College of Education
University of Missouri

The Leader in Me Effectiveness Study

Executive Summary

submitted to FranklinCovey Education
November 15, 2018

By
Christi Bergin, Principal Investigator
Sarah Hill, Project Manager
Sara Prewett, Chia-Lin Tsai, Eli Jones, and Bridget Murphy

Research Team
Christi Bergin
Assoc. Dean, Research & Innovation
Chia-Lin Tsai
Asst. Professor of Statistics
University of Northern Colorado
Eli Jones
Asst. Professor of Research Methods
Columbus State University
Sara Prewett
Postdoctoral Fellow
Bridget Murphy
Senior Data Analyst
Mat Qazi
Doctoral Candidate
Susan Nossaman
Research Assistant
Carmen Marty
Research Assistant

We acknowledge the four schools that participated in this study. Five principals or assistant principals and 18 teachers generously gave of their time to support this study and allowed us to visit their school and classrooms repeatedly. Twenty students and 14 parents/guardians patiently shared their views of TLIM with us. To protect their anonymity, we cannot thank them by name, but we are deeply grateful for their kindness and help in completing this study.

Special thanks also go to Tony Castro, associate professor of social studies education and qualitative research methods at the University of Missouri for guiding analysis of the collective case study, and to Kirsten Pinto, editor, for improving our writing.

Abstract

The purpose of this study was to investigate the effects of *The Leader in Me* (TLIM) on teachers and students. A mixed-method design was used that included (1) a collective case study and (2) a quasi-experiment. The collective case study included four elementary schools that were diverse for locale and student demographics. Multiple sources of data were collected from principals, teachers, students and parents. These included observations, student diaries, student surveys, school records, and 94 interviews. Participants across the four schools identified similar robust outcomes. As a result of TLIM implementation, teachers became more prosocial, used more effective discipline, developed better relationships with students, felt more camaraderie with each other, and found teaching easier and more enjoyable. Students became more prosocial, engaged in less bullying or problem behaviors, developed greater confidence, and became more motivated, harder working, self-regulated learners. Specific active ingredients that contributed to these outcomes were identified by participants.

The quasi-experiment involved propensity score matching of 117 TLIM schools and 348 non-TLIM schools across a state. The groups were compared on secondary state-wide data for achievement, attendance, and discipline incidents. These data were problematic in ways that attenuate results (e.g., highly skewed, change in state proficiency tests). Yet, despite data limitations, positive results were detected for TLIM on achievement, attendance, and discipline incidents for students overall. The collective case study further suggests that for some students, such as low-SES students or those that dislike school, the positive effect of TLIM can be dramatic.

Executive Summary

This effectiveness study was designed to determine the effects of *The Leader in Me* (TLIM) on teachers and students. It uses a mixed methods design, meaning it involves both qualitative and quantitative data in two parts: a collective case study of four schools and a quasi-experiment. A collective case study is a process whereby general lessons are drawn from multiple case studies. In the quasi-experimental study, schools implementing TLIM were matched to similar schools not using TLIM as a comparison group, and then outcomes for the two groups were compared. We summarize results from the collective case study first, followed by the quasi-experiment.

Collective Case Study

We conducted a separate case study for each of four schools. Case studies paint a rich picture of participants' experiences and provide detailed perspectives to help us understand how and why an intervention works in a specific context. In this "collective" case study we compared results from the four case studies in order to draw general results and explore both replication and diversity.

We selected four schools (cases) for diversity in attributes that might affect outcomes of TLIM. Three of the schools were Lighthouse Schools, meaning they had achieved a specific standard of implementation set by FranklinCovey Education. One school (Rural Elementary) was preparing to apply for Lighthouse designation. The schools had four to six years of implementation of TLIM. The schools were selected for diversity in locale, socioeconomic status (SES), achievement, ethnicity, and special needs of the student body in order to maximize variation of experience. They range from rural to urban and vary dramatically in ethnicity (8% to 91% white) and percentage of students receiving free or reduced-price lunches (8% to 99%). Thus, we studied the implementation and outcome of TLIM in contrasting contexts.

