

Evaluation Report the 2009 NARST Summer Research Institute  
Submitted by Troy Sadler, NARST Research Committee Chair

### Introduction

In fall 2008, an organizing committee made up of three science educators submitted a proposal to the NARST Research Committee for the establishment of a Summer Research Institute (SRI). The SRI was envisioned as a week-long summer experience for doctoral students to work with one another as well as experienced researchers, who would serve as mentors. The aims for the SRI, as articulated in the proposal, entailed

- A) Helping students to
  - a. “understand the place of their research in the broader research community,”
  - b. “build knowledge related to research design, data analysis, and write-up,”
  - c. “form a network of emerging science education researchers,”
- B) “Improving science education research through dialogue with a community of researchers.” (Abell, Friedrichsen & Zembal-Saul, 2008)

The Research Committee presented this proposal at the fall meeting of the NARST Board of Directors. The Board expressed interest in the proposal but requested that the organizing committee consider several issues and revise the proposal. The organizing committee submitted a revised proposal, and the Board approved its passage. The Board also approved a companion proposal submitted by the Research Committee that established a charge for the Research Committee to oversee evaluation of the first SRI. This evaluation report is the result of the companion proposal.

### Focus of the Evaluation

The following aims guided evaluation activities and development of this report:

- 1) Document implementation of the SRI.
- 2) Explore participant perspectives on the SRI and its effects.
- 3) Offer recommendations for future SRI.
- 4) Identify issues for the consideration of future SRI.

### Methods

#### Overview of Evaluation Activities

During committee meetings held at the 2009 NARST annual meeting, the Research Committee considered the Board’s charge and directed the Committee Chair to lead evaluation efforts. In this role, I attended an organizational meeting held for the faculty mentors. During the implementation of the SRI, I made a two-day site visit. While on-site, I observed numerous sessions, conducted interviews with student and faculty participants, sat-in on faculty planning meetings, and participated in informal events associated with the SRI (e.g. group dinners). I also collaborated with the organizing committee to design and distribute a survey completed by student participants following the summer institute

#### Data Sources

Data sources used for the evaluation included documents, interviews, field notes, surveys, and student products. The organizing committee produced several documents in preparation for the SRI. These documents included the proposal for the institute, a

preliminary report submitted to the Research Committee (in March 2009), and scheduling materials for the SRI. I conducted several interviews during the site visit. The interviews were coordinated such that they would minimally impact the flow of the Institute and the work of the students and faculty. Student interviews were conducted with individuals or small groups: a total of 13 students participated in six interview sessions. Appendix A presents the semi-structured interview protocol used with students. I conducted interviews with five faculty mentors in addition to more informal conversations with three of the other four mentors. Appendix B presents questions used with faculty. I also interviewed a graduate assistant who helped coordinate the logistics of the event.

During the site-visit, I observed each of the different kinds of sessions (i.e. workshops, faculty research presentations, mentor lunch discussion, and group dinners) and sat-in on the working sessions of all three student-faculty teams. I took field notes during visits of the formal activities and wrote debriefing memos to help contextualize these notes at the end of each day of observations.

The organizing committee and I had planned to distribute surveys to elicit student feedback on their experiences at the SRI. In order to avoid requesting that students complete multiple surveys, we collaborated to produce a single survey. The organizing committee distributed the survey electronically and made the results available for evaluation purposes. The survey is presented in Appendix C.

As a part of the application process for selection to participate in the SRI, students created synopses of the research students would discuss and work-on during the institute. For most (if not all) students, these synopses described their dissertation research. The reports followed the general format of a NARST presentation proposal. One of the expectations for students was presentation of their work in a common interactive poster session to be held at the 2010 annual meeting. In preparation for this, students submitted a formal poster proposal approximately two months following conclusion of the SRI. Like the research synopses prepared before the SRI, the poster proposals followed the typical NARST presentation proposal format. I conducted a content analysis of the paired documents in order to examine ways in which students' SRI experiences may have affected the students' research (or the ways in which the research was presented).

