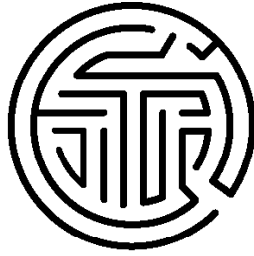




**INTEL TEACH TO THE
FUTURE® LEADERSHIP
FORUM: FORMATIVE
RESEARCH**



C C T R E P O R T S
D E C E M B E R 2 0 0 4

**INTEL TEACH TO THE
FUTURE[®] LEADERSHIP
FORUM: FORMATIVE
RESEARCH**

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EXECUTIVE SUMMARY

Consistent with the longitudinal evaluation of the Intel Teach to the Future Essentials Course that Education Development Center's Center for Children and Technology (CCT) has been conducting since the program's inception in 2000, the Intel Foundation commissioned CCT to conduct a formative evaluation of the Leadership Forum Pilot program. This report presents findings and recommendations from this formative research.

Methods

Data collection for this formative research was conducted using mixed methodologies:

- *Survey.* EDC developed and advised Intel in the deployment of an online survey that all Leadership Forum attendees were asked to complete at the end of each training session.
- *Observations.* An EDC evaluator attended and observed six Leadership Forums from September through November 2004.

Key Findings

Below is a list of key findings from the formative evaluation of the Pilot.

- From September 27 to November 19, 2004, Intel Innovation in Education held 18 Leadership Forums, training 345 administrators, 267 of whom responded to an online survey (77% response rate).
- Twenty-six percent of survey respondents were district-level administrators (superintendent, curriculum director, etc.) and 56% were school-level administrators (principal, assistant principal, tech coordinator, etc.). There was very little difference in the survey responses submitted by administrators working at the district and state levels, suggesting the Forums reached both groups effectively.
- Nearly all survey respondents (95%) reported the ideas and skills they learned from the Forum either will probably (54%) or will definitely (41%) help them improve teacher effectiveness and student achievement by supporting and promoting the integration of technology.
- Almost all of the survey respondents (95%) reported the Forum helped them either to a moderate extent (43%) or to a great extent (51%) create a prioritized list of leadership behaviors that impact the integration of technology as a tool to improve student learning. Equally high were the number of respondents who reported the Forum did the following: examined the critical role educational leaders play in the effective integration of technology into teaching and learning; presented an analysis of the ISTE NETS-A standards and performance indicators; helped me to develop a personalized action plan ready for implementation in my school or district; illustrated concrete strategies that were new to me for improving student achievement through the integration of technology into the classroom.

- A solid majority of survey respondents found all five of the core modules of the Leadership Forums — review of available resources, creation of personal action plan, discussion of case studies and leadership behaviors, discussion of best practices and exploration of NETS-A standards — either moderately or very useful.
- Three-quarters of respondents reported feeling either well prepared (16%) or adequately prepared (59%) to act on the steps outlined in their Action Plans.
- The Leadership Forums helped strengthen administrators' perceptions of and interest in Intel Teach to the Future, specifically: 1) 70% of survey respondents were from schools/districts participating in Intel Teach to the Future; 2) the Leadership Forums helped strengthen administrators' perceptions of and interest in Intel Teach to the Future; 3) many participants said they were interested in providing additional training for themselves and other administrators; and 4) most of the RTAs and trainers interviewed reported they had little or no follow-up planned after the Forums' completion.
- The Leadership Forums encountered several implementation challenges: 1) core technologies — both Internet connectivity and Turning Point — were sometimes unreliable; 2) the curriculum script was too restrained and the format was not interactive enough for some administrators; and 3) a small minority of administrators mistakenly expected the Forum to focus on concrete skills and tools for them rather than focusing on technology integration at the classroom level.

Recommendations

The report contains recommendations based on the findings represented in Sections I and II.

Continue to fill the void of administrator technology training by expanding the program.

Administrator responses to this program confirm the program team's expectation that little professional development regarding instructional uses of technology is yet available for administrators. Consequently, administrators were very receptive to this program, but also came either with very narrowly defined goals and expectations (wanting technical training) or with so many needs it was difficult for them to focus in on the specific goal-setting activities presented in the current curriculum. Although Intel is unlikely to choose to respond to administrators' interest in skills training, there are many opportunities to expand this training to provide further support to administrators who are just beginning to learn how to be effective leaders in this area. Possibilities include the following:

- Partnering with administrator certificate/degree programs offered by schools of education. For instance, one of the Forums was embedded in a course administrators were taking at a state university as part of a longer training program.
- Offering a series of Forums that focus on strategies for implementing Action Plans and opportunities for administrators to expand and deepen their goals. Parts of the series — discussion of the various Action Plan implementation steps, for instance — could occur online after administratorshad the initial opportunity to train face-to-face.

- Building an administrator component into teacher training thereby facilitating administrator-teacher communication around technology integration. For instance, the future iteration of Teach to the Future could include a Leadership Forum segment, requiring teachers to collaborate with principals and other instructional leaders within their schools.

Continue to use Leadership Forums to strengthen the positive perception of and participation in Intel Teach to the Future. While all participants are introduced to Intel's teacher training program during the course of the Forums and receive a copy of the "Intel Teach to the Future: Meeting the Challenge of No Child Left Behind" booklet, they could absorb more detailed information about how teachers in their schools and districts can pursue additional training opportunities. Past evaluation of the Essentials Course has indicated that Intel Teach to the Future often complements existing, more basic professional development offerings within school districts. The Leadership Forums could include an activity in which administrators conduct an initial needs assessment regarding their teachers' professional development related to educational technology, and consider where the Essentials Course might fit within their overall sequence of trainings. More concretely, administrators could be given hard copies of information about how to become involved in Intel Teach to the Future, and contact information for other districts in their area who have already been involved in the program and could provide insight into how to make the best use of it.

Give participants greater opportunity to exchange ideas with one another by building in additional paired and group activities. Many participants expressed a desire to hear from their colleagues about technology integration within their local settings and to use the Forum as an opportunity to develop concrete ways to work together within their schools and districts. In the Essentials Course, the extended training period gave teachers time to build these relationships and develop plans for future collaboration. This kind of peer learning and collegial support are consistent with the spirit of all of Intel's professional development programs, and should be emphasized in the Leadership Forums as well. However, their brief timeframe means these kinds of activities must be structured into the program itself, because there is little or no time for informal discussion or follow-up conversations among participants. The Leadership Forums should emphasize the importance of learning from one another's experiences and the value of future collaboration among participants by building time for structured, focused planning around these topics into the Forum agenda.