- Mixed Elementary is in a mixed middle-class and low-SES suburban neighborhood and is a district magnet school for students with special needs in addition to serving the neighborhood children. It has implemented TLIM for six years and earned Lighthouse status.
- Urban Elementary is in a low-SES neighborhood with high student turnover and low achievement. Almost all (99%) students qualify for free or reduced-price lunch and 58% of students are English language learners. It has implemented TLIM for four years and earned Lighthouse status.
- Rural Elementary is in a low-SES rural area that is beginning to have an influx of higher-SES families who commute to a nearby suburb. It has implemented TLIM for four years and has not yet earned Lighthouse status.
- Suburban Elementary is in a prosperous middle-class neighborhood on the outskirts of a large city. It has implemented TLIM for six years and earned Lighthouse status.

Within each school, four to six students (sub-cases) were purposively selected based on whether they were new to TLIM because they just moved from a non-TLIM school into a school that is

fully implementing TLIM. We asked them to describe how their school experience was different before and after TLIM. A total of 20 students in four schools participated in this collective case study. Their teachers, principals, and parents also participated in the study.

Our data collection strategies were primarily interview but also included school visits, observation, a student survey, photos, student daily diaries, and school records. In total 20 students and their 18 teachers, four principals, one assistant principal, and 14 parents were interviewed. We conducted 39 student interviews and 36 teacher interviews. A grand total of 94 interviews were conducted from January to May within a school year.

This collective case study is an intensive analysis of TLIM that is both a descriptive and an explanatory study. The research questions addressed by the study are:

RQ 1: How is TLIM being implemented by teachers and students?

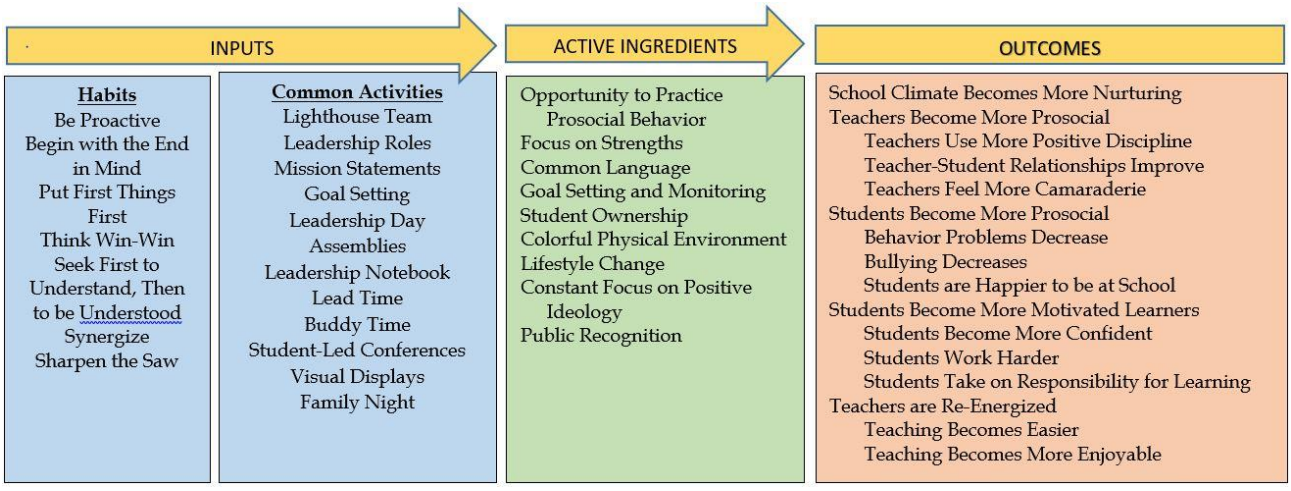
RQ 2: What active ingredients of TLIM might explain changes in student and teacher outcomes?

RQ 3: How do teachers and students change as a result of TLIM in their school?

Each research question was addressed from the perspective of students, teachers, principals, and parents.

We fully analyzed one case first. We selected Mixed Elementary as the first case for analysis because it was "in the middle" of the four schools for student socioeconomic status (SES) and it had the most diverse ethnic composition. Next, we analyzed each of the other three schools separately. We then conducted a cross-case comparison of our results from the four diverse schools. We followed a three-phase coding process with different combinations of a team of four researchers in order to reduce the risk of bias and enhance the validity of the findings. Results across the four case studies are compiled into a summary logic model in Figure 1. We found that although the contexts of these four school varied greatly, results were highly similar.