### Program Description

As a part of the original proposal, the organizing committee made the decision to create a theme for the institute. Science teacher learning served as the theme. The research of student and faculty participants related in some way to this theme.

In Spring 2009, the organizing committee recruited students and faculty for the first SRI through the NARST listserv and website. Twenty-nine students applied and the organizing committee extended invitations for 25 of these students to participate. The following criteria were used in determining application acceptance: a complete application packet and fit with the institute's theme of teacher learning. Twenty-three students ultimately attended the SRI. These students came from 16 different universities. Nine faculty members from seven institutions served as mentors. Among this pool of mentors, three were designated as more junior faculty. The junior faculty mentors were matched with two more senior faculty as a means of providing multiple levels of support. The organizing committee created teams consisting of seven or eight students and three mentors (one junior and two senior faculty members). The teams were created with the

intent of grouping individuals in terms of research interests. Another criterion was ensuring that students were not working in groups with mentors from their home institutions.

The institute ran from June 21 – June 26 and was hosted at the University of Missouri in Columbia, MO. Working sessions were held in university facilities, and the participants (excluding Columbia residents) stayed in a hotel adjacent to the University. The faculty mentors met for an organizational meeting on the first afternoon (Sunday, the 21<sup>st</sup>). Otherwise, activities did not begin until 6pm with a group dinner and an opening session in which participants were introduced and an orientation to the institute was provided.

The schedule for Monday through Thursday followed a fairly standard structure. Each day began with a brief meeting of all participants at 8:30am. Individual teams then met for about 1.5 hours. Faculty presented hour-long presentations of their own research. These presentations were paired such that approximately half of the participants would attend one talk and the other half would attend the other session. In these talks, the mentors tried to highlight how their research agendas had evolved in addition to the findings that emerged from the work. For lunch, the students dined together in a university facility and the faculty would meet to discuss progress and share ideas. The faculty facilitated workshops in the early afternoon. Workshop topics included 1) validity in qualitative research, 2) NVIVO-qualitative analysis software (this was an optional session), 3) technologies to support research and social networking, and 4) publishing. The teams reconvened in the late afternoons for group activities or individual writing time. Group dinners were arranged in local eateries. Participants usually returned to the hotel by 8pm and many would spend time socially or continue research discussions in the hotel common areas. On the final day of the institute, the teams met individually and then made group presentations for the full institute. The final organized sessions concluded at noon.

The team structure became the central organizing feature of the institute. Participants came to strongly identify with their teams. The content and structure of team meetings varied across the three groups. The mentors for each group involved their students in setting priorities for their groups and shaping the nature of activities in which they would engage. The groups made use of a “critical friends” approach in which all students shared research topics and challenges followed by feedback and questions. All three teams used this basic approach, but the manner in which it was implemented and the frequency varied across the teams. A common theme addressed in all teams was the importance of well-conceived theoretical and methodological frameworks. For at least one team, theoretical frameworks became a central organizing theme for most of the group’s activities. The other teams adopted less focused approaches. Another commonality across the teams was attention to the production of a proposal for a presentation at NARST. The organizing team and mentors decided that each of the students would be expected to submit a proposal for presenting their research at the 2010 NARST annual meeting. Here again, the teams demonstrated different levels of attention to this task.

## Findings

### Student Perspectives

Student participants expressed overwhelmingly positive feedback regarding the structure, focus, and effects of the SRI. Every student from whom data was collected

expressed enthusiasm regarding their participation and gratitude for the mentors for sharing their time and expertise. The list below identifies the most prevalent themes discussed when students were asked to reflect on their experiences in the SRI, potential benefits of the SRI or ways in which the SRI will likely affect their work.

