

Communication Through Community?  
The Effects of Structural Changes on High School Communication

Michael J. Weiss  
Consortium for Policy Research in Education  
University of Pennsylvania  
[weissmj@dolphin.upenn.edu](mailto:weissmj@dolphin.upenn.edu)

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## Overview

First Things First (FTF)<sup>1</sup> is a comprehensive school reform program developed by the Institute for Research and Reform in Education (IRRE). Like several currently popular high school reform programs, one of the key strategies of FTF is to change the organizational structure of the school. FTF restructures the school by creating Small Learning Communities (SLCs) whose main objective is the formation of closer relationships among students, school staff, and families. For most schools, the formation of SLCs shifts the organizational structure from one which revolves around subject matter departments to one in which groupings are interdepartmental. This new arrangement is intended to encourage a more interdisciplinary, student-centered approach to high school education. This paper examines the impact of organizational change on communication patterns within high schools.

When considering the restructuring of high schools, Linda Darling-Hammond (1996) suggests the school structure should promote teacher collaboration as well as teacher empowerment. The structure of the school can create a milieu which encourages teams of teachers to assume shared responsibility over a relatively small number of students, leading to a more personal school environment. The traditional departmental organization of the school fails to foster a sense of teacher shared responsibility over individual students because most students are only in class with one teacher in each department per year. In contrast, teacher teams allow teachers to get a more “holistic” view of their students, since within a given team there are multiple teachers engaged with each individual student. In addition, since both teachers and

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<sup>1</sup> Throughout this paper FTF will refer to the First Things First organization, whereas FTF1, FTF2 and FTF3 represent the three schools examined in this study.

students are associated with a given team, teachers' collective responsibility over their team's students is explicit.

McLaughlin & Talbert (2001) agree that some teacher communities help teachers focus their work on "...students and shared responsibility for students' mastery of content and progress in the curriculum." Furthermore, they argue that strong professional communities develop norms of practice, both with respect to teachers' work as well as to their interactions with students. As such, teaching communities are a primary mechanism for improving school quality. While a sense of teacher community and sets of common norms are *sometimes* a bi-product of the departmental organization of schools, SLCs are designed *with the intention* of fostering a school climate of collegiality. In order for this environment of shared responsibility and norms of practice to develop, there must be communication among members of any professional community.

One key component of the organizational restructuring that occurs during the implementation of FTF is the setting aside of specific time for SLC members to engage in dialogue with each other. This "common planning time" provides an essential opportunity for communication and the flow of information from teacher to teacher with the hope of creating "communities" within the school. Creating this formal, structural change is intended to have an impact on who talks to whom about what within the school. However, formal groupings do not always translate into actualized relationships. Empirically examining whether or not these artificially fashioned formal groupings impact communication patterns within the school is one of the

goals of this study. In a sense, I am examining the extent to which structural changes can foster the creation of professional community within schools.

## Research Questions

This paper focuses on three areas of professional communication: the classroom management network, the strategies to assist low performing students network, and the course content and planning network (for more details see Data Sources). Several key research questions are addressed:

1. Does the formal organizational restructuring of schools around small learning communities lead to changes in patterns of communication within schools? That is, are two people in the same SLC more likely to communicate with each other about professional matters than two people who are not in the same SLC?
2. If communication patterns appear to be impacted by organizational structure, does this impact differ across different communication networks (i.e. – the curricular network and the low performing student network)? If SLCs are having an impact on communication patterns, are these impacts across the board, or only in particular areas? Can differences be explained by what is discussed during common planning time?
3. Prior research suggests that friendship is largely associated with communication patterns around issues of professional concern. (Weinbaum et al, 2006) Given this fact, when SLCs are created, do they overlap with the already formed friendship network within a school? Could this influence the results of research question 1?

## Sites

The data in this paper come from a survey conducted at three high schools implementing the comprehensive school reform model, FTF, during the 2004-2005 school year. The three schools were selected by FTF to reflect schools in various stages of implementation of their reform. FTF1 was in the nascent stages of implementation; teachers in this school were associated with an SLC, but the SLCs had not regularly met. FTF2 was in the second year of implementation of FTF; teachers in this school had experienced a full year of SLC meetings and membership. The “mature” school, FTF3, had worked with FTF for five years. Since each school was in a different implementation stage, teacher networks can be examined in schools at different phases of the reform. In addition, data was collected from FTF1 at two time points - first, during the nascent stages of implementation and then again 1 year later, allowing for the measurement of changes in teacher networks from time 1 to time 2 within FTF1.