Figure ES.1. Combined Logic Model Across Four Cases



Implementation

Despite diversity of the school communities, the components of implementation across the schools were quite similar and included:

1. Lighthouse Team
2. Leadership Roles
3. Mission Statements
4. Leadership Day
5. Leadership Assemblies
6. Student-Led Conferences
7. Goal Setting and Monitoring
8. Leadership Notebook
9. Lead Time
10. Leader Loop
11. Buddy Time
12. Visual Displays
13. Family Night

This is not surprising given that the schools had become, or were aspiring to become, Lighthouse Schools. To earn this designation, schools had to meet common standards. Nevertheless, TLIM is a comprehensive program with many components. It takes sustained attention, teamwork, and strong buy-in from the staff to implement so many components in a school. The degree of similarity of implementation across these diverse schools and the caliber of implementation is impressive given how complex the program is. Presumably, this is a reflection of the quality of professional development and coaching support provided to the schools, which all the teachers commended, describing it as engaging and meaningful.

Nevertheless, there were some implementation differences among the four schools. Some differences had to do with degree of implementation. For example, some schools (e.g., Suburban) more fully used leadership notebooks than other schools (e.g., Rural), and some schools had a higher percentage of students in school-level (rather than classroom-level) leadership roles (e.g., Mixed vs. Urban). Other differences reflected the communities of each school, as follows.

- Mixed Elementary adapted TLIM to accommodate the high proportion of special needs students at their school, creating Habit lessons and leadership roles appropriate for their students.
- Urban Elementary adapted TLIM to accommodate the high turnover in students. New students need to learn the 7 Habits quickly to "catch up" to the current students, so the school created leadership boot camp. To accommodate the high prevalence of challenging behavior, the district implemented a behavior management system. Urban Elementary incorporated 7 Habit language into this system and gave students leadership roles related to the system (e.g., behavior ticket collectors). To accommodate a high percentage of non-English speaking parents, the school was experimenting with variations on family night, including having students teach their parents the 7 Habits in their native language.
- Rural Elementary adapted TLIM to accommodate the service orientation of their small, close-knit community that valued looking after one another. The school formalized

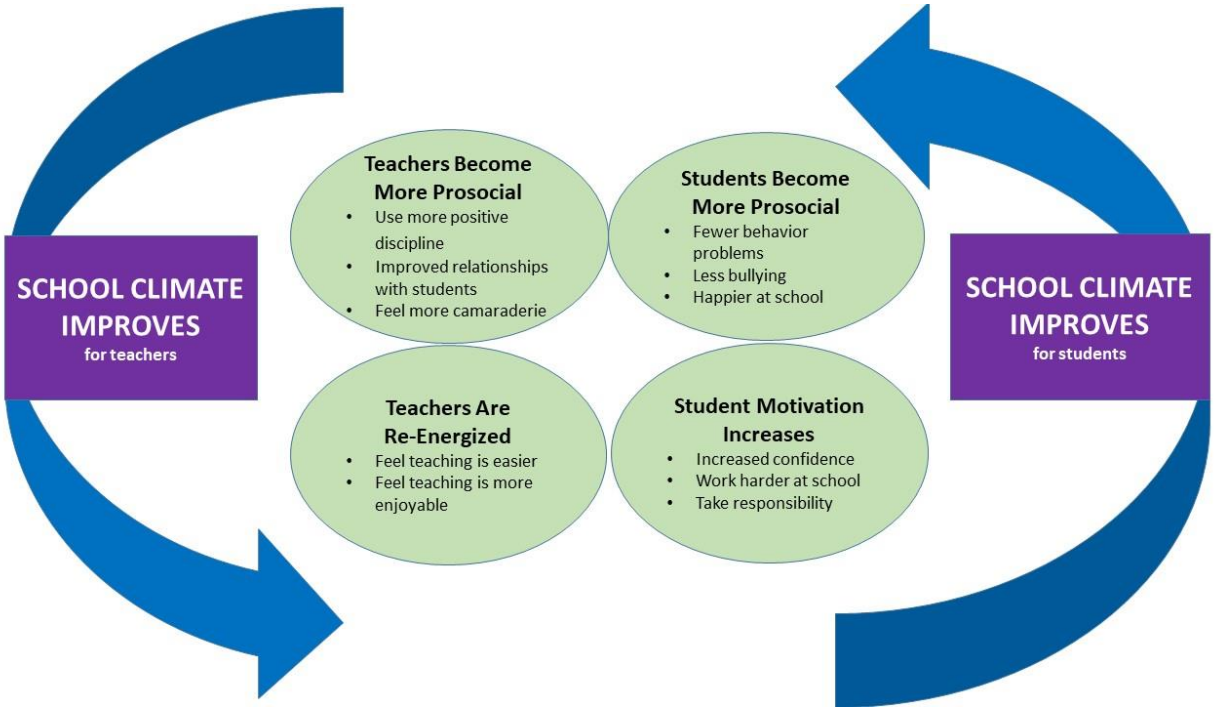
procedures for students to apply to lead community service projects. They also implemented daily shout-outs to celebrate student leadership behavior. While this celebration of students was positive, some teachers felt there needed to be more emphasis on celebrating goal attainment, which would require increased goal monitoring and more consistent use of the leadership notebooks.