Reduce the level of "scripting" in the training experience by encouraging facilitators to familiarize themselves with the substance of the curriculum rather than relying on specific language. As the program expands and the need to recruit trainers grows it will be important to communicate clearly what is expected of each trainer and to model these expectations in the training they receive. This will be true of both newly recruited trainers as well as administrators who initially attend a Forum and then have an interest in training fellow administrators once they return to their schools and districts. Although requiring all trainers to read a curricular script ensures the delivery of the same content in every Forum, it does not give the trainer the flexibili-

ty to adapt to local needs and interests, potentially making the training less valuable to participants. Therefore, future training and support materials, such as an online resource constructed for trainers in the field, may include a simple description of key points worth emphasizing in each curriculum module. Another useful resource would be a list of “tried-and-true” adaptations that trainers have made depending on various local conditions and particular kinds of participant groups.

Conduct detailed technical run-throughs prior to each training session. Trainers as well as an on-site technical support staff will minimize the number of technical delays and glitches by doing the following: running Turning Point software checks, conducting software inventories, including Flash, preloading relevant Internet sites, and testing the connection between the laptop and projector. Ideally, the same tech support person, who is familiar with the facility and other demands that are likely to occur on infrastructure at the time of the training, will remain present during the training to troubleshoot any difficulties that arise.

Use the next phase of evaluation to identify concrete ways participants use their training, tracking the implementation of their Action Plans and how they support technology integration at the classroom level based on their Forum experience. Nearly all of the participants interviewed expressed a strong desire to implement their Action Plans but relatively few (16%) described themselves as being “well prepared” to do so. Tracking if and how administrators take action to accomplish these goals is likely to yield valuable information about the local and systemic challenges administrators encounter, specific knowledge or information they may need in order to act effectively, or different decision-making or policy-setting practices that prove to be more or less successful. Learning more about all of these topics will inform further development of the training experience and help to define the scope and depth of impact the program can expect to have.

Revise the online survey — or administer two versions — to capture a broader range of responses. Just as the Forum curriculum will be updated, so too must the survey to reflect the changes and newly refined goals. While this survey provided useful feedback on participants’ responses to the Forum, responses were highly consistent across questions and across different groups of respondents. It is appropriate to develop a more focused survey at this point that would allow for more discrimination among participants’ different experiences with the program.

Appendices

The reports contains three appendices:

- Introductory Letter to Online Survey
- Online Survey
- Online Survey Basic Frequencies

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INTRODUCTION

Building on the four-year momentum of the Intel Teach to the Future training initiative aimed at classroom teachers, the Intel Leadership Forum is a program designed for school- and district-level administrators throughout the United States. Recognizing the important role administrators play in supporting teachers' efforts, the training experience was developed to guide K-12 instructional leaders in their efforts to plan and implement technology integration and professional development in their schools, especially those schools that previously had participated in the teacher training program. Specifically, the Forum gave participating administrators the opportunity to do the following:

- Examine the critical role leaders play in the effective integration of technology into teaching and learning
- Apply their knowledge to create a prioritized list of leadership behaviors that impact the integration of technology as a tool to improve student learning
- Analyze the International Society for Technology in Education (ISTE) National Educational Technology Standards for Administrators (NETS-A)
- Synthesize their understanding to develop a personalized action plan ready for implementation

Each administrator participating in the Forums received a curriculum guide with a complimentary CD-ROM and spent three or four hours engaged in hands-on activities in a computer lab setting. Using a PowerPoint presentation as well as print and web-based tools and resources, a trainer (or co-trainers) facilitated the Forum curriculum, which consisted of six separate but related modules:

- 1) Introducing the Forum
- 2) Exploring best practices, including viewing the Intel Innovation in Education Web Site and exploring strategies and exemplary unit plans
- 3) Examining leadership standards and behaviors, including doing a hands-on activity with the "Visual Ranking" tool and reading case studies featuring real-world administrators
- 4) Constructing a personal action plan
- 5) Touring available resources included on the web and curriculum CD-ROM
- 6) Wrapping up

Consistent with the longitudinal evaluation of the Intel Teach to the Future that Education Development Center's Center for Children and Technology (CCT) has been conducting since the program's inception in 2000, the Intel Foundation commissioned CCT to conduct a formative evaluation of the Leadership Forum Pilot program. Two goals guided the 2004 evaluation of the U.S. Intel Teach to the Future Leadership Forums:

- Understanding how the program is being received by participating administrators and what qualities of the program are supporting or impeding the usefulness of the Forums
- Understanding participants' perceptions of whether and how the program is likely to influence their actions in their own schools and districts and what factors may be impeding or supporting their efforts to follow up on the experience.

This report is comprised of five sections:

- 1) Key Findings
- 2) Description of Leadership Forum Participants
- 3) Detailed Findings
- 4) Recommendations
- 5) Appendices

Methodology

Data collection for this formative research was conducted using mixed methodologies.

Survey. EDC developed and advised Intel in the deployment of an online survey that all Leadership Forum attendees were asked to complete at the end of each training session.¹ The survey instrument investigated the following:

- Administrators' perceptions of and responses to the program
- Their current practices and beliefs regarding the development of their local educational technology program
- Their goals for further expansion or improvement of those programs
- Their perceptions of the local conditions that are supporting or impeding their efforts to improve the use of educational technology in their schools or districts

This survey was launched prior to the beginning of the program pilot in July. EDC worked with Intel to ensure that program participants were able to complete the online survey at the conclusion of their Forums. The survey was web-based and made use of Zoomerang technology.

Observations. An EDC evaluator attended and observed six Leadership Forums from September through November 2004. The evaluator worked with Intel staff and Regional Training Agency (TRA) contacts to guide site selections, with a goal of visiting a wide range of Forums that varied by geographic region and types of districts and participants involved. See Table 1 for an overview

¹See Appendices 1 and 2 for copy of the online introductory letter and survey.

of observed Forums. The evaluator also worked with ICT staff to determine which of the scheduled Forums were likely to occur based on early registration. A minimum of eighteen people were required to register at least three weeks in advance for each Forum; 10 to 29 administrators participated at each of the six observed Forums.

