

# **Implementing for Success An Analysis of Five CSR Models Accelerated School Summary**

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## PROJECT OVERVIEW

The U.S. Department of Education funded the Education Alliance at Brown University to evaluate the implementation of six widely used comprehensive school reform models: Accelerated Schools, Co-nect, Modern Red School House, Success for All, Consistency Management-Cooperative Discipline (CMCD), and Rigby Professional Development. The study, titled *Implementing for Success (IFS)* was conducted over an almost four-year period and addressed ongoing issues raised by observers and critics of school reform and focused on the larger picture of implementation and teacher practice. Alliance researchers were guided by two overriding goals:

- to discover how school reform model characteristics, school characteristics, teacher variables, and various support variables affect the extent of implementation of school reform model components; and
- to explain why some teachers implement reform models successfully and/or change how they teach while others continue their practice unchanged.

As noted, Education Alliance researchers chose to focus on an oft-overlook area of comprehensive school reform—namely, the degree to which comprehensive school reform models extend beyond school level change to effect change in teacher practice. The research team combined qualitative and quantitative data to identify patterns of teacher change resulting from comprehensive school reform implementation. More specifically, the research team sought to discover the key factors that influence: (1) whether or not change in teacher practice takes place, and (2) the nature or quality of that change if and when change occurred.

With the goal of identifying factors that both encourage and impede successful model implementation, Education Alliance researchers surveyed teachers and principals, conducted extensive site visits, observed and interviewed teachers, interviewed principals, district personnel, and model providers, and returned to sixteen case study schools to reexamine the implementation cycle with teachers. By integrating these multiple data sources, researchers were able to explore the way contextual factors both internal and external to the school influenced model implementation within the classroom as well as throughout a school. This study was designed to help link the contextual factors that are relevant to model acceptance at the school level with quality change in teacher instructional practice. By using quantitative and qualitative data as a means to compare and contrast differing sub-groups of schools and teachers, researchers gained a unique perspective for understanding the drivers of successful comprehensive school reform (CSR) implementation, with a central focus on change in teacher instructional practice.

The following report contains a summary of findings from the final report presented to the US Department of Education. It features findings related specifically to the Accelerated Schools Model, while also providing a brief synopsis of patterns that emerged when data from schools participating in all five models was looked at as a whole.

## **I. IMPLEMENTATION FOLLOWING MODEL ADOPTION**

Alliance staff had three sources of data regarding classroom practice: model teacher survey data, comparison teacher survey data, and model classroom observation data. Findings from each of these sources are reported below.

### **Model—Site Teacher Survey Data**

Teachers were asked to report their implementation of 61 reform-based instructional indicators both prior to model adoption and at the time of survey administration. Teachers used a four-point scale, where 1=rarely and 4=routinely, to rate the frequency of their implementation of these classroom practices. Teachers reported moderate levels of implementation prior to model adoption, ranging from 2.7 to 3.1 depending on the model in question. Implementation levels at the time of survey administration—after implementation—ranged from 3.1 to 3.5.

### **Instructional Indicators and Factors**

In discussions with the model developers for five of the six reform models included in this study a list of 61 model-relevant, implementation-based instructional practices—also referred to as “indicators” in this study--was developed. Teachers were asked to rate each practice along two dimensions. First, teachers were asked how often they implemented a given instructional practice “before model implementation,” then they were asked how often they implement that same practice “now.” It is worth repeating that teachers typically completed these surveys in the spring of their second or third year of model implementation, a time chosen with the hope that teachers in a given school would have experienced some sustained period of implementation activity. Teachers used a four-point scale, where 1=rarely and 4=routinely, to rate the frequency of their implementation of these classroom practices.

While providers of the six models promoted inquiry around a shared body of instructional practices (CMCD to a much lesser extent) overall, each model explicitly reduced this shared body of practices to a discrete subset of the indicators for the purpose of measuring their classroom-based implementation. As a result, the 61 indicators represented in the survey and the 10 factors that emerged as a result of factor analysis were not considered as a common set for all models. Out of the 61 indicators, Co-nect supported 45, Accelerated 39, SFA 37, Modern Red 48, and CMCD 5 for the purpose of reflecting model implementation effects at the classroom level. It should be noted that although CMCD supported the use of only a very small number of the instructional indicators from the survey for this analysis--largely because the survey was designed

before they were added to the study--five of the seven CMCD schools in this study were also implementing SFA. To this end, the 37 SFA indicators plus the five CMCD indicators were used as the set of indicators for analysis of classroom practice among the CMCD sample of schools.

The fact that each model supported different subsets of instructional indicators had an impact on the development of subscales to represent groups of related instructional practices. Factor analyses were conducted on the 61 items and ten factors were determined for use as notational shorthand for those times when discussing each practice individually was unnecessary. Because the six models did not select all 61 indicators as common to their core classroom-based effects, this created interpretational challenges when project staff sought to discuss factors across models. For example, one factor was called “Computer Use in Instruction” and was comprised of eight practices or indicators. While Co-nect promoted all eight of indicators, Success for All promoted none.

Despite the fact that each model did not explicitly promote all indicators or factors, data are often presented in this report for all 61 instructional practices or all ten factors. In these cases, indicators or factors *not* explicitly used by model providers in training teachers or promoting their model are noted through shading or formatting in table presentations to denote the exceptions. By examining all the indicators and factors, however, the research team was able to illustrate the interesting phenomenon that teachers did in fact report implementation and/or change in areas outside of their respective model’s purview. There are several explanations for this. For instance, numerous teachers reported that they were already implementing various practices prior to model adoption and therefore reported routine implementation on many survey items. Teacher *change* on non-model specific indicators presented different possibilities. Such change could stem from non-model related professional development or other school-wide initiatives. Equally plausible, the reported change may have been an unintended consequence of model implementation; the model, perhaps, motivated teachers to change in new ways that were not explicitly advocated by the model. While data are not available to fully account for how models may have influenced non-model-specific practices, it is certainly worth further investigation in those cases where change extended beyond focused trainings provided by the model.

