A Toolkit for Collaborative Self-Study of Data Use Practices in Teacher Education

▶ **Jahnette Wilson | Benjamin Ngwudike | Tabitha Otieno | Marcelo Schmidt | Cap Peck**

With Jessica Gottlieb, Chase Young, Aaron Zimmerman
US PREP Self-Study Research Group

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Introduction »

In this document we share our experiences in carrying out self-studies of data use practices in teacher education. We believe this work must be deeply collaborative in order to achieve its potential for supporting meaningful program improvement--improving programs is, after all, collective work. Our collaborations with our program colleagues in each participating University School Partnership for the Renewal of Educator Preparation (US PREP) institution were important, and our work was also aided tremendously by our collaboration across programs. Our goals in developing the Toolkit are to offer colleagues in other US PREP programs the kind of pathway for the self study process we can imagine might have been useful to us. We have tried to structure the Toolkit in a way that allows readers to see the "whole" relatively quickly, and then drill down to more specific resources per individual needs and interests. The examples of how we did the work, and the resources and tools we developed or found from other sources, are not intended to be prescriptive. Rather, they are meant to provide a framework for how a program may approach this work based on its own context and needs. We hope you will find this description of our work, and the tools we developed and gathered in undertaking our self-study process to be useful in your own efforts.

The "Self-Study Cycle of Inquiry" figure below depicts the path the US PREP Self-Study Research Group followed as we journeyed through the work. The process itself was not perfectly linear, but followed a general "cycle of inquiry" as each institution navigated their individual path throughout the project.

Self-Study Cycle of Inquiry

01 Getting Started

02 The Planning Process

03 Data Collection

04 Data Analysis

05 Program Report

06 Follow-Up Studies

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Getting Started »

SHARED UNDERSTANDING

It is critical to establish a shared understanding of the goals of self-study (SS), and these should be explicitly grounded in issues of faculty concern. Although self-study projects can be valuable for accountability reporting functions, such as those required by the Council for the Accreditation of Educator Preparation (CAEP) or Teacher Preparation Inspectorate (TPI) reviews, this work is NOT about compliance with external mandates. This work is about supporting "locally owned and operated" agendas for program improvement. The focus, goals, and findings of this kind of research are related to the specifics of local context - it is important that local teacher educators stay in the driver's seat for this work.

In building a shared agenda for local inquiry, differences of opinion about data and the proper role of data in decision-making should be expected. We have found it to be quite important to treat these differences with respect for dissenting views. This is not always easy, particularly in the context of contemporary policy pressures related to data use work. But dissenters almost always have a piece of the truth. Therefore, showing respect for those concerns is an important part of making the process inclusive and real, and important to developing self-study goals that are responsive to local values and concerns. Finally, the self-study process is not intended to render value judgements about a program's data use practices, but to guide efforts to make those practices more useful for meaningful program improvement.

SELECTING RESEARCH LEAD(S)

Leadership is critical to collaborative self-study work and distributed leadership is particularly valuable (see Sloan [2013] for a useful discussion of this concept in the context of data use work). In identifying leaders for your self-study, our experiences suggest that the following selection factors are worth considering:

- *Proximity - Faculty/staff that are very close to the work. It is important that they should be members of the Teacher Preparation Program (TPP).*

- *Agency - Faculty/staff that have a degree of leverage/ may influence a culture of improvement/change.*

- *Knowledgeable Researchers - Faculty/staff who are knowledgeable or have experience with qualitative and quantitative (mixed methods).*

- *Faculty Driven - We recommend that program administrators not play a direct role in leading self-study work. The work is intended to be useful for program members who serve in administrative roles, but we have found that the power relationships that attend these roles can often make it more difficult to get candid feedback about data use policies and practices from program staff and faculty. It is however, quite important that department and college leaders be cognisant and supportive of the self study process, and that a clear plan is established for reporting and using study results to improve local data use policies and practices.*

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Our use of the term "faculty" here is not intended to suggest only tenure-line faculty, but rather anyone who plays an active role in the work of the program. The job description utilized within our first round of self-study work in the US PREP coalition can be seen here: Job descriptions of RLs. Choice of leaders for this work ultimately depends on local context.   One program identified a well-respected Clinical Faculty member to lead the work as the Research Lead. The Research Lead then reached out to program leaders as the work progressed to insure their understanding and commitment to the use of self-study findings as a resource for programmatic improvement efforts.