During each site visit, the evaluator paid particular attention to the following:

- Whether and how trainers' presentation corresponded to the structure and content of the training materials, and what local circumstances required the trainer to adapt their approach
- How key messages about administrators' roles in supporting the use of educational technology were communicated
- To what extent administrators were engaged by, contributed to, and responded to discussions and activities during the Forum
- Whether and how administrators discussed how the ideas presented in the Forum connected to their current local situations and goals, and what local challenges and opportunities they perceived to be relevant to achieving the goals discussed in the Forum

Table 1: Overview of Observed Forums

	FORUM 1	FORUM 2	FORUM 3	FORUM 4	FORUM 5	FORUM 6
Region	Southwest	Rocky Mountains	New England	New England	Northwest	South
Training	High School Computer Lab	Annual Professional Conference	Regional PD Center	Elementary School Computer Lab	University Computer Lab	Theater within Science Center
Participants/Districts	All from single rural district	Multiple districts (rural, urban suburban) across the country	All from single urban district	All from single urban district	Multiple districts (primarily rural) throughout one state	Multiple districts (rural, urban, suburban) throughout one state
Length of Session	4 hours	3 hours	4 hours	4 hours	4 hours	4 hours
Trainer	ICT Staff	ITC Staff and Local Superintendent	Curriculum Co-author	Curriculum Co-author	University Professor	Local Principal
Number of Participants	19	17	12	17	29	10

During these visits the evaluator also conducted informal interviews with the trainer immediately following the Forum or established a later time to conduct an interview with him or her via telephone. These interviews served a two-fold purpose: 1) to document the trainer's perceptions of the goals and core concepts of the Forum and 2) to gather his or her views of how successful this particular Forum experience was and how interested in and ready for the material administrators

were. When possible, just after the conclusion of the Forum or during breaks, the evaluator also conducted informal interviews with participating administrators to explore their perceptions of the goals, strengths and weaknesses of the Forum. The evaluator probed both for administrators' interpretations of the relevance and utility of the Forum relative to their own needs and current practices and resources and for their level of engagement with and understanding of the core concepts the Forum was intended to introduce.

Phone interviews. The EDC evaluator conducted 12 phone interviews and email exchanges with administrators who participated in Forums, most of which were different from the ones the evaluator observed. These phone interviews and electronic exchanges investigated topics similar to the informal interviews described above and explored in more depth how administrators may be planning to make use of key concepts from the Forum and apply them to their local circumstances.

SECTION I. DESCRIPTION OF LEADERSHIP FORUM PARTICIPANTS

From September 27 through November 19, 2004, Intel Innovation in Education held 18 Leadership Forums throughout the country. Three hundred forty-five administrators attended these Forums, 267 of which submitted responses to the online evaluation (77% response rate). Based on these responses, below is a profile of the participants and the characteristics that defined them.

Participants' Roles and Experience

Participants held a variety of administrative positions within their schools and districts. The largest grouping (39%) was principals, followed by assistant principals (11%) and district-level curriculum directors, coordinators, or supervisors (10%). For a complete breakdown of participant's positions, see Table 2.

Table 2: Participants' Job Titles

NUMBER OF STUDENTS ENROLLED IN DISTRICT	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS (N=266)
District superintendent	5%
District assistant superintendent	3%
District-level curriculum director, coordinator, or supervisor	10%
District-level technology director, coordinator, or supervisor	8%
School principal	39%
School assistant principal	11%
School-level curriculum director, coordinator, or supervisor	3%
School-level technology director, coordinator, or supervisor	3%
Classroom teacher or other instructional staff	8%
Other*	11%

* Participants who indicated "other" specified a wide range of job titles. Examples include: Special Education Director, District Technology Resource Teacher, Media Director, Director of Research and Development and School Improvement Specialist.

On average the participants reported having nearly 13 years of experience teaching: 7 years of experience as a principal and 6 years of experience as a K-12 administrator. The participating principals had an average of 7 years of experience with few participants having more than two decades of experience. See Table 3 for a comparison with national percentages.

Table 3: Principals' Years of Experience

NUMBER OF YEARS OF EXPERIENCE AS A PRINCIPAL	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS	NATIONAL PERCENTAGE
3 or fewer	36%	30%
4-9	38%	30%
10-19	23%	28%
20 or more	4%	13%

Demographic Information

Participants represented a range of school districts, in terms of student populations, size of the district, and student eligibility for free and reduced lunch.

Thirty percent of participants worked in school districts that had 25,000-99,999 students, which is much higher than the national percentage, and nearly half worked in districts that had fewer than 7,500 students. For a complete accounting of district student enrollment and comparisons to national percentages, see Table 4.

Table 4: District Student Enrollment

NUMBER OF STUDENTS ENROLLED IN DISTRICT	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS	NATIONAL PERCENTAGE
1 - 299	6%	22%
300 - 999	12%	27%
1,000 - 4,999	25%	38%
5,000 - 7,499	13%	5%
7,500 - 9,999	5%	2%
10,000 - 24,999	7%	4%
25,000 - 99,999	30%	2%
100,000 or more	1%	<1%
Not sure	1%	

Approximately half of the participants (53%) worked in districts comprised of ten or fewer schools and 23% worked in districts of 21 to 50 schools. For a complete accounting of number of schools in the district, see Table 5.

Table 5: Number of Schools in District

NUMBER OF SCHOOLS IN DISTRICT	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS
1 - 5	29%
6 - 10	24%
11 - 20	6%
21 - 50	23%
51 - 100	12%
More than 100	5%
Not sure	1%

Approximately three-fourths of participants (73%) worked primarily within a single school rather than an entire district. Therefore, we asked participants to indicate the size of their schools.

Thirteen percent worked in schools with fewer than 300 students compared to 33% nationally and 39% worked in schools with 300 to 749 students compared to 47%. For a complete accounting of the number of students in participants' schools, see Table 6.