### **Teacher Reported Implementation by Model**

Tables 1.1 and 1.2 show the level of implementation reported by teachers at the time they filled out their surveys—at least two years after model adoption. For each model, these tables reflect teacher implementation patterns in the “now” or “after implementation” category, showing the indicators for which teachers reported the highest implementation. Teacher implementation levels “before” model adoption will be discussed later in this chapter. *It is important to remember, therefore, that the implementation scores presented below tell only half the story. For example, while Modern Red schools had the lowest mean implementation “after implementation” score, these schools also had the lowest “before” implementation scores.*

A summary of “after” implementation ratings by model is presented in Table 1.1, where each mean score is calculated using only the indicators explicitly promoted by the respective model indicated. As shown, there are distinct differences among teachers with regard to how they perceive use of classroom practices after model implementation. Modern Red teachers reported the lowest levels of implementation, while CMCD teachers reported the highest. Note that all schools reported implementing with considerable frequency, particularly considering that the items averaged into this “After” score included those (e.g., bringing community resources into the classroom,) which even teachers implementing their models perfectly are unlikely to use “routinely”.

**Table 1.1 Teacher Ratings by Model “After” Implementation**

<b>Model</b>	<b>Mean,-Rating</b>
SFA	3.39
Rigby	3.43
MRSH	3.11
Co-nect	3.17
Accelerated	3.41
CMCD	3.49

A more detailed presentation of “after” scores is presented in the following model-by-model discussion. Tables for each model present the top 15 indicators that teachers reported implementing based on data for all 61 indicators. The results afford insights on the extent to which the highest teacher implementation was taking place with respect to indicators explicitly promoted by model providers or not. Indicators that were not part of a given model’s subset of indicators are highlighted (see italicized items) on each table.

**Accelerated Schools**

Unlike SFA, Modern Red, and Co-nect, there were no indicators on Accelerated School’s list of most frequently implemented indicators that were unique to the Accelerated Schools program (AS). This is consistent with the fact that AS is considered a more process-oriented model than one focused on promoting a finite list of practices. This would explain, in part, the breadth of change that Accelerated teachers reported, a finding that will be discussed further in the next section.

**Table 1.2 Accelerated Schools: Highest Teacher Ratings “After” Implementation**

Instructional Indicator	Mean
Encourage students to read outside of school	3.73
Ensure students understand purpose of task	3.67
Construct opportunities for students to contribute meaningfully	3.67
Frame questions to elicit critical thinking	3.67
Encourage students to follow up on interests	3.66
Link activities to standards	3.65
Help build connections between prior and current learning	3.64
Give students instructions in writing skills	3.62
Link activities to student interests	3.61
Use authentic problems to teach concepts	3.59
Students complete short writing assignments	3.57
Help students use comprehension strategies	3.54
Students summarize	3.52
Engage in joint problem solving	3.51
<i>Students ask questions to raise understanding</i>	3.5

### **Impact of Sustained Implementation**

Selection of schools for this study focused on schools that were either in their second, third, or fourth years of model implementation. The goal was twofold. First, it was hoped that teachers would have been exposed to at least a full year of model implementation when responding to survey questions about changes in their teaching practice. Second, duration of model implementation was considered essential to examining schools’ “implementation arc” with respect to teacher attitudes towards their model, teacher reported implementation of the model in the classroom, and other contextual factors. Selecting schools with varying sustained levels of implementation allowed researchers to examine the impact of sustained model implementation on changes in teacher reported changes in model-specific instructional practices. CMCD schools are not included in this analysis because all of the CMCD schools in this study were in Year 3 of implementation when we administered our survey, affording no variability in level or years of implementation. It is important to note that many schools in this study received federal funding for three years to implement CSR models within whole school programs of reform. A number of schools continued to implement their model beyond three years with the help of district funds. Additionally, some models were particularly successful in persuading schools and districts to continue implementation; in this study sample, many of the SFA schools continued with the model for up to six years.

Rather than using all 61 instructional practices for each model when considering the impact of sustained implementation, this analysis was limited to the 10 instructional factors derived from the 61 indicators. One pattern was constant for four of the five model groups—SFA, Modern Red, Co-nect, and Accelerated Schools—*Year 4 teachers were more likely to report routine consistency of teaching practice than Year 2 or Year 3*

*teachers*. Two of the models, Co-nect and Modern Red, reported substantially higher implementation on many factors in Year 4. These patterns are significant because they speak directly to a concern that was often articulated by teachers and administrators during interviews: sustained change required as many as five years of implementation.

There may be a second explanation for the higher levels of reported teacher consistency and implementation of other practices after Year 4 or 5 of the reform process. Given other findings that are reported below, the higher levels of routine implementation in the fourth year of implementation may indicate that models did not focus on classroom implementation (instructional practice) until later in the implementation cycle. SFA (and Rigby where the two models were implemented together) was the exception; SFA teachers reported similar implementation frequency in Years 2 and 3. It is curious that teachers would report more consistency among their teaching practices in Year 4 while reporting lower implementation of those practices. Perhaps this speaks to an equilibrium that is reached as schools progress through the implementation process: that is, as the level of implementation declines, teachers become more unified in what they see as the important elements to “own” or take away from their reform implementation.

Table 1.3 summarizes the results of these analyses for Accelerated Schools; factors made up of indicators that were not explicitly promoted by a given model are again shown in italicized text within each table summary.

### **Accelerated Schools**

The Accelerated Schools sites in this study were either in Year 3 or Year 4 of their implementation at the time of teacher survey administration. Of the 10 instructional practice scales, the following table illustrates the percentages of teachers reporting routine implementation. Accelerated teachers reported slightly higher routine implementation in Year 4 for half of the factors and the converse for the other five factors.

**Table 1.3 Percent of Accelerated Teachers Reporting They Implement “Routinely”**

<b>Instructional Practice Scale</b>	<b>Year 3</b>	<b>Year 4</b>
Cooperative Learning	24%	16%
<i>Student Engagement in Joint Planning</i>	24%	36%
Linking Instruction to the Community	50%	46%
Enhancing Student Involvement	71%	64%
Supporting Use of Comprehension Strategies	55%	45%
Customizing Instruction	50%	59%
Helping Students Build Meaning	51%	43%
<i>Computer Use in Instruction and Planning</i>	20%	26%
Consistency of Teaching Practice (With Other Teachers)	41%	55%
Teacher Collaboration	35%	36%

### **Comparison Site Implementation**

An exploration of teacher reported implementation from comparison site schools provides a new lens on these six models’ impact in the classroom. In 2003, after identifying comparison sites for each model site in the study, teachers in comparison site schools were asked to complete a survey very similar to the model site surveys. Section C of the model site survey and Section A of the comparison site survey each required teachers to rate the extent to which they used a particular instructional practice. More specifically, on a scale of 1 (rarely) to 4 (routinely), teachers were asked to rate how often they used a particular instructional strategy. Survey items for the model sites and comparison sites were identical except for a few cases where item wording from the model survey was changed because it referenced the model specifically. Additionally, five items were deleted from the original set of 61 items in the model site survey and were consequently excluded in this analysis.

