Final Report

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Minnesota Department of Education
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Submitted by

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Title: Building Robust and Rigorous PreK-3 Learning Environments

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<u>**Evaluation Questions**</u>
(Theory of Action) What is the plan of action that links change strategy/strategies to desired outcomes?

In this project, we have sought to create an online course that introduces teachers to FirstSchool's PreK-3 approach through the lens of student discourse. Our years of experience in the field, coupled with data collected using classroom observation measures (i.e., The FirstSchool Snapshot, The CLASS) have shown us that teachers rarely allow children to talk in the classroom. Research heavily suggests that oral language experience helps close the word gap, build community in classrooms, and prioritize children's voice and experience. In these important ways, oral language opportunities contribute to equitable education experiences, particularly for children of color.

In order to shift teachers' practice, which functions as the proximal driver of children's classroom experiences, we also addressed two distal outcomes: teachers' knowledge and dispositions. We measured all three outcomes (knowledge, dispositions, and practice) in order to gauge the success of the course. We examined knowledge through quizzes built into the course. We examined dispositions with a pre- and post-course survey. We examined practice with the EduSnap classroom observation tool. Specifically, we examined the prevalence of three codes related to student voice: vocabulary provisions, oral language development, and student collaboration. As with the survey, we gathered these data using a pre/post randomized cluster design to document change over time and differentiate course effectiveness based on varying levels of support.

We studied the effect of engaging in the course in three different ways. The control group consisted of teachers and administrators from one school who only took the online course. Their interactions with FirstSchool personnel were largely limited to interactions through course postings and message boards. At a matched school, we provided two degrees of support, both of which we evaluated to examine their effectiveness at promoting engagement and outcome change. (We matched schools based on student demographics and assessment data.) One group of teachers in the matched school met regularly with a FirstSchool facilitator who helped them problem solve course-related issues and led a community of practice around course material. The other group of teachers in the matched school met regularly with their colleagues to discuss the course, thereby indirectly benefiting from the FirstSchool team member's involvement, but did not meet with the FirstSchool team member themselves. At the end of the course, we examined the three groups' scores on the outcome measures using hypothesis testing to determine the effectiveness of the online course and the related supports.

(Process Evaluation) What are the planned activities? Is the project implemented as planned? What are the major changes, if any? Why the changes? Please make sure these questions are answered with data.

FirstSchool staff created the content, activities, and quizzes for each module and then received feedback from a group of external reviewers with experience in early childhood education prior to publishing the course. Suggested changes were incorporated, resulting in a course that included 12 modules of content and five webinars spread throughout the 20-week administration

period. A more in-depth description of the course content is available in the final narrative report.

Originally, we planned to collect pre-course data in January 2015, with teachers taking the course shortly thereafter. However, North Carolina was unable to deliver matching funds in a time frame that would allow that to happen. Therefore, we shifted implementation of the course to the fall of 2015. We collected survey and observation data in August/September and participants began working on the course in September and finished in the spring of 2016. We collected post-intervention survey and observation data immediately following the completion of the course as planned.

Winston-Salem/Forsyth County Schools was uniquely positioned to engage in this work, as they already possessed licenses for the assessment tool and trained staff who could provide classroom observation data for the evaluation. In all, 21 participants signed up to take the pilot course. One of these participants was a central office administrator, two were principals, and the remainder were teachers. There were two teachers at each grade level (PreK-3) at each school. The participating schools serve a diverse population of students and have diverse leaders and professional staff.

After the pilot course's completion, the Minnesota Department of Education (MDE) contacted FirstSchool about the possibility of providing the course in Minnesota as part of their PreK-3 reform efforts. In collaboration with personnel from MDE, we revised the course and support components based on feedback from the pilot course. MDE hired school personnel from geographically diverse parts of the state to serve as regional liaisons, supporting course participants through in-person and online interactions. Additionally, we planned and attended in-person meetings with liaisons throughout the course to inform and guide their efforts. Finally, we met with course participants at the beginning of course implementation in the fall of 2016 in order to engage the participants and facilitate their formation of relationships with the liaisons. The first MDE-sponsored cohort of 200 educators will complete the course in March of 2017. Currently, MDE staff are seeking additional state and foundation funding that will support a second cohort of participants during the 2017-2018 school year.

(Outcomes Evaluation) To what extent is the project successful? What has changed in the conditions as a result of your efforts? What is the evidence of the success (what does success look like)? Please be as specific as possible, with regard to number of children and/or adults served, indirectly and/or indirectly. What, if any, are the expected results that are not achieved? Please make sure these questions are answered with both quantitative and qualitative data; as well as baseline and progress metrics.