- The SRI exceeded student expectations in terms of usefulness for their research.
- The SRI exceeded student expectations in terms of enjoyment.
- The SRI provided opportunities for students to gain new perspectives on their own work and how it connects to the broader science education community.
- The SRI provided opportunities for new networks of science education colleagues both in terms of other students and established researchers. For several students, the opportunity to get to know established scholars on a personal level made a very positive impression.
- Experiences in the SRI, particularly those facilitated in the working teams, helped students think about their research in new ways. Several students talked about gaining new understandings of theoretical frameworks and the significance of aligning frameworks, research questions, and methods. Others discussed exposure to new ideas and perspectives that would directly impact their work.
- The SRI was a very productive use of time. The following quote represents this sentiment: “I’ve got more done on my research in the last three to four days than the last six months.”
- The SRI was organized effectively and efficiently. Students frequently commented on how smoothly the event ran and they appreciated the time and effort that had been devoted to the institute on the part of the organizing committee and the other mentors.

A distinct sub-set of students came from universities with small (or non-existent) science education programs. These students were particularly appreciative of the opportunity to work with established researchers. Most of the participants cited the ability to network with colleagues as an important strength, but for the individuals from smaller programs this opportunity was perceived as truly transformative for their work.

For another sub-set of student participants, the SRI provided an opportunity to better understand how professionals in the science education community work. These students talked about better understanding how to mentor, collaborate, and develop research agenda. They discussed gaining new perspectives on how science educators balanced teaching, scholarship and their personal lives.

Students provided very favorable feedback in terms of the scheduling and organization of time blocks within the institute. The bullet points below summarize programmatic elements that students rated. The values listed indicate the percentage of survey respondents that rated a particular element as “outstanding” or “good” (n=21).

- Faculty research presentations – 100%
- Team session – 100%
- Workshops – 100%
- Closing – 95%
- Faculty mentoring – 100%

In responses to written prompts and interview question, some students suggested that the faculty research talks and workshops were not as useful as the team sessions and

individual mentoring. However, other students discussed these sessions as being equally influential.

When asked to comment on the timing and duration of specific elements of the institute, the majority of students suggested that “we spent the right amount of time” on all but one of the elements identified. (The students’ other choices were “we spent too much time doing this” or “we spent too little time doing this.”) The single exception related to opportunities to meet individually with mentors from teams other than their primary team. In this case, 52% of the respondents wanted more time with other mentors. A strong majority of students (>70%) approved of the time committed to faculty research presentations, team sessions, unstructured time, and meeting with faculty mentors from their own teams. Students expressed more variable opinions, with responses in all three options, for the following elements: workshops, writing time, and working on NARST proposals. In addition to these timing issues, students expressed support for the organization of the teams and the student-to-faculty ration (8:3). The students clearly appreciated the access they had to multiple mentors.

When asked about potential outcomes of their participation in the SRI, students provided very positive feedback. The percentages reported below indicate the proportion of respondents who agreed or strongly agreed with the accompanying item.

- The SRI allowed me to create a new network of science education colleagues – 100%
- The SRI allowed me to network with peers – 100%
- The SRI allowed me to network with established science education researchers – 100%
- The SRI helped me establish a theoretical framework for my study – 100%
- The SRI helped me create research questions for my study – 100%
- The SRI helped me develop a plan for collecting data – 100%
- The SRI help me develop an analysis plan for my study – 76%
- The SRI helped me align my theoretical framework and research questions – 70%
- The SRI helped me align my research questions and methods – 100%
- The SRI helped me align my theoretical framework and methods – 95%
- The SRI has changed the way I will conduct my dissertation research – 52%
- The SRI has changed the way I think about myself as a researcher – 85%
- The SRI helped me develop confidence as a researcher – 95%

The students expressed similarly positive feedback when asked about their perspectives on specific learning outcomes such as learning about how to frame research questions, how to establish a research agenda, how to publish educational research, and skills necessary for science education research.

I explicitly asked students to comment on the \$300 fee that was required for their participation. All of the students who commented suggested that the value of the SRI far exceeded \$300 and all respondents were glad they chose to participate. However, the fee plus the travel expenses could have been prohibitive for some students. Approximately half of the students who participated in interviews paid these expenses themselves while the other half received support from their home institutions. Some of the individuals who received support reported that they would not have been able to attend without this support. Other students suggested that they would have paid a greater percentage of the costs associated with the institute from personal funds (up to \$1000 for at two students).