- Suburban Elementary adapted TLIM to accommodate the strong curriculum expectations of their district that tended to crowd out TLIM activities. The school involved non-teaching staff to supervise and train students in leadership roles so that teachers did not have as many demands on them. They infused the 7 Habits into academic lessons and reduced the time spent on direct lessons about the 7 Habits.

Outcomes and Active Ingredients

Results from the four case studies strongly converged despite the fact that these four schools were selected for diversity and that they are implementing TLIM in different school and community contexts. Key outcomes shared across the four schools are presented in Figure 2.

Figure ES.2. Key Outcomes of *The Leader in Me* Across Four Diverse Schools



Why does TLIM promote these outcomes? This is a vital question for practitioners and theorists who need to know which active ingredients are most important to implement in order to achieve the outcomes. It is challenging to identify the active ingredients for TLIM for two reasons. First, as discussed above, there are many components of TLIM implemented across these four schools. Second, by design, the 7 Habits permeate behavior and activities. As one teacher said, "It just encompasses everything I do and say, from the way my room is decorated, the way we embed it into our lessons, to the way I speak to students." However, as participants discussed what

outcomes they believed resulted from TLIM, they often spontaneously drew cause-effect linkages between specific active ingredients and outcomes. In the following discussion of outcomes from the collective case study, we will present the active ingredients that participants believed may have caused each outcome.

Outcome #1: Positive School Climate

Data from all four schools robustly support the conclusion that ***The Leader in Me* creates a more nurturing and positive school climate**. Participants at one school believed this even extended beyond the school because mission and values are shared across school and home, making home-school connections stronger. Teachers said TLIM made the school a "friendlier" place. One teacher said it has improved the "social climate 100%." Students used terms like "homeier and "like family" to describe the school climate.

Active Ingredients

Participants indicated that several active ingredients of TLIM improve school climate: common language, warm physical environment, leadership roles, mission statements, and celebrations of success.

The common language helps everyone share values and expectations for good behavior and communicates school-wide guiding principles. The visual displays create a "warm" and "kid friendly" physical environment. The leadership roles help students feel valued at the school. Composing mission statements helps teachers and students make a positive ideology for themselves more concrete. These ingredients, plus the emphasis on celebrating successes, result in a positive focus at the school. In addition to these active ingredients, the following three outcomes of TLIM contribute to the positive school climate.

