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Research Brief: The Role of Curriculum Units in the Teachers Institute in the Theory of Change

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Public school districts, in partnership with one or more universities and colleges, form Teachers Institutes that offer seminars led by faculty on topics that teachers have identified as important to their work.² The seminar schedules vary across Institutes, but typically seminars meet weekly over a period of several months. In the seminars, the faculty seminar leader guides participating teachers (Fellows) in learning about the seminar topic, and the Fellows develop curriculum units on some aspect of the topic with support from other Fellows in the seminar. The curriculum units are also published online for other teachers to use.

Past documents detail the Teachers Institute approach³ and theory of change.⁴ After summarizing the theory of change, this brief describes new evidence from a recent study for the role of curriculum units in the Teachers Institute approach to teacher professional development.

Teachers Institute Curriculum Unit Study

The study focuses on curriculum units completed in 2014 and 2015 in three Teachers Institutes (Yale-New Haven Teachers Institute, Delaware Teachers Institute and Teachers Institute of Philadelphia) and the Yale National Initiative.

The study draws on multiple data sources, reflecting different perspectives on curriculum units:

- (1) online questionnaires completed by Fellows at the end of the program;
- (2) a systematic review of curriculum units;
- (3) a Web pop-up survey (Yale National Initiative and Yale-New Haven Teachers Institute Web sites only);
- (4) Online teacher survey (New Haven, CT school district only); and
- (5) focus groups (Yale-New Haven Teachers Institute only).

The Theory of Change Identifies How Teachers Institutes Expect to Improve Teaching and Student Learning

A theory of change is a succinct description of a program or approach and the mechanisms through which it is expected to improve its targeted outcomes. In the case of Teachers Institutes, the immediate products of the seminars are the curriculum units created by participants and the professional recognition and faculty privileges at the university that participating teachers receive (see the graphic below).

These immediate products are expected to lead to three strands of outcomes corresponding to teachers, students, and university faculty. For teachers, seminar participation and writing curriculum units are expected to result in increased content and pedagogical knowledge and improved research and communication skills, which are expected to improve the quality of their instruction when implementing their curriculum unit and teaching other aspects of the seminar topic.

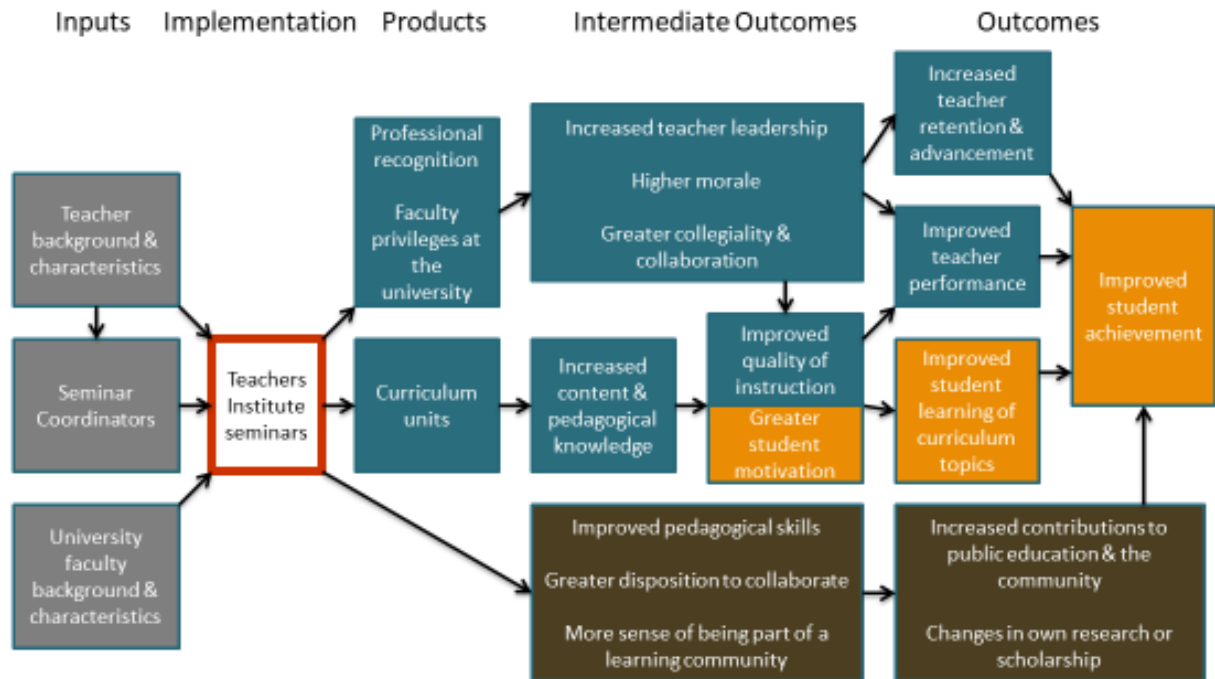
¹ Prepared by Ellen Eliason Kisker, Twin Peaks Partners, LLC, January 31, 2018.