All students were expected to develop proposals for a poster session to be held at the 2010 NARST annual meeting. As discussed above, each of the teams handled the issue of creating NARST proposals somewhat differently. Proposal writing seemed to be a focal point for one team; whereas, the other teams positioned the task more peripherally (i.e. students knew they were expected to write a proposal but proposal writing did not seem to be a specific focus within the institute). When asked about the expectation to write a NARST proposal, students provided a variety of ideas. Many thought that the expectation to write a proposal was consistent with the focus and purpose of the SRI. Others felt that the task distracted from the primary goals.

When asked to provide suggestions for future SRI, most students suggested that the most important suggestion was to continue offering this experience. Another frequent comment related to possible follow-up activities. Students wanted to see additional opportunities to collaborate with their new colleagues. Another frequent suggestion was for organizers to carefully consider where students were in their programs in making acceptance decisions. They felt that participants who had not progressed far enough in development of their proposals would be unlikely to benefit maximally from the SRI. Finally, some students would have liked easier access to library resources.

#### Faculty Perspectives

Like the students, faculty participants provided very positive feedback regarding the process and results of the SRI. Every mentor who participated in an interview or informal conversation expressed enthusiasm toward his/her participation in the institute. The following comment provided by one mentor represents statements offered by many: "This is better than I ever thought it could be. It has been very intense but rewarding intellectually and socially."

I asked faculty to comment on what they saw as benefits of their participation. The following list captures the main themes expressed.

- The SRI has provided opportunities to help students. This assistance is an important contribution to the field and making this kind of contribution is personally rewarding.
- The SRI enhances the mentors' network of colleagues in terms of strengthening relationships with established researchers and building new relationships with a new group of scholars.
- The SRI helped faculty learn about how others mentor and will make their own mentoring practice more effective.
- The SRI experiences helped mentors think about their own work in new ways. Some of the activities required faculty to "unpack" their own thinking. They also learned about new ideas and perspectives from the students.

The mentors also shared ideas regarding the structure of the institute. Like the students they generally expressed positive opinions about the SRI structure and organization. A couple faculty suggested more flexibility in the schedule, but when asked how to achieve that flexibility in terms of which elements to be cut, they did not have immediate suggestions. One idea expressed by several mentors was to bring mentors in a full day before the start of the institute to provide more of an opportunity to collaboratively plan and ensure better alignment among the faculty. Mentors also approved of the faculty-

to-student ratios. Some suggested that the ratio could increase by two students (to 10:3), but greater increases would adversely affect the quality of mentorship provided.

One interesting issue emerged in terms of how the mentors and students perceived the faculty talks. Students tended to view the faculty research talks as longer versions of standard research presentations that they might see at the NARST annual meeting. The faculty tended to view the presentations as unique and providing insights into the processes of their work that are often obscured in more standard presentations. Some of the mentors really emphasized how important these talks were for the students. At least two mentors even suggested that future organizers should consider scheduling faculty talks so that they do not overlap so that students could hear all of them. Most students did not seem to perceive the same level of significance.

The issue of compensation (i.e. whether mentors should receive compensation) received varying responses. Some of the mentors passionately argued that faculty should not be compensated for participating in the SRI. They felt that this work was an important part of their service to the community. This group cited benefits to the mentors themselves as ample compensation (discussed above). Another group of mentors were rather ambivalent. They obviously agreed to participate without compensation and were happy to have done so, but would have appreciated an honorarium considering the large investment of their time. A third group felt strongly that mentors should receive some form of financial compensation. This group argued that the time and expertise of mentors should be valued and honored.

The mentors also expressed varying opinions regarding the importance of organizing the institute around a theme. Some argued that a common theme ensured appropriate focus for the SRI. Having a set theme made recruitment of advisors easier and ensured that faculty would be well prepared to assist students on their own projects. Others argued that a single theme unnecessarily limited participation. This group tended to prioritize the networking opportunities afforded by the SRI.