The key outcomes we examined as part of this evaluation derived from the theory of action. Specifically, we wanted to alter teachers' knowledge of practices related to student voice, their dispositions toward those practices, and their implementation of those practices within the classroom. We added a fourth outcome that focused on the course itself, examining completion rates. For each of these outcomes, we examined not only the effectiveness of the online course in changing them but also the differences in the effectiveness of the various levels of support (i.e., direct support, indirect support, and no support). Initially, we hypothesized that direct

support and indirect support might yield different outcomes. However, this was not the case based on initial analyses. Therefore, in subsequent analyses, we have grouped these participants together.

Participation and Knowledge

The first outcome we measured was the completion rate of participants. Data (see below) suggest that the amount of coursework a participant completed is positively related to changes in practice, in particular. Therefore, if this course is to be successful in the long-term at changing educational practice, fully engaging participants in the course is an important outcome. Among the three conditions, no significant differences existed between participants' completion rates in the direct and indirect categories. In the school receiving direct and indirect support, 91% of educators completed the course. At the school not receiving support, only 33% of teachers completed the course. The difference between these two completion rates is both substantively and statistically significantly different ($p < .01$).

In order to assess participants' knowledge of practices related to student voice, we examined quiz grades on each of the modules. The mean quiz score across the entire course was 91.2% ($SD = 12\%$). The high scores participants received on the quizzes suggests proficiency in understanding the knowledge related to student voice we sought to impart. Although participants in the school with direct and indirect support scored higher initially ($p = .02$), those differences disappeared as individuals in the no-support school dropped out, suggesting that those who remained were more carefully reading the content.

Dispositions

We measured changes in teacher dispositions toward student voice with a short survey. In order to avoid certain known survey response biases (e.g., social desirability bias) and prevent item misunderstanding, we pilot tested the survey with teachers not taking the course in a different North Carolina district. In doing so, we asked teachers to sit down with the survey, read the questions, and then "think aloud" the process they used to create their responses (i.e., cognitive interviewing). Through this process, we discarded a number of items we had originally designated for the survey due to lack of variance in answers, consistent misunderstanding of the items, or evidence that participants were providing answers they felt were "correct" rather than accurate answers.

We ended up with a 10-item survey measuring teacher attitudes toward two constructs we sought to impact through the course: attitudes toward student voice in the classroom and using data for the purpose of continuous improvement. The purpose of the first two questions on the survey was to prime participants to provide a more accurate answer to the third question. Therefore, we will not discuss their results here. Model fit for the factor analysis of the remaining survey was acceptable, $\chi^2(19) = 45.40$, $p = .08$, although fit results should be interpreted with caution due to the small sample size.

Table 1 shows the results of the pre- and post-course disposition surveys (questions 3-10). Due to the small number of participants, few of the substantively different scores met the standards

for statistical significance. Questions three as well as questions five through nine all yielded results in the direction of our hypotheses. Participants' responses at the end of the course were significantly higher on item three, reflecting a stronger belief in the importance of vocabulary and oral language proficiency with respect to students' development of literacy skills. Responses to item five were also significantly higher, suggesting that teachers believed more strongly that students would remain on task if given academic topics to discuss. Teachers' responses suggested that teachers valued student expression and vocabulary development more and that teachers saw data as more important following their participation in the course.

Table 1
Pre- and post-course disposition survey results

Item	Pre-Course Mean	Post-Course Mean
3. Expressive Language and vocabulary are important	2.95	3.32*
4. Teachers talk more than children	2.95	2.95
5. Conversation stays on topic	2.43	2.95**
6. Classroom observations are important	3.33	3.53
7. Examining student data is important	3.38	3.47
8. Creating questions before read-alouds is important	3.38	3.42
9. Children are on-task when they are quiet	1.71	1.73
10. Standards leave little time for student conversation	2.52	2.74

Note. Scores range from 1 (Strongly disagree) to 5 (Strongly agree); $*p < .05$; $**p < .01$

Question four, which asked teachers if the teachers in their building talk more than the students, performed well in pilot testing. That is, teachers who allowed students to talk more in their classrooms answered that question more affirmatively. However, this was not the case in the post-surveys here, where scores on this item were uncorrelated with Snapshot scores measuring classroom practice. Although our explanation for this phenomenon is necessarily post hoc, we suspect that this item is measuring two constructs in the light of this course. The first, intended construct, is teachers' dispositions toward student speech. However, the second construct is an awareness of a teacher's own speech. Although teachers often do not recognize how much they themselves dominate classroom conversations, this course helped make them more aware of this tendency. Therefore, even teachers who actually were allowing students to talk more at the end of the course counterbalanced that growth against a newfound realization of how much they themselves were talking.