## Data Sources

At each of the three sites a survey was conducted with all teaching staff. The survey provides information on the communication networks that exist within schools, as well as data regarding the topics of conversations discussed during the SLC meetings. The survey also provides a variety of background information about the school staff, including their:

- Small learning community membership
- Department
- Free period
- Classroom location
- Whether or not they were a small learning community chair

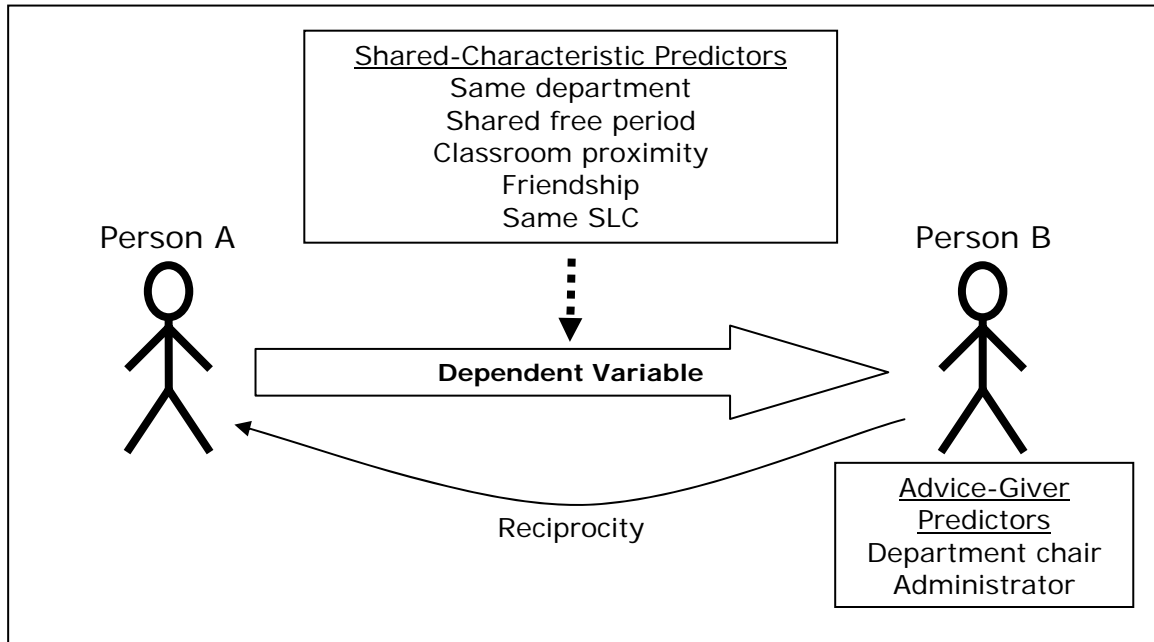
- Whether or not they were a department chair
- Whether or not they were a school administrator

The survey instrument contained five network questions, three focusing on professional issues, one on friendship, and one on communication about First Things First. I focus on the three professional networks, the “Classroom Management Network”, the “Low Performing Student Network”, and the “Course Content and Planning Network.” The course content and planning network, for example, was based on the question stem “During this school year, to whom in your school have you gone for help in selecting and planning course content coverage and pacing?” Responses to this and the other network prompts included the name of the individual sought out for help, the frequency with which advice was sought from this helper, and the influence of advice from the helper.

## Methodology

In order to examine communication patterns within the school, social network analysis was employed. A selection model was used to account for who goes to who for help in the three professional networks mentioned above. Figure 1 provides a visual depiction of the network selection models. In this diagram we see two people who work in one school, person A and person B. The network model predicts the likelihood that person A will go to person B for advice. Whether or not person A goes to person B for advice is the dependent variable in our model, depicted by the arrow from A to B.