### Changes to Research Proposals

In order to document changes in practice associated with participation in the SRI, as compared to participant perspectives on their experiences, I performed a content analysis on the research proposals submitted before (as a part of SRI application materials) and after (for the NARST poster session) the institute. The guidelines for preparation of both sets of materials were similar in terms of proposal elements requested. As a part of the application, students were encouraged to discuss the research that they were working on as a part of their dissertations. For the poster proposals, students were encouraged to present the same research as it had evolved over the summer. I requested access to these materials from individual students. Seventeen of the 23 participants provided me with their proposals and permission to use them for this analysis. Two other science education researchers assisted in the content analysis of these proposals.

Of the 17 sets of proposals, three sets presented completely different research projects in the application proposal (pre) as compared to the poster proposal (post). The remaining 14 sets of proposals related to common studies (pre and post). We chose to focus the analysis on these 14 sets because they afforded more direct comparisons. In terms of proposal length and detail, all of the post proposals were significantly more detailed than the pre proposals.

After an initial review of eight sets of proposals, we decided to consider basic proposal sections (e.g. theoretical framework and results) as the unit of analysis. Because most of the pre-institute proposals and many of the post-institute proposals did not contain results and discussion sections, we chose to focus the analysis on the following sections: research questions, theoretical framework, and methods. We identified these sections within the proposals (regardless of how authors had labeled the proposals) and compared specific sections between the pre- and post-institution proposals for individual participants. We were interested in how the post-institution proposals may have improved or regressed relative to the pre-institution proposals. We saw no evidence of post proposals being less well-developed than pre proposals; however, many of the post proposals did show improvements. We operationalized improvements in terms of the clarity of presentation, internal consistency of ideas expressed, use of relevant literature, and level of detail provided. To better characterize the range of improvements observed, we developed an ordinal scale for use in the assessment of all three sections. The sections for each proposal set were rated as demonstrating significant improvement, some improvement or no change. The table below presents results from this analysis. A total of eight proposal sets (57%) demonstrated significant improvements in at least one section. Thirteen proposal sets (93%) demonstrated some level of improvement in at least one section. This analysis of proposals has obvious limitations, not the least of which is that factors other than the SRI very likely contributed to changes observed in the proposals. However, the analysis offers a perspective on the potential effects of the institute beyond the expressed opinions of the participants.

Table 1. Number of proposals rated in each of the three ordinal categories for each section assessed. Total number of proposal sets assessed equals 14.

	Research Questions	Theoretical Frameworks	Methods
Significant Improvements	5	4	6
Some Improvements	2	6	3
No Change	7	4	5

### Recommendations

Based on this evaluation of the 2009 SRI, I make the following recommendations for future institutes.

- Students need to be at the right phase in their graduate experiences to derive the greatest possible benefit from the SRI. I recommend targeting a range of students from those who are conceptualizing their dissertation projects to those who are engaged in initial phases of data collection and analysis.
- Recruitment of student and faculty participants should begin at the NARST annual meeting held over a year in advance of the institute. Assuming that the SRI will continue, the community needs time to consider how this new structure can be used effectively.
- At least in its initial phases, I recommend that the SRI be held every other year preferably in the years that ESERA does not offer their Summer School.

- The format and structure of the 2009 SRI was well received by all participants. Future organizers should consider this model both in terms of the different kinds of activities (e.g. workshops, teams sessions, etc.) and arrangement of groups. Partnering teams (with up to 10 students) with three mentors was very well received. The students appreciated access to multiple faculty perspectives and the mentors liked working with two other faculty members.
- Building a system whereby junior faculty work with more experienced faculty builds infrastructure for mentorship beyond connections between students and faculty. I recommend that this feature of the SRI be continued.
- The faculty mentors for the 2009 institute communicated electronically, met at the annual meeting prior to the SRI and met when they arrived at the SRI site. More opportunities to discuss approaches to mentorship, how they wanted to structure team time, how they thought about theoretical frameworks, etc. would have been useful. Bringing mentors to the SRI site a full day earlier than the students would be a one means of creating greater opportunity to have these discussions.
- I recommend that future SRI organizers carefully consider follow-up opportunities. This year, the SRI organizing committee collaborated with the Research Committee to hold an interactive poster session at the annual meeting. This provides a venue for students to share their work, but it limits formal activities. Future organizing committees could consider hosting activities during the pre-conference workshop period at the annual meeting.
- Having a graduate assistant or staff person able to help coordinate logistics of an institute is very helpful for the smooth functioning of the event.
- Arrangements should be made to provide participants with access to library resources (either in a physical facility or online).