Teachers' responses to question ten suggested that, rather than believing that student speech and curricular objectives were not mutually exclusive, as we hoped they would, teachers left the course feeling more strongly that they were mutually exclusive than when the course began. This was a troubling finding for us as teachers often want to promote student expression within

the classroom but feel that they cannot based on internal pressures they put upon themselves to meet their state standards using particular pedagogies. Rather than rely on a post hoc hypothesis to explain this critical finding, we gathered qualitative data from surveys and meeting logs to provide a substantive answer.

We found the answer in the meeting notes from one of the FirstSchool support visits. During this visit, the teachers spent much of the meeting venting that their administrator and county coaches were not supportive of approaches that provided more time to students talking. Participants from the support condition school also echoed these sentiments in their responses to one of our course experience survey items:

> I hope supervisors don't come in during [afternoon] meeting, because there will be no time to explain what I am doing and the value of it. I fear they will think classroom meetings are not part of the schedule – "she is off task." It makes me want to rush through the meeting so I can teach what is on the schedule.

> Morning and afternoon meeting would be a practice that I would allow more time for. It would allow for time for students to develop their language skills. Also continue to build on allowing more time for students to discuss the higher order thinking questions. The barrier was TIME! TIME! The pressure of administration and county coaches coming in to watch classes has been difficult. It would be nice to be able to be viewed as a professional and not constantly monitored to see if teachers are on schedule.

> I would like to adopt this entire course work into my practice but this school is going through a lot of changes right now (New Principal, new rules, new changes, NEW EVERYTHING!) and I don't see it at this time. Maybe later on down the rode [sic] but not right now.

> Many practices were great but not for my school. I don't know if it is because we are Title I or because we are on a slight decline but our schedule is very tight and we are monitored to that effect.

Each of these quotes highlights the helplessness teachers felt in confronting existing practices and priorities within their school and district. Therefore, while we felt successful in changing course participants' dispositions, in order for new practices to be adopted we would have had to change the dispositions of non-course participants in positions of power over the teachers. Although we were disappointed in this finding, it was also an important piece of helping us design a more effective course for the future by finding ways to secure the support of decision makers at the district and state levels.

With regard to the dispositions of teachers who received direct support vs. indirect support, the differences were small across the items and no clear pattern emerged in the differences that did exist. Therefore, it appears that the changes in participants' dispositions arose from their exposure to the first one or two modules, which nearly all the participants completed. The positive news from this finding is that teachers' dispositions can be changed with few resources and little time. However, accounting for the findings from item ten, we (and other change

agents) must be sure to allot some of those resources to changing the dispositions of decision makers at the school, district, and state levels in addition to changing those of teachers in their classrooms.

Practice

In order to examine possible relationships between the course and teacher practice, we modeled the course participation data and observation data using path analysis conducted in M*plus* 7 (Muthén & Muthén, 2012). We hypothesized a relationship between variables such that additional support would directly influence teacher practice, additional support would directly influence the number of modules a participant completed, and the number of modules would predict the participant's classroom practice following completion of the course. The hypothesized relationships are shown in Figure 1.
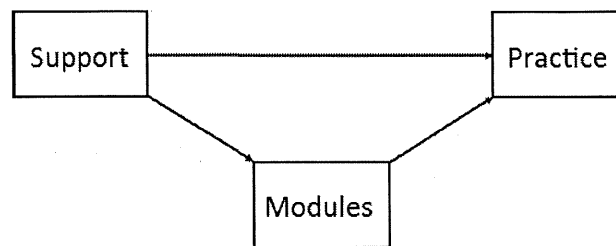

Figure 1. Hypothesized Mediation

Specifically, we wanted to examine three areas of teacher practice that we sought to influence through the online course: teachers' provision of vocabulary and accompanying definitions to the students, teachers' provision of oral language opportunities, and teachers' provision of opportunities for student collaboration. Although optimally, we would have collected data from a teacher's full instructional day, limited resources precluded this possibility. Instead, we collected data from a two-hour literacy block for each teacher using the EduSnap Observation Tool (EduSnap; Ritchie, Weiser, Mason, & Holland, 2015). The EduSnap provides information on how children spend their day in the classroom, quantifying these data through a minute-by-minute time sampling procedure. In addition to the relevant predictors and outcome variables, we also included participant's pre-course proportions on the relevant outcome variable to control for between-participant variance in practice.

Prior to estimating final models, we examined the data to ensure adherence to underlying assumptions. Preliminary models for two of the dependent variables showed outliers exerting undue influence on the models (Cook's $D > 1$). Additionally, models including these values showed patterns of nonlinearity in the residuals. We examined the values and believe them to be authentic. However, as they were causing model misspecification, we elected to remove them from the data set. After omitting these observations, the residual patterns suggested proper model specification.

