FRAME WORKS INSTITUTE

How Media Portray Learning Space and Time

A Core Story of Education Report

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TABLE OF CONTENTS

Introduction

Americans hold narrow, and generally conservative, views of how educational spaces and times should be organized.[1] This perspective typically treats learning as a hierarchical and compartmentalized process in which teachers transmit knowledge to passive student recipients. In contrast, contemporary education reformers have begun to re-imagine and investigate optimal configurations of where, when and how learning takes place in order to better align education with 21st century learning goals — what we refer to here as "learning space and time" reforms.[2] This report shows that, while media stories discuss learning space and time reforms, they frame these issues in ways that further entrench the public's general conservatism and, in so doing, undermine public support for the types of spatial and temporal redesigns that experts see as vital components for improving the education system.

This report is part of a FrameWorks series that examines media coverage of education and learning issues.[3] The compendium of media reports is designed to inform experts and advocates about the patterned ways in which the media commonly represent education issues and how these patterns interact with public understanding. In order to do this, FrameWorks researchers first map the common streams of opinions, arguments and narratives that constitute "public discourses" about learning and education. FrameWorks then analyzes how the media coverage compares to the kinds of messages education experts and advocates are trying to disseminate. Finally, researchers compare the dominant frames in the media to findings from research detailing the cultural models — or shared, patterned and implicit understandings and assumptions — that Americans use to think about issues related to learning and education.[4] This comparison demonstrates *how* patterns in media coverage are likely to interact with, and potentially influence, public understanding.

In this report, FrameWorks researchers map the contours of media coverage of learning space and time by examining a sample of 106 media stories that covered these issues. This sample was drawn from print and broadcast media sources between October 1, 2010, and October 1, 2011. Findings are based on an in-depth qualitative and cognitive analysis of these stories. By analyzing the ways that the media constrain and enable public understanding of specific issues, this report provides a blueprint for responding to, and informing, the media coverage of issues related to learning space and time.

EXECUTIVE SUMMARY

Key features of the media's coverage of learning space and time include:

- **Innovation in learning space and time is a private sector enterprise.** Journalists consistently argue that learning space and time should be a central part of the education reform agenda, but these discussions focus on private institutions as the drivers of these reforms. These stories send the message that learning space and time reforms are the provenance of the private sector, which is the only sector sufficiently innovative and efficient to enact broad-ranging reforms. Furthermore, they place primary responsibility on parents to seek out educational settings in which innovative reforms to learning space and time are taking place. Relatedly, media stories represent traditional public schools as incapable of designing and enacting the kinds of spatial and temporal reforms that experts argue are necessary to improve learning outcomes and build 21st century skills. According to media commentators, "accountability regimes" and other structural characteristics of public education stifle effective reform and discourage innovation.

- **Global competition is the reason to reform learning space and time.** Media stories present global competition — and, in particular, cross-national differences in the amount of time students spend in school — as the primary rationale for reforming learning space and time. These arguments typically rely on stereotyped portrayals of hard-working Asian and South Asian students and their "lazy" American counterparts to argue for lengthened days and calendars.

- **Digital media is a major character in the media narrative about learning space and time.** Although primarily discussed as a means to make education more accessible to non-traditional students by expanding online adult learning, some media stories demonstrate how new technologies may help teachers and administrators fundamentally reconceptualize the spatial and temporal dimensions of the classroom.

- **The media are missing process and causal elements.** The media rarely describe *how* and *why* space and time influence learning. That is, readers exposed to these stories are left with little appreciation for, or understanding of, how the times and places in which learning occurs shape the learning process itself. Therefore, audiences lack information about how these kinds of contextual reforms can improve learning outcomes.

Based on these findings, FrameWorks recommends that education reformers begin their discussions of temporal and spatial reforms by clearly explaining *how* these contextual dimensions influence the learning process. Causal series that link outcomes to environments hold great promise in reframing this discussion. Second, expanding public thinking about education and reform will also require clear articulations of how space and time reforms can be implemented effectively in

traditional *public* schools, and that these are not concerns exclusive to private settings. The *Remodeling* explanatory metaphor, developed in previous FrameWorks education research, is particularly useful in this regard. Lastly, media discussion of the potential for digital media to expand and improve learning times and spaces represents a small, but promising, communications foothold. However, the presence of this discussion also suggests the need for reformers to be aware of the American cultural models that become active when issues of technology and learning are brought together. FrameWorks' research on Digital Media and Learning is helpful in navigating the confluence of these issues towards productive understandings of progressive learning reforms.[5]

RESULTS

The Inside and Outside Frame: Innovation in learning space and time happens outside of public schools.