Although model site teachers were asked to rate the extent to which they carried out the teacher practices/strategies listed “at the beginning” and “now” (*after* implementation), we only used the “now” rating for comparing these with what the comparison site teachers reported they were doing at that time. Descriptive statistics were computed for the teacher practice items and these are presented in Tables 1.4-1.7 below. In addition, two-way ANOVA analyses were conducted to determine if the difference between means for each item for the two groups (comparison versus model sites) were statistically significant. The tables summarize the extent to which teachers (by model and comparison site grouping) reported using instructional, classroom, and other related practices. The initial table is followed by the findings, listed in order of importance. Lastly, comparisons are made on the extent to which model sites differed from their comparison sites.

### **Accelerated Schools**

Accelerated Schools (AS) is a process-based model that aims to make all students academically able through Powerful Learning, an approach to enrichment that integrated curriculum, instructional strategies, and school and classroom context. Powerful Learning places emphasis on student research activities, artistic endeavors, community studies, and a range of applications where knowledge was applied to real world activities. Students are expected to generate authentic ideas, products, artistic performances, and problem solutions across subjects that could be assessed directly for quality rather than relying solely on standardized test scores for evidence of student learning.

When comparing the means for the two groups of teachers, AS teachers were found to be using strategies for cooperative learning/student interaction more often than their counterparts. Also, AS teachers were more likely to collaborate, support the use of comprehension strategies and link community to instruction than their comparison site teachers. However, consistency of teaching practice was less frequent with the model site teachers than with control site teachers.

***Accelerated Schools teaches reported using cooperative learning / student interaction strategies more frequently than comparison site teachers.*** Statistically significant differences were found with regard to how often specific cooperative learning/student interaction strategies were used. Accelerated schools teachers reported using all instructional strategies in this area more often than their counterparts. Greatest differences between the groups included having students exhibit what they had learned before audiences (.35) and having students work in teams with individually assigned leadership roles (.32).

**Table 1.4 AS and Comparison Site Implementation of Cooperative Learning**

Instructional Indicator	Mean Frequency of Use (1=rarely, 4=routinely)		Difference (Min=-3, Max=+3)
	AS Teachers (N=545)	Comparison Site Teachers (N=376)	
C32A students independently investigate	3.24	2.94	0.30**
C33A students do projects-build concepts	3.38	3.19	0.19**
C37A Student work in teams w/ leadership roles	3.21	2.89	0.32**
C42A students exhibit learning before audiences	3.10	2.75	0.35**

\*\* p<.01

***Accelerated Schools teachers reported more frequent collaboration than comparison site teachers.*** Additionally, statistically significant differences were found in terms of teacher collaboration. Accelerated Schools teachers reported collaborating with teachers in different subjects and in different positions more than comparison site teachers. The greatest difference (.33) was found in cross-disciplinary collaboration and this may be explained by the fact that the model focuses on student work that cuts across subjects.

**Table 1.5 AS and Comparison Site Implementation of Collaboration**

Instructional Indicator	Mean Frequency of Use (1=rarely, 4=routinely)		Difference (Min=-3, Max=+3)
	Accelerated Teachers (N=545)	Comparison Site Teachers (N=376)	
C1A plan/coordinate w/ teachers in different positions	3.09	2.90	0.19**
C2A plan/coordinate w/ teachers in different subjects	2.98	2.65	0.33**
C3A plan/coordinate w/ teachers in same subject	3.40	3.46	-0.06

\*\* p<.01

*Accelerated Schools teachers reported less consistency in teaching practice than comparison site teachers.* Means for consistency in teaching practice items were relatively high for both groups, indicating that consistency in teaching practice was fairly routine. However, comparison site teachers reported that they used common classroom management routines, common teaching methods, and a common framework for teaching more than AS teachers.

**Table 1.6 AS and Comparison Site Implementation of Consistency**

Instructional Indicator	Mean Frequency of Use (1=rarely, 4=routinely)		Difference (Min=-3, Max=+3)
	Accelerated Teachers (N=545)	Comparison Site Teachers (N=376)	
C4A colleagues and I use common class mgmt routines	3.28	3.51	-0.23**
C5A colleagues and I use common teaching methods	3.27	3.41	-0.14*
C6A colleagues and I use common framework/vocabulary	3.36	3.48	-0.12*

\* p<.05 \*\* p<.01

*Accelerated Schools teachers reported linking instruction to community more often than comparison site teachers.* Given the emphasis on community studies and a range of applications where knowledge was applied to real world activities, the finding that there are statistically significant differences in terms of linking instruction to community is not surprising. Accelerated Schools teachers reported using community resources and introducing cultural traditions more routinely than comparison site teachers.

**Table 1.7 AS and Comparison Site Implementation of Linking to Community**

Instructional Indicator	Mean Frequency of Use (1=rarely, 4=routinely)		
	Accelerated Teachers (N=545)	Comparison Site Teachers (N=376)	Difference (Min=-3, Max=+3)
C49A use community resources	3.14	2.83	0.31**
C50A introduce cultural/local traditions	3.32	3.15	0.17*

\* p<.05 \*\* p<.01

## II. TEACHER CHANGE IN INSTRUCTIONAL PRACTICE

As described earlier in this chapter, 61 model-relevant, implementation-based instructional practices or indicators were developed to examine model implementation and change in teacher practice. Survey items representing indicators of these practices were rated by teachers along two dimensions: how often they implemented a given instructional practice “before model implementation,” and often they were implementing that same practice “now” (see Appendix A for a copy of the survey items). Teachers typically completed these surveys in the spring of their second or third year of model implementation to afford incorporation of sustained implementation activity in teacher ratings. Frequency of implementation of these classroom practices was measured on a 4-point scale, where 1=rarely and 4=routinely. Change scores were created for each indicator, measured as the difference between each teacher’s “before” and “now/after” responses.