None of the predictor parameters in the final model for teachers' provision of oral language were significant, suggesting that the course and related support did not affect this particular practice.

It is possible that the course did not impact this practice at all. It is also possible that the course influenced this practice at times other than the observed literacy block. However, examination of supplemental qualitative data from surveys and meeting notes does not suggest that participants were largely targeting their increase in oral language opportunities to other times or subjects. Interestingly, many of the participants cited an increased awareness of and increased provision of oral language opportunities as the most important benefits they received from taking the course. For example, the following are responses from participants outlining practices that they planned to take from the course:

> I plan to create an environment that promotes communication.

> Allowing students to communicate more and probe their thoughts as well as storytelling.

> I let the kids talk more and I have more conversations with them.

> More open-ended discussions.

> Continuing to allow students a chance to do their own talking to gain knowledge about them.

Gaining a clearer understanding of the disjunction between participants' qualitative assertions of change and the changes evidenced through the literacy block observation will require future research.

The model predicting participants' provision of vocabulary, shown in Figure 2, had multiple significant parameters. Model fit was excellent, $\chi^2(1) = 0.001$, $p = .979$, $CFI = 1.00$, $RMSEA < .001$, $SRMR = .001$, suggesting that the model is effectively portraying the significant relationships in the data.
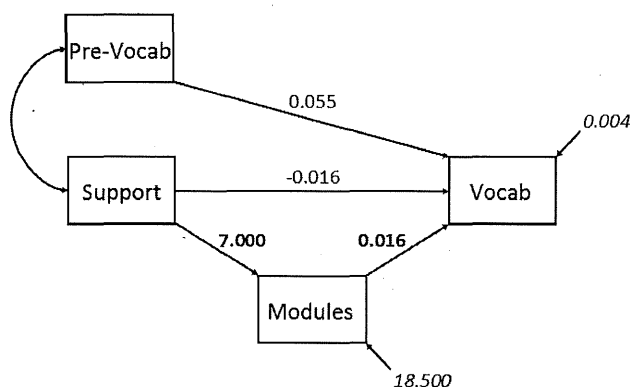

Figure 2. Final Model Predicting Vocabulary Opportunities
Bold parameters are significant at the .001 level; Italicized parameters are significant at the .01 level; All regression significance tests are one-tailed, as they concern directional hypotheses

The model shown in Figure 2 illustrates that participants who received some support are predicted to complete seven more modules than participants who receive no support. Additionally, each module a participant completes is predicted to increase the percentage of the literacy observation dedicated to vocabulary development by 1.6%. Therefore, participants who received support are predicted to dedicate over 11% more of their literacy blocks to vocabulary development compared to participants who did not receive any support. The model suggests an interpretation of the data aligning with module completion fully mediating the support's effect on provision of vocabulary development. That is, additional support leads to increased participation in the course. Increased participation in the course leads to more opportunities for vocabulary development for young children. Participants' EduSnap vocabulary proportions collected before they took the online course were not a significant predictor of their vocabulary proportions after they completed the course nor did support directly predict vocabulary portions beyond the increased participation effect.

The model predicting provision of collaboration opportunities, shown in Figure 3, also had parameters worth examining. Model fit was very good, $\chi^2(1) = 0.850$, $p = .357$, $CFI = 1.00$, $RMSEA < .001$, $SRMR = .053$, providing confidence in the parameter estimates it provides.
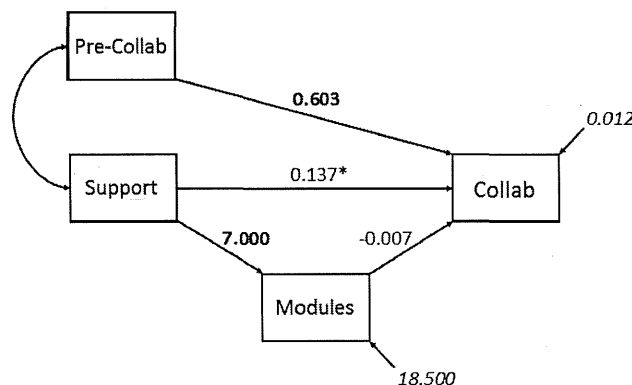

Figure 3. Final Model Predicting Collaboration Opportunities
* Significant at the .05 level; Bold parameters are significant at the .001 level; Italicized parameters are significant at the .01 level; All regression significance tests are one-tailed, as they concern directional hypotheses

The model in Figure 3 shows that participants receiving support completed more modules than their counterparts who did not receive support. However, completing more modules did not predict increased opportunities for collaboration, holding pre-course collaboration proportions constant. Rather, support directly predicted increased provisions for collaboration, suggesting that some component of the support changed teacher practice rather than the online course modules themselves. Specifically, students in the classrooms of teachers receiving some form of support were predicted to spend nearly 14% more of their time collaborating with one another, irrespective of how many modules they completed.

