"Who's Got The Chalk?": Beginning Mathematics Teachers and Educational Policies in New York City

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Abstract

Under The No Child Left Behind act, beginning mathematics teachers in New York City find themselves at the crossroad of multi-level educational policies that span the different domains of the teaching profession, from the recruitment and support process to accountability, standards and assessment requirements, to pedagogical models and the teaching practices in the classroom.

In this research the author provides the beginning teachers' perspectives on their experiences as they face some of these policies as "novices" in the context of a New York City classroom. The data reported here suggest a dissonance among the various policies and confirm how high stake test are narrowing the mathematics curriculum and how teachers filter the policy messages according to their priorities and experiences.

Preface

> *For now, the politicians are silent and the best we can do is to slap absurdly Orwellian names upon bills such as The No Child Left Behind Act; I tried to do my part from within the classroom. The system is broken, but everyday millions of students enter it. From within my classroom, I tried to make a difference with thirty of those students.*
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> *.... When I first started teaching, my goal with my classes was a seemingly laudable 100% passing rate on the Regents. But this goal, though well intentioned, was stupid. My teaching framework has evolved. My new goal is much broader and less verifiable by standardized tests and common testing practices. My new goal is this: I wish to help mold students into critical thinkers who are able to use math as a lens for analyzing their world. My original goal of 100% passing rate on the Regents was heavily influenced by the pressure I felt by the state, administration, other teachers, and even the Teaching Fellows.*
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> *.... Somewhere along this top-down approach to education, there was a disconnect, a misfiring in the synapses between one well-meaning politician and another. Or maybe it was a misinterpretation between policy maker and teacher, who thought workshop model meant treat the classroom like a sweatshop, to be judged solely by its output.*
>
> —A second-year math teacher

Introduction

The narrative above is a testimony from a second-year mathematics teacher trying to sort through the complexities of teaching mathematics in an urban setting. Beginning mathematics teachers in New York City are at the crossroad of multi-level educational policies ranging from federal to state to city to school. These policies span the different domains and stages of the teaching profession, from the recruitment and support process to accountability, standards and assessment requirements, to pedagogical models and the teaching practices in the classroom.

This research is an attempt to provide beginning teachers' perspectives on their experiences as they face some of these policies as "novices" in the context of a New York City classroom.

The New York City Policy Context

According to the New York State Department of Education, the New York State public school system serves nearly three million students in over 700 school districts, which includes almost

4,300 schools. Approximately 1.1 million of these students attend New York City public schools, a system that employs about 73,000 classroom teachers (NYSED, 2008). In 2005-2006, New York State ranked fourth in the nation in average starting salary for teachers ($39,000) and in 2007-2008, it ranked second in the nation in average salary for all public school teachers ($62,332) (National Education Association, 2008).

State-guided curriculum and state exams precede the No Child Left Behind Act (NCLB) for a long time in New York. Since 1878, New York Regents exams were established for the academically able students, along with the Regents Competency Tests which served as an alternative exam. In the 1990s New York Commissioner of Education Richard Mills and the Board of Regents decided that all students seeking high school diplomas must pass five regents exams; new examinations were also introduced in various subjects in elementary and middle schools (Crocco & Costigan, 2007).

Prior to 1997, assessment in New York, like in many states, was designed primarily to provide information to local administrators and teachers to diagnose and remediate poor-performing students. The system did not hold teachers, schools or districts accountable for the results, except in the most extreme cases where schools could potentially lose their registration (Boyd et al., 2008).

In recent years the Regents Board adopted the Learning Standards that substantially altered high school graduation requirements and which are now supported by a new curriculum based assessment system. With this long history in accountability and State assessments, New York still ranks high on accountability standards and assessment (Education Week, 2008). All students are now held to the same high learning standards and subject to exit exams in five subject areas that are required for a high school diploma. The Learning Standards define curriculum in every grade, and statewide assessments in the 4th and 8th grade were introduced to gauge progress.