Media stories in this sample discretely located learning space and time reforms, and the impetus for these reforms, outside of the public school system. Journalists described private or semi-public settings, such as charter schools, private schools and homeschooling environments, as the places where innovative and creative learning space and time reforms originate and are implemented. Despite their positioning outside of public education, many of the reforms referenced echoed expert recommendations, and included expanding the academic calendar, extending learning opportunities beyond the traditional classroom, and creating complex and stimulating learning environments, among others.

> *Beginning with the establishment of 10 Bridgescape Learning Centers, the Magic Johnson Foundation plans to create schools with a more personalized curriculum both online and in person — all in the name of helping high school students achieve their diploma more efficiently. The Bridgescape classroom comprises small study groups, counseling, and flexible schedules for students at risk of dropping out. "When just over 40 percent of students in Los Angeles are graduating from high school, steps need to be taken to recapture these students into the education system to better their opportunities in life," Magic Johnson announced.*[6]

> *Community schools differ from traditional schools in several respects: they are open longer hours (often well into the evening, on weekends and holidays, and throughout the summer); they offer more services, supports, and opportunities for students and their families; and they bring together an array of partners that share accountability for results.*[7]

Even in the rare stories that discussed learning space and time reforms implemented in *public* school settings, the drivers of these reforms remained

external actors, such as non-profits, foundations and community organizations. These actors are vital in reforming education, but by focusing exclusively on them, media stories leave little space for public schools to play a role in reforming learning contexts.

The Static Systems Frame: Structural constraints prevent learning space and time reform within public schools.

Media stories about education reform typically assign responsibility for failing schools to the individual shortcomings of students, teachers or parents.[8] In the sample of stories about learning space and time, however, the media attributed the lack of dynamic and creative learning spaces in public schools to features of the public education system itself. Journalists and commentators discussing the failure of public schools to enact learning space and time reforms pointed to "accountability regimes," and other systemic obstacles to change.

> *We do not have a name for such teaching, teaching that is designing, though it is increasingly pervasive out of school. So let's just call it Teaching as Designing (TAD). TAD is on offer out of school, and is and will be the fuel for many a new startup. But it will not come to schools any time soon, unless we change our testing and accountability regime. In the interim, it is becoming the basis of a new out-of-school "school system," often centered on 21st century skills.*[9]

> *"Most new ideas die in the traditional school structure," Aldrich said. "Our schools are monopolies. When you have monopolies of ideas, the problems you start seeing are standardization, rising costs and lack of creativity."*[10]

> *Have we reached the limits of our traditional school system's capacity to deal with the diversity of learners that come into our schools today?*[11]

Other stories described how structural factors, such as budgetary constraints, not only precluded temporal and spatial innovation, but, in fact, lead to reductions in learning space and time, such as shortening the school day or the school year. Thus, as economic pressures increase, according to this framing equation, space and time necessarily contract. The following excerpt illustrates the kinds of budgetary decisions that impact learning space and time in public school systems.

> *The first concerns changes to offset a possible $10 million deficit for the 2012-13 school year. Under consideration is the closure of two elementary schools and/or one middle school. Options include shortening the school year and allowing out-of-county students to pay tuition to attend Fayette schools. The second regards possible changes to the high school schedule to allow students to earn more credit hours.*[12]

Structural explanations for educational problems can be productive if they shift attention away from attributions of individual responsibility and toward collective and public solutions. However, when media stories discuss systems in ways that emphasize their lack of dynamism and creativity, they encourage a view of these systems as static, and as incapable of solving education problems. This is an important caution to framing a systems view, and one that is well accommodated in the *Orchestra* and *Remodeling* metaphors developed by FrameWorks in earlier work as a way to reframe systems and systems change.[13]

Bypassing Public Schools Frame: Changing learning space and time on one's own is a way to circumvent failing schools.