(Impact Evaluation) Has the project improved vulnerable children's lives? If yes, how many children, in what ways and what are the concrete measures? If not, what could have been done differently to improve the odds of the project's impact?

Direct Impact

This project has had a significant impact on vulnerable children's lives and the course developed through it will continue to do so into the future. In North Carolina, the pilot online course affected practice in two schools that serve a high proportion of children living in poverty. We estimate that 714 students directly benefited last year from the changes adopted by their teachers through engagement in the online course. Nearly all of these teachers expressed a desire and intention to continue the outlined practices in future years. If we estimate conservatively that teachers will continue to implement these changes for an average of three additional years past the end of their course engagement, that would lead to direct impact for another 2,142 children in North Carolina.

This past year, we expanded the online course at the invitation of the Minnesota Department of Education. Minnesota was eager to engage in this work because the achievement gap there is the largest of any state in the country. As of the close of registration for that cohort, 226 educators had signed up for the course, a majority of them located in rural, low resource school systems. Of those who registered, 93 are teachers who directly impact children through classroom instruction. Assuming similar outcomes to those found in the pilot course, this would mean that the course has directly influenced the classroom experiences of a further 2,204 students (based on NCES statistics on average MN class size for elementary schools) this year. Assuming participants' continued application of lessons learned in the course for three more years, that would expand the direct impact in Minnesota to 6,612 students. Combined with the North Carolina cohort, we estimate number of children direct impacted by this project thus far to be approximately 11,672. Taking the results of the prior section's outcomes analysis, we would predict each of these students to receive an additional 198 hours of vocabulary instruction over their school careers, on average, and an additional 247 hours of time to collaborate with their peers.

We are currently in discussions with the Minnesota Department of Education to continue the online course there with another cohort and with the North Carolina Department of Public Instruction to offer the course again in North Carolina. Additionally, we are planning to offer the course for a fee through the Frank Porter Graham Child Development Institute's Professional Development Center, further expanding its reach.

Indirect Impact

Quantitatively measuring indirect impact is much more difficult than measuring direct impact. The non-teacher educators who took the course consisted of professionals in a wide variety of roles, ranging from principals and instructional coaches to higher education professors who are overseeing student teachers. However, as more than half of the participants (133) in the Minnesota cohort are in these roles, we wanted to present data on their impact as well. To this end, we elicited participants to respond to the following question as part of their coursework:

"How have you shared information from this course with families or colleagues (co-teacher, PLC, employees, etc.)?

The most popular responses centered on sharing information with teachers in both formal (PLCs and staff meetings) and informal (in the hallway or in the teachers' lounge) settings. Forty-five participants indicated some form of sharing in these ways. One participant described her informal sharing like this:

> I have been so excited to share the things I'm learning and trying with colleagues and family. Because of the way this course has changed my mindset, I think and plan our day differently. I notice exciting learning and exchanges happening with my students and I want to share those stories. Ideas I've tried have worked (or not worked) and I want to share that too. When I see other teachers' work or hear what they are doing in their classrooms, I am now noticing the ways they incorporate communication to deepen learning and I am inspired to try these or similar ideas in my own classroom. Collaboration is what this course is about. It is important to remember to do this together as colleagues.

Another participant described her sharing in PLC like this:

> As a PLC leader, I have used this course as the focal point of our PLC. We even wrote our PLC goal as: I will increase oral communication of students by building rigorous and robust learning environments as measured through the use of pre/post checklists. Each week I try to have some part of the course to share with colleagues and I usually have an activity planned that stems from the week's module. Our principal is even part of this course, so our entire staff is benefiting from it!

Some of the administrators and coaches taking the course also shared the course information with other teachers through observation feedback and consultation. One of the administrators taking the course said, "I have been using the information in my discussions with staff as I am providing feedback to staff after observations. I want to continue to look at this and build it into more conversations with staff and administration."

In addition to sharing the information from the course with classroom teachers, a number of the course participants have also shared the course with educators outside the classroom, including principals and assistant principals, district administrators, teaching assistants and para-professionals, instructional coaches, and school board members. In total, 33 participants shared course information with educators who were not classroom teachers. One of the course liaisons described her experience by saying:

> I have shared information contained in this course with those who serve on our district's PreK-Grade 3 Leadership Committee. This group includes district administrators, building principals, and PreK-3 classroom teachers. Members of this committee see the benefits of this course and how the content completely aligns with our district PLC and CIT goals.