The school report card system has been in place since 1997. Report cards continue to be widely disseminated and receive extensive public discussion, which has increased pressure on schools and districts. By the NCLB's accountability, stricter consequences were increasingly enforced if schools received low scores or bad report cards. Unlike some states, New York has no direct consequences for teachers. However, indirectly, teachers have felt considerable pressure to increase tests scores. As a result of this pressure, some New York teachers have cheated to improve student scores: "Teachers have taken actions such as illicitly reviewing tests in advance and tailoring their instruction to match specific questions; improperly giving students passing grades when they score tests for the state; and telling students to correct answers the teachers knew to be wrong." (Boyd et al., 2008).

New York City Teaching Fellows Program
Founded in 2000 to address "the most severe teacher shortage in New York's public school system in decades" (NYCTF, 2008) and "in response to changes in New York regulations regarding certification of teachers" (Boyd et al., 2008), the New York City Teaching Fellows (NYCTF) program provides teachers in NYC an alternative certification route.

According to the program's design, Teaching Fellows take six weeks of pre-service preparation during the summer, after which they receive transitional licenses and begin teaching full-time in the fall. They spend the next two years taking graduate coursework in the evenings at local partner universities while teaching in their certification area full-time to complete state requirements for permanent certification.

The program's scope and impact have grown tremendously since its inception. At this point, the NYCTF program prepares more than a third of all new teachers for New York City schools; in 2006-07 approximately ten percent of all New York City teachers had begun their careers as Teaching Fellows (Boyd et al., 2008). The scope is even greater in the case of mathematics teachers; in 2005, the program alone provided over 60% of all new math teachers entering the NYC public school system.

New York State and New York City education policies regulate that mentoring support must be provided for alternatively certified teachers like the New York City Teaching Fellows. An analysis of the policy documents and a consideration of the mathematics Fellows' case revealed a proposed complex support system involving school administrators, mentors, and mathematics coaches. However, the analysis of the enacted system shows that supports for Teaching Fellows within schools are either not present, or are overwhelmingly present; they are rarely available in a way that one might term "just right" (Foote & Haydar, 2008).

Theoretical Framework
The research design and methods for this study are informed by a framework that articulates theoretical standpoints deriving from educational policy research, teacher education and educational assessment. Below are the main ideas borrowed from the above standpoints as well as some of their multiple interconnections.

First, we believe in the complexity of the link between policy environment and instructional change and note the teachers' major role as mediators who filter policy messages based on their beliefs and practices and second, we believe in the importance of supporting beginning teachers and considering their professional needs within the growing alternative certification context, we finally recognize the complexity and the range of influences that high stakes testing can have on novice teachers' decision-making.

Recent studies have found that the link between the policy environment and instructional practice has become closer with the emphasis on accountability (Spillane and Burch, 2006). However, "while policy messages may penetrate classrooms, they are mediated by teachers who filter them through their prior practices and beliefs about teaching and learning" (Coburn, 2004; Diamond, 2007). This resonates with what Stigler and Heibert referred to as persistence of "cultural scripts" (Stiegler & Hiebert, 1999).

Teacher education research indicates that the most successful alternative certificate programs need to have the following characteristics:
• high entry-level standards;
• solid pedagogical training in subject-matter instruction, management, curriculum, and working with diverse students;
• intensive mentoring and supervision from carefully chosen, well-trained staff;
• expose candidates to excellent teaching and modeling of good practice;
• develop strong relationships among the partners;
• provide plenty of guided practice in lesson planning and teaching prior to a candidate's taking on full responsibility as the teacher of record; and
• have high exit standards.

(Darling-Hammond et al., 2007)

This is in line with some researchers who suggest that new teachers face a number of

challenges in "survival skills," such as student discipline and motivation, individualizing instruction, assessment, and dealing with parents. Kagan (1992) concluded that until novices have established standard routines and resolved their images of self as teachers, they will continue to be obsessed with discipline and class control (Kirby et al., 2006).