#### Critical Issues

The NARST Board needs to consider several critical issues in terms of facilitating future SRI. The first question is whether or not NARST seeks to support future institutes. If the Board does plan to support future institutes, some of the issues which will require Board attention are identified below.

- For the 2009 SRI, NARST provided \$22,000 and the University of Missouri provided an additional \$6,000. Students each paid a \$300 fee. The NARST Board will have to decide how much support it wants to provide for this kind of program. It must also decide how much support it expects from host institutions. The RC is concerned about the number of institutions would be willing to host a SRI if a \$6,000 commitment were required. The Board may want to consider suggesting cost-cutting recommendations to future organizing teams. One way of cutting costs would be to cover less of the expenses associated with the experience. For example, the 2009 SRI provided lodging and all meals for all of the participants. A cost cutting measure could have had students pay for their own dinners. The other factor to consider is the fee for students. Other, similar graduate student opportunities (like ESERA Summer School) require much higher fees that come closer to covering the costs of the program. A possible strategy would be to impose higher fees coupled with a stated expectation that students' home institutions provide some financial support and a limited number of scholarships.

- Related to the item above is the issue of faculty compensation. Strong arguments can be made on both sides of this issue (to provide or not provide compensation). The Board will have to decide how to handle the issue.
- The organizers of the 2009 SRI developed a theme that helped structure the institute and used as a criterion for determining who participated. The decision of whether or not an institute should have a theme is closely linked to the primary aims of the institute. If the primary aim is to support student development of their research projects, then bringing together groups of faculty with common interests and areas of expertise seems to be an effective strategy for achieving that aim. If the primary aim is to foster the enculturation of new researchers into the community of science education, then a specific theme may unnecessarily limit the individuals who are able to participate. The decision regarding this issue will have important implications who participates and how an institute is structured. One suggestion made in response to this issue during the 2009 SRI was to have each organizing committee make the decision based on their specific contexts.
- Two student participants and one faculty mentor from international institutions participated in the 2009 SRI. The Board will need to consider the extent to which it wishes to support international participation in future SRI. Two members of the RC who reviewed a previous draft of this report point out that NARST is an international organization and should consider providing extra support to ensure more internationally diverse participation in future institutes.

As a final recommendation, I would like to encourage the Board to publicly thank the student and faculty participants of the 2009 SRI. They all contributed a great deal of time and effort to the institute and have provided the Board with an opportunity to consider new ways of supporting the professional development of the science education community. Sandi Abell, Pat Friedrichsen, and Carla Zembal-Saul deserve a special thanks for the fine work they did in creating a model for the Board to consider.

Appendix A: Student Interview Protocol

- 1) Knowing what you know now, are you glad that you are participating? Why?
- 2) What are the best parts of the Institute?  
What ought to be changed?
- 3) Specific thoughts on any of the following programmatic features:
  - Whole group sessions?
  - Team sessions?
  - Research presentation?
  - Workshops?
  - Unstructured time?
- 4) What do you think about the ratio of students to mentors (8:3)?  
Do you like 8 students in each working group with 3 mentors? Would you prefer smaller groups with fewer mentors? Larger groups with more mentors?
- 5) What are the benefits of your participation in this program?  
How do the benefits compare to your expectations?
- 6) What advice would you have for students from your program who are considering participating in a future Summer Research Institute?
- 7) How did you fund your travel?  
How much out of pocket expense would an Institute like this be worth?  
How much out of pocket expense would be possible?
- 8) Would you like a formal opportunity to reconnect with participants (mentors and students)? Would you be willing to participate in this kind of follow-up if it meant going to the NARST Conference a day or half day early?
- 9) How will this experience change your work?
- 10) What suggestions do you have for improving the SRI?