The course has also indirectly impacted the next generation of educators through those working with pre-service teachers and other adult learners. One participant shared the information from the course with her daughter, who is student teaching:

> This course has been so useful to me in so many aspects. I have been able to pull information from modules to use as I coach with my teachers and as we set goals from our Edusnap data. It is nice to be able to refer back to the information and give them a concrete example from some information that we had been provided. This was just a part of our conversation in our PLC's today. Perfect timing came when my daughter, who is student teaching in 3rd grade right now, was a bit panicked about teaching math. It was nice to be able to have her view the module on Student Communication during math instruction. She really felt that this information was valuable and had never really seen Metacognition in action. Her feedback was that it really impacted her teaching and that she was really intentional about getting students to talk about their process.

One of the course liaisons described her experiences applying the coursework to her work outside the classroom, not only passing along course material but also applying course material to her own teaching style:

> Recently retired...I have been surprised by the opportunities I have had to share course information. I currently work with training district volunteers to support kindergarten teachers and students in the development of early literacy and early math skills. In each training session, we begin with relationship building, and carving opportunity for student voice. Prior to this course, we focused entirely on the training of tasks to support the learners. We have added time to the training, to provide participants time to talk. It has been nice to have the research on my fingertips, to share with these adult learners. I have also had the opportunity to work with new staff at the request of administrators, and in all of our time together, I find that I am using this information and making connections to content being taught. New teachers often have content questions, and classroom management questions. Carving time and space for relationships and embedding social learning into content learning have provided focus to our time together.

Some of the participants even shared their course content with individuals we had not originally conceptualized as targets for this learning, including parents and teachers. One participant, who shared her experiences broadly, said this:

> This information has been shared with many people and groups. What I shared in dependent on who I am sharing with. I used information generally in a grant application, board meetings, and with my own family. My son has a child in kindergarten and first grades. He is one person I can toss these concepts over with. Early Childhood Family Education is a great venue for letting parents understand what their children do in class, but also to give them ideas of what they can do at home to enhance their child's learning, and why they would want to make the effort to do these things. Specific information was discussed within our PLC's, conversations with peers, and in our early childhood collaborative. The class closely aligns with the PreK-3 Principal Leadership class we recently took, so there have been several discussions involving this content.

Paraprofessionals are included in many of these discussions. I believe the more we discuss concepts with others, the deeper our understanding of them becomes. Add that to everyday implementation of the strategies, and reflection about the way we use strategies creates deeper knowledge.

These responses, coupled with our discussions with participants and liaisons as the courses have unfolded, give us reason to believe that the impact of the course is reaching far beyond the classrooms of those teachers who are taking the course. Rather, the information from the course is being shared widely, impacting grant applications, influencing school board decision making, and shifting PreK-3 priorities within the states that have participated in the course thus far. Although this kind of influence is difficult to quantify, we do not believe that this fact makes it any less real. As we conclude the course for the first cohort in Minnesota, we believe that we will continue to gain a better understanding of how the course content is influencing education in that state and beyond.

(Lessons Learned) What are the unexpected results (positive and/or negative) of the project? What are the challenges encountered? How have the challenges been addressed? What lessons have emerged to help the Kellogg Foundation advance its mission of supporting vulnerable children, families and communities? Please make sure the lessons/challenges emerge from data analyses.

The development of this online course was our first foray into creating content that leverages technology to reach a broader audience with less direct support. Because of that, we learned (and continue to learn) a number of important lessons about how to most effectively influence teacher knowledge, dispositions, and practice through the modules we created.

With regard to the online course itself, the most important lesson we learned from our experience and subsequent analysis was the critical nature of support in keeping learners engaged in the course. Some learners will not complete the course no matter what support they receive. However, nearly three times as many teachers at the supported site completed the course compared to their counterparts at the unsupported site. Because completing more of the course directly translated to changes in practices related to vocabulary provision, this support was critical in driving the changes we saw in participants' practice. Additionally, support in the context of the online course was a significant driver of change for teachers with regard to providing children with opportunities to collaborate.

The necessity of support as a core component of the course provides us with a unique challenge. The advantage of an online course is that any educator can use it, regardless of factors like distance from the course facilitators or rural isolation. However, the necessity of support brings those problems back into the picture. Qualitative responses from participants suggested that our attempts to use technology to bridge this gap (e.g., Adobe Connect, Skype, conference calls) were not successful. This led us to attempt a different solution in Minnesota, a state that is both far from us geographically and features a number of relatively isolated rural educators.