In their studies on the effect of high-stake testing on instruction Hamilton et al., (2007) and Stecher (2002) looked at the effects on a continuum of potential positive, ambiguous and negative consequences. Their frameworks inspired the way we analyzed the views on testing in this study.

Methods

This study draws on data from a larger research project, facilitated by MetroMath - The Center for Mathematics in America's Cities, that examines the impact the NYCTF program is having on mathematics education in the New York City classrooms. In this larger research project, the NYCTF program is examined both from macro and micro lenses. The macro study uses large-scale surveys of the 2006 and 2007 cohorts (approximately 300 each year). The primary data sources for the micro study are regular interviews with eight Fellows and video observations of their teaching (about ten times per school year). The observation data is supplemented by post-observation reflections on the class written by the Fellows and post-observation interviews conducted by a researcher with the Fellows.

In order to complement the survey and classroom observational data, we have also conducted individual interviews with over 30 mathematics Fellows.

In order to describe the policy context and the support system for new teachers specifically in New York City we examined policy documents available from the New York City Department of Education, the New York State Department of Education, and the New York City Teaching Fellows program.

In order to capture the Fellows' perspectives on No Child Left Behind, high-stake testing and the workshop model, we focused on the sections of the survey that ask about policy effect on instruction and the school climate and culture. We analyzed the responses of 167 teaching fellows from the 2007 survey. To examine more deeply their perspectives on the above policies, we also coded the related sections of the interviews. The coding scheme was partly inspired by the theoretical framework described above. The interviews data was sorted, resorted and analyzed, moving from descriptive information to constructing explanatory schemes (Bogdan & Biklen, 1992; Strauss & Corbin, 1998).

To simplify the presentation of the survey results, we adopted descriptive phrases used by some researchers instead of numbers to report the proportion of respondents who gave a particular response (Hamilton et al., 2007). We used *almost all* when 90 percent or more of the respondents answered in a particular way. We use *most* when approximately two-thirds (i.e. 60 to 70 percent) of respondents gave a similar response. *A majority of respondents* means more than 50 percent, and *about half* means between 45 percent and 55 percent. We use *some* when about one-third of respondents (i.e. 30 to 40 percent) gave the same response, and *almost none* or *almost no* denotes fewer than 10 percent of respondents.

Findings

In one question of the survey, Teaching Fellows were asked how much influence did they think teachers in their schools have over different areas of planning and teaching including: textbook selection, content selection, grading and evaluation, discipline and homework. Table 1 below

presents in percentage how they viewed the level of teachers' influence from "no or minimal" "moderate" to "significant or great deal" influence.

Table 1
Responses to the survey question: In your school, how much influence do teachers have over the following areas of planning and teaching?

	Selecting textbooks and materials	Selecting content, topics, skills	Selecting teaching techniques	Evaluating and grading	Disciplining	Determining amount of homework
Great deal of or significant influence	26.94%	34.13%	53.89%	77.84%	52.09%	81.43%
Moderate influence	23.35%	19.76%	20.35%	11.97%	27.54%	11.97%
Minimal or no influence	47.90%	43.71%	23.95%	8.38%	18.56%	4.79%
No Response	1.79 %	2.39 %	1.79%	1.79%	1.79%	1.79%

Most teachers thought that they have a great deal of influence in determining the amount of homework and in evaluating and grading students' work. The majority of them thought that they can influence disciplining and selecting their teaching techniques. Only some thought they can influence the selection of the content and textbooks.

Table 2
Survey Question: What is the approximate percentage of lessons in which the following types of activities occurred?

Percentage of lessons	(a) You followed workshop model.	(b) You used either the Impact or Prentice Hall textbooks as a basis for middle school or Math A/B Lessons	(c) Your focus was on preparation for standardized math tests
76 to100	35.32 %	20.95%	18.56%
51 to 75	32.33%	17.96%	26.94%
26 to 50	11.37%	12.57%	26.34%
10 to 25	10.17%	13.77%	14.37%
Less than 10	10.17%	32.93%	12.57%
Blank	0.59%	1.79%	1.19%

The workshop model is an instructional model initially designed to promote interactive pedagogy and creative student learning, and adopted in New York City schools since 2003. When asked to approximate the percentage of lessons in which they followed the workshop model, one-third of the respondents thought that they did so consistently in most of their lessons and most of the teachers said they followed the model more than half of the time.