**Figure 1. Mathematically Modeling Social Networks**



It is hypothesized that the likelihood that person A will go to person B for advice depends upon the individual characteristics of person A and person B, as well as their shared characteristics. For example, one might expect that department chairs are more likely to be sought out for advice about course content and planning. As a result I include as an *Advice-Giver Predictor* whether or not person B is a department chair. This enables me to establish whether department chairs are more likely to be advice givers than non-department chairs.

One also might expect that if person A and person B share certain characteristics, for example if they are both in the same department, this may increase the likelihood that person A will go to person B for advice. As such, we include several *Shared-Characteristic Predictors*. This enables me to establish whether or not the likelihood that person A will go to person B for advice depends upon whether or not they are in the same department.

In the resulting statistical models, each independent variable's coefficient describes the association of that variable with the dependent variable. For example, "Same SLC" is an independent variable in the model representing whether or not two staff members belong to the same SLC. The higher the magnitude of the coefficient for the variable Same SLC, the greater the odds of communication between people belonging to the same SLC. This modeling technique is not unique to this research; a similar model was used to explore the relationship in high schools between friendship segregation and school-level characteristics (Moody, 2001).

## Results

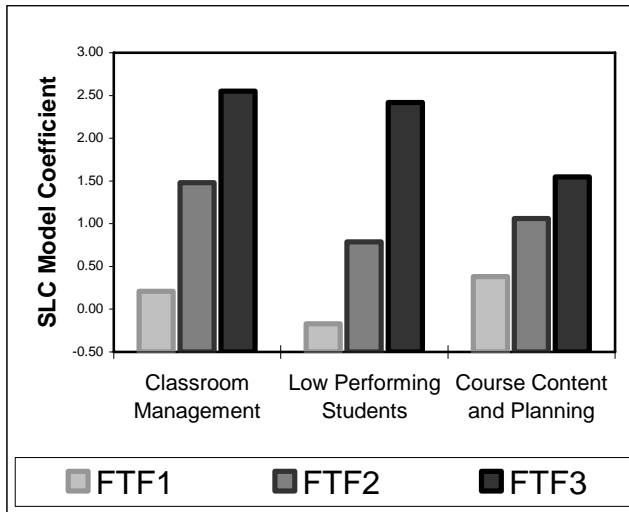
Of particular interest in FTF, is whether or not belonging to the same SLC is associated with an increased likelihood of communication between school staff. Since SLCs are a structural change in the organization, designed to strengthen relationships among staff, it is expected that belonging to the same SLC would be a significant predictor of who goes to whom for help.

The social network data suggest that the structural changes introduced by FTF had an effect on communication. As a predictor of communication, the same SLC coefficient was not a statistically significant predictor of communication in FTF1 in any of the professional networks. This is unsurprising, since in FTF1 teachers had not yet regularly met in their SLCs. In contrast, in FTF2 and FTF3, the schools where the SLCs had met for 1 and 5 years respectively, belonging to the same SLC was a statistically significant predictor of communication in all three professional networks.

Figure 2 plots the magnitude of the Same SLC coefficients in each of the three communication networks (class management, low performing students, course content and planning) in each of the three schools. As evidenced by the upward trends in the graph, in the schools which are further along in the implementation of FTF, belonging to the same SLC is a stronger predictor of the likelihood that a staff member will go to another staff member for help. The trends in the data provide supporting evidence that as schools move along in the implementation of FTF, school staff increasingly go to people within their SLC for help. Breaking down this overall finding by network provides insight into the functioning of SLCs.

**Figure 2. Magnitude of Same SLC Coefficient in Modeling Network**

**Communication**



The overall trend of the impact of belonging to the same SLC appears to vary by communication network. While SLCs appear to become a more significant predictor of communication in schools that are further along in the implementation process, how much more significant of a predictor SLCs become seems to differ by network type. Essentially, as phase of implementation increases, SLC's seem to have a larger impact on communication

around classroom management and low performing students as compared to course content and planning. This is not surprising, given that SLCs are composed of staff members who teach a variety of subject areas which overlap in limited ways. It is more natural for teachers to communicate about course content with teachers in their same subject area, which is the reason why schools have traditionally been organized around departments.