Outcome #2: Prosocial Teachers

TLIM helps teachers become more prosocial toward each other and toward students. Prosocial behavior refers to any behavior that benefits others or promotes harmonious relationships. As a result of TLIM, teachers develop better relationships with each other and feel greater camaraderie. A teacher said, "People choose to be here because of the climate that we have." Another teacher said TLIM has "brought us all a lot closer together." Teachers said that TLIM helped them have more empathy for each other and get along better. Teachers said TLIM has helped them trust and understand students more. The teachers report themselves as being "nicer" or "more respectful" toward students, and they report that students are more likely to "want to do the right thing." Teachers use more positive discipline with students and develop better teacher-student relationships. TLIM has helped them focus on the positive and use improved vocabulary for redirecting problem behavior so that their discipline approach is more respectful. A teacher said her discipline "strategies are a lot more focused on the positive than they used to be." Research suggests that improving discipline may be one of the most powerful aspects of creating a more nurturing school climate and improving student behavior (Bergin, 2018).

Active Ingredients

Participants indicated that three active ingredients of TLIM help teachers become more prosocial: setting goals, living the 7 Habits, and common language.

Staff set and monitor goals together. This gives them a shared mission and sense of purpose, which creates "a more positive culture among staff." Teachers also felt that they improved as human beings as they tried to implement the 7 Habits themselves, which helped them listen more empathically to one another. For example, they would Seek First to Understand, Then to be Understood during team meetings. The common language helps teachers use more positive discipline across grade levels. One teacher pointed out that if she runs into any kid in the hall who is "not doing the right thing" or any child who is off-task, she can say to the child, "'Are you being proactive?' or 'Are you putting first things first?' . . . And they'll know what that means. Even kindergartners."

Outcome #3: Prosocial Students

TLIM helps students become more prosocial. Teachers and students said that TLIM has helped them become more kind, generous, and helpful. Students said their classmates were kinder to one another at this TLIM school than they were at their previous schools. For example, one student said that TLIM "teaches kids to be kind to one another if they're not" already. Students' increased prosocial behavior extends to home as well, where they are more helpful with chores and are more cooperative with siblings. Students are happier to be at school because it is a more welcoming, positive place. There are fewer behavior problems and when problems do arise, the students work through them faster. Behavior problems and bullying decrease.

Active Ingredients

Participants indicated that five active ingredients of TLIM help students become more prosocial: opportunity to practice prosocial behavior, focus on strengths, student ownership, common language, and goal setting.

Leadership roles and buddy time give students opportunity to practice prosocial behavior, which increases prosocial behavior. Teachers and students defined leadership as prosocial behavior—serving others. A student said, "being a leader is helping others." In addition, the focus on strengths and student ownership allows students to identify ways they can help others, which leads to students behaving better and "rising up" to be the kind of people they and their teachers want them to be. Teachers and parents pointed out that this was particularly powerful for students who are not academic stars. Furthermore, teachers said the common language of the 7 Habits makes it easier to re-direct student behavior. One teacher said TLIM has unified the school because everyone is using the same language to address behavior across grade levels. Finally, setting and monitoring behavior (office referral) goals with data posted in the hallway where students "see that data every month of which grade level has the least number of office visits" motivates them to behave better.

Outcome #4: Motivated Students

TLIM increases student motivation. Students develop greater confidence because students feel like they have a valued place in the school. Confidence is built by trusting students to take on

leadership roles and ownership of classroom responsibilities. Teachers said students become more motivated learners. They work harder academically. They become more responsible and self-directed. Teachers talked about how students are more goal oriented, focused, and proactive in their schoolwork. For example, one teacher said that students have a better academic mindset because they apply the Habits to their learning. Setting academic goals may lead students to strive academically. Students also discussed how they want to work harder and even feel driven to achieve. Both parents and students said TLIM helped students become more independent and conscientious in their work both at school and at home.

Active Ingredients

Participants indicated that three active ingredients of TLIM help students become more motivated learners: student ownership, common language, and goal setting.

The common language of the 7 Habits helps teachers talk with students about strategies, such as Put First Things First and Begin with the End in Mind, to plan ahead to get school assignments done. Students set their own goals and are in charge of their own learning. A teacher said that "putting more of their educational environment, learning, and the activities that they get to do in their hands" gives students more control and more confidence. TLIM teaches children to set goals and plan strategies to get there. A teacher said students are "absolutely" learning greater "self-responsibility" from this because "they're tracking goals, setting goals, learning how to manage their time." A student said, "I try as hard as I can to make those goals."

Outcome #5: Re-energized Teachers

Teachers report that teaching is easier and more enjoyable as a result of these student and teacher changes. Teachers reported feeling more energized about teaching after implementing TLIM.