COMPENSATION AND SUPPORT FOR THE WORK

The work of the Research Leads for the self- studies we conducted was supported with modest stipends from the US PREP network.   The need for extramural support, or other compensation (course releases, summer salary increments, etc.) varied depending on program context and norms… but it was important to recognize that facilitating and coordinating the self-study process required commitment of up to 20% time for the Research Leads in each program over a 6 month period.   Other project participants (interview and focus group informants, for example) were not compensated.   US PREP provided a part time "critical friend" as a support for the work, as well as part time support from a project coordinator.

THE "NORTH STAR"

We believe that it is quite important that leaders thoroughly discuss the purpose, participants, and process of the Self-Study with participating faculty and staff in order to facilitate the development of a shared understanding about the work. We used the metaphor of the "North Star" repeatedly in discussing the work to express an explicit value guiding decisions about the work, specifically our commitment to making the SS work useful to people working in the programs. One of the most robust findings from our first year of SS work was that program administrators, faculty and staff members seldom held a shared understanding of the goals for data use activities, with administrators often viewing these as inquiry-oriented, and faculty/staff members viewing the work as oriented around compliance with state or grant mandates. This suggests to us that creating a shared sense of priority and purpose related to data use work is not achieved simply by stating goals, but through an ongoing process of discussion and deliberation about the values and purposes of the work.

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The first day we met and discussed the self-study, I was so overwhelmed and intimidated by the scope of the work that I wanted to run out of the room. From time to time reference was made that some of our team members had qualitative method experience and that their expertise would be essential along the way… Though I was discouraged and helpless, I did not quit.
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AMBIGUITY & UNCERTAINTY

The nuances and demands of self-study work can be daunting, but our experiences in the first year of this work convince us that there is considerable value in the examination of local data use practices. Our SS work helped program faculty, staff members and administrators see many opportunities to make the data they had already collected more useful, and more regularly used, for program improvement. Veterans of this process had this to say about their experiences over the past year:

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The first day we met and discussed the self-study, I was so overwhelmed and intimidated by the scope of the work that I wanted to run out of the room. From time to time reference was made that some of our team members had qualitative method experience and that their expertise would be essential along the way. Of course I counted myself out, I did not have any idea why they even chose me to join the group. I had a plan to just fade out gradually so they could get somebody else with a qualitative method background to replace me. I did not want to produce work that would be an embarrassment. Though I was discouraged and helpless, I did not quit.

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The Planning Process »

RESEARCH QUESTIONS

The planning process for the work was designed to invite both a variety of perspectives on possible research questions (initially) and then gradually narrow these to a plausible number for self-study. We did this in a stepwise fashion, first generating lists, then prioritizing, combining, and sometimes deleting questions that seemed too big to manage, or too small to matter to our work in a significant way. For this particular self-study process, it was important to keep our research questions clearly focused on issues of data use practices.

Sample research questions were provided as a guide for programs to select from and/or to assist them in developing their own. Each program developed research questions that were unique to their institution or customized questions to address program needs. We used a framework developed by McDiarmid & Peck, (2007) to organize our thinking about research questions (see People, Tools, and Organizations Framework (PTO)). This framework helped us talk about the challenges of data use work in a more holistic and systemic way, and helped us develop a shared language about our work. In the document referenced here we show the questions that emerged as we used the framework to organize and prioritize our original list of questions: PTO Framework and Questions.

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Our perspective was that we knew there was going to be a lot of variation and we knew it was going to be very difficult to reduce to common questions, but the strategy was to invite the variation, get it into the room, and then help people struggle with it in ways that began to sift out some of the variance. I don't know if you noticed this, but a lot of the specific questions dropped out because we couldn't pursue them all. We began to build a common set of questions that really cut across all the programs, but that happened...and this was intentional - it happened kind of organically, because time began to force us to drop things that weren't common. But I don't think people felt forced around that, the idea was not to force it but to just let the process mature in ways that brought people together, but still didn't make everybody have to ask exactly the same questions in exactly the same place.

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IRB

Institutions vary significantly in the ways in which Institutional Review Board (IRB) policies are enacted. In some cases, SS work may be conducted under the auspices of prior IRB approvals, including those developed as part of the broader USPREP initiative. In other cases, a new IRB will be required. In general, we have not found IRB reviews to be problematic for SS work, as this work is with adults, and seldom raises issues of risk or coercion. You can find a model that may be useful to your application here (Example IRB).