## Cautions

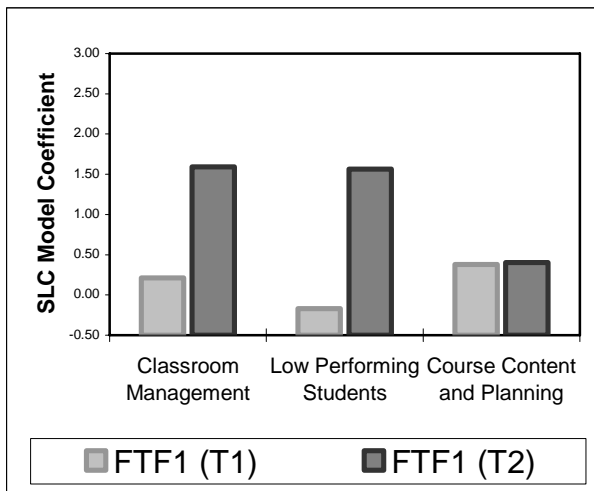
The robustness of these findings, that SLCs impact communication patterns, may have been affected by two forms of selection bias. First, it is of concern that school staff may have been involved in the selection process which determined who was placed in which SLC. If this is the case, then it may not have been the time spent together during common planning time, nor the artificially created organizational structure which impacted communication patterns, but rather the selection process itself which gave the appearance that SLCs impacted communication. SLCs may have served to reinforce already existing relationships and the association of SLCs with communication patterns might be nothing more than an association.

Some evidence suggests this was not the case. In FTF1, same SLC was not a statistically significant predictor of communication in any of the three professional networks; so in FTF1 teachers did not select into SLCs based on pre-existing professional networks. However, a separate analysis showed that staff members were more likely to be in the same SLC as their friends. In addition, in an interview conducted at FTF1 the principal informed "...we give the teachers a choice on which small learning community they want to be on." So while the selection process did not seem to influence the professional network results in FTF1, it is possible that staff in FTF2 and FTF3 joined SLCs in part based on existing professional ties.

The second, more major, selection concern has to do with how the schools were chosen. The schools in the sample were purposefully sampled by FTF to reflect partner schools at different stages of implementation of the comprehensive school reform. There is no evidence that these schools are either representative or typical of schools at that stage in implementation. Specifically, FTF may have chosen the more “mature” schools because they were particularly successful implementers of the reform.

Although these concerns can not be completely mitigated, evidence exists suggesting that SLCs are in fact the cause of changes in communication patterns. In FTF1, data were collected at two time points. By separately modeling communication at time 1 and time 2, changes in the association between SLC membership and communication can be observed. Figure 3 plots the magnitude of the Same SLC coefficients in each of the three communication networks (class management, low performing students, and course content and planning) at time 1 and time 2 in FTF1.

**Figure 3. Changes in SLC Coefficient from Time 1 to Time 2**



At time 1, belonging to the same SLC in FTF1 was not a statistically significant predictor of communication in any of the three professional communication networks. In other words, at time 1 teachers were no more likely to go to someone within their SLC for assistance than they were to go to someone outside of their SLC. Just one year later, this changed, and belonging to the same SLC was a statistically significant predictor of communication around both classroom management and low performing students. This change over the course of one school year provides fairly robust evidence that the structural change of creating SLCs impacted communication patterns in this school.

At the same time, SLCs were still not a statistically significant predictor of communication around course content and planning, providing supporting evidence for the hypothesis that structural changes have varying impact on different communication networks. Specifically, it may be more difficult to get teachers to discuss course content and planning with SLC members, because it is more natural to discuss these matters with members of their department who may be teaching similar material.