Building on its portrayal of education innovation as something that occurs outside of the public school system, media stories in the sample also suggested that learning space and time reforms are a way for families to take responsibility for their children's educational outcomes and to circumvent a failing public system. Media coverage presented changes in learning space and time as ways for parents to step around, and avoid, substandard public schools.

> *The standard elementary school gifted education program — pulling kids with high test scores out of their regular class a couple of times a week for special instruction — doesn't work very well. Some parents of gifted children have told me their kids do much better if they pull them out of school and let them read and investigate whatever they like.*[14]

> *In Dupont Circle, Adams Morgan, Columbia Heights, Brookland and along U Street, parents are contemplating educating their children at home. A sample from the back-and-forth on the Brookland Kids forum:*
> *"If we don't have any viable options for 1st grade, I need to consider home schooling." "Hi all I was wondering if anyone home-schools their kids.… I wanted to get your thought on pacing guides and package curriculum." "We have been toying with the idea of home schooling."*
> *It's an interest that comes from necessity. For years, parents in these sections of the District assumed they could raise their children in their beloved neighborhoods but not have to rely on their local schools, most of which they considered substandard. They went elsewhere for public education, usually to the west of Rock Creek Park, where the affluent neighborhoods were home to high-achieving, under-enrolled schools.*[15]

According to these stories, homeschooling, charter schools, private schools and other alternatives to the public school system offer curricula that are student-driven and move beyond the temporal and spatial confines of the traditional classroom. Journalists contrasted these sorts of learning environments with the standardized

and test-centered curricula of public schools, as the following excerpts demonstrate.

> *A new coinage has entered the ever-expanding lexicon of alternative education over the last few years: unschooling. Unschooling might best be defined as home schooling without the school. It eschews standardization of education in favor of customization. Unschoolers don't turn their kitchen tables into de facto classrooms, piled high with math textbooks, reading lists and maps of Asia. Instead, unschoolers let their children take the lead, allowing them to decide whether they want to study algebra or Civil War history. The children determine whether they prefer to spend a day or a month playing chess or building a catapult.*[16]

> *But Jolie's dilemma is a surprisingly familiar one — how do you fit your own unique, amazing, curious children into our increasingly rigid, test-oriented modern system? How do you trust that learning isn't just a matter of sitting quietly and filling out little circles? And when Jolie says, "I wish there was a book every parent could read that tells you how to navigate through the school system, and how to tailor the education system for your children and their interests," she sounds a hell of a lot like most of the moms at my local playground.*[17]

The Power of Digital Media Frame: Digital media is critical for (adult) learning space and time reforms.

Previous FrameWorks research has found that both the media and the public are highly pessimistic about the role of new technologies in improving education outcomes.[18] The coverage of digital media in the context of stories about learning space and time, however, was more optimistic. Of the 36 articles dealing with digital media in this sample, 35 took a positive position on the potential for technology to improve learning.

The majority of this coverage focused on higher education and adult or workplace learning. Journalists discussed how expanding learning space and time through the use of digital media can "democratize" education, particularly for working people who cannot maintain traditional academic schedules. Although less common than coverage of digital media and adult learning, the sample contained several stories where digital media was discussed in relation to learning space and time in K-12 education. These included, for example, discussions of games that students play in the summer months to stave off "summer learning loss" — a loss that media stories described as being felt most acutely by students of color and students from lower socioeconomic backgrounds.[19] Other stories reported that online learning platforms, such as the Khan Academy, have given teachers the freedom to rethink how they spend in-person time with students. Journalists also described how

digital technologies can offer greater freedom with respect to where learning happens, which was discussed as being especially helpful for students with disabilities. The following excerpts exemplify these more positive discussions of digital media in the context of learning space and time.

> *His dyslexia sometimes leaves him grasping to text the right acronym to his friends. He often loses his train of thought because of his attention deficit hyperactivity disorder. Though he graduated from a public high school here two years ago, he was not prepared to go to college. "The maturity level, his frustration threshold — he just was not ready," said his mother, Carol Clarkston. Six weeks ago Mr. Clarkston began taking online courses in financial management. Now, he can have his course materials read to him. Or, when his mind wanders, he can hit pause and take a walk. If he does not understand something, he can contact a teacher. He has done so well that he now plans to attend community college in the spring and, eventually, to open his own process-serving business. Ms. Clarkston said she has seen a transformation in his self-esteem.*[20]