### Overall Change

The percentage of teachers who reported any change in the frequency of their implementation of each respective instructional practice was examined for each survey item. The results were dramatic. For almost every indicator, ranging from “I frame questions to elicit critical thinking,” to “I have my students reflect on a passage to determine what is important,” to “I have my students complete short writing assignments,” only 30% to 45% of teachers reported a change in the frequency with which they implemented that instructional practice from “before model implementation” to “now.” In other words, 55% to 70% of all teachers surveyed reported they had not changed their classroom practice with respect to the 61 different instructional strategies that the model providers designated as key indicators of model implementation. Table 3.35 [2.1] outlines the mean change in instructional practice by model.

Note that over two-thirds of Co-nect teachers in the study came from one district, labeled ‘District 2’ because it is one of four districts profiled in the Chapter 4 discussion of district influences on model implementation. Because the Co-nect teachers from District 2 reported very different levels of model implementation than the rest of the Co-nect teachers in the study, researchers present the result of the following analyses for two groups — all Co-nect teachers and the Co-nect teachers who were *not* part of District 2.

**Table 2.1 Teacher Change in Practice by Model**

Model	Mean Change
<b>SFA</b>	<b>.42</b>
<b>Rigby</b>	<b>.45</b>
<b>MRSH</b>	<b>.44</b>
<b>Co-nect Total</b>	<b>.37</b>
<b>Co-nect — Jersey City</b>	<b>.30</b>
<b>Co-nect — Non-Jersey City</b>	<b>.53</b>
<b>Accelerated</b>	<b>.49</b>
<b>CMCD</b>	<b>.49</b>

It is worth noting that one of the major predictors of change was self-reported implementation level prior to model adoption. There is a strong negative correlation between implementation level prior to model adoption and reported change following model adoption. This of course makes sense, as teachers reporting higher levels of initial implementation simply had less room for improvement over time. The correlation between “before” measures of implementation and change measures for all teachers combined was -0.579. Correlations for the individual models ranged from -0.532 for Modern Red to -0.699 for Accelerated Schools.

The remainder of this discussion focuses on teacher change for the 15 indicators (top 25%) evidencing the greatest amount of change. Indicators for which teachers reported the least amount of change are not discussed as they were much the same for all models—few teachers reported they “encouraged students to follow up on their interests” or “encouraged students to read outside of school” in any way less than routinely prior to model adoption. In other words, there was little room for change to be reported on this type of item. These data are not listed for the sample as a whole because unusually high change scores for specific models and the items distort the data for the total body of respondents. Again, indicators that model providers did not explicitly promote at the time the survey was administered are shown in italicized text within tables listing results by model. Teachers generally reported the most change in the areas that their models did emphasize explicitly. The exception to this rule was Accelerated Schools, where seven of the top fifteen indicators were *not* promoted by the model. Some hypotheses on this anomaly are included in the Accelerated Schools text.

### **Accelerated Schools**

Accelerated Schools had the most atypical list of indicators where teachers reported their greatest amount of change (see Table 2.2). Seven of the fifteen top areas of change for Accelerated Schools were indicators that the model provider did not explicitly promote at the time of survey administration. This is compared to a maximum of two such indicators for the other five models. These results inspire at least two theories to explain them. First, it is possible that Accelerated was frequently being implemented in conjunction with

other reform efforts in model site schools; however, it is unclear why this would be a unique case for AS but not for other models in our study. The other theory is that the AS findings highlight the fact that CSR initiatives focusing on some instructional practices may have motivated, inspired, or taught teachers to change on others.

In the implementation data reported earlier in this chapter, it was shown that AS did not have “unique” indicators that would differentiate it from all other models in the top 10-15 of most frequently implemented indicators. Also, looking ahead to the results presented in the next section of this report, the Accelerated Schools model registered significantly higher amounts of change than other models on the greatest number of indicators of all the models in this study—another example of Accelerated Schools breadth. The question then becomes, “What is it about Accelerated Schools in particular that seemed to inspire change across a range of instructional indicators outside the scope of the model?” Perhaps Accelerated was more effective at creating an excitement about reform and the desire to take the reform process above and beyond a specific CSR model in its teachers.

**Table 2.2 Accelerated Schools: Highest Teacher Change Indicators**

<b>Instructional Indicator</b>	<b>Mean Change</b>
students work in teams w/leadership roles	0.67
<i>students think-pair-share</i>	0.63
<i>use rubrics to specify success criteria</i>	0.62
<i>students apply rubrics</i>	0.55
students do projects-build concepts	0.55
students take part in creating classroom rules	0.54
<i>students ask questions to raise understanding</i>	0.52
help build connections across content areas	0.52
<i>help build connections between lessons and s-w themes</i>	0.51
Colleagues and I use common framework/vocabulary	0.51
Use assessment data to make group placements	0.51
<i>Computers: plan/keep records</i>	0.50
Link activities to standards	0.58
<i>Students use peer-writing conferences</i>	0.54
Colleagues and I use common class mgmt routines	0.42

### **Model to Model Comparison: Instructional Change**

In order to compare the teacher responses from each model, a composite variable was created so that the teachers in each model could be compared to the rest of the teachers combined across the other models in the study. Tests for significant differences in the mean change scores for these two groups were conducted for each of the instructional practice indicators relevant to the model at hand.

**Table 2.3 Teacher Change by Model Compared to All Other Teachers Combined**

	<b>Significant* Difference</b>	<b>Significant Difference Where Model is <i>Higher</i> Than Combined Mean</b>
MRSB	11 out of 49 (22%)	8 out of 11 (73%)
Rigby	15 out of 61 (25%)	13 out of 15 (87%)
CMCD	15 out of 39 (38%)	15 out of 15 (100%)
Co-nect	26 out of 45 (58%)	5 out of 26 (19%)
Co-nect w/o District 2	16 out of 45 (36%)	15 out of 16 (94%)
SFA	22 out of 37 (59%)	11 out of 22 (50%)
Accelerated	39 out of 39 (100%)	39 out of 39 (100%)

\*  $p < .05$

The feature of the data that stands out most is the range of the total number of significant differences between models. At the low end, Modern Red seems to be the least distinctive, with teachers reporting significantly greater or lesser change on 22% of its indicators. CMCD comes next with 38% of its indicators registering significantly different amounts of change than the rest of the models. Co-nect and SFA rank next, with 58% and 59% respectively, and Accelerated Schools is at the top of this list, with its teachers reporting significantly different amount of change than their non-AS peers on all 39 of the Accelerated School’s indicators. Given that the models have varying levels of distinctiveness from each other, patterns of differences were further examined for positive or negative levels of change. The following discussion reports these findings for each of the six models.