Working with the Minnesota Department of Education, we elected to recruit a number of regional liaisons: educators working in a range of positions located in geographically diverse

areas of the state. Each liaison was responsible for engaging approximately 15 course participants in the course. Because the feedback from the pilot course suggested that in-person meetings were key to cementing participants relationships with us and, in turn, their engagement with the course, we created kick-off events in four locations around the state where participants would meet one or two of the course authors, a member of the Minnesota Department of Education, and their online course liaison. Preliminary data from this implantation cycle suggest that participants who were able to attend the kick-off meeting are completing more modules than those who were unable to attend the meetings.

Another key restrainer participants cited in the pilot course was pressure from school and district leadership to implement practices contrary to those we sought to teach practitioners to implement. During the course, we received information to this effect during support sessions at one of the schools. We followed up by asking participants to identify particular practices that leadership was attempting to suppress. Participants' answers ranged from specific practices like Morning Meeting and Afternoon Meeting to pedagogical techniques like allowing students to work together in groups. Because we lacked leverage at the district level to overrule the district coaches and administrators who were advocating against the course content, there was little we could do to increase the likelihood that teachers would change their practices to the degree we wished. This was an important lesson for us to take away from the pilot course.

In Minnesota, we had the advantage of state support from the beginning. However, our past experiences working with schools has shown us that many times, districts will seek to supersede state guidance, citing site-based management policies. Therefore, we wished to impress clearly upon teachers, administrators, and other course participants the strength of the Minnesota Department of Education's convictions with regard to the practices we were promoting through the course. In order to maximize our use of limited resources, we made two-way communication a focus of the liaisons' role and emphasized this message at the kick-off meetings we previously described. State personnel made it clear to liaisons that the state was invested in these practices and wanted to incubate them in schools, even if districts were currently pursuing other foci. In turn, state personnel asked the liaisons to report any instances of districts suppressing participants' attempts at new practices so that they could be addressed privately with the district. This solution appears to have been an effective one as we have yet to see a participant cite district instructions as a reason not to try new practices in their classrooms or schools.

The final key lesson we have learned from our work thus far has been that the course as we originally envisioned it appears to be too long. We are basing this on data gathered from the course on participation rates. Participation rates are quite high at the beginning of the course. In our current iteration of the course in Minnesota, participation rates continued to be high through the first half of the course. However, reports from liaisons and data on page views and assignment completion suggest that participation has been declining in the second half. Moreover, while liaisons often effectively motivated participants to rejoin the course if they experienced a brief lapse in participation during the first nine weeks, they have had less success doing so in the second half. This suggests to us that as the newness of the course wears off, participants are pushing it to the side in favor of other, more pressing tasks. We do not believe that this is a result of less important or less engaging material in the second half as course

participants have generally remained positive in their feedback while emphasizing the competing demands for their time:

> I really enjoyed the course when I was able to be completely active. I wish I had taken it when I was not currently in school and working two jobs. I was stretched pretty thin and was not able to really utilize the course/resources like I wanted to.

> I think the course had great information (from the time I did participate) but the demands of things to complete in the classroom and read (on top of the work that has to be done in a very demanding school environment) it became overwhelming.

Based on this feedback, we are planning to shorten the course during our next iteration. In order to retain as much valuable information as we can while trimming content that participants find less useful or engaging, we are soliciting their advice in course experience surveys on what they found most helpful. We will retain the other modules to use during our own professional development opportunities and possibly to make available to participants outside the context of the course itself.

(Stories) What is the story that can be told about this project's work, success, challenges or learning (a story that could be written for newspapers and/or other media)? Please share a real story.

We have seen this scenario in classrooms a hundred times. At the front of the room, a well-intentioned teacher stood, directing students' attention to the figure of a plant on the board. She pointed to each part of the plant and asked students to name them.

Root.

Leaf.

Flower.

As the lesson dragged to a close, the teacher dismissed the children to their desks in rows to fill in the spaces on a plant worksheet and then color the plant in with their half-broken crayons if they had time.

Over and over, we have seen a culture of silence come to pervade the schools where we work. At first in third grade, with testing looming at the end of the year, and then creeping down into successive grades until now we even find it sometimes in PreK classrooms. Children listen to teachers and, when they have a chance to talk at all, it is in one word utterances. The reasons for this creeping silence are myriad. Some come from above: "At 9:00 on Wednesday, you should be on page 49 of the teacher's guide. If you aren't, we will have to have a talk about it in my office." Some come from within: "If I let them start talking now, I'll never get their attention back." Whatever the reasons, we see these classrooms and we become concerned.

The achievement gap is real. It's not just the difference in test scores. It is a symptom of an opportunity gap. Some children have opportunities in classrooms to participate in rich dialogue, a chance to grow into assertive thinkers. Other children are relegated to memorizing isolated facts and doing what they are told. They don't learn how to tell their stories or articulate their experiences. They don't learn how to use language as a tool to craft an argument or explain their thinking. The new words they learn are not a part of their lives. Working together with a friend to solve a challenging problem is not a part of their schooling.