TIMELINE

The final part of the planning process was focused upon establishing a timeline for deliverables. The timeline held each of the RLs accountable for each phase of the work that was to be completed: Sample Timeline. In some cases individual institutions amended the timeline according to their needs and where they were in the process, but the timeline was important to keeping us aligned in the general phases of the research. This, in turn, helped us help each other as we proceeded.

Building a Community of Self Study Practice »

Much of our "tool kit" focuses on the specific methodological resources and procedures we used to undertake our data use self study work. However, we also want to be clear about the importance of the social process we used to build a strong sense of collaboration and community in our work. While each of the studies proceeded relatively independently of one another, decisions about shared focus, common protocols, and analytic concepts were negotiated through collective deliberation and joint decision making. While the research process was facilitated and supported by both a USPREP staff member and an outside "critical friend", we strove to create a community of practice where each member took what they needed from our collective discussion and learning and applied what made the most sense to their own programmatic context. This meant that a key feature of the process was its "emergent design", which refers to the way in which the process was not prescribed, and then implemented entirely as planned. We held bi-weekly meetings that were structured in such a way that the participants were provided space to talk about the process, their success, their challenges and then others were able to take up what was useful to them and apply it in their own work. The theory of action underlying this general approach was that program self study work was more likely to be taken up and sustained as an inquiry tool to the extent to which it was perceived to be useful to participants (the North Star), and that our best strategy for making the work useful was to support participants in shaping the work in ways that made practical and professional sense to them.

> " I believe the most important aspect of the self-study was our bi-weekly meetings. We were free to ask questions, and someone from the team took time to explain. I found out what the other teams were doing and how they were lost (just like me) and turned this to a learning experience. This gave me the confidence I needed to make progress. I cannot say enough about our bi-weekly meetings - they were invaluable! "

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Data Collection »

SAMPLING

The data collection process began with identifying sampling strategies and protocols to be used in the self-study. We used a variety of Data Sources in the self-studies: interviews, observation, focus groups, survey questions, and artifacts.

INTERVIEWS

Interviews were our main source of data. In many cases, we found that the interview protocols needed to be adapted for specific informant groups. For example, they had to be differentiated for administrators, teacher mentors, school principals, faculty and site coordinators. Examples of possible interview questions can be found here:

• Individual interview
• Dean/Leadership interview

OBSERVATIONS

Observation was also one of our data sources for self study. Research Leads strategically selected meetings to attend. They then observed and took field notes on the meeting agendas, paying particular attention to data-focused discussions and related activities. The notes taken were integrated into each program's SS data set, and included in the data analysis that provided valuable information for the self-study report. The following is an observation protocol drawn from a prior research project that we drew on for our own observations: Observation Protocol.

FOCUS GROUPS

We found focus groups to be a valuable and efficient data collection method as they provide a broad sense of data use practices. Participants for focus groups can be homogenous in role, or they can be selected to represent perspectives from different stakeholder groups such as administrators, faculty, teacher mentors, principals,K-12 officials, assessment coordinators, and site coordinators. We discovered that including representatives from diverse stakeholder constituencies in focus groups to be particularly valuable in generating new kinds of conversation and communication. As they listened to one another, it was not unusual for folks in these groups to recognize problems that they had not previously understood. Solutions to some of these problems sometimes arose spontaneously, while in other cases participants reported these informal cross-group conversations to be quite energizing, and to open new pathways and possibilities for collaboration. The following is a focus group protocol utilized in the project: Focus Group Protocol.

SURVEYS

Surveys may also be used in data collection. Here are some examples of survey tools used in some of our self-studies: Example 1; Example 2

> *The prepared surveys gave me a great opportunity and guideline to help me focus on the "North Star." I heard questions other institutions had and this helped me frame my own and consequently stay close to the framework. This was a common connecting factor with the rest of the institutions.*

ARTIFACTS

Finally, various artifacts may be included as part of the data collection plan. Certain documents can be invaluable to the data use self-study process as they provide insight to the organizational policies and practices (e.g., meeting agendas, job descriptions, promotion policies, etc) that shape data use practices.

TRANSCRIPTION

There are several methods of transcribing audio recordings from interviews and focus groups. A number of software programs and services are available that may be used for the transcription of the interviews. Some of these platforms use AI programs to automate the transcription process. One of these is program is included as part of the Zoom web-based video conferencing program. We found the quality of AI program to be problematic, and editing transcription errors was too time consuming. We ended up using www.rev.com. They were found to be most accurate and had the quickest turnaround times. Transcription may be done locally as well, and one program reported good results in employing students to do transcription work. In another SS, the Research Lead did all of her own transcription, and reported the process to be both extremely laborious and extremely useful. We believe it is quite important to do full transcripts from audio recordings of interviews and focus groups, if at all possible. Each program used the most suitable method for its own program.