Table 6: Number of Students in School

NUMBER OF STUDENTS IN SCHOOL	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS	NATIONAL PERCENTAGE
1 - 99	2%	11%
100 - 299	11%	21%
300 - 749	39%	47%
750 - 1,499	16%	16%
1,500 or above	4%	4%
Not applicable	27%	

The socioeconomic composition of participants' districts, as indicated by the number of students qualifying for free or reduced-price lunch, was evenly split: about one third worked in districts where half or fewer students were eligible; roughly one-third represented districts where three-quarters to half of students were eligible; and roughly one-third came from districts where all to three-quarters of these students qualified. For a complete accounting of district and school eligibility for free or reduced-price lunch, see Table 7.

Table 7: District and School Eligibility for Free or Reduced-Price Lunch

PERCENTAGE ELIGIBLE FOR F/R LUNCH	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS - BY DISTRICT (N=260)	PERCENTAGE OF INTEL LEADERSHIP FORUM PARTICIPANTS - BY SCHOOL (N=251)	NATIONAL PERCENTAGE BY SCHOOL
0 - 25%	10%	15%	34%
26 - 50%	23%	18%	34%
51 - 75%	31%	19%	16%
76 - 100%	30%	22%	16%
Not sure	6%	<1%	
Not applicable		25%	

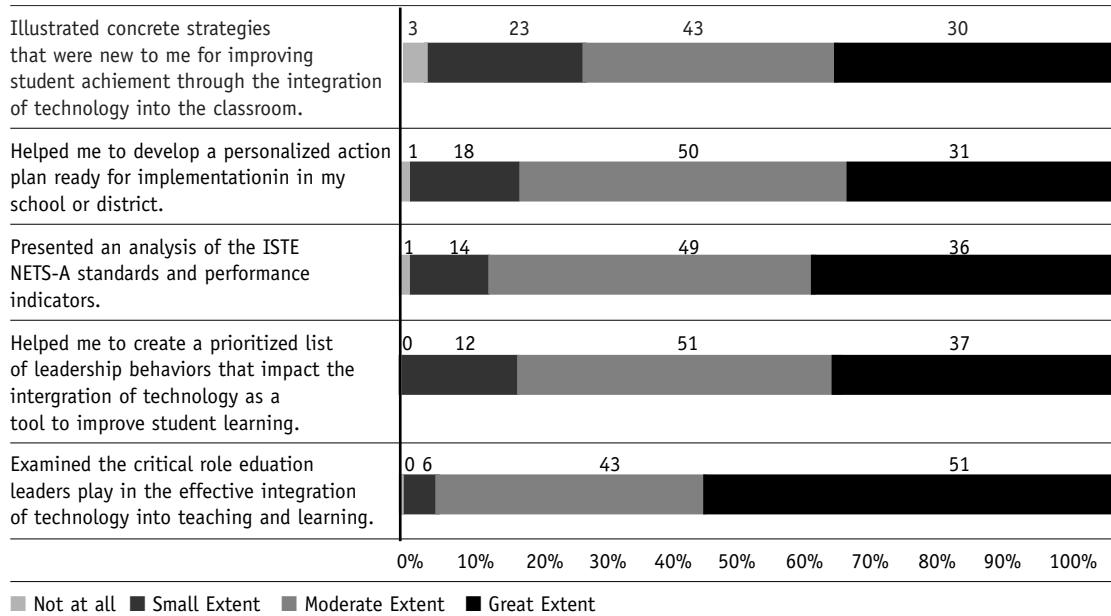
SECTION II: DETAILED FINDINGS

The findings are grouped into five categories: overall training experience; action plans and other curricular modules; Intel Teach to the Future and other future plans; training materials; and facilitation and implementation challenges. While none of these categories is mutually exclusive each one relates to an important layer of the Leadership Forum. Furthermore, although the online survey asked participants to designate their current position, e.g. principal or superintendent, there was no difference in any of the responses they gave to questions in the survey between those working at the district level and those working at the school level, suggesting the Forums reached these two groups equally. As a result, there are no distinctions between these two domains of responsibility in the reporting of the findings below.

Overall Training Experience

Overall, participants reported they were satisfied with their training experience and valued what they learned. The vast majority of survey respondents (93%) said they either probably (45%) or definitely (49%) would recommend the Leadership Forum to a colleague. As one superintendent from a district in the Southwest summarized, “It was excellent. It was very interactive...I thought the training was outstanding.” Similarly, 92% of respondents reported they agreed (44%) or strongly agreed (49%) the goals and objectives of the Forum were clearly stated and the agenda was followed (n=264). Ninety-four percent of respondents said the Forum examined the critical role educational leaders play in the effective integration of technology into teaching and learning to a moderate or great extent and 88% said it helped them create a prioritized list of leadership behaviors that impact the integration of technology as a tool to improve student learning (n=266). See Figure 1 for a full summary of responses to this question.

Figure 1: Participants’ Statements About the Forum Experience



At the conclusion of the Forum, participants reported feeling strongly about three of the four primary areas addressed during the training and approximately half said their opinions either had slightly or significantly changed as a result of their training experience.

Survey respondents said they strongly agreed with the following statements:

- Administrative leadership plays an important role in ensuring the success of classroom technology integration (81%, n=265).
- It is important for administrative leaders to model the use of technology for teaching and learning within their school or district (79%, n=265).
- Technology is an important tool that should be used to enhance teacher effectiveness and student achievement (79%, n=266).

Furthermore, although roughly half of the respondents said their opinions about leaders’ roles and leadership behaviors did not change as a result of their training, the other half reported their opinions changed slightly or significantly because of their participation in the Forum. There was no correlation between the responses participants had given to these two questions. Respondents who rated one of the statements within Question 12 highly rated all the other Question 12 statements highly. This was also true of Question 13. Nevertheless, the degree of opinion change was not related to their level of agreement with each statement.