**Accelerated Schools**

The Accelerated Schools story is perhaps the most surprising and certainly one of the most dramatic. *AS teachers reported significantly higher levels of change than teachers from other models on all 19 of the 39 instructional indicators it advocated in 2001.* Although other models, such as Co-nect without District 2 and CMCD, also showed above average change wherever the level of change was significantly different between their teachers and all other teachers combined, neither of these other two models were similar to Accelerated schools with respect to the actual number of indicators for which change was demonstrated. Indicators for which the greatest difference in change between AS and non-AS teachers was determined included: students participating planning activities, students conducting independent investigations, student working in teams with individually defined leadership roles, and teachers linking class activities to student interests.

**Teacher Change Patterns Across All Models**

The three findings summarized below came from analyses performed on all teachers and

schools in the sample, rather than on the subsets of teachers and schools in each model. Specific models were only referenced if their results differed notably from the sample as a whole.

### **Change and Teacher Tenure**

While many principals and teachers suggested that the more tenured teachers were particularly resistant to change, this was not borne out in IFS survey data. The percentage of least experienced teachers who reported little change was almost identical to that of the most experienced teachers who reported little change. Additionally, there was no significant difference between the average amount of change that most experienced teachers reported and the amount of change that the least experienced teachers reported. Teacher tenure did not impact the amount of change teachers reported, but it did impact what kind of change teachers reported. It is worth keeping in mind, however, that these findings are based on self-reported data, and a teacher tenure effect might still be present with respect to change in actual classroom practice. While this study was not designed to measure change through classroom observation, it would certainly point to a need for that type of study to address the teacher tenure question.

### **School-Level Implementation and Change Patterns**

Schools that reported low implementation “before” model adoption tended to report the highest degree of change. The relationship holds for schools that reported high implementation in the “before” category: teachers who, reported high implementation before model adoption reported the least change after model implementation. One can only speculate as to whether teacher recognition of a need to change spurred teachers on to greater change or whether perhaps a post-implementation appreciation of changed instructional practice led teachers to lower self-ratings in the “before” category. This finding could also be related to a ceiling effect with respect to the survey scale.

### **Teacher Entry Point and Change**

Given that the first year of model implementation is typically the most intense with respect to model-related training and indoctrination, Alliance researchers hypothesized that presence for model selection and the first year of implementation might have a significant impact on teacher attitude, implementation, and change. In fact, teacher presence during this period had a negligible impact on implementation and change. There was only a five percentage-point difference between the percentage of “wholetimers” and “newcomers” who felt positively about the professional development they received. Being present during the first year of implementation made relatively little difference with respect to self-reported teacher support for the model and perception of its impact on the culture of their schools. It also bore little relationship to teacher change.

## **III. OBSERVED IMPLEMENTATION**

Much of the qualitative data analysis focused on text that came from site visitors “scripting” the lesson they saw; site visitors were asked to keep a running log as the lesson went on, describing instructional activities, teacher response to student questions,

student engagement, and so on. Qualitative data analysis software (NVivo™) was used to “code” the scripts with the set of instructional indicators identified on the survey. Unfortunately, site visitor scripts varied greatly in length. If a site visitor produced a less explicit classroom narrative, it was more than likely that the shorter narrative would be coded with fewer instructional practice codes than would a lengthier narrative. Thus, the number of instructional practices coded from the observation data was dependent on the teacher as well as on the site visitor who observed the lesson. Alliance researchers were very careful to evaluate this data with this reservation in mind. In this section the observed frequency of implementation is reported, noting only the trends large enough to transcend the data limitations outlined above.

## Indicators Common to All Models

Table 3.1 illustrates the incidence of each of the practice codes mentioned for the models observed. Codes that model providers indicated they were not explicitly emphasizing at the time of this survey (2001) are presented in italicized text. These codes are included to illustrate how teachers fared with respect to practices that were not part of their own models but that were considered part of overall “reform” or “best” teaching practice. It is important to note that it is natural to see wide variation in observed incidences of the indicators listed. Although some practices one would expect to see almost every day in the classroom, others are strategies that even the best teachers would likely use only occasionally. To this end, rather than comparing implementation of indicators to each other, analyses focused on how implementation of specific indicators varied by model. This analysis includes indicators that were common to all models as well as indicators that were common to some but not all of the models.

It is worth noting here that Alliance researchers observed very little difference in classroom practice between teachers who said they had and teacher who said they had not changed based on their survey responses. This is not necessarily unusual, for if teachers who reported change on the survey did indeed make changes in the classroom they may have “caught up” in implementation to those teachers who reported little change on their surveys. This could be the case even if teachers as a whole overstated their levels of implementation, as long as their assessment of their change over time was more or less accurate.

The number of indicators common to all five of the models in question is relatively small—just 10 out of 61. Yet within these 10 indicators marked differences were observed in implementation between teachers from different models. The following Table 3.1 outlines these differences for each of the models studied.

**Table 3.1 Incidence of Observed Implementation of Practices by Model**

<b>Indicator</b>	<b>Accel.</b>	<b>Co-nect</b>	<b>MRSH</b>	<b>CMCD</b>	<b>Rigby</b>
Community Resources	23.7%	22.7%	2.8%	0%	0%
Framing Questions	21.1%	40.0%	32.4%	20.8%	56.8%
Hands-On	64.5%	49.3%	46.5%	64.6%	32.4%
Joint Problem-Solving	21.1%	25.3%	16.9%	12.5%	13.5%
Meaningful Contributions	61.8%	72.0%	74.7%	54.2%	62.2%
Purpose of Tasks	23.7%	24.0%	21.1%	18.8%	16.2%
Revise ~ Review	64.5%	62.7%	62.0%	29.2%	29.7%
Student Interests	42.1%	38.7%	32.4%	10.4%	24.3%
Student Reflection	11.8%	14.7%	19.7%	4.2%	10.8%
Writing Assignments	32.9%	28.0%	36.6%	14.6%	18.9%
<b>Total # of Teachers</b>	76	75	71	48%	37%

**Accelerated Schools**

A substantially higher percentage of Accelerated Schools’ teachers used hands-on strategies in the classroom when compared to Modern Red and Co-nect teachers. AS teachers, along with Co-nect teachers, also made much greater use of community resources than teachers in the other three models; 24% of the observed AS teachers used community resources, compared to 3% or less for the Modern Red, CMCD, and Rigby.