Active Ingredients

Participants indicated that three active ingredients of TLIM make teaching easier and more enjoyable: student ownership, and teachers and students prosocial behavior.

One teacher said, "the biggest difference between us and a non-*Leader in Me* school [is students] run the show. . . They've taken a lot off my plate." Teaching is easier when students take more initiative for their own learning. In addition, teaching becomes easier and more enjoyable as teachers and students become more prosocial.

In addition to these common outcomes across the four case studies, two differences emerged that may be the result of contextual conditions of the diverse schools. First, participants at Urban Elementary focused more on improvement in student misbehavior. All schools mentioned this, but it was a central theme at Urban Elementary. Student behavior was a significant issue at Urban Elementary and across the district prior to implementing TLIM. A district-wide behavior management system was implemented, yet teachers described non-TLIM schools in their district as still having significant student behavior issues. Within this context, teachers at Urban Elementary focused on how TLIM reduced student defiance toward teachers and bullying toward each other. After implementing TLIM, discipline incident rates were down, and previously

challenging students were thriving. Teachers at Urban Elementary said that kids are happier at the school since they implemented TLIM. Students run excitedly into the school each morning.

A second difference was that teachers and parents at Urban Elementary told multiple stories of dramatic turnarounds for individual students; they were almost miraculous transformations. For example, one student, who had been expelled from a previous school because he was in so many fights, has flourished under TLIM. At Urban Elementary he became an exemplary student who always does his work, is polite, stays focused, and is more motivated. He "loved" his TLIM school. The teacher credited this behavior turnaround to TLIM. His mother cried because she was so happy about the transformation.

These two differences in outcomes between Urban Elementary and the other three schools are in accord with intervention research that shows greater growth in outcomes when students have more initial room to grow. This case comparison confirms the hypothesis that TLIM may be especially powerful for students with challenging behavior prior to implementation of TLIM, although the results are quite positive for children in general.

Quasi-Experiment

A quasi-experiment was used to estimate the effects of TLIM on achievement, attendance, and discipline incidence rate. We used propensity score matching to create an intervention and comparison group. Propensity score matching is a statistical process of accounting for factors that might predict whether a school is in TLIM or not. The goal is to create a TLIM and a non-TLIM group that approximate random assignment, thereby reducing bias in estimates of the effect of TLIM. We matched schools on 14 variables. A successful matching process resulted in a final sample of 348 non-TLIM schools and 117 TLIM schools, 23 of which were Lighthouse Schools.

Four analyses were conducted for achievement and attendance outcomes: (1) comparing outcomes for TLIM schools before and after they implemented TLIM, (2) linking length of implementation of TLIM to increase in outcomes, (3) comparing TLIM and matched non-TLIM outcomes, and (4) comparing Lighthouse and non-Lighthouse TLIM school outcomes. Only the third analysis could be conducted on discipline outcomes due to the limitations of the data.

Achievement Results

TLIM schools and their matched comparison schools tend to have higher achievement than other schools in the state, suggesting higher achievement is due to pre-existing variables used to match schools. Achievement was measured by percentage of students scoring proficient or advanced on the state proficiency test in English Language Arts (ELA), Mathematics, and Science. Four analyses were conducted to investigate possible value added for TLIM implementation on achievement.

- First, we compared TLIM schools before and after they implemented TLIM. We found significant increase in ELA and decrease in Science (2010–2017) achievement before and after schools implemented TLIM. These outcomes are consistent with state trends; that is, across all schools in the state ELA scores increased and both Math and Science scores

decreased. However, TLIM schools showed no difference in Math achievement before and after implementing TLIM, despite the overall Math achievement trend decreasing.

- Second, we investigated the linkage between length of implementation of TLIM and increase in achievement. We found a moderate correlation between length of implementation of TLIM and ELA achievement and a weak correlation for Science and Math achievement.
- Third, we compared achievement trends in TLIM and matched non-TLIM schools. We found that TLIM schools had a faster ELA achievement increase and slower Math achievement decrease between 2010 and 2017.
- Fourth, we compared achievement trends in Lighthouse and non-Lighthouse TLIM schools. We found that Lighthouse Schools had consistently higher achievement than non-Lighthouse TLIM schools across years.