Effecting change in schools can be difficult. Practices become entrenched over time, requiring significant force to dislodge. Teachers, with a hundred demands on their time and energy, become difficult to reach. The kind of information that could change those silent classrooms never makes it into the right hands; it never impacts the knowledge, dispositions, and practices of those who could put it to good use. Even when teachers are ready to learn new ways of teaching, resources in education are strained to the breaking point. Education agencies do not have the funds or the time to put the right opportunities in front of the right educators.

Our work for the last 10 years has aimed to disrupt the inequities in PreK-3 education. We have spent thousands of hours in schools and classrooms, creating more seamless experiences for the most vulnerable children, giving voices to parents who have never felt their voices to be valuable, and helping teacher recognize that being an phenomenal educator is not about being better than the teacher next door but better than one used to be. In this project, we have recognized that while in-person work with schools is the most impactful way to bring change to education, it is not always feasible. To this end, we created an online course targeting the practices that lead to a culture of silence in classrooms.

We originally planned for participants to take the course over a period of 20 weeks. Most of the course would consist of self-paced modules that participants could take on their own at their own pace over the course of a week. Included in the modules were lessons we had learned and data drawn from PreK-3 classrooms to illustrate them, research and data to substantiate the practices the modules taught, supporting materials like podcasts and videos to bring the lessons to life, a quiz so participants could check their knowledge and understanding, and an activity designed to be implemented in the school by the participants. We also spaced webinars throughout the course that would allow us to respond to a cohort's individual needs and highlight important information found in the modules.

As with a pilot of any new course, we learned a number of important lessons by implementing this in two schools in North Carolina. Participants who met us personally were more likely to stay engaged and complete the course. For each module a teacher completed, we saw an increase in the amount of vocabulary development that teacher provided to her children. The online course alone was not enough to increase the number of collaboration opportunities teachers provided, but adding personal support to the course content did serve to increase those opportunities. Teachers and children of color began finding their voices in the classroom in spite of district policies that sought to silence them.

Not everything we implemented in our pilot course resulted in success. We struggled to keep educators prioritizing the course over other challenges and commitments. District literacy

coaches' commitment to rote, direct instruction approaches made it difficult for teachers to apply lessons they learned from the course in the classroom. We took the lessons we learned from our small pilot, and used them to alter the course before implementing it statewide in Minnesota.

To this end, we worked with the Minnesota Department of Education to create a system of regional liaisons across the state. The liaisons served two key purposes: they engaged participants in the course on a personal level, serving as surrogates for us and allowing us to reduce implementation costs. Second, they served as ambassadors from the Minnesota Department of Education, providing districts, administrators, and teachers with permission to attempt the new practices they learned through their participation. In creating this liaison network around the state, we were able to overcome two of the key challenges we experienced in our pilot course: participant engagement and district resistance to new practices.

As we near the end of the second cohort's course in Minnesota, we are looking back on what we have accomplished. We have created a course that delivers critical information to PreK-3 educators in a cost-effective way. This has allowed us to directly impact over 10,000 children in these grade levels over the course of the past two years, extending our reach far beyond what we would have been able to do with in-person professional development. For these children, they will complete third grade with improved skills around vocabulary development and use and enhanced opportunities to collaborate with their peers around learning. In doing so, they will be better readers and better learners, allowing them to take advantage of more opportunities in school and later in life.

Beyond the direct effects, there is evidence that the course is beginning the slow task of changing the culture and values in the school communities where it is being implemented. Teachers, administrators, district personnel, school boards, and parents are coming to understand the importance of student voice. These education stakeholders are having conversations centered on the benefits of children and adults using rich vocabularies to discuss learning, defend thinking, and propose new ideas. Although these conversations will not shift the different approaches to educating children on each side of the achievement gap overnight, they represent the seeds of a sea change that could eventually lead to a more equitable PreK-3 educational system in the state of Minnesota.

Moreover, while the progress we have made over the last two years in creating and implementing the FirstSchool online course is notable, we are more excited to look ahead. Because this project yielded a modular course that has been validated as an effective intervention, we will be able to offer to schools, districts, and states for a nominal cost. This will allow interested parties to scale the size of their participation to meet their needs in a way that maximizes the return on their resource outlay. While some individual teachers may wish to take the course as a supplement to their existing professional development in districts, states other than Minnesota may also wish to engage large cohorts in the course, shifting the culture of pedagogy within their own states. However we deliver the course in the future, we are excited about the possibilities and promises it holds for changing the field of education in ways that benefit those most in need of it.