Accelerated Schools teachers were at the lower end of the spectrum when it came to framing questions. Twenty-one percent of the observed Accelerated Schools’ and CMCD teachers framed questions to elicit critical thinking, compared to 40% for Co-nect and 57% for Rigby.

**Indicators Promoted by Some but Not All Models**

The observed implementation data also allowed Alliance researchers to at least come to some tentative conclusions regarding model efficacy in promoting teacher practice. If teachers in a model that promoted a given instructional practice were observed using that practice far more often than teachers in models that did not promote the practice, one can come to at least tentative conclusions that the model implementation made a difference in the classroom. The classroom management code is a perfect example of this type of clear model effect. CMCD was the model in this study that placed by far the greatest emphasis on classroom management and discipline, so much so that the very name of the model reflected these priorities. Seventy-one percent of CMCD teachers were observed using some form of explicit classroom management strategy, a figure that is remarkably high even when considered alone. This number takes on new meaning when one considers that the next most frequent use of this practice came from the 28% of Co-nect teachers observed using a classroom management strategy. In this case, it seems undeniable that CMCD made a profound impact on classroom practice in precisely the area it focused on and for which it trained teachers. The think-pair-share instructional practice is a similar though somewhat less dramatic example. SFA (and thus our CMCD schools) placed a strong emphasis on the think-pair-share practice, where other models did not. The model’s success at promoting this strategy was evident when one looks at the breakdown

of how often teachers were observed implementing it. Whereas 17% of CMCD teachers were observed using think-pair-share in their lessons, the next most frequently observed model was Modern Red, where 3% of teachers did so.

On the other hand, if teachers in a model that *did not* explicitly emphasize an instructional practice in their training were observed doing that practice more often than teachers in models that *did* explicitly emphasize that practice in training, it is reasonable to at least question how effectively the second model promoted teacher change in that area. Even if one does not question the efficacy of the model's training for a given indicator, this type of pattern in the data could well indicate that there simply was not a strong relationship between model adoption and the implementation of a specific instructional practice.

Two indicators in particular stood out in this way: student input and instances/events. Although Accelerated Schools indicated that they did not explicitly train teachers on the use of student input in 2001, a much higher percentage of Accelerated teachers were observed implementing this practice than teachers from the other models. Fifty-five percent of Accelerated teachers provided for some type of student input into the lessons observed, compared with 21% of Co-nect teachers and just 10% of Modern Red teachers, both models that explicitly promoted this practice. This discrepancy actually corroborates the Accelerated Schools implementation and change survey data; 7 of their top 15 highest change indicators were not specific to the model, and a few of these fell into the student input category. The same type of anomaly was observed with Co-nect teachers relating to the instances and events code. While Co-nect teachers indicated this was not stressed in their trainings, 28% of Co-nect teachers were observed making the instances/events connection, compared with 20% of Modern Red teachers and 8% of Accelerated teachers (again, models that did explicitly promote the instances/events practice).

Teacher integration of students' prior learning did not seem to be clearly related to model support for this practice. Co-nect teachers were observed integrating prior learning more often than teachers from any other model, despite the fact that Co-nect did not explicitly emphasize this approach. At the same time, just 2% of the CMCD teachers in this study were observed explicitly drawing prior student learning into their lessons, despite the fact that SFA (which they were implementing in conjunction with CMCD) purportedly promoted this practice. Encouraging students to work in small groups or teams is another example of a practice that is so widely promoted throughout the education community that no one specific model may be responsible for teachers' implementation of it in the classroom. For example, 55% of Modern Red teachers were observed using teaming as a strategy, which is comparable to the other models despite the fact that Modern Red did not provide explicit training on this instructional practice.

Table 3.2 illustrates the percentage of teachers who were observed using many of the instructional practices identified on the survey, disaggregated by model. Italicized cells indicate the percentage observed for indicators that were not explicitly promoted by a given model.

**Table 3.2 Percent of Teachers by Model Observed Using Practices**

<b>Instructional Practice</b>	<b>Accel.</b>	<b>Co-nect</b>	<b>MRSH</b>	<b>CMCD</b>	<b>Rigby</b>
Ask Self Q	<b>1.3%</b>	<b>1.3%</b>	1.4%	0%	0%
Authentic Audiences	1.3%	6.7%	2.8%	0%	0%
Authenticity	29%	45.3%	28.2%	12.5%	40.5%
Author's Meaning	<b>1.3%</b>	<b>0.0%</b>	9.9%	0%	0%
Class Rules	<b>5.3%</b>	<b>1.3%</b>	<b>1.4%</b>	0%	0%
Classroom Management	<b>18.4%</b>	<b>28.0%</b>	<b>22.5%</b>	70.8%	16.2%
Community Reports	1.3%	5.3%	<b>0.0%</b>	<b>2.1%</b>	0%
Comprehension Strategies	<b>19.7%</b>	<b>20.0%</b>	38.0%	12.5%	43.3%
Content Areas	22.4%	24.0%	9.9%	0%	5.4%
Create Images	<b>4.0%</b>	<b>6.7%</b>	8.5%	6.3%	18.9%
Critical Feedback	<b>9.2%</b>	<b>16.0%</b>	7.0%	0%	2.7%
Cultural Traditions	11.8%	9.3%	4.2%	0%	8.1%
Instances ~ Events	<b>7.9%</b>	<b>28.0%</b>	19.7%	<b>4.2%</b>	21.6%
Investigations	2.6%	9.3%	2.8%	<b>2.1%</b>	0%
Learn Through Content	7.9%	6.7%	5.6%	0%	8.1%
Monitor Understanding	<b>60.5%</b>	<b>60.0%</b>	62.0%	<b>39.6%</b>	32.4%
Prior Learning	<b>17.1%</b>	<b>25.3%</b>	19.7%	2.1%	21.6%
Projects	30.3%	28.0%	18.3%	<b>6.3%</b>	5.4%
Rubrics Used Prior	1.3%	5.3%	8.5%	0%	0%
Searches-Student	1.3%	6.7%	1.4%	0%	0%
Student Input	55.3%	21.3%	9.9%	<b>18.8%</b>	16.2%
Students Apply Rubrics	2.6%	5.3%	5.6%	0%	5.4%
Summarize	<b>7.9%</b>	<b>4.0%</b>	16.9%	8.3%	27.0%
Teaming	56.6%	50.7%	54.9%	50.0%	40.5%
Themes	4.0%	13.3%	7.0%	<b>0%</b>	0%
Thinking Process	<b>6.6%</b>	<b>12.0%</b>	11.3%	<b>4.2%</b>	10.8%
Think-Pair-Share	2.6%	2.7%	2.8%	16.7%	0%
Total # of Teachers	76	75	71	48	37