In summary, achievement trends in TLIM schools followed state-wide trends. Two exceptions are that TLIM schools had faster growth in ELA proficiency test scores than non-TLIM matched schools and that TLIM may be protective against the state-wide trend in decreased Math achievement. In addition, there is a modest relationship between higher achievement and length of implementation of TLIM.

Attendance Results

TLIM schools and their matched comparison schools tend to have attendance rates similar to other schools in the state. Attendance rates were high across schools, hovering at the 90% level, with little variation. Four analyses were conducted to investigate possible value added for TLIM implementation on attendance rate.

- First, we compared TLIM schools before and after they implemented TLIM. We found that schools' attendance rate was higher after they implemented TLIM.
- Second, we investigated the linkage between length of implementation of TLIM and increase in attendance rate. We found a positive, but weak, association between length of implementation and attendance rate.
- Third, we compared attendance-rate trends in TLIM and matched non-TLIM schools. We found that TLIM schools and non-TLIM schools had similar attendance trends. No significant difference was found, although TLIM schools had a faster increase rate in attendance than non-TLIM schools.
- Fourth, we compared attendance rate trends in Lighthouse and non-Lighthouse TLIM schools. We found that although Lighthouse Schools had a consistently higher attendance rate than non-Lighthouse Schools, there was not a significant difference.

In summary, data suggests that TLIM had a positive effect on schools' average attendance. TLIM schools have higher attendance after implementing TLIM and attendance increases as length of time in TLIM increases.

Discipline Incident Results

Only one type of analysis could be conducted on discipline incident rates because of limitations of the data. Specifically, discipline rates are low overall and are highly dependent upon whether a school is an elementary or middle school. TLIM schools significantly decreased in discipline incidences over time compared with matched non-TLIM schools. However, Lighthouse Schools did not share the same decrease in discipline incidence rates over time, presumably because their discipline rate was already notably lower than either TLIM or non-TLIM matched schools to begin with. Table 1 summarizes the outcomes of the quasi-experiment.

Table ES.1. Summary of Quasi-Experiment Outcomes

Achievement	Attendance	Discipline
Data Limitations		
▪ Distinctive state-wide trends (increasing ELA & decreasing math & science scores). ▪ New test in 2015. ▪ TLIM & matched schools have pre-existing higher achievement.	▪ Negatively skewed. ▪ Little variation.	▪ Positively skewed. ▪ Fluctuates annually. ▪ Varies by school level (elementary vs. middle)
Among TLIM schools, is there a difference in outcomes before and after implementing TLIM program?		
Probably. There is not the decline in math scores that is evident in non-TLIM schools.	Yes. Attendance rate is higher after implementing TLIM.	---
Do schools' outcomes increase as their years of TLIM implementation increase?		
Yes. Moderate effect for ELA, small effect for Math & Science.	Yes. Small effect for attendance.	---
Is there a difference in outcomes between TLIM and non-TLIM schools?		
Yes. TLIM schools had faster increase in ELA, and slower decrease in Math.	Yes. TLIM schools have a faster increase in attendance rate.	Yes. TLIM schools decrease in discipline rate over time.
Is there a difference in outcomes between Lighthouse and non-Lighthouse Schools?		
No. For all outcomes, Lighthouse Schools were doing better before implementing TLIM and maintained their lead.		

Alignment of the Collective Case Study and Quasi-Experiment Outcomes

The five outcomes identified in the collective case study may be expected to affect the data that is tracked by the state department of education, namely achievement, attendance and discipline incident rates. Thus, we would expect results from the collective case study and the quasi-experiment to align. We discuss that alignment next.

Achievement

The collective case study found that students are working harder, having fewer behavior problems, feeling happier, setting goals, putting first things first, and being proactive. It is reasonable to expect that if students are doing these things, their academic achievement should increase. One parent (Urban Elementary) gave a dramatic example of this. Talking about her student, she said "He went from straight Ds and Fs to straight As and Bs, and it's a complete

turnaround." In addition to this dramatic example, principals at three case study schools said that proficiency test scores had improved since implementing TLIM.