When asked to approximate the percentage of lessons in which they focused on test preparation the majority of respondents answered that they did so for more than half of the lessons.

The above question was followed by another one that asked them on what they thought of the effectiveness of the workshop model and their textbook instruction and whether they thought their administration pushed them to focus on the workshop model, on the use of the textbook or on students working in groups.

Table 3
Survey Question: To what extent do you agree with the following statements about instruction and textbook use in your classes?

	(a) The workshop model is an effective model of math instruction	(b) Your administration makes sure you teach with the workshop model	(c) The required text is an effective text to teach with	(d) Your administration makes sure you teach with the required text on a regular basis	(e) Your administration makes sure students work in groups
Strongly Agree	11.97 %	22.75%	1.79%	9.58%	20.95%
Agree	34.73%	31.73%	13.17%	17.36%	43.11%
Neither Nor	24.55%	17.96%	25.74%	17.96%	17.96%
Disagree	17.36	13.17%	26.94%	27.54%	10.17%
StronglyDisagree	11.37	14.37%	31.73%	26.94%	7.78%
Blank	0 %	0%	0.59%	0.59%	0%

According to Table 3, only some of the respondents favored the workshop model as effective model for mathematics instruction, about one third were neutral toward it. Most respondents thought their administrations make sure they follow the model and that students work in groups. The majority didn't think the required text is an effective text to teach with. It is interesting to note that none strongly agreed in favor of the text's effectiveness. Almost half responded that their administrations don't make sure that they teach with the required text on regular basis.

New York City Teaching Fellows' Views of NCLB
When asked about the national policies that affect them in their professions as teachers, NCLB was the policy most mentioned by the interviewed Fellows. In these cases, or when prompted explicitly to explain what they know about the NCLB Act, Teaching Fellows' responses varied both in the level of detail and type of reaction. Apart from the few who identified the

overwhelming complexity of the Act, most of interviewed Fellows reduced the whole Act into a single characteristic or element. The elicited reactions can be classified into three types: interpretive, pragmatic or critical. Interpretive reactions define or explain some aspects of the Act. The pragmatic ones focused on the NCLB's practical effects on them as teachers or on their schools, and the critical reactions judged the Act negatively for various reasons.

Interpretive reactions

The interpretive reactions, those trying to define or explain NCLB, were sorted into the following sub-types:

a) Nominal interpretations: These are reactions that attribute the Act to President Bush and/or reiterate what is implied by the phrase "no child left behind."

> *"...I mean it's Bush's initiative, it was his movement that we're going to make sure all children, that we don't leave them behind, that they all achieve."*

> *"It's an initiative of the Bush Administration that is about accountability."*

b) Focus on testing and standards: These are explanations that reduce the Act into the excessive testing element or the measurable standards for all students.

> *"No child left untested."*

> *"I know that even for Special Ed students you shouldn't–you should definitely keep them on level. And they shouldn't be excused from taking the tests–like math and writing. So that's what that means. So there's no exception. They definitely need to be–if they're in eighth grade you need to teach them eighth grade-level math or make sure they understand eighth grade-level math"*

> *"There is resistance to the idea of promoting kids without actually performing at the grade level they're supposed to be performing at. But at the same time, we don't want to just let these kids not move up. So the idea was to create all these more measurable expectations for the [Learning] Standards, that we're beginning to really think about what kids and then assess whether or not it means moving up to the next grade."*

c) Business model interpretations: These are relatively high-level interpretations that relate one aspect of the Act, like testing, to other aspects, like funding, and compare NCLB to a business or trade model.