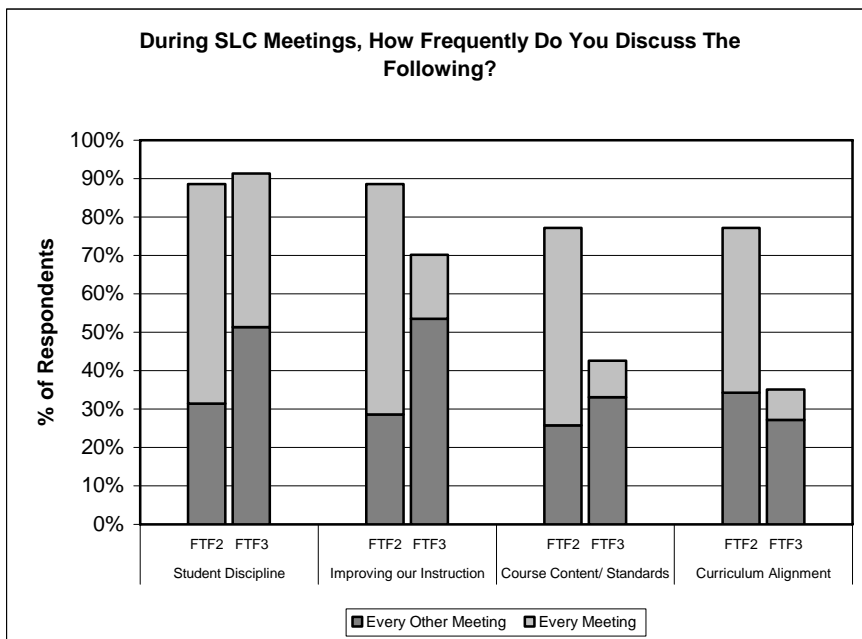
Given that these differences in communication patterns exist, and that they appear to differ by communication topic, the next question to examine is why? To explore possible explanations I look to the SLC meeting, the common planning time.

Common planning time represents the most significant face to face time for school staff within an SLC. FTF works with schools to create a schedule which allows staff in the same SLC to meet together for common planning time for at least three hours per week. FTF2 and

FTF3’s SLCs met two times per week. It is during this time that “teaching staff discuss the academic and behavioral progress of the students they share, study and improve their instruction and conduct the business of their community.” (IRRE website: <http://www.irre.org/ftf/slc.asp>)

Figure 4 illustrates the responses of teachers in FTF2 and FTF3 when asked “During SLC meetings, how frequently do you discuss the following?” Teachers in FTF3 reported that student discipline was the most talked about subject with over 90% of survey respondents saying that student discipline was discussed during at least every other meeting and 40% reporting that student discipline was talked about during every meeting. Student discipline was not the only major subject discussed; teachers reported that the meeting time was also spent discussing strategies for improving instruction.

**Figure 4. SLC Meeting Communication Topics**



Compared to these two topics there was a precipitous drop-off in reported conversations around course content standards and curricular alignment. These results support the network analysis finding that in FTF3 SLC's are more highly associated with communication around classroom management (student discipline) and strategies for assisting low performing students (improving instruction) compared to selecting and planning course content coverage and pacing (course content/standards and curriculum alignment).

Notably, discussions in SLCs varied between FTF2 and FTF3 as can be seen by comparing adjacent bars in Figure 4. While the top two categories of discussion remained the same in both schools, the quantity of discussions in these areas was greater in FTF2. In addition, course content/standards, and curriculum alignment were reported to be discussed far more often in FTF2 than in FTF3. These results tend to align well with the network analysis finding that in FTF2 SLC's were evenly associated with communication around classroom management, strategies for assisting low performing students and selecting and planning course content coverage and pacing. However, it is somewhat unclear why the overall amount of discussion during common planning time is greater in FTF2, yet belonging to the same SLC is associated with a greater likelihood of communication in FTF3. It is possible that the SLC structure is so firmly embedded in FTF3 that much intra-SLC discussion occurs outside of common planning time.

The communication patterns described by the network analysis tend to reflect what is discussed during common planning time. There is support for the claim that creating small

learning communities and setting aside specific meeting times for these SLCs had an impact on communication patterns within a school.

## **Educational Importance**

First Things First is one of several comprehensive school reform programs whose theory of action involves making structural changes to a school to fashion a new environment. In order to create “communities” within a school, FTF groups teachers and has them spend significant amounts of time together. An important part of any community is communication. It is through communication that shared norms can develop, information can flow, and eventually practices can be changed. Within the three schools observed, teachers at those schools further along in the process of implementing FTF were more likely to turn to someone within their own SLC for advice. These results support the idea that implementing structural changes in a school may influence communication patterns. This study provides evidence that restructuring (an organic, inexpensive change) can have an impact on who talks to whom within a school. The findings described in this paper shed light on the potential of structural reform to build professional community among high school faculties. Furthermore, it illustrates the multiple communities to which teachers may need or choose to belong in order to meet all of their professional needs.

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