> *For example, say I was trying to teach a 10-year-old about Bernoulli's principle. According to this principle, when speed is high, pressure is low. Sounds dry and abstract. But what if I could bring this lesson alive by linking it to the soccer star Roberto Carlos — showing students a video clip that illustrates how his famous curved shot is an example of Bernoulli's principle in action. Then suppose I followed up with an engineer from Boeing — who explained why this same principle is critical in aviation and introduced an app that could help students master the concept through playing a game.*[21]

Despite positive coverage, media stories about the role of digital media in learning space and time reforms further emphasized the perspective, described in the Inside and Outside Frame, that innovation in education practices falls under the purview of for-profit institutions. By focusing mostly on institutions outside of public education, journalists dismiss the potential for innovative use of digital media within public school settings. This perspective was especially apparent in discussions of higher education and adult learning.

> *What's more, the traditional university isn't really set up to educate a person who has a full-time job. The for-profits can offer class times that are convenient for students, rather than for professors. They can offer online classes, which many traditional universities have been reluctant — or unable — to dive into. They pay professors to teach, not conduct research. A well-run for-profit college could teach its nonprofit counterparts a thing or two about efficiency and innovation. That's the part of the profit motive that grades well.*[22]

> *That's where technology comes in. Just as the iPod compelled the music industry to accommodate its customers, we can use technology to force the education system to meet the needs of the individual student.*[23]

The Global Competitiveness Frame: Competing with other countries requires more learning time.
Finally, in discussing learning time, media stories focused on ideas of global competitiveness. These stories typically emphasized the amount of time that students from other countries spend engaged in educational activities, and contrasted stereotyped images of easy schedules and poor work ethic among American students with equally stereotypical portrayals of overworked, stressed-out "robotic" students from Asian countries.

> *When you think of America's students, do you picture overworked, stressed-out children bent under backpacks stuffed with textbooks and worksheets? Or do you call to mind glassy-eyed, empty-headed teenagers sitting before computer screens, consumed by video games and social networking sites, even as their counterparts in China prepare to ace yet another round of academic exams?*[24]

> *Students in the U.S. spend fewer days in school than their counterparts in many industrialized countries. In Japan, for example, students attend school 243 days a year, and academic learning does not end once the school day is over. The school day is extended, as many students attend Juku, which are privately run after-school services that primarily focus on academic subjects, although some provide tutoring in the arts and sports.*[25]

By emphasizing the rigorous schedules of students in other countries, journalists and commentators highlight the assumed impacts of learning-time reforms such as extending the school day and year. American students cannot compete in a global economy, so the typical argument went, if children in other countries are clocking in thousands of additional instructional hours each school year.

COGNITIVE IMPLICATIONS

- **Media frames portray public schools as imbued with the same negative characteristics as government bureaucracies: inexorably opposed to innovation.** In previous research, FrameWorks has found that the public understands government as a highly inefficient provider of social services.[26] When applied to education contexts, this perspective structures public views in which education reform initiatives are best developed, designed and implemented in the private sector. When this script becomes active,

privatizing and "running education like a business" becomes the silver bullet for education's problems.[27] The dominant frames in media stories analyzed here regarding private innovation, public inefficiencies and a public system that is "too far gone" are likely to further calcify the public support for privatization. This perspective poses serious problems to progressive reformers and champions of *public* education.

- **Focus on global competition depresses support for education reform.** Previous quantitative and qualitative FrameWorks research has found that the value of Global Competition fails to lift public support for learning space and time reforms and reforms across other key domains.[28] When the public is presented with information about gaps in test scores between U.S. students and their international counterparts, they tend to attribute those differences to "culture" rather than the systemic and contextual factors that structure students' educational experiences.[29] The media's comparisons of international and American school schedules are likely to trigger default patterns of thinking about the poor work ethic of American students or lead to stereotyped and xenophobic discussions of child-rearing practices in other countries. Previous research has shown that the public tends to interpret these types of global comparisons in two ways. First, the perceived "laziness" of American children is blamed on poor parenting. Second, the claims of Chinese academic achievement are attributed to an authoritarian society that eschews freedom and democracy, which is undesirable for Americans to emulate. Both modes of interpretation are detrimental to policy-thinking around issues of learning and education reform.[30]