> *"That schools are funded largely based on their test scores."*

> *"And it's basically like a business model for education. So that teachers and students, like everyone, needs incentives in order to perform. And if there's no incentive, like money, then schools won't perform well. And that's why – oh and also about investing. We shouldn't, why should we invest–you wouldn't invest your money in a business that's doing well, why would you invest your money in a school that's not doing well? So it's like that. It's basically like looking at education from that perspective."*

Pragmatic reactions

Under this category fall reactions that focus on how the NCLB affects teachers or their schools. These varied as follow:

a) Teach to the test: Some teachers thought the immediate effect of NCLB would be to force them to teach to the test.

> *"I definitely will have to be teaching for a test. I mean, I'm aware of that. I don't know how much."*

b) Teaching all students: Others thought that the Act will push teachers to attend to the needs of every student.

> *"Definitely, it is going to affect me and my students. Teachers now know that they can't ignore someone because they don't understand something. You're responsible for every student in your classroom."*

c) Top-down pressure: According to some teachers the NCLB leads to more top-down pressure from the administration. Teachers will be affected by having more external monitoring in their own classrooms

> *" So there's going to be more people observing my classes and there's going to be more pressure from the top down from administrators in terms of things that will boost our score or boost our appearance."*

Critical reactions
A few of the interviewed teachers were categorically against the NCLB Act. They criticized it for different reasons as shown below:

a) Buzz words: One teacher expressed cynicism that in trying to meet the Act's demands administrators and teachers are superficially emphasizing a buzz word without real consideration to the learning process.

> *" I feel like it goes along with a lot of like buzz words and things that are kind of superficial but that make the school look really good"*

b) No resources: A couple of teachers expressed their belief in the impossibility of implementing the NCLB for lack of resources.

> *"But to me that's crazy because in making sure that every–first of all, I don't understand how we're going to have the resources for that. And also from what I understand there hasn't been the allocation of the resources to do that."*

c) Teacher concerns: One teacher was concerned that in the context of some urban high schools limiting teachers' authority might create a threatening and unsafe environment.

> *"The whole issue of teacher safety, I think, and not being able to remove students from the classroom for a given amount of time because of this Act scares me in a sense because I've seen a lot of things happen in the school that where if I were in high school before No Child Left Behind, the student would have been expelled and home-schooled or whatever it is…"*

New York City Teaching Fellows' Views of High-Stakes Testing

As mentioned in the methods section, the analysis for this part of the research study was based on Hamilton et al. (2007) and Stecher (2002). The following themes emerged and leaned in their majority toward what Stecher (2002) characterized as "negative potential effect of high-stakes tests."

Focus more on specific test content

The mathematics content gets shaped or trimmed into test content. This comes at the expense of the higher order mathematical skills that are difficult, if not impossible, to assess through paper and pencil tests. Teachers expressed how the test's content turned into their instruction blueprint.

> *"Everything I do has to relate back to the Regents in one way or another. The teachers are so accustomed on one hand, the kids too are so accustomed to only having to be ready for the Regents and asking, 'Do I need to know this'. That any possibility of doing anything else is just killed which is really unfortunate."*

> *"Standardized tests guide my instruction and they determine it."*

> *"They're everything. That's all we teach. At least from September to March we don't teach anything that isn't on the test."*

Reallocating instructional time

Another effect of high-stakes testing is the distribution of the content across the school year. Teachers are pressured to reallocate the instructional time according to the tests' demands.

> *"Then possibly once we're done with that I can really go into basically, like, giving them fun projects to do and stuff like that. So maybe I can think of things and then actually have them execute them."*

> *"And now I know what is going to be on the assessment they're going to take in December, what's going to be on the assessment they're going to take in February, and for those [exams] to be meaningful, I want to make sure I've taught everything. So I'm going to—we're going to tweak that schedule a little bit so I've taught everything on the assessment before they take the assessment."*

Subject cuts

Some teachers noted what was widely criticized in the educational circles. The emphasis in schools turn into the tested subjects only at the expense of arts , physical education and other electives

> *"Our school at one point, from what I understand, was–they had courses there that they could take, like shop and they could take auto mechanics. And on my floor now they don't even have art. Their elective is journalism and journalism for all intents and purposes is another period of language arts a week. And so these kids hate it. They hate it."*

Test preparation

The excess focus on testing "leads teachers to engage in inappropriate test preparation" (Stecher, 2007). Teachers gave many examples of how test preparation became a distracting but essential part of their mathematics instruction.