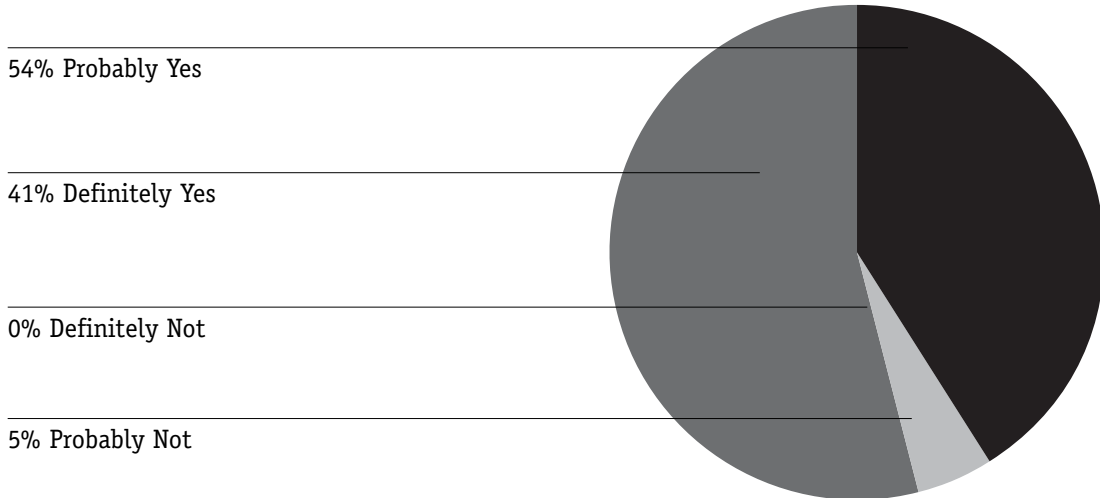
At the conclusion of the Forum, a majority of participants reported they felt familiar with the NETS-A standards, though a portion said they were not familiar with them. Sixty percent of survey respondents said they agreed with the statement, “I am familiar with the NETS-A standards for administrators’ use of technology” though 17% disagreed and 3% strongly disagreed with it (n=264). Significantly, 83% of respondents said their familiarity with the standards had changed slightly or significantly as a result of their participation in the Forum (n= 261). Similarly, 85% of respondents reported the Forum had presented an analysis of the ISTE NETS-A standards and performance indicators to a moderate or great extent (n=266). One trainer attributed this to the connection the curriculum drew between the standards and the personal action plans. He said, “We asked people to fill out three parts of the [Action Plan] matrix. Some people filled out every single block. That showed me that we met a need: people are trying to fit the national standards to their own environments.... That was a culminating validation. We wanted leaders to take responsibility of integrating technology in their schools, and it worked.”

Exchanges among participants — and between participants and trainers — were where a great deal of the learning took place. Administrators reported they valued having the opportunity to spend time with their peers discussing their various approaches to technology integration. Some participants said they would have liked additional time to converse with one another built into their training session. By contrast, several RTAs said they were eager for the Forums to keep to their timeline and said they were concerned that administrators were “talking too much.” Nevertheless, 87% of survey respondents reported they agreed or strongly agreed they had been engaged in group discussions on the topics presented in the Forum (n=265).

Action Plans and Other Curricular Modules

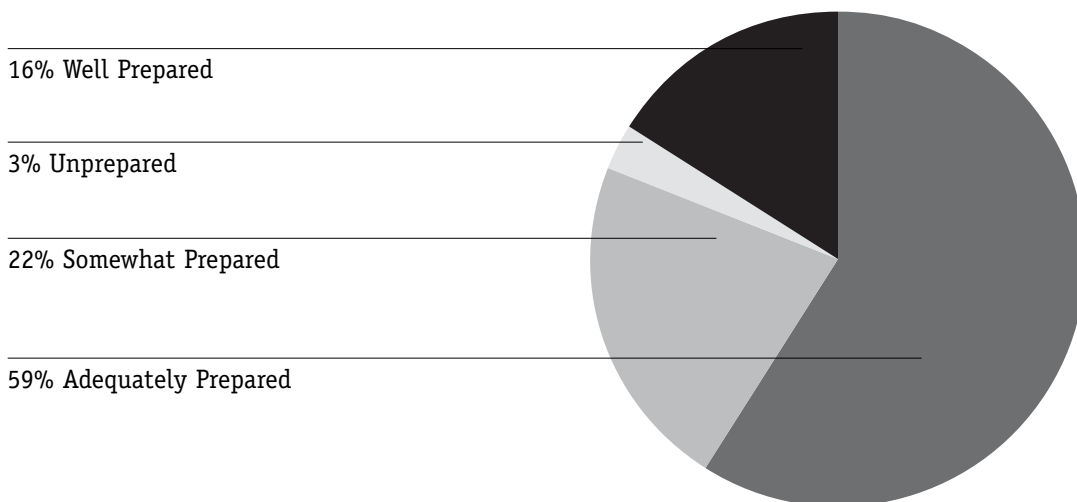
Nearly all participants reported they would be better able to support technology integration among their teaching staff as a result of their training. Ninety-five percent of survey respondents said the ideas and skills they learned from the Forum either would probably (54%) or definitely (41%) help them improve teacher effectiveness and student achievement by supporting and promoting the integration of technology (n=273). See Figure 2 for a full summary of responses to this question.

Figure 2: Likelihood of Forum Ideas and Skills Improving Teacher Effectiveness and Student Achievement by Supporting Technology



The majority of participants said the Action Plan they had created during the Forum would help them implement their technology-related goals. Among survey respondents, 59% reported feeling adequately prepared and 16% well prepared to act on the steps they had outlined in the Action Plans (n=271). See Figure 3 for a summary of responses. Likewise the majority of respondents said the Forum had to a great extent (30%) or moderate extent (50%) helped them develop a personalized action plan ready for implementation in their school or district (n=266). One trainer attributed the success of the Action Plan to the Visual Ranking activity. He explained, “It gives everyone a starting point to get to the action plan. They see the priorities depending on the role they play — teacher, administrator. It’s a way to have content drive the technology.”