² In addition, the Yale National Initiative implements the Teachers Institute program on a condensed schedule for teachers from school districts that have or are considering establishing a Teachers Institute.

³ Yale National Initiative (2007). *The Teachers Institute Approach: A Manual Containing the Steps, Understandings, Procedures, and Timeline for Establishing and Maintaining a Teachers Institute*. New Haven, CT: Yale National Initiative.

⁴ Kisker, Ellen Eliason (2011). The Teachers Institute Theory of Change. *On Common Ground*, Number 14, pp. 4-7.

Teachers Institute Theory of Change



For students, teachers' increased knowledge and improved instruction are expected to lead to greater engagement and motivation to learn.

The experiences of university faculty who lead seminars are expected to improve their own pedagogical skills, increase their disposition to collaborate, and enhance their sense of being part of a learning community.

Ultimately, these intermediate outcomes are expected to increase teacher retention and advancement and improve teachers' performance as assessed in school district teacher evaluation systems; enhance student learning of curriculum topics; and enhance the contributions of university faculty to public education. All of these outcomes converge to support higher student achievement.

The Teachers Institute theory of change has a longitudinal dimension that is difficult to illustrate but is valuable for understanding the potential impact of Teachers Institutes. Although a relatively small number of teachers participate in seminars in a given year, over time a significant proportion of teachers will participate. Some teachers will participate in multiple years, which is expected to strengthen outcomes for those teachers and their students.

Higher teacher retention maximizes the benefits that compound over time. Teachers who remain teaching in the district continue to use Institute-developed curriculum units and apply their enhanced knowledge and classroom practices when teaching future cohorts of students. Participating teachers who

remain in their district are likely to take on leadership roles in addition to their teaching and to continue to foster collaboration and higher morale and collegiality among teachers.

Writing Curriculum Units is Central to the Teachers Institute Approach

Writing a curriculum unit is intended to solidify teacher learning. The writing process helps Fellows work out, with support from their seminar leader and other Fellows, how to take some part of what they learn in the seminar into their classroom to share with students.

Seminar leaders play a key role in the curriculum unit writing process. They guide Fellows in learning about the seminar topic, and they are available to answer questions, make suggestions, encourage progress, and provide feedback on curriculum unit drafts. They meet individually with each Fellow in their seminar and provide written comments on the prospectus and first and second drafts of each participant's curriculum unit. In 2014 and 2015, nearly three quarters of Fellows in Teachers Institutes and the Yale National Initiative agreed at the end of the program that their seminar leader was useful to a great extent, and most of the remaining Fellows reported that their seminar leader was useful to a moderate extent. Most Fellows reported that they received enough guidance from their seminar leader and that they received helpful feedback from their seminar leader on their draft curriculum unit.

Interactions with other Fellows during the curriculum unit writing process support Fellows in developing their approach to teaching the topic of their unit. Other seminar participants may help Fellows adapt material for their students, suggest teaching practices and learning activities, and offer feedback on Fellows' initial ideas for their units. In end-of-program questionnaires, nearly all Fellows described their interactions with other Fellows as useful to a great or moderate extent. Three quarters of Fellows also reported that they learned new teaching strategies from other Fellows and the seminar leader.