"Well, before the test, maybe for about a month or so before the state test, I kind of had, I'd say a little bit of a cram or a review spree. Where almost every day I was trying to get in a lot of drills and stuff. And it wasn't really that much fun for me or for the kids."

"From September–and now in my new school we're spending one period a week for each class doing test prep. Starting September."

"Well, again, a lot of the year is drawn out of Impact Math and in terms of the content of each lesson until we got to February or so when we as a school, and as a math department we turned to a lot of test preparation."

Devaluate teacher's sense of professionalism

Some teachers were vocal in voicing their critical views regarding how the testing culture is standing in the way of a rounded education and demeaning teacher's professional judgment as well as students' creativity and independent learning.

"I mean it's ridiculous. Yes, that's one way to assess these kids, but it's become the only way for most of us to assess these kids. It's because we're looking at how well are they performing compared to other kids, when it shouldn't be about that. It should be we're giving them a well-rounded education."

"Teaching strictly to the Regents implies that the only math worth knowing is that which was chosen by legislators and a testing committee. Such an approach is stifling and severely limits independent research into specific math content areas students might take interest in."

Test as incentive, goal or concern

For many teachers that their students pass the test in high percentages is a goal and sometimes their primary concern. One teacher used the test as incentive for students and found it hard to keep them on task once the test was over.

"And since that time, it's been a little bit harder to keep the lower performing students on task because I don't have something to hold over their heads. The only thing I'm holding over their heads is 'you guys might be here for summer school or you know might not go to high school if you don't get your work done or start doing your homework.' And I don't know because that's, even though that is a real threat, like I feel like it's less immediate for them, like they're responding less to that than they were to the idea of a state test."

[Speaking of goals for the second year of teaching:] *"Well, I hope that I get a good turnout on who passes the math standardized tests. That's one of my concerns."*

New York City Teaching Fellows' Views of Workshop Model

At the time of the study teachers in New York City were mandated to use the workshop instructional model in all subjects since 2003-04 (Traub, 2003). The model was initially designed to move from didactic pedagogy, which is "organized through a set pattern of lecture, recitation, and seat work" (Gamoran, Secada, and Marrett, 2000), and designed to promote interactive

pedagogy and creative student learning. In practice, however, a majority of beginning teachers who claimed they followed the model were found to be maintaining "relatively tight control of how students learn and practice school mathematics" (Brantlinger & Cooley, 2008).

The survey data above showed that most of the teachers said that they follow the workshop model consistently in their mathematics instruction and that their administrations make sure that they use it. In the analysis here, we wanted to listen deeper to the Teaching Fellows reactions to the workshop model.

It is a great idea on the paper

Some teachers liked the premises behind the workshop model. They thought it is an ideal model emphasizing cooperative learning and students construction of ideas but that in reality cannot be implemented or at least it doesn't work for them.

" *I actually think the workshop method is a wonderful idea, a wonderful paradigm where you can have students at desks in groups working with each other, and if you have the right class, I think it's amazingly wonderful.*"

" *I think it has some real values, the idea kids can learn from each other is definitely true. That type of method, when it's used [in] a lesson that they can kind of discover on their own and they can kind of figure out some of the rules, you just see in groups then I do think it's very valuable. I think it's a little more memorable and stick[s]with them a little more if they have some sense of ownership.*"

No preparation, no support

Teachers expressed that they don't get enough preparation or support to adopt or improve teaching with the workshop model.

"We might have received training beginning two years ago to get us ready to use the workshop model. But again, no models in real classrooms were provided. Yeah, there wasn't as much support there as there should have been."

Show them what they want

Some teachers said that they do it because they are asked to and so they focus on the appearances of the models like classroom setting and displays and students grouping.

