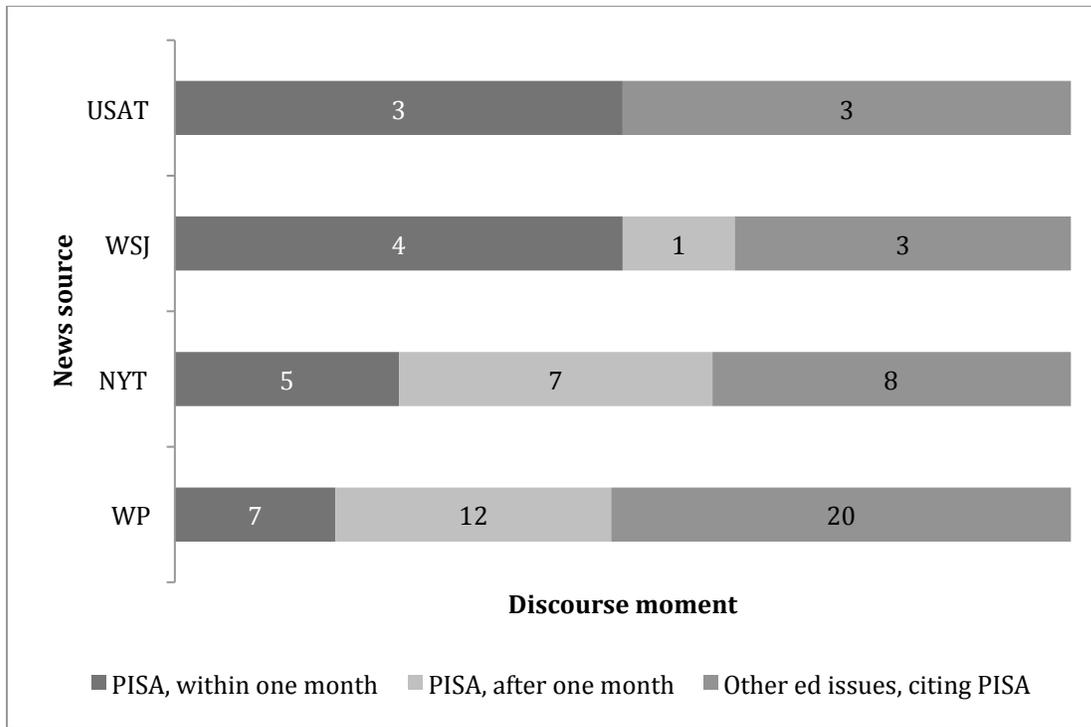
**Figure 5: Media sample over time**



Source: Green Saraisky, 2015.

Another temporal variable was the “discourse moment.” Following Ferree et. al. (2002), I distinguish between three time periods in which the articles are published and coded accordingly: articles that were published within a one-month period surrounding the release of new PISA results; articles that discuss PISA scores but were published more than one month before or after the release date; and articles that refer to PISA but were actually about a different educational or social issue. Figure 5 shows the shift in news moments over time, suggesting that while PISA results were initially covered in the news as news items around the triennial release of results, as the idea of PISA became a taken-for-granted measure of educational excellence in the public consciousness, it was referenced more consistently throughout the years.

**Figure 6: Coverage of PISA by discourse moment and by source**



The theoretical literature suggests that elites play a key role in the policy process (Kingdon, 2011), and the analysis of speech acts bore this out. At the speaker level, the discourse is guided by a mere handful of elites: the data show that six speakers provide almost 30 percent of the commentary on PISA in the US. There is virtually no public voice in the discourse, despite the fact that education is one of the most public of issues – virtually all citizens have been in an education system at some point. Teachers, parents and students are almost non-existent in the discussion. Instead, a small, highly elite group of policy analysts and researchers drive the discourse. Out of the speech acts coded, the single most frequently quoted actor in the American media is the European head of the Organization for Economic Cooperation and Development, which administers PISA

**Limitations and Conclusion**

Media content analysis is not without its limitations. First, there are theoretical disagreements about how much influence media have in the policy process, and the assumptions of the media’s importance in the classic policy studies literature have surely been changed with the advent of electronic and social media. Beyond that, however, the media can never give a complete picture of why certain policy ideas come to the fore, or why certain policy choices are made or not. The public discourse on any given education topic represents only one of the many venues in which policy deliberation occurs.

Additionally, media content is produced within an environment of particular constraints. Media tend to publish shorter, dramatic stories rather than those that are

longer or more nuanced and complex. The pressures of deadlines, competition from other news outlets, the limits of reporters' and editors' own knowledge about a given topic, and the political leanings of news sources may conspire, together or in combination, to limit how education news is covered (Henig, 2008). It is also important to distinguish between elite and popular press, and the readership of each. Such characteristics place limits on the generalizability of findings, as can research that analyzes a limited number of media sources or coverage at only one point in time.

Nonetheless, if done well, media analysis provides a reliable, valid and replicable method for understanding the public context of education. The categorization and analysis of media can elucidate trends, beliefs or the zeitgeist of the times. Media content analysis helps to show how education fits into the contemporary polity as a whole. Media discourse plays a prominent role in issue identification and issue framing, and acts as an important conduit in transmitting information and opinion. While media discourse does not represent complete variation in cultural attitudes, beliefs, and values, it provides a strong measure of the overarching cultural and political arguments being made within a given country, as well as important variations within and across nations. While electronic media, including blogs and social media, continue to rapidly change the media's role, traditional newspapers remain appropriate sources to provide insight into national cultural and political landscapes.

The empirical examples presented about the reception of PISA in the US media between 2000 and 2012 exemplify the way media content analysis can be used to produce nuanced insights about the construction of educational discourse that might otherwise remain latent. While hardly a comprehensive overview, the examples are meant to provide some instances of the kind of data and analysis that can emerge from media content analysis.

A recent focus of the comparative education literature has been the way in which ideas and global trends have influenced national education policy on the ground. One can view the public representation of ideas about education as the outcome of a contest about meaning of education. Media are one set of organizations that can show researchers what education "means" and how it is interpreted or problematized in a particular time and place. Toward that end, media content analysis is a method that comparativists can leverage to analyze the ways in which ideas about education shape the direction of education policy and discourse.

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