- **Media stories put learning space and time reform in the family bubble.** FrameWorks' research on education has shown that Americans attribute responsibility for education and education outcomes to three actors: teachers, students and parents. By framing learning space and time as an outside-of-school concern, these stories align the issue with private and parental responsibility, and lodge it firmly in the family bubble. The "family bubble" is a dominant assumption about parenting that supports patterns of thinking that childrearing — and, importantly, responsibility for children's education — occurs primarily in the family, while things that occur outside that family are irrelevant.[31] The net cognitive effect of this type of coverage is that, when Americans hear about reforms to the places and times in which learning happens, they are likely to attribute responsibility for education outcomes to parents and other private actors, rather than the public system. FrameWorks' research has shown that understanding education as a private rather than a public issue is a concerning trend for education reformers.[32] The research described here shows yet another stream of information that is likely to feed and strengthen this way of thinking about education reform.

- **Digital media can change space and time, but not necessarily learning itself.** Previous FrameWorks research has found that Americans tend to view digital media and technology as a distraction that prevents students from mastering basic subject content. When viewed in a more positive, but still limited, light, digital technologies are relegated to "fancier books" that, while providing faster access to information, serve no real pedagogical purpose.[33] These perceptions of digital media are unchallenged by media stories of learning space and time, leaving the public without the cognitive tools to understand how digital media can create better *ways of learning* by re-imagining where and when learning can happen.

Absences

In addition to existing features of the media discourse that are likely to have cognitive implications for the American public, there are also several key absences in this coverage that are likely to affect public understanding.

- **There is limited attention to the relationship between space and time and *how* learning occurs.** The media clearly articulate the need for improvements to the spaces and times in which children learn. However, none of the articles in the sample analyzed addressed *how* spatial and temporal factors affect learning processes. While there was an implicit argument that space and time are important, the mechanisms by which these contextual factors influence learning were left unexplained. This absence allows the public to "fill in the blanks" with narrow and unproductive understandings that occlude thinking about how spatial and temporal reforms might improve education outcomes.[34] For example, if the public is allowed to fall back on default cultural models of learning as a passive, teacher-centric process, calls to make learning space and time more student-centered and driven are unlikely to gain public support.[35]

- **Coverage ignores the classroom itself as a site of reform.** Media coverage portrays out-of-classroom space as an important site of reform, but ignores in-class spaces as viable levers in improving learning. Put another way, when discussing the spaces and settings in which learning occurs, the media focus primarily on how schools might offer more out-of-classroom learning experiences but rarely address the need to restructure spatial or temporal aspects of the classroom itself. FrameWorks researchers have found that the public believes that classroom space should be organized to enforce order, discipline and hierarchy. Education experts, on the other hand, argue that classrooms should be redesigned to facilitate student-centered activities that foster 21st century skills such as creativity,

collaboration, problem-solving and communication.[36] The media's failure to address the current misalignment between classroom configuration and learning goals allows the public to continue to view the classroom primarily as a disciplinary space.

CONCLUSION

The media send a clear message that there is something lacking in the learning spaces and schedules of the traditional system of public education. Despite sounding a clear call for reform, however, this media narrative is incomplete at best, and in some ways even counterproductive to efforts to reform learning space and time. By according all innovation to parents, external actors and private sources, reforms to space and time are hijacked away from school systems. The already profound distinction between what types of learning are appropriate in school and out of school, as well as the way that Americans attribute responsibility for improving education outcomes, are exacerbated by this coverage. Finally, school systems are sucked into the government-as-bureaucracy frame, in which the only way to successfully reform education is to get outside the system.

In order to expand the public's understanding of how spatial and temporal factors influence learning, and their awareness of the necessary reforms that bring learning contexts into alignment with learning goals, experts need to build out the existing media narrative and, when possible, create new ones. There are several strategies that emerge from this analysis that will be helpful in this work.

First, communicators must forefront the contextual factors — including space and time — that shape learning. Even more importantly, they must provide concrete explanations of *how* these factors affect the learning process and shape its outcomes. If the public can become more aware of the roles that context, environment and setting play in learning, they will be more likely to support the kinds of spatial and temporal reforms that learning space and time experts propose. The presence of stories that feature space and time affords a promising platform on which to build; the challenge will be to get innovations into the school system, not beyond its purview. FrameWorks researchers are in the process of developing metaphors to explain the role of context in the development of particular skills and learning more generally. This metaphor will be critical for communicators working on issues of learning space and time.