Data Analysis »

CODING

We developed a comprehensive plan for guiding our data analysis work (see the document here: Data Analysis Guide. The first step we took in data analysis was to begin coding interview transcripts, observation notes, and textual artifacts using "low inference" codes. Here is a coded interview that may help you see what this looks like Low Inference Coding model. Using the list of low-inference coding (LIC) "tags" from the documents we had coded, we grouped these into categories based on inductive grouping procedures. Here is a video resource we found useful as a visual representation of the category formation process: https://www.youtube.com/watch?v=nxIErzX3aQQ. Then, utilizing the same grouping process to reduce the combined list to a number of categories we felt we could manage as we coded our data, keeping them under 20. This meant we had to merge some categories.

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This is a place where the process worked out in a way I did not anticipate because I thought we were going to have a common coding system which is how you would do it with a more formal research project, but I learned that that wasn't necessary. I learned that each program could do its analysis in a different way and that it didn't need to be a line-by-line analysis in the way I did like the Spencer project. And the way we did the self-study back at UC Santa Barbara, we did line-by-line analysis.

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Next, we used the resulting merged code list to code the rest of these data. We added new codes as things came up that seemed important but were not "caught" by the existing list. Additionally, we dropped codes that did not turn out to be useful.

Any preferred software package can be used to do the coding (e..g, Dedoose, NVivo, RQDA), However, for the purposes of this project, we simply used the MS Word "Commenting" tools to do our coding. We needed a way of retrieving coded text segments for comparison, and Word did that adequately for our purposes.

DOCUMENT SUMMARY FORM

For each data document we finished coding (that is, each interview, observation or artifact), we completed a Document Summary Form in which we summarized findings in that data document related to our research questions. These summaries played a key role in helping us develop "themes" or patterns that are grounded in our data. It also helped us trace our way back from themes to underlying data across informants, documents, and observations.

EMERGENT FINDINGS SUMMARY

Using the Document Summaries we have completed for interviews, artifacts, and observations as a resource, we summarized emergent findings for the case using this matrix of guiding questions and related evidence: Emergent Findings Summary

> *Those one-page summaries were really important to give us a perspective of where we are going and what the final product may look like. It's just one page but carried a lot of information and kind of reassurance of where we are going and what we can get out of this.*

DEANS FOR IMPACT (DFI) DATA DIAGNOSTIC TOOL

Finally, each Research Lead met with their program leadership team to present their emerging self-study findings (drafts). We used the Emergent Findings Summary as a resource for these discussions, and as a data-based resource in completing the items on the Deans for Impact (DFI) Data Diagnostic–a self-assessment tool developed to support educator preparation programs participating in Deans for Impact's Common Indicators System Network in identifying areas of strength and opportunities for growth with respect to essential data use practices. We found the DFI Data Diagnostic to be very useful in guiding these discussions, we found it not only in areas where raters had agreement, but those where there was disagreement about the status of data use practices in the program. Some of these disagreements we found to be related to differences in positionality within the program. They sometimes surface important concerns about communication. We found, in general, that self-ratings on the DFI Data Diagnostic tended to be more positive than those warranted on the basis of the SS data. This discrepancy represented an important context for discussion, as it often pointed to significant tensions between views of the work.
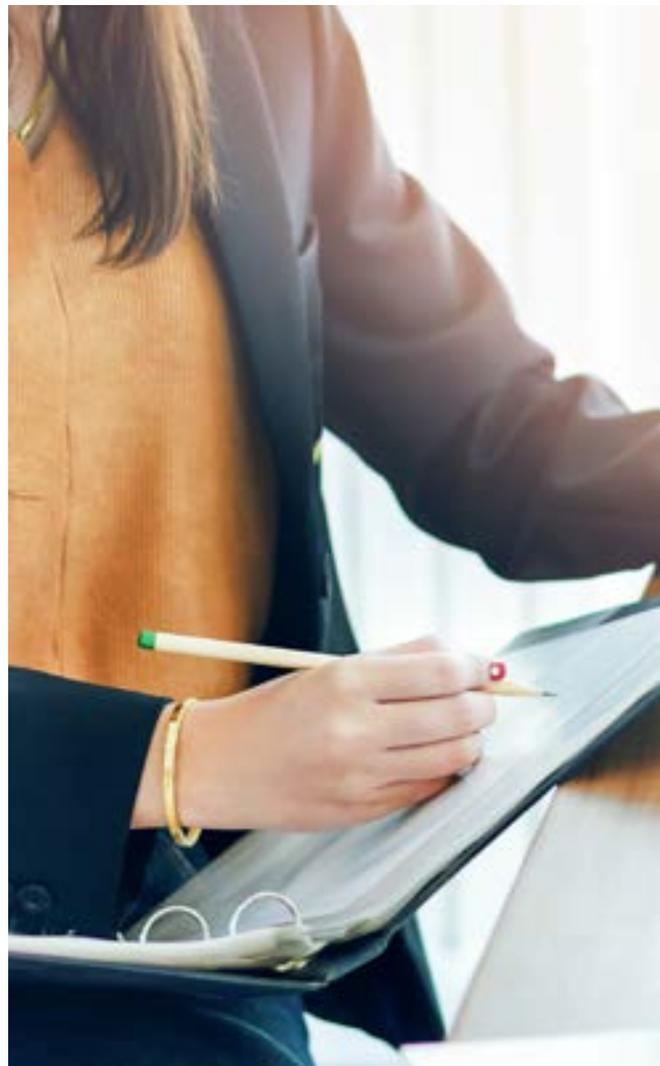
METHODICAL VARIATIONS