### **Observed versus Self-reported Implementation: Critical Thinking**

While teacher surveys are the most common means of asking teachers about their classroom practice, research indicates that there are often disconnects between researcher/model developer and teacher understandings of certain instructional practices related to the quality of instructional change. Teachers may report implementing a new instructional practice, but researcher observations may not corroborate such perceptions. Ideally, teachers exhibiting "quality" change in instructional practice would ground tasks in significant principles or concepts. Presentation would engage students and discourse norms would support meaningful inquiry, problem solving, explanation of the thinking process, and justification for answers. At issue is the extent of teacher focus on higher order thinking in the classroom through the implementation of various instructional

practices in the classroom (Antil, Jenkins, Wayne, & Vadasy, 1998; Mayer, 1999; Rowan, Schilling, et al., 2001; Spillane and Zeuli, 1999).

In this study, researchers identified several instructional strategies in particular as necessitating higher order thinking. These items are listed below:

- I help my students build connections between words or images and a speaker's or author's intended meaning
- I frame questions to elicit critical thinking
- I have my students reflect on a passage, class, or unit to determine what is important
- I engage in joint problem-solving with students
- I help my students build connections between particular instances or events and concepts or principles
- I help my students build connections between what students say and their beliefs or thinking processes.
- I have my students create images in their mind or on paper to deepen their understanding

Teachers were asked about the frequency with which they implemented each of these critical thinking instructional practices on our survey. Teachers reported on implementation frequency using the 4-point scale where 1=rarely and 4=routinely. Codes were generated for each one of these instructional practices and coded the observation data accordingly. (Definitions and classroom applications of each are provided in the appendix.)

A substantial difference was found between self-reported implementation of the critical thinking instructional practices and observed implementation for all the critical thinking codes. The chart below shows this gap. For each indicator the percentage of teachers is provided who reported *routine* implementation in the classroom. These teachers rated their implementation level at 4 on the rarely-routinely scale, suggesting to us that high percentages of teachers had a high comfort level with critical thinking instructional practices.

Next to the self reported figure, the percentage of classrooms is provided in which teachers were *observed* implementing each instructional strategy, broken down by model. For example, slightly over half of all teachers reported that they *routinely* helped students build connections between words or images and a speaker's or author's intended meaning. This was observed in 9.9% of Modern Red classrooms, 1.3 % in Accelerated School classrooms, and not at all in Co-nect classrooms. (Italicized areas represent indicators that were not explicitly promoted by the model, although it is interesting to note the high percentage of "instances and events" and "thinking process" codes, which were not specific to the Co-nect model, taking place in Co-nect classrooms.)

**Table 3.3 Critical Thinking Practices: Self-reported and Observed**

<b>Indicator</b>	<b>Self-Reported v. Observed</b>	<b>AS</b>	<b>Co-nect</b>	<b>MRSH</b>	<b>CMCD (SFA)</b>	<b>Rigby</b>
Author’s Meaning	Self-Report (Routine)	45.6%	41.9%	39.2%	61.2%	67.3%
	Observed	1.3%	0.0%	9.9%	0.0%	0.0%
Instances and Events	Self-Report (Routine)	44.2%	43.5%	40.8%	55.3%	68.8%
	Observed	7.9%	28%	19.7%	4.2%	21.6%
Thinking Process	Self-Report (Routine)	45.5%	42.8%	40.9%	60.0%	70.4%
	Observed	6.6%	12.0%	11.3%	4.2%	10.8%
Student Reflection	Self-Report (Routine)	48.6%	44.6%	40.6%	52.3%	66.4%
	Observed	11.8%	14.7%	19.7%	4.2%	10.8%
Create Images	Self-Report (Routine)	56.0%	55.6%	50.9%	67.8%	72.1%
	Observed	4.0%	6.7%	8.5%	6.25%	18.9%
Framing Questions	Self-Report (Routine)	70.0%	61.6%	55.5%	71.5%	82.1%
	Observed	21.1%	40.0%	32.4%	20.8%	56.8%
Joint Problem Solving	Self-Report (Routine)	58.3%	53.6%	48.9%	66.1%	71.7%
	Observed	21.1%	25.3%	16.9%	12.5%	13.5%

The table above clearly represents a large discrepancy between observed and self-reported practice, especially because teachers reported routine implementation of these practices.

It is difficult to explain the differential between observed and self-reported implementation (23-67 percentage point differential for each critical thinking code) without further research on teacher perception of critical thinking practices and the methodological issues related to observing instances of these perceptions. One methodological note about the scale used in the teacher surveys is that it was not anchored in specific numbers of hours of implementation but, instead, used the somewhat subjective terms “rarely” and “routinely.” This coding situation contributed to the tenuousness of making comparisons between survey and observation data. Research interpretation is limited, in other words, by not knowing the exact temporal frequency which teachers had in mind when reporting "routine" implementation of "framing

questions to elicit critical thinking.” This frequency could range from once an hour, to several times a day, to once a day. Each may be valid depending yet again on the perceived nature of the practice. Teachers' underlying assumptions about the meaning of the word "routine" hold the key to exactly how often researchers would expect to see certain practices if teachers were genuinely implementing with the same frequency as they reported on their surveys. Nonetheless, some of the gaps between reported and observed implementation are so dramatic that it is hard to believe that they are attributable solely to the meaning of "routinely" as opposed to a genuine gap between teacher perception of their practice versus their actual implementation of instructional strategies.

Teacher interviews and principal interviews allowed for some exploration of the gap between reported and observed implementation. When asked about model facilitation, some teachers voiced frustration with the lack of explicit classroom focus. As one teacher reflected, “A continued problem is the training. Accelerated model providers provide good theory but are very limited in their ability to illustrate what this looks like in the classroom. This causes much frustration.” A principal described the problem in this way:

*A note concerning the model providers—they should simplify the training, move it into the school and use real teachers and students. There is a thread of providing theory, providing criticism but providing no detail of how to move classroom instruction to better align with the attributes of this model.*

Teacher exposure to and absorption of *theory* and a lack of time devoted to classroom *application* could partially explain the high levels of reported implementation. Teachers may have felt comfortable with the concepts that models were presenting, yet they did not truly understand what those principles looked like in practice. Particularly given the limited amount of time some model facilitators spent in each school, facilitators simply would not have had time to observe teachers and monitor how the theories being presented in trainings were translating to practice. Co-nect, MRSH and Accelerated Schools recognized this challenge and moved to remedy the situation with a greater focus on instructional practice and student learning beginning in 2002. Accelerated Schools also raised the number of days of on-site professional development that its schools received in Year 2 and Year 3 of implementation.