Teachers, however, had mixed opinions. At Urban Elementary, one teacher said, "I've seen test scores go up." At Mixed Elementary, one teacher said test scores were at the highest level they have ever been in terms of the number of children reading at grade level. She felt this was because the children were tracking their progress. In contrast, another Mixed Elementary teacher said, "I wouldn't necessarily say that test scores are influenced." Another Urban Elementary teacher said, "common assessments have shown increases" but they have not seen an increase on state test scores. Still another teacher said that TLIM has a stronger effect on behavior than on academics. She said, "there is some growth in [academics] too [but] not as predominant as the behavior aspect." In fact, teachers were united in their belief that TLIM led to greater change in behavior rather than grades and test scores.

Students also had mixed opinions. When asked if TLIM affects how hard they try in class, four Mixed Elementary students said no and two said yes.

Results of the quasi-experiment support these mixed opinions. That is, the data supports the conclusion that TLIM has a modest effect on achievement across schools and students (apart from a potential dramatic effect on some students who previously hated school).

Attendance

The collective case study found that students are happier to be at school and are striving to reach attendance and achievement goals that they have set. It is reasonable to expect that if students are doing these things, their attendance would rise because they would want to be at school. Indeed, the principal at Mixed Elementary told a story that supports this conclusion. Just a few weeks before our study began, there had been an accident involving a school bus with 19 students aboard. When the principal arrived at the accident scene, the paramedics asked "What's this Lead Time thing? All the kids keep talking about is that they have to get to school for Lead Time!" Afterwards, parents told the principal that when they tried to take their children home after the accident, the children insisted that they had to get to the school because they did not want to miss Lead Time. During an interview, a parent confirmed that her children "love" Lead Time. "They're excited to wake up in the morning" on Lead Time days. Similarly, at Urban Elementary, through a translator, one Spanish-speaking mother said her daughter "doesn't like to miss school even if she has a headache."

On the other hand, it may not be reasonable to expect that their attendance would rise for two reasons. First, children have relatively little control over attendance. Parents, not children, schedule dentist appointments or choose to take trips that remove their children from school. Second, attendance rate has very little variation—hovering at the 90% level across schools—leaving little room for attendance to improve with TLIM. Any true relationship between attendance and TLIM would be attenuated by this lack of variation.

Results of the quasi-experiment support both expectations in that a modest effect of TLIM was found for attendance. No statistical significance was found between TLIM and non-TLIM schools' attendance rates across years. However, TLIM schools' attendance rates were higher after they implemented TLIM and length of TLIM implementation was positively, but weakly, associated with attendance rate.

Discipline Incident Rate

The collective case study found that students are more prosocial, teachers use more positive discipline and have stronger teacher-student relationships, and students strive to reach discipline goals that they have set. It is reasonable to expect that if teachers and students are doing these things, the rate of discipline incidents would decrease.

Principals and teachers at all four case study schools said that office referrals have declined. In some cases, the reduction was significant. One principal said some students from other schools have a dramatic turnaround when they transfer to the TLIM school. "We've had kids with huge discipline issues or they were kicked out. They come and they just shine."

Results of the quasi-experiment support this view. TLIM schools significantly decreased in discipline incidences over time compared with matched non-TLIM schools. This is a noteworthy finding because discipline rate has little variation, with most schools hovering near 0%, and is unstable with year-to-year fluctuation. This would result in any relationship between discipline and TLIM being attenuated.

Conclusion

In conclusion, the collective case study of four diverse schools found that as a result of TLIM implementation, teachers became more prosocial, used more effective discipline, developed better relationships with students, felt more camaraderie with each other, and found teaching easier and more enjoyable. Students became more prosocial, engaged in less bullying or problem behaviors, developed greater confidence, and became more motivated, harder working, self-regulated learners. Specific active ingredients that contributed to these outcomes were identified by participants. The quasi-experiment study that matched 117 TLIM schools and 348 non-TLIM schools across a state found that despite data limitations, small, positive results were detected for TLIM on achievement, attendance, and discipline incidents for students overall. The collective case study further suggests that for some students, such as low-SES students or those that dislike school, the positive effect of TLIM can be dramatic.