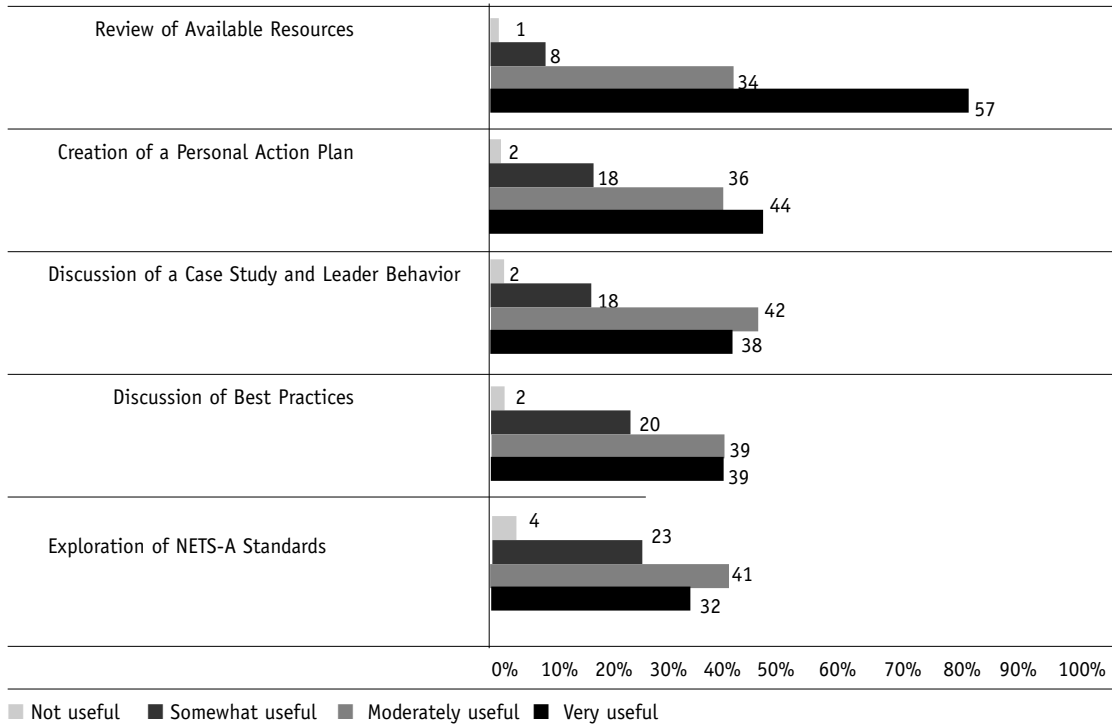
Figure 3: Participants’ Level of Preparation to Implement Action Plans



Participants identified all factors identified in the survey as strong “driving forces” in their efforts to achieve their Action Plans. Survey respondents said the following would help support or sustain their process of change: stated school/district goals for technology integration (62%); interests and priorities of other administrators in my school/district (57%); the technology resources (equipment) available in my school/district (55%); interests and priorities of teachers in my school/district (56%); Federal/State mandates related to technology integration (52%); scope and focus of budget allocations associated with technology integration within my district (49%); and interests and priorities of the school board in my district (47%).

The majority of participants said they walked away from the training with new ideas for integrating technology into their teaching and learning goals. Among the survey respondents, 73% reported the Forum illustrated concrete strategies that were new to them for improving student achievement through the integration of technology into the classroom, either to a moderate or great extent (n=265). Several participants reported during the interviews that they looked forward to finding the time to explore the resources and other materials they had received during the training while others said they returned to their schools and immediately shared the resources with fellow administrators and/or classroom teachers. Nearly all of the administrators interviewed said it was too soon to know how effective their new skills would be — or if they would have time to make use of them.

A clear majority of participants reported finding each of the substantive modules useful. Consistently, approximately 80% of survey respondents said the five core content areas — exploration of NETS-A standards, discussion of best practices, discussion of a case study and leader behaviors, creation of a personal action plan, and review of available resources — were either moderately or very useful. Equally consistent, only one-fifth of participants said these five areas were somewhat or not useful. In interviews, both trainers and administrators singled out Visual Ranking, the lesson plans found on the Intel Innovation in Education website, the NETS-A standards, and the resources to be among the materials and tools they valued the most. See Figure 4 for participants’ response to the core curricular modules. A few people also expressed specific opinions about the merits and utility of the Case Studies. For example, one trainer said about the Case Studies: “They take more time than they are worth. I don’t think the administrators think reading those at the time of training are a good use of time.” Alternatively, one principal reported during an interview the Case Studies could serve as a starting point for the training. She said, “The case studies are perfect. I thought we’d start there and then say, ‘Look principals this is how your day could look.’ This guy [the principal in the Case Study] is click, click, click and our day is write, write, write. I thought we’d ask: what components could you use in your world. Why doesn’t your world fit with this? Are there tools you don’t have? Are there things you don’t know? How do you build your technology plan from there? You could compare yourself to the ‘technology principal’ and move from there. That’s the way everyone was relating to this material.”

Figure 4: Usefulness of the Curriculum Modules

Intel Teach to the Future and Other Future Plans

The Leadership Forums helped strengthen administrators' perceptions of and interest in Intel Teach to the Future. In discussing their recruitment strategy for the Forums, several RTAs interviewed said they sought out administrators already familiar with Intel Innovation in Education's teacher training program. It is not surprising therefore that 70% of survey respondents were tied to schools or districts that had participated. For example, one professional development coordinator who helped coordinate one of the Forums said of the 190 staff in his district, 130 had gone through the 40 hours of Intel Teach to the Future training. Despite their general familiarity, several administrators reported during interviews the Forum helped them gain a better understanding of the kinds of issues surrounding technology integration. They also said they had an increased interest in seeing teacher training expand and/or said they had acquired an improved view of the support Intel Innovation in Education provides practitioners. Other administrators interviewed said they returned from the Forum ready to encourage their teachers to get involved in the Teach to the Future program. As one principal explained, "I thought it was excellent. I came back and touted the program to my teachers. This [Teach to the Future] was offered at my last school but we didn't pursue it. Now I'm happy to be somewhere where we can get involved. I was very impressed."

Many participants said they were interested in providing additional training for themselves and other administrators. Participants said they would like to identify ways to train other administrators either by having them attend a formal Intel Leadership Forum or by recreating the experience themselves in a staff development meeting where they could tailor it to local needs. One trainer reported this would be possible because “the curriculum was self-standing.” While some participants said they definitely would pursue additional training through Intel Innovation in Education, others said they were awaiting grants and other sources of support to determine what would be possible given potential budget constraints. Two RTAs reported during interviews how they would continue to try to take advantage of “natural opportunities,” such as monthly principals’ meetings and other already scheduled events, to offer additional training. As one trainer who had arranged to offer the Forum as a part of one course in a two-year Superintendent Endorsement program explained, “Figuring out how to get people to events is a real challenge. Standards and a budget crunch make that hard. We try to capitalize on events that are already happening, where people are already gathering. People are too busy to come to something that is separate. The embedded way is the only way to achieve success.”