Appendix B: Mentor Interview Protocol

- 1) How is the Institute progressing?  
What is working well?  
What needs to be modified?
- 2) Specific thoughts on any of the following programmatic features:
  - Whole group sessions?
  - Team sessions?
  - Research presentation?
  - Workshops?
  - Unstructured time?
- 3) What do you think about the ratio of students to mentors (8:3)?  
Do you like 8 students in each working group with 3 mentors? Would you prefer smaller groups with fewer mentors? Larger groups with more mentors?
- 4) What kind of progress are the students in your teams showing or is it too early to tell?
- 5) Has it been a rewarding experience for you? If so, in what ways?
- 6) How important is it to have a theme that connects all of the mentors' and students' research interests?
- 7) You and your colleagues serving as mentors committed to this work without compensation. Given the investments of time and effort that you've made, would you do it again? What kind of compensation should faculty be receiving to do this work?
- 8) If you were designing Summer Institute from scratch, how would you set it up?

Appendix C: Follow-up Survey

1. In which phase of your dissertation work were you at the beginning of the institute?  
 Just getting started    Near the beginning    Proposal Phase    Data Collection  
 Data Analysis    Writing it up    Other

2. With which team did you participate?

3. Select the response that corresponds to your assessment of the *quality* of the following aspects of the NARST Summer Research Institute.

	Outstanding	Good	Mediocre	Needs Significant improvement
Faculty research presentations.				
Team sessions.				
Workshops.				
Closing ceremony				
Faculty mentoring.				
Explain your ratings for any SRI aspects that you rated below "Good."				

4. Select the response that best corresponds to your opinions about the *timing and duration* of the following aspects of the NARST Summer Research Institute.

	We spent too much time doing this.	We spent the right amount of time doing this.	We spent too little time doing this.
Faculty research presentations.			
Team sessions.			
Workshops.			
Unstructured time.			
Writing time.			
Meeting with faculty mentors from our team.			
Meeting with faculty mentors from teams other than our own.			
Working on NARST proposals.			

5. The statements below identify possible outcomes of the Summer Research Institute (SRI). Indicate the extent to which you agree with each statement.

	Strongly	Agree	Disagree	Strongly

	Agree			Disagree
The SRI allowed me to create a new network of science education colleagues.				
The SRI allowed me to network with peers.				
The SRI allowed me to network with established science education researchers.				
The SRI helped me establish a theoretical framework for my study.				
The SRI helped me create research questions for my study.				
The SRI helped me develop a plan for collecting data.				
The SRI help me develop an analysis plan for my study.				
The SRI helped me align my theoretical framework and research questions.				
The SRI helped me align my research questions and methods.				
The SRI helped me align my theoretical framework and methods.				
The SRI has changed the way I will conduct my dissertation research.				
The SRI has changed the way I think about myself as a researcher.				
The SRI helped me develop confidence as a researcher.				

6. The items below indicate possible learning outcomes of the Summer Research Institute. Indicate the extent to which you agree with each statement.

Because of my participation in SRI, I learned about...	Strongly Agree	Agree	Disagree	Strongly Disagree
... tools for supporting/organizing my research life and social networking tools.				
... theoretical frameworks.				
... publishing education research.				
... issues relevant to science teacher education.				
... how to write a NARST proposal.				
... how to establish a research agenda.				
... how to mentor.				
... what it means to be a faculty member.				
... skills necessary for science education research.				
... how to frame research questions.				

7. Select the response that corresponds to your assessment of the *quality* of the following aspects of the NARST Summer Research Institute.

	Outstanding	Good	Mediocre	Needs Significant improvement
Hotel accommodations.				
Facilities for group sessions and presentations.				
Lunch sessions.				
Group dinners.				
Technology/Internet access				

8. Which aspects of the SRI were most useful for you?

9. Which aspects of the SRI were least useful for you?

10. What recommendations do you have for improving future SRI?

11. In what ways did the SRI influence your research project?

12. In what ways did the SRI influence you as a researcher?