Second, if digital media is a central tool in the enactment of learning space and time reform, communicators must be highly strategic in framing technologies in ways that avoid cuing unproductive understanding of their place in learning and the education system. FrameWorks' research on Digital Media and Learning has developed and tested several metaphors that have been shown to help bring

technology and digital media into the fold of effective learning. For example, the *Cooking With Information* metaphor is useful in establishing learning as a hands-on, experiential process, and thus a positive role for technology in creating more effective learning processes.[37] Communicators can use the extant media coverage on the role of digital media as a mechanism for meaningful space and time reforms to lodge better explanations of the pedagogical utility of such technologies in the public discourse. This strategy has the potential to increase the public's appreciation of the role of digital media in expanding and improving the spaces and times in which effective learning takes place. The challenge for learning space and time experts and advocates will be using the digital media metaphors in such a way that dismantles rigid bifurcation of in- and out-of-classroom learning.

Education experts interviewed by FrameWorks researchers do not argue for tearing down the entire public education system and beginning anew. Rather, they call for updating critical components so that schools provide the kinds of skills, knowledge and learning that students need to participate as engaged citizens in the 21st century information economy. Still, these "updates" entail substantial changes to the way most Americans envision the classroom, schoolhouse, community and learning schedules. The *Remodeling* metaphor, developed in previous FrameWorks research to explain the step-by-step process by which education reforms can be enacted, may be particularly useful as experts seek to build public support for spatial and temporal reforms. By explaining how concrete, step-by-step reforms are possible within the existing public school system, the *Remodeling* metaphor may serve as an antidote to both explicit and implicit suggestions that abandoning public education in favor of a private system represents the only viable option for improving education outcomes.

APPENDIX: METHODS

This research is guided by two primary goals: (1) to examine how topics related to learning space and time are regularly treated in the media, and (2) to explore the likely impact of these patterns on the public's thinking on the spatial and temporal dimensions of education. In order to address these goals, the analysis is divided into two stages: (1) a content analysis based on a qualitative and quantitative examination of media materials that reference learning space and time, and (2) a cognitive analysis of the media frames identified in relation to findings from previous cultural models research. Descriptions of the data and analytical techniques are provided below.

Media Content Analysis

A recent Pew Center study suggests that, by and large, Americans receive their daily news from a combination of newspapers (both print and online) and broadcast news sources.[38] Sample selection in the current study was based on this assumption and included materials taken from national newspaper articles and television broadcasts, as well as three news blogs representing a span of political perspectives. Using the LexisNexis, Factiva and Google News databases, specific news sources were selected based on circulation/viewership statistics and geographical and political diversity. The sample was drawn from the following print sources: *The Washington Post*, *USA Today*, *San Jose Mercury News*, *New York Post*, *The New York Times*, *Los Angeles Times*, *Houston Chronicle*, *The Denver Post*, *Chicago Sun-Times* and *The Atlanta Journal-Constitution*. Sources used to construct the sample also included national television newscasts from ABC, CBS, NBC, CNBC, MSNBC, CNN and FOX News Network, and the *Huffington Post*, *Hot Air*, *National Review* and *Daily Beast* blogs. The study sample was selected from these sources over a one-year period from October 1, 2010, to October 1, 2011.

Media stories were captured from the databases if they included at least five mentions of the words "education" or "learning." This threshold of number of mentions ensured that the sample squarely dealt with issues related to education and learning and avoided materials that mentioned education in passing, but that were not focused on education content or issues. The search strategy was also designed to be sufficiently broad so as to capture stories that covered a wide range of education issues and allow for analysis of more specific education issues including skills and learning, assessment, educational disparities, structure of the education system, and education policies and programs. The initial capture procedure yielded 1,346 stories. Each of these media stories was assigned a number and researchers used a random number generator to select 570 stories that comprised the final study sample. Of these, 106 dealt squarely with issues related to learning space and time and were included for analysis for this report.