Most of the RTAs and trainers interviewed reported they had little or no follow-up planned after the Forums’ completion. Several trainers said they did not have a specific strategy for contacting participating administrators but, as one trainer commented, “We don’t have a next step but if we did, there is a lot of good will so the next step would be an easy one to take.” And among those that did have a plan following the Forums, the emphasis would shift toward teacher training. As one RTA stated, “I think follow-up [with administrators] doesn’t really makes sense because they are busy people, dealing with one crisis after the next. The focus is on Teach.... ideally the principals [who were trained] would send 15 teachers to get trained.”

Training Materials

The guide and CD-ROM were clear and easy-to-follow as was the overall training. Ninety-two percent of survey respondents said they agreed (45%) or strongly agreed (47%) the directions were clear for each activity (n=262). Likewise, 90% reported the session was organized and the materials were helpful (n=263). One trainer explained, “The format of the manual is very well organized. It is very strong. You can go back and go through it at your own station and again when you have the time. And the manual is very step-by-step so that makes it easy.” Similarly, during interviews several administrators said they appreciated receiving both the guide and the CD-ROM. During an interview, one trainer offered a counterpoint, saying, “The confusion about what is on the CD and what is on the web is huge. Upfront, you want to make this clear. Giving a little more clarity about the two would help people who are less comfortable switching through windows. We should help trainers understand the two better during training.”

The Turning Point technology was an effective tool for generating administrators’ participation and enthusiasm. Most of the administrators, trainers and RTAs interviewed said they enjoyed interacting with the audience response system. However, one RTA said that using Turning Point as

a give-away incentive could be reconsidered. He said, "I'd like to see some kind of technology incentive rather than one door prize, even if you have to decrease the numbers. Make a special incentive to get there." In a previous training program funded through a grant he said all participants receive a laptop.

Participants appreciated receiving flash drives and leather-bound journals and the trainers enjoyed distributing the materials. As one trainer described, "It's a classy touch giving the participants the fobs (drives) and the certificates. It is good of Intel to do that. It's also nice to walk out with a guide and the disc, both of which are comprehensive. The administrators could give a mini-in-service on their own with the materials they receive." Half of the trainers observed by the evaluator made a point of distributing the flash drives and describing how administrators could use them to save their Action Plans. They explained this hands-on walk-through increased the value of the drives because administrators who were unfamiliar with the technology would know how to actually use it when they returned to their buildings. As one trainer explained during an interview, "I make the flash drive part of the experience. Otherwise, people who didn't know how to use the drive didn't use it, they give it to someone else. I have them pull up their action plan and save it. That is one of those psychologically powerful experiences. They no longer worry about ruining the machine because they haven't used it right."

Trainers appreciated Intel Innovation in Education's commitment to improving the Leadership Forum materials and some had identified changes they would like to see made. As one trainer explained, "I was amazed by the additions to the slides since the original curriculum was developed. Intel is geared up to make changes up until the last. We're encouraged to download the latest PowerPoint right before each training."

Trainers reported the four-hour version of the Forum was much more effective than the three-hour version. While acknowledging how little time administrators have outside of their offices and daily commitments, nearly every trainer said they could accomplish a great deal more in the longer training session than in the shorter one. Specifically, they cited the opportunity to engage participants in more discussion and the chance to use the Turning Point software to ask additional questions about participants' response to specific modules.

Facilitation and Implementation Challenges

Overall, participants reported they were impressed by the trainer's ability to create a worthwhile experience. Among the survey respondents, 55% said the trainer was very effective at facilitating the training and another 36% said the trainer was adequately effective (n=264).²

The trainer was responsible for setting the tone and maintaining learning throughout the Forum. By design, the content of a Forum is delivered through a trainer and the resources (PowerPoint slides, Intel Innovation in Education website, Turning Point questions, guide, CD-ROM, etc.) available to him or her. As one trainer summarized, "We have been told to stick with the script and to try and keep it as similar as possible." And, overall, each trainer observed succeeded in follow-

² See Appendix 3 for a listing of all basic frequencies from the online survey.

ing the curriculum and the sequence of the modules. There were, however, several key points in the training where the trainer's individual style and understanding became apparent:

- *Technology glitches:* When the technology failed there was an even greater focus on the presenter and his or her ability to keep the training moving. One trainer suggested having a hands-on back-up plan for the Visual Ranking activity. He thought a stack of cards, each representing a standard would allow participants the same learning opportunity albeit in a low-tech way.
- *Balance of screen time and reading time.* Trainers varied in how much of participants' attention they drew to their individual monitors, the PowerPoint slides projected on a large screen at the front of the room, the printed curricular guides and themselves. Some verbally encouraged individual learning styles while others were more prescriptive about where participants were to focus.

Several participants and trainers said the curricular script was too restrained and the format was not interactive. Both trainers and participants alike reported during interviews the script the trainers followed, which one facilitator called "highly prescriptive" was too rigid, leaving little room for genuine interaction. As one survey respondent commented, "Our trainer was fantastic, but I do not like being read to. I would have preferred to have someone who could do the training without having to read it from the book. Truthfully, I didn't stay until the end because of this!" One of the trainers had a similar perspective and explained during an interview, "It is impossible for me to train with the kind of energy and response to the moment that is necessary. I hit all the content but not with a script. I think that's a matter of personal style — I like a more fluid experience. It validates the people in front of us.... If I'm reading a script I think the participants disengage more." And an RTA, who suggested adding opportunities for participants to "get out of their seats and engage in hands-on activities" said, "The problem is Intel is running this like a corporate training. And we're educators."

Technology was sometimes unreliable. A few trainers explained they had requested a technical support person to be on-site during the training to troubleshoot and resolve any technical difficulties while others said they tested the server and Turning Point software before their Forums began. Nevertheless, half of the Forums observed had significant challenges with either the Internet connection or the Turning Point software not functioning. Several trainers and administrators alike said there was a need for specific strategies for dealing with the inevitable technological delays and challenges, eliminating the potential drag these unexpected glitches had on the curriculum.

The Forum setting had to accommodate the logistical needs of the participants. Given the hectic lives of administrators and the myriad demands on their time, invariably a few participants arrived late while others had to move in and out of the room to field phone calls from their schools and offices.

