

Report of Survey of the Aurora University
Mathematics and Science Education Center Collaboration
September 4, 2011
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This report is presented in three parts. The first is an introduction with a brief history of the Aurora University Mathematics Science and Education Center, its funding, legislation, and evaluation. The second presents the questions that were asked in the survey of Collaboration membership (also presented in Appendix A) and the results of the survey. The third is a summary with recommendations.

I. Introduction and brief history

A. Introduction

The Aurora University Mathematics and Science Education Center project began in the fall of 2008. The Community Leaders group constituted a subcommittee to develop an application to the Dunham Fund for a Challenge award. The purposes of the Collaboration are to result in higher student achievement in mathematics and science, draw an increased number of students to science, mathematics, and technology fields, and develop and retain science, technology, engineering, and mathematics talent to Aurora. The project has resulted in a number of initiatives thus far. The first is the development of content-based master's degrees. The Illinois Mathematics and Science Partnership grants have funded four content-based areas including life science, mathematics, elementary mathematics, and earth and space science. Seventy teachers representing eight local school districts became the first graduating class in 2011. In addition, the grants have funded summer professional development workshops in mathematics and science. These programs have trained 160 teachers in nine school districts thus far. Furthermore, the Collaboration leveraged resources available via the Dunham fund grant in cooperation with the City of Aurora and Communities in Schools to deliver the Amazing Summer Science summer camp program the summer of 2011. The program served approximately 100 middle school students. The program was piloted in the after-school program, and modules from the camp will be replicated in the after-school program settings. However, the cornerstone of the Collaboration has been planning for the STEM Partnership School. This school will be built on the Aurora University campus and will serve approximately 200 students in third through eighth grades in four participating school districts in Aurora. The school will serve students talented in mathematics and science in a way they are not currently being served. In addition, the school will serve as an incubator for educators who wish to become leaders in STEM in their home school districts. The school will provide graduate education opportunities for teachers, who will develop, implement, and share best practices in STEM education. Teachers will serve two to four year terms in the Partnership School before returning to their home districts to lead and mentor other educators in that setting to strengthen STEM education across all educational settings in Aurora and beyond.

B. Evaluation

An evaluation report was commissioned in the first year of the life of the AUMSEC project, known at that time as AMSES (Aurora Mathematics and Science Education System). The report requested for the second year was to be attenuated in scope and to include a quantitative survey of membership rather than qualitative interviews. The report presented here summarizes major achievements and presents results of the requested survey.

C. Funding history: The application for the first Dunham Fund Challenge for Change award was finalized January 15, 2009. The Dunham award was made available August 4, 2009. The award was executed through the Community Foundation of Fox River Valley. The kick-off meeting with

the leadership group was August 3, 2009. The leadership group at the time of initiation of the project was comprised of representatives of the original applicant collaboration. A second application filed with the Dunham Fund was partially funded. The Dunham Advisors stated that they "...applaud this program that fulfills the philanthropic wishes of John C. Dunham and the Dunham Fund." An award of \$250,000 for the design of the Multi-District Magnet/Charter Hybrid Academy was made. In addition, the Fund offered a matching component of up to \$150,000 at 50 cents for every \$1.00 in cash contributions raised for the program from outside sources. Funding was also sought by way of an I3 grant, which was not awarded, and is being pursued via corporate partners, state appropriations, and private gifts and bequests. The objective is to develop a funding base to support construction and equipment of a school and to establish an endowment to support its operations.

D. Legislation

Representative Tom Cross originally sponsored a bill, HB 6272, which would allow the establishment of a multi-district charter allowing for set criteria for selection of students. The bill was co-sponsored by Representative Linda Chapa La Via. This bill was re-introduced this year in the senate and was filed by Senator John Cullerton on February 2, 2011. The Senate sponsor was later changed to Linda Holmes. The bill went through a series of iterations. The bill was amended by Senator Holmes, referred to committee, placed on the calendar for reading, amended again and referred back to committee, read two more times, passed with the two amendments, and sent to the House. In the House, additional co-sponsors including Rep. Tom Cross, Rep. Darlene Senger, Rep. Kay Hatcher, and Rep. Timothy Schmitz were added. The bill was read, sent to committee, read, debated, read, and passed on 5/18/11. At that time, additional co-sponsors including Rep. Mike Fortner, Rep. Robert Pritchard, and Rep. Eddie Lee Jackson, Sr., were added. The bill was sent to the Governor on 6/16/11 and signed at Aurora University on 7/13/2011. The Act "provides that 4 or more continuous school districts with all or a portion of their territory located within geographic boundaries of the same municipality may, when in their judgment the interest of the districts and the students therein will be best served, jointly operate, through in institution of higher education located within the municipality, a science and mathematics partnership school for serving some or all of grades kindergarten through 8" (Illinois General Assembly). The Act authorizing establishment of the Partnership School is viewed by the Collaboration and the University as an important achievement and a critical milestone along the path to the construction and operation of a STEM school within the confines of Aurora University.