It should be noted that although the methods of data collection and data analysis described above align with the conceptual framework of people, tools, organizations (PTO) and the methodological technique of low-inference coding, other methodological approaches are possible. Indeed, adopting an alternative methodological approach to the self-study might yield novel insights. For example, future self-study teams may experiment with ethnographic approaches in order to answer questions related to the culture of the teacher education department; with phenomenological approaches in order to closely inquire into the lived experience of collecting, working with, and talking about data; with narrative approaches in order to learn about the stories that are being told in and about data and data use within a given teacher education department; or, with statistical modeling rooted in social network analysis in order to answer questions about who talks to whom about data (and how often). We want to encourage self-study teams to choose their methodological approach based on the nature of the research question that the self-study team identifies as most pressing. The "North Star" should always be in view. That is to say, regardless of the approach to data collection and data analysis that is adopted, the findings of the self-study must, first and foremost, be useful.

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Program Report »

INITIAL REPORT

We developed a framework for organizing and writing a report, describing each program's self study process and findings. We strove to create a report template that was detailed enough for colleagues to understand what we did and what we learned, yet brief enough to be "consumable" within the scope of typical faculty, staff and administrator workloads. We tried to keep the reports to 10 pages or so. In some cases we failed!

- **Program Context:** *This section described the program, and provided the background under which the Self-Study was conducted.*

- **Description of Methods:** *Here we described the tools we used to collect and analyze our data. Some times we included appendices to share specific protocols, analytic summaries, and other tools we had used.*

- **Summary of Findings:** *In this section we provided a summary of major themes in our data, including brief excerpts from interviews, observations or work artifacts to illustrate specific issues of interest.*

- **PTO Connections:** *We devoted a section report using the PTO framework to offer a "systemic" analysis of data use practices in the program. We felt is was important to show how each dimension of our current practice affected the others.*

- **Next Steps/Action Plan:** *Each program identified next steps from their SS and developed actions plans on how to address each finding. Our next steps varied and depended on what faculty and administrators considered important in their program. For example, one program developed action plans to address areas of weakness while others involved more faculty to develop their own self-studies.*

- **Report to Stakeholders:** *Each program shared with their stakeholders the findings and received feedback. Discussions on the findings and suggestions on the way forward were addressed in a meeting of all stakeholders. The following are two examples of a final report:* Example 1 *and* Example 2.

Follow-Up »

FOLLOW-UP DATA COLLECTION PLAN

Following our "North Star" again, we were concerned to collect and analyze follow up data to evaluate the extent to which our self studies were useful in generating meaningful change in data use practices, as well as the extent to which changes were sustained over time. We began this effort by developing a Follow Up Data Collection Plan for each program (see an example here: Example 1 Follow-Up Data Collection Plan; Example 2 Follow-Up Data Collection Plan). In some cases these follow up data collection plans required submitting a modification to IRB, but in most cases these data collection activities were allowable under our original IRB approval. In retrospect, we would advise programs to include a plan for collecting follow-up data in their initial IRB application.