Fellows benefit in a variety of ways from writing a curriculum unit. In end-of-program questionnaires, nearly all 2014 and 2015 Fellows in Teachers Institutes and the Yale National Initiative reported gaining knowledge of the seminar topic, and some described how writing helped them absorb more knowledge of the topic and how feedback and suggestions from their seminar leader deepened their understanding. According to Fellows, deeper knowledge of the subject of their curriculum unit boosted their confidence in teaching it.

Curriculum Units Forge a Strong Link Between Institute Seminars and Teachers' Classrooms

By requiring applicants to obtain their school principal's agreement that they will be assigned in the coming school year to a class in which they can teach the curriculum unit that they will develop and by requiring Fellows to submit written curriculum units, Teachers Institutes and the Yale National Initiative maximize the likelihood that Fellows use their units in their teaching. In both end-of-program questionnaires completed by returning Fellows and in an online teacher survey in New Haven CT, nearly all Fellows reported using their curriculum unit (a few were unable to use their units, most often because their teaching assignment changed).

Institute curriculum units, which focus on subject matter and teaching strategies but do not include complete lesson plans, can be used in a variety of ways. Most New Haven Fellows who responded to an online survey implemented their own units as written or with adaptations. The types of adaptations reported include rearranging the unit to fit the curriculum, implementing parts of the unit at various times, adapting the unit to a different grade or to differentiate instruction, supplementing the unit to fit

the needs of particular classes, and adjusting pacing or activities based on experience teaching the unit or in response to student interest while teaching the unit. Many Fellows also used the teaching strategies or subject matter from the unit to prepare for teaching other materials.

Use of the Curriculum Units by Other Teachers Expands Potential Effects on Teaching and Learning

Teachers Institutes publish Fellows' curriculum units for use by other teachers, expanding the potential effects of the Teachers Institute seminars to more teachers and students. It is common for Fellows to use units written by other Fellows. In New Haven, CT, where a long-established Teachers Institute operates, half of the Fellows who responded to an online teacher survey had used units written by other Fellows.

Other teachers use Institute curriculum units, too. At the end of their seminar, most Fellows report that they plan to share their unit with other teachers. While the extent of use by other teachers is uncertain, the study found that a small proportion of other teachers in New Haven had used Institute units. Many New Haven teachers were unaware of the Institute curriculum units but expressed interest in learning about them. A Web pop-up survey also identified thousands of teachers across the United States and around the world who had used or planned to use the Institute curriculum units they found online.

Unlike most commercial curriculum materials, Institute curriculum units emphasize subject matter and teaching approaches and do not provide complete lesson plans. Institute curriculum units are written with an audience of other teachers in mind, and a systematic review of Institute curriculum units written in 2014 and 2015 determined that most units are clearly written, accurate, and usable by another teacher. Other teachers can implement or adapt the units, use the content to bolster their own knowledge, or use the teaching strategies to present their own content.

When using Institute units written by other teachers, New Haven teachers who responded to an online survey were most likely to read the teaching strategies or subject matter in the units to get ideas or prepare for teaching their own curriculum. Many reported that they implemented the most recent unit they had used with adaptations or read the bibliography to identify other resources. As expected, few said that they implemented the unit as written.

Institute curriculum units are well-regarded. In New Haven, nearly all teachers who responded to the online survey were satisfied with the units they had used and planned to implement again the unit they had used most recently.

Most Fellows and other teachers in New Haven who had used Institute curriculum units as written or with adaptations found that Institute curriculum units require as much or more preparation time than commercial curriculum units they had used. Many also reported that Institute units elicit greater student attention, interest, and motivation, and lead to the same or higher student mastery. More than half reported that Institute units were superior overall to commercial curriculum materials they had used.

For more information...

For more information about the Teachers Institute or the research summarized in this brief, please send inquiries to: teachers@yale.edu

Teachers Institute curriculum units are published online and can be reached through the following Web site: <http://teachers.yale.edu/units/>