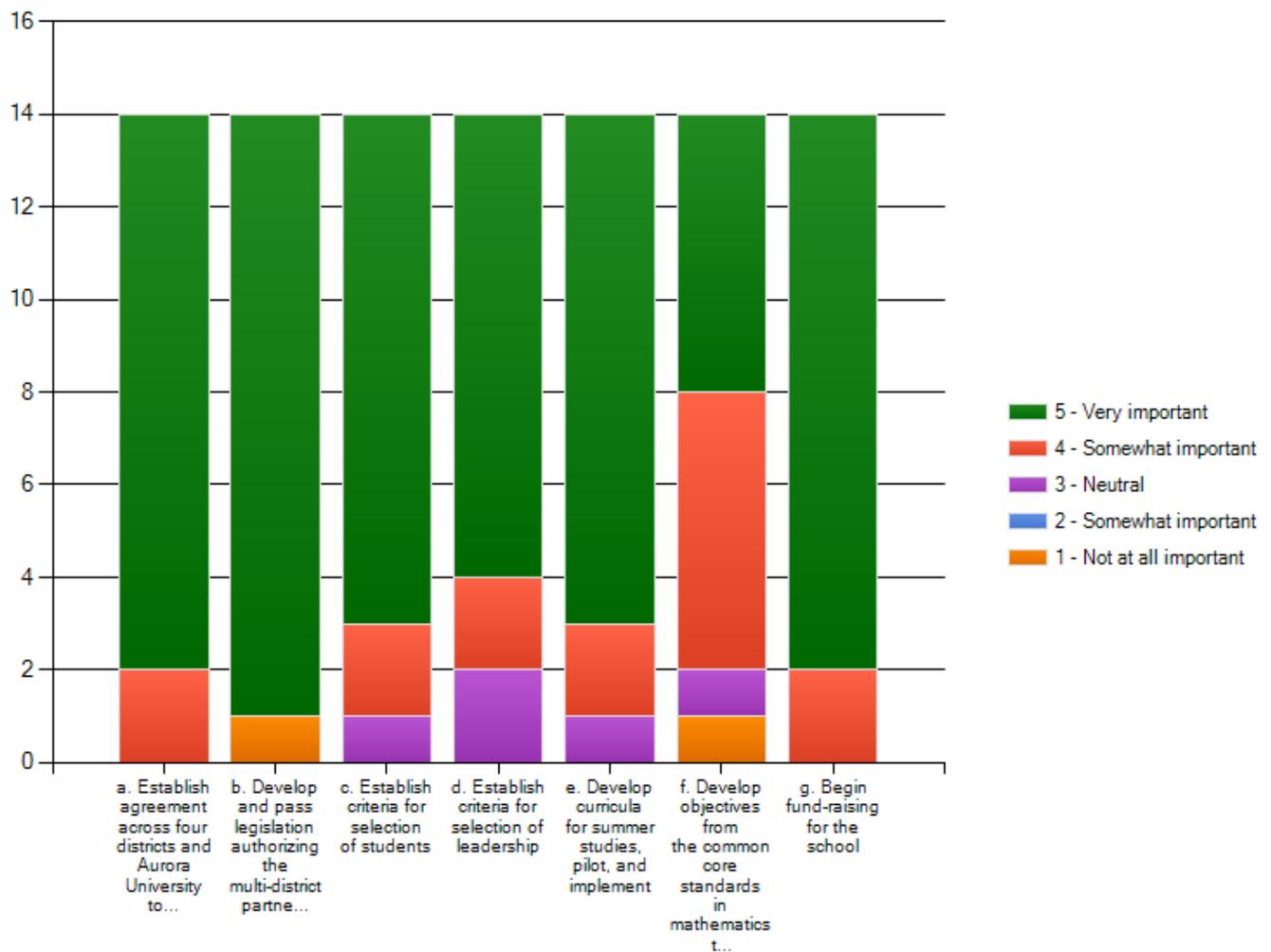
E. Additional achievements in the past calendar year

A total of four additional major projects were undertaken and completed by the Collaboration during the past calendar year. They include: develop selection criteria for students for the STEM school; develop criteria for selection of teachers; begin development of curricula by "unpacking" common core standards in mathematics to serve as the foundation of the mathematics curriculum for the STEM school; and develop and implement the Amazing Science Summer Studies program. The evaluation of the Amazing Science program is available as a separate product.

II. Results

A questionnaire was developed by the Evaluator and revised and approved by the Executive Director of the Institute for Collaboration along with the Institute Administrator Fellow, Christine Crouch. The questionnaire was formatted and delivered via Survey Monkey. The responses were completely anonymous. A list of a total of 25 Collaboration members was developed in conjunction with Collaboration leadership. The survey was sent to Collaboration members twice with a link and note of introduction. A total of 14 members completed the survey. The results are shown below by question.