For a small minority of administrators, the Forums were inaccurately portrayed as "administrator training." Several participants reported during interviews they had the mistaken impression the Forum would give them concrete skills as administrators rather than focusing on teachers' integration of technology. As one trainer stated during an interview, "The emphasis is on teachers, not principals. For some, this was a missed opportunity." Similarly, a principal explained during a Forum break she thought the training would introduce her to materials and resources she could use to be a better leader, such as technology tools for supervising teachers. She said, "We want to know how to value

technology in our lives.... You have to get leaders — us — to see what the value is and how to use it. For example, we want to see how it can diversify and differentiate our teachers' instruction. Then, it will feed into teachers' practice. If you are a 'technology principal' then you are going to have a technology school. ... I was doing an observation the other day and would have loved to have seen standards on a handheld that had check boxes with those standards." For a few other participants, because they saw the emphasis being on teachers they believed the Forum could have been much shorter. As a director of educational services commented in an interview, "Everything was fine, but the administrators' didn't need the depth... the administrators resented the time. This was no fault of the trainers. The administrators needed to get back to their buildings and they wanted just a brief overview [of the teacher tools]."

SECTION III: RECOMMENDATIONS

Based on the findings described in Sections I and II, below is a set of recommendations the Intel Innovation in Education staff may wish to consider as they further develop the Leadership Forums. Several of these suggestions pertain to revisions to the actual training and the larger program implementation while others deal more directly with the next phase of evaluation.

Continue to fill the void of administrator technology training by expanding the program.

Administrator responses to this program confirm the program team's expectation that little professional development regarding instructional uses of technology is yet available for administrators. Consequently, administrators were very receptive to this program, but also came either with very narrowly defined goals and expectations (wanting technical training) or with so many needs it was difficult for them to focus in on the specific goal-setting activities presented in the current curriculum. Although Intel is unlikely to choose to respond to administrators' interest in skills training, there are many opportunities to expand this training to provide further support to administrators who are just beginning to learn how to be effective leaders in this area. Possibilities include the following:

- Partnering with administrator certificate/degree programs offered by schools of education. For instance, one of the Forums was embedded in a course administrators were taking at a state university as part of a longer training program.
- Offering a series of Forums that focus on strategies for implementing Action Plans and opportunities for administrators to expand and deepen their goals. Parts of the series — discussion of the various Action Plan implementation steps, for instance — could occur online after administrators had the initial opportunity to train face-to-face.
- Building an administrator component into teacher training thereby facilitating administrator-teacher communication around technology integration. For instance, the future iteration of Teach to the Future could include a Leadership Forum segment, requiring teachers to collaborate with principals and other instructional leaders within their schools.

Continue to use Leadership Forums to strengthen the positive perception of and participation in Intel Teach to the Future. While all participants are introduced to Intel's teacher training program during the course of the Forums and receive a copy of the "Intel Teach to the Future: Meeting the Challenge of No Child Left Behind" booklet, they could absorb more detailed information about how teachers in their schools and districts can pursue additional training opportunities. Past evaluation of the Essentials Course has indicated that Intel Teach to the Future often complements existing, more basic professional development offerings within school districts. The Leadership Forums could include an activity in which administrators conduct an initial needs assessment regarding their teachers' professional development related to educational technology, and consider where the Essentials Course might fit within their overall sequence of trainings. More concretely, administrators could be given hard copies of information about how to become

involved in Intel Teach to the Future, and contact information for other districts in their area who have already been involved in the program and could provide insight into how to make the best use of it.

Give participants greater opportunity to exchange ideas with one another by building in additional paired and group activities. Many participants expressed a desire to hear from their colleagues about technology integration within their local settings and to use the Forum as an opportunity to develop concrete ways to work together within their schools and districts. In the Essentials Course, the extended training period gave teachers time to build these relationships and develop plans for future collaboration. This kind of peer learning and collegial support are consistent with the spirit of all of Intel's professional development programs, and should be emphasized in the Leadership Forums as well. However, their brief timeframe means these kinds of activities must be structured into the program itself, because there is little or no time for informal discussion or follow-up conversations among participants. The Leadership Forums should emphasize the importance of learning from one another's experiences and the value of future collaboration among participants by building time for structured, focused planning around these topics into the Forum agenda.

Reduce the level of "scripting" in the training experience by encouraging facilitators to familiarize themselves with the substance of the curriculum rather than relying on specific language. As the program expands and the need to recruit trainers grows it will be important to communicate clearly what is expected of each trainer and to model these expectations in the training they receive. This will be true of both newly recruited trainers as well as administrators who initially attend a Forum and then have an interest in training fellow administrators once they return to their schools and districts. Although requiring all trainers to read a curricular script ensures the delivery of the same content in every Forum, it does not give the trainer the flexibility to adapt to local needs and interests, potentially making the training less valuable to participants. Therefore, future training and support materials, such as an online resource constructed for trainers in the field, may include a simple description of key points worth emphasizing in each curriculum module. Another useful resource would be a list of "tried-and-true" adaptations that trainers have made depending on various local conditions and particular kinds of participant groups.

Conduct detailed technical run-throughs prior to each training session. Trainers as well as an on-site technical support staff will minimize the number of technical delays and glitches by doing the following: running Turning Point software checks, conducting software inventories, including Flash, preloading relevant Internet sites, and testing the connection between the laptop and projector. Ideally, the same tech support person, who is familiar with the facility and other demands that are likely to occur on infrastructure at the time of the training, will remain present during the training to troubleshoot any difficulties that arise.

Use the next phase of evaluation to identify concrete ways participants use their training, tracking the implementation of their Action Plans and how they support technology integration at the classroom level based on their Forum experience. Nearly all of the participants interviewed expressed a strong desire to implement their Action Plans but relatively few (16%) described themselves as being “well prepared” to do so. Tracking if and how administrators take action to accomplish these goals is likely to yield valuable information about the local and systemic challenges administrators encounter, specific knowledge or information they may need in order to act effectively, or different decision-making or policy-setting practices that prove to be more or less successful. Learning more about all of these topics will inform further development of the training experience and help to define the scope and depth of impact the program can expect to have.

Revise the online survey — or administer two versions — to capture a broader range of responses. Just as the Forum curriculum will be updated, so too must the survey to reflect the changes and newly refined goals. While this survey provided useful feedback on participants’ responses to the Forum, responses were highly consistent across questions and across different groups of respondents. It is appropriate to develop a more focused survey at this point that would allow for more discrimination among participants’ different experiences with the program.