FOLLOW-UP REPORT

As with our initial report, we were eager to share follow up data with our colleagues. We summarized these data in a brief report, and used these data as a context for deliberation of next steps in the program inquiry and improvement process. Here are some examples of the SS follow-up reports we developed: (Example 1 Report; Example 2 Report). In some cases, this led to the adoption of collaborative self study methodology in the context of additional program improvement initiatives (SS RFP Example)

Multiple Uses of Self-Study Work »

USING THE SELF-STUDIES FOR COMPLIANCE PURPOSES: FROM INQUIRY TO COMPLIANCE

As we have said, our primary goals for the self studies of data use in these programs were about inquiry and program improvement.   However, we found the process, and the reports it generated could also fulfill a variety of external reporting requirements. For example, the Jackson State University College of Education team analyzed data use practices related to several different types of data in the process of implementing the self-study (SS). Content data, which is related to Council for Accreditation of Educator Preparation (CAEP) Standard #1, reflect scores from the PRAXIS I and II, Foundations for Reading, Teacher Assessment Instrument and portfolio. Changes in data use practices related to these measures allowed the College to make their uses of the data for program improvement more explicit and concrete for external reviewers.

Similarly, data use practices related to ACT scores for admission to the teacher education program, Praxis I and II scores, Foundation of Reading Scores, candidate portfolio during field experience, mentor teacher evaluation of teacher candidates, field supervisor evaluation of teacher candidates' performance, and site coordinator evaluation of candidate performance during the field experience were all relevant to CAEP accreditation reporting requirements. CAEP Standard 5 states: "The provider maintains a quality assurance system comprised of valid data from multiple measures." The standard specifically requires EPPs to present data-based evidence for continuous improvement. Further, Section 6 of the CAEP Annual Report focuses on "Continuous Improvement." The EPP must answer

questions around data-driven EPP-wide programmatic improvements. That said, a Self Study that targets data use practices can provide specific data-based evidence for CAEP Standard 5. The excerpt below illustrates how the ss work was used in the CAEP reporting process for University of Houston:

Example of CAEP Annual Report: Data Use Excerpt

CONNECTION TO THE FIELD

Self-studies of data use practices can contribute to the existing literature and ongoing research on teacher education. With an appropriate IRB in place, data collected during the course of self-study can be used to develop manuscripts and publications suitable for venues such as AERA, ATE, and AACTE. For example, we have presented manuscripts developed from our self-study work at ATE and AACTE in 2019.

Using data collected through the self-study process for manuscript development and writing offers an opportunity for research leads and other faculty members to use the self-study process to support their individual professional goals, as well as program improvement. By integrating this work into the traditional research work of faculty, such as writing papers or presenting at conferences, self-study has become a complementary source of data and ideas, rather than an external demand.
LINK TO AACTE AND AERA PROPOSALS

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RELATED RESOURCES

McDiarmid, G.W., & Peck, C. (2007, March). T*heories of action and program renewal in teacher education.* Paper presented at the Annual Meeting of the Northwest Association for Teacher Education. Seattle, WA.

This paper presents the People-Tools-Organizations framework we used to organize our self-study projects.

Peck, C, & Davis, S. (2019) Building Capacity and Commitment for Data Use in Teacher Education. Programs. in E. Mandinach & E. Gummer (Eds.) *Data for Continuous Programmatic Improvement: Steps Colleges of Education Must Take to Become a Data Culture.* New York, Routledge.

This chapter reviews research related to data use practices in teacher education, and offers recommendations for policy and practice

Peck, C. Gallucci, C. & Sloan, T. (2010) Negotiating implementation of high-stakes performance assessment policies in teacher education: From compliance to inquiry. *Journal of Teacher Education.* 61(5), 451-463.

This paper describes the program self study work undertaken at UC, Santa Barbara that provided the conceptual and methodological basis for the work undertaken in USPREP.

Peck, C., MacDonald, M., & Davis, S. (2015) Using data for program improvement: A study of promising practices in teacher education. https://secure.aacte.org/apps/rl/resource.php?resid=504&ref=rl

This website includes brief portraits of practice in "high data use" programs, and examples of how these programs have engaged common problems of practice related to data use. These resources were designed to be read in 10-15 minutes each.

Sloan, T. (2013). Distributed leadership and organizational change: Implementation of a teaching performance measure. *The New Educator, 9*(1), 29-53.

This paper describes distributed leadership practices in a high data use program.

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