#### **IV. CONTEXTUAL FACTORS AND TEACHER CHANGE**

Education Alliance evaluators also looked to contextual factors surrounding model implementation as a way to shed light on the presence or absence of teacher change in the classroom. This analysis was conducted using the entire sample of teachers and schools, with specific models only referenced if their results differed notably from the sample as a whole. Included below is a brief summary of our contextual findings as a whole.

##### **Principals and Teacher Change**

Half of the 2600 teachers surveyed reported that they “routinely” perceived their principals as a co-creator of the reform process who communicated coherence and

expectations in the context of a collaborative school climate. Another 40% indicated that the principal did affect model implementation in the school, if not routinely, in an active and collegial manner. In addition, strong principal leadership was directly correlated with strong teacher support for the model *and* high teacher scores on the school climate factor. Teachers, who viewed their principal as actively engaged in leading model implementation also expressed a positive view of the model and returned high ratings for the degree of collaboration, trust, and collegiality in the school.

Principal turnover was a serious blow to the reform effort in schools that IFS staff visited for case studies. Low change schools consistently reported principal turnover and/or limited principal engagement in and enthusiasm for the reform process. Yet even in school with reasonable levels of principal consistency and support, “changers” were only slightly more likely to rate their principal at the highest rating than “no changers”. This illustrates the fact that a higher degree of teacher satisfaction with principal leadership was not, on its own, a sufficient catalyst for substantive teacher change.

### **Professional Development/Model Facilitation and Teacher Change**

The quality of professional development/model facilitation was an important theme in teacher and principal accounts of reform, yet it can be described as one of several undercurrents shaping the implementation process. While teachers from most of the high change schools found little to criticize about professional development/model facilitation in their schools, teachers from low change schools were mixed on their assessment of the same with equal numbers of teachers praising or faulting the quality of model-related professional development in their schools. Although survey data showed a significant correlation between model facilitation and teacher change, a *stronger* correlation emerged between principal leadership and teacher professional development ratings (.453). This suggests that principals are essential to the creation of both a culture that values professional development and of the time and resources needed for teachers to take full advantage of the facilitation each model has to offer.

IFS survey data showed relatively slight variation in teacher ratings of model-related professional development for Co-nect, Accelerated Schools, Modern Red, and SFA. This is interesting given how different much of this professional development was—SPA trainings were typically quite prescriptive, while Modern Red trainings, for example, often relied heavily on the teachers themselves to generate curricula in line with their own state standards. Rigby teachers returned significantly higher professional development ratings than teachers in the other model sites in the study. However because all Rigby school in the sample came from one small district, it would be unwise to draw universal conclusions from this study's Rigby findings.

Strong and consistent in-house facilitation emerged as a critical factor influencing implementation in moderate-to-high change schools; conversely, as with principal leadership, model-facilitator turnover and/or inconsistent in-house model facilitation was associated with low change schools. Thirty percent of schools in the study did not have a full-time in-house model facilitator. SFA schools reported the highest percentage of full-time facilitators (80%) while 13% of SFA schools had no facilitator at all. This is in

marked contrast to Modern Red, where just 57% of its schools had a full-time facilitator, and 29% had no facilitator at all.

### **School Climate/Collaboration and Teacher Change**

One of the most remarkable findings to come out of this research is the suggestion that schools with close-knit, established groups of teachers may be less likely to successfully implement a reform model than schools where the teaching staff has dealt with conflict or turnover. When considering five different “before model adoption” collaboration-related variables and teacher change, in every case, a school's level of collaboration prior to model adoption is significantly and *negatively* correlated with total school change. Rather than functioning as a group of teachers ready to support each other in reform, teachers that already collaborate closely prior to model adoption may instead function as a highly effective, close-knit group of resisters.

In schools that do *not* enter the model implementation process with a high level of collaboration or positive school climate, these seem to be among the most consistent byproducts of successful model adoption. As evidence, while 67% of teachers reporting substantial amounts of instructional change rated their school highly on the climate/collaboration factor, just 46% of teachers who reported little instructional change did the same.

With one exception, teacher ratings on school climate/collaboration following model adoption varied little by model. Rigby—a curriculum based intervention—teachers reported significantly higher collaboration following model implementation than the other models. This suggests that it is the reform process itself, rather than the specific model sponsoring it that leads to a more collaborative and positive school environment.

### **District Support and Teacher Implementation and Change**

Teachers reporting substantial amounts of instructional change were significantly more likely than teachers reporting little instructional change to report that their school's reform model fit with district initiatives, and that district administrators supported building-level initiatives. What this data does not shed light on, however, is whether teacher change actually varies by district support for the reform process or whether teachers who are resistant to change to begin with are likely to have negative perceptions of the district and their relationship to schools. Our case study and interview data suggest that the survey data reflect some of each phenomenon.

Principals gave districts highest ratings for supporting school-based initiatives, responding to requests for specific help and establishing accountability requirements. Principals were less satisfied in three other areas—support for reassigning staff, reallocating non-personnel budget items, and coherence of reform initiatives. Principals gave districts substantially *lower* ratings for willingness to waive district policies. This competition between multiple district initiatives and model implementation was a fundamental issue that emerged in qualitative data and case study analyses.

The degree of implementation and change as a result of reform model adoption differed considerably from district to district, as demonstrated by the low implementation/change scores found for one district in the study which had multiple schools mandated to implement Co-nect. Low ratings from principals in this district on the question of model compatibility with district initiatives and district willingness to waive policies in conflict with model implementation indicate the degree to which competing district initiatives hampered reform efforts. Case study data also illustrated the degree to which district policy influenced change patterns. A coherent and supportive district policy throughout the three-year implementation cycle was closely associated with moderate-to-high change in a school. In addition to district coherence, a second "district" factor emerged as an influence on teacher and school change—latitude in model selection and adoption. High-to-moderate change schools reported a greater degree in choice or “ownership” of the model selection and implementation process.