The media content analysis was conducted in two stages. First, FrameWorks researchers developed a codebook based on standard coding categories utilized in previous FrameWorks content analysis research and in the framing literature more generally.[39] Those categories include:

1. Storytelling style (episodic vs. thematic)
2. Tone
3. Section of the newspaper
4. Age-group, race, ethnicity and socioeconomic status of the students mentioned
5. Types of messengers/experts cited
6. Values
7. Mentions of specific policies and programs.

In addition to the codes above, each story was coded for whether or not it addressed the following areas of interest: skills and learning, assessment, learning space and time, educational disparities, structure of the education system, education policies, and programs.

After the codebook was developed, three researchers were trained in its application. To test for inter-coder reliability, each researcher coded a set of 25 randomly selected media stories from the sample. The researchers achieved an inter-coder reliability score of 0.8 using Holsti's coefficient — indicating a respectable 80 percent agreement across the coded themes.[40] After the reliability test, we coded the remaining stories and subjected the resulting quantitative data to statistical analysis examining the frequency of codes within each category. In addition, selected cross-tabulations were computed to examine relationships between codes.

In the second stage of analysis, the sample was divided into the areas of interest and each area was subjected to a qualitative analysis of dominant narratives. In this stage, researchers analyzed the dominant frames that structured media discussion about skills and learning, assessment, learning space and time, educational disparities, structure of the education system, education policies, and programs. The results of these analyses are presented in separate reports.

Cognitive Analysis

The cultural models findings referred to in this document are based on over 70 one-on-one, semi-structured interviews conducted between 2008 and 2012 on issues related to education, including education and education reform, digital media and learning, skills and learning, assessment, and learning space and time. Consistent with interview methods employed in psychological anthropology, cultural models interviews are designed to elicit ways of thinking and talking about issues.[41]

Patterns of discourse, or common, standardized ways of talking, were identified across the sample using a basic grounded theory approach to thematic analysis. These discourses were then analyzed to reveal tacit organizational assumptions, relationships, propositions and connections that were commonly made, but taken for granted, throughout an individual's transcript and across the sample. In short, analysis looked at patterns both in what was said (how things were related, explained and understood) as well as what was not said (shared, but taken-for-granted, assumptions).

Finally, to examine expert messages on education and learning, FrameWorks researchers conducted 20 one-on-one, one-hour phone interviews with experts from the fields of education, psychology and early childhood development. These interviews were conducted in late 2011 to early 2012 and, with participants' permission, were recorded and subsequently transcribed for analysis. To locate experts, FrameWorks surveyed a group of leading foundations working on education issues.

In the cognitive component of this analysis, FrameWorks' researchers compared findings from the media analysis with results from the cultural models interviews in order to examine how media frames are likely to intersect with the cultural models that currently inform public thinking. This analysis addresses multiple patterns of intersection, including how media frames might (1) cue and strengthen existing cultural models, (2) conflict with or challenge existing models, and/or (3) fail to address a topic such that extant patterns of thinking are left to "fill in the blanks." The analysis also provides an etiological understanding of dominant media frames, as the relationship between frames in media and culture in mind is not unidirectional.[42] In this way, the media analysis enables FrameWorks to identify the likely cognitive impacts of media framing, and to formulate strategic recommendations for experts and advocates who communicate about education and learning.

[1] Kendall-Taylor, N., Lindland, E., & Baran, M. (2012). *Mapping the gaps on where and when learning takes place: A core story of education report.* Washington, DC: FrameWorks Institute.

[2] By learning space and time, we mean those places and times where learning occurs — from classrooms, to inside and outside of school spaces, to communities; and from class time, to school day time, to before and afterschool time, to school year and career time.

[3] O'Neil, M. (2012). *Overarching patterns in media coverage of education issues: A cognitive media analysis.* Washington, DC: FrameWorks Institute.

[4] Shore, B. (1996). *Culture in mind: Cognition, culture, and the problem of meaning*. New York, NY: Oxford University Press. See also, Holland, D.C., & Quinn, N. (1987). *Cultural models in language and thought*. Cambridge, England: Cambridge University Press.

[5] Visit http://www.frameworksinstitute.org/digitalmedia.html to access FrameWorks' full body of research on digital media and learning.

[6] Magic Johnson reforming education in LA. (2011, September 14). *The Huffington Post*.

[7] Buery, R. (2011, June 20). True education reform: Community schools and collective impact. *The Huffington Post*.

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