"Well, kids have to sit in groups. You have to use the workshop model, you have to have an objective problem of the day written on the board. You have to--they [administration] really like to have really pretty classrooms."

But " it doesn't work"

Many teachers believed or came to the conclusion that the workshop model doesn't work or is not for them or their students and they mentioned the following various reasons:

Classroom management: *"I'm trying not to use group work 'cause I find that I don't–it's hard for me to say at this point whether I think group work is effective or not because essentially I just know I can't pull it off with my classroom management the way it is."*

Grouping: *"I've tried to use it. Most of the time, it doesn't work. Every one of my classes right now—right now, every one of the classrooms that I have set up—they are in groups of two, not in groups of four or five."*

Time and management: *"I love the idea of them working and comparing answers and 'Oh, I see why you did it that way.' It's just—to me, that's how they learn so they remember, much more than if they hear it from me. The drawback is that I spend so much time going around trying to get people back on task when they're in a group of four or five because they'll get off task so fast."*

Garbage: *"I would say first of all, forget all of that workshop model garbage; I know that's not a popular thing to say but really, just figure out what works for you. For math it doesn't work, especially advanced level math. You can't have a 10-minute mini lesson. That's barely enough time to do one example of a problem or do skills review for the one thing that you need to do."*

To "workshop" or not; mixed messages
A teacher expressed the conflict in the messages about the workshop model between the mentor and the school.
> *"His advice also made it sound the workshop model is just a trend, it'll be gone in a few years. And so [my mentor said] do that when I need to, but that's not how I should necessarily be designing my whole teaching style. And I think that's probably pretty valid advice. But at the same time, right now, this school is pushing the workshop and also that is how I'm trying to get my lessons and formats and everything."*

Conclusion
Narrowing of the curriculum
In the analysis of the Teaching Fellows' perspective of the high-stakes testing and its effect on their instruction, the emergence of the "focus on the test content" as a prevailing theme echoes and adds more insider's perspectives from beginning mathematics urban teachers on what has been called the "narrowing of the curriculum" (Dillon, 2006; Jerald, 2006). Their narrow and limiting perception and use of the workshop model as described by the Fellows confirms the expanded interpretation of "narrowing the curriculum" as defined by Crocco & Costigan (2007) to include the effect of these policies on limiting the pedagogical options.

Influence on pedagogy
The majority of teachers surveyed in this study thought that they can influence selecting their teaching techniques more than they can influence the selection of the content and textbooks. This is in line with other research findings that showed that teachers link the influence of high-stakes testing policies to instructional content more often than pedagogy (Diamond, 2008). When it comes to pedagogy, teachers filter policy messages according to their beliefs and previous experiences.

Policies dissonance?
The beginning teachers' perspectives brought throughout this research shed the light on the mixed messages that different policies and educational agents are transmitting to them. The focus on these teachers at the crossroad of multi-level educational policies that span the different domains of the teaching profession showed the complexity and the amount of pressure that

teachers are receiving from the demands and implications of these policies especially when they are compounded all at once. One can describe it as policies dissonance where different policies push in different directions.

Closing

> *"…I was attempting at quality. Could I increase student success by focusing on a unit rather than a single skill? Could I further increase understanding and success by focusing not on the easiest material, but on more challenging material that related more to real-life? In order to answer this question I had to throw out the pacing calendar given to me by my assistant principal. Bizarrely enough, though I know it is right to teach a concept in depth and to ignore the arbitrary demands of the state, I found this incredibly hard to do. I experienced a good amount of cognitive dissonance: On the one hand I knew what I was doing was right; on the other my students had to pass the Regents!"*

> *"Yet I know that regardless of the techniques I implement and the new strategies I incorporate into my arsenal, there will continue to be a large population of students I simply will not be able to reach. Not because I won't want to, not because I won't try, but because the system has, is, and will fail them. As long as there continues to be schools with police stations in them, there will continue to be an entire segment of the population that is marginalized"*

> —A second-year math teacher

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