Chart 1: Responses to questions about the importance of accomplishments within the 2010-2011 school year



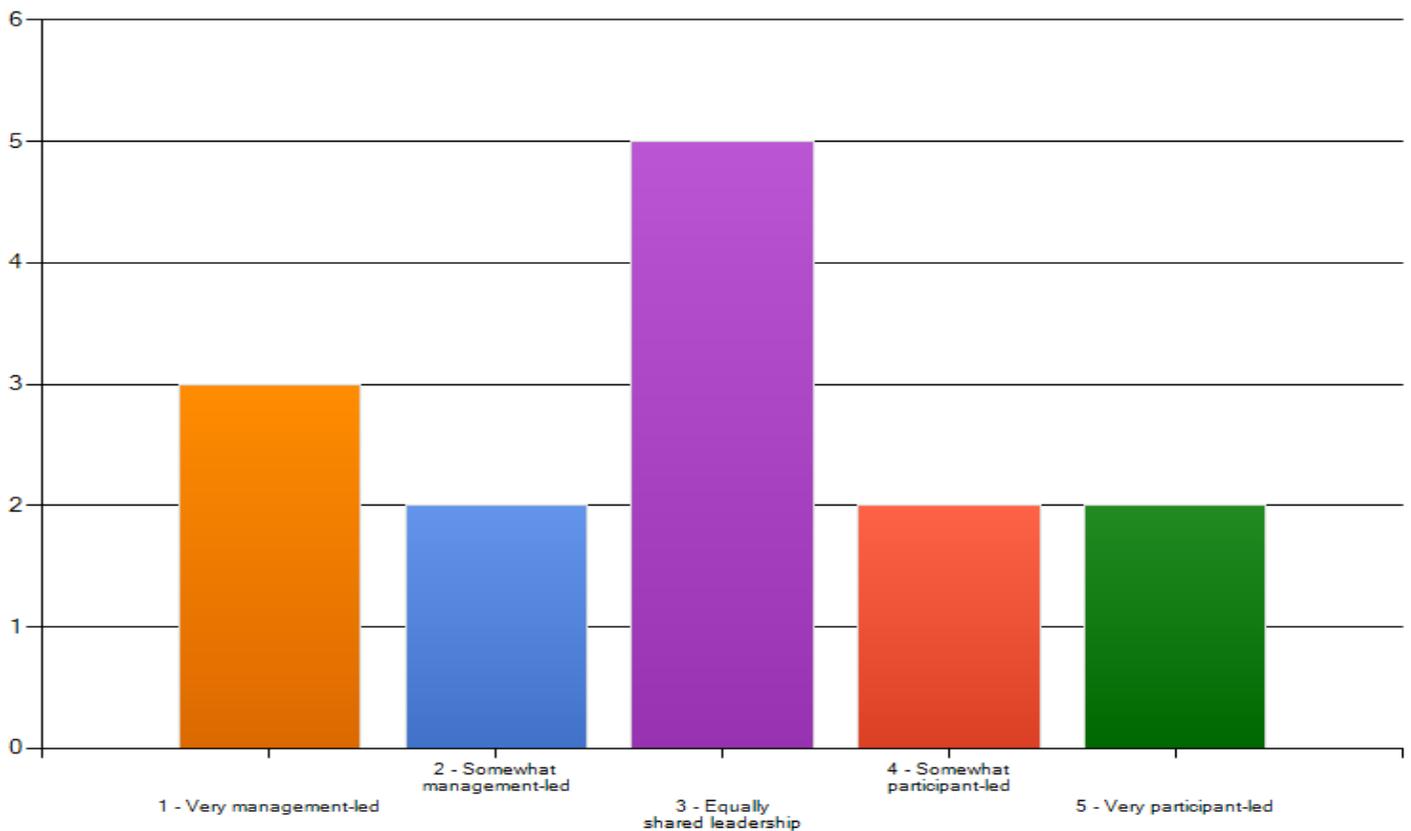
The responses depicted in Chart 1 suggest that most collaboration members found most of the accomplishments during the past school year to have been very important. This was particularly true with regard to passing legislation. However, the responses to the process of developing

objectives from common core standards in mathematics to serve as the foundation for the mathematics curriculum in the partnership school were more mixed. Nonetheless, 86% of respondents continued to find this objective very important or somewhat important.

Question 2 was an open-ended question about how perception of how the Collaboration’s time and other resources were used in the past year. Responses were largely favorable. Respondents stated they thought that the Collaboration had “accomplished a lot,” “accomplished a great deal,” “accomplished what we had intended,” and had been “effective” and stated, “I think the determination of the leadership and the members allowed this to be the case.” Respondents mentioned the “flexibility,” organization and transparency, value of agendas, and good use of subcommittees. They also specifically identified time spent gathering data from charter schools and time discussing and resolving issues with districts as factors in the success of the group in the past year. Respondents did state they thought meetings tended to go past scheduled times and that they thought there was some redundancy between Community Leaders meetings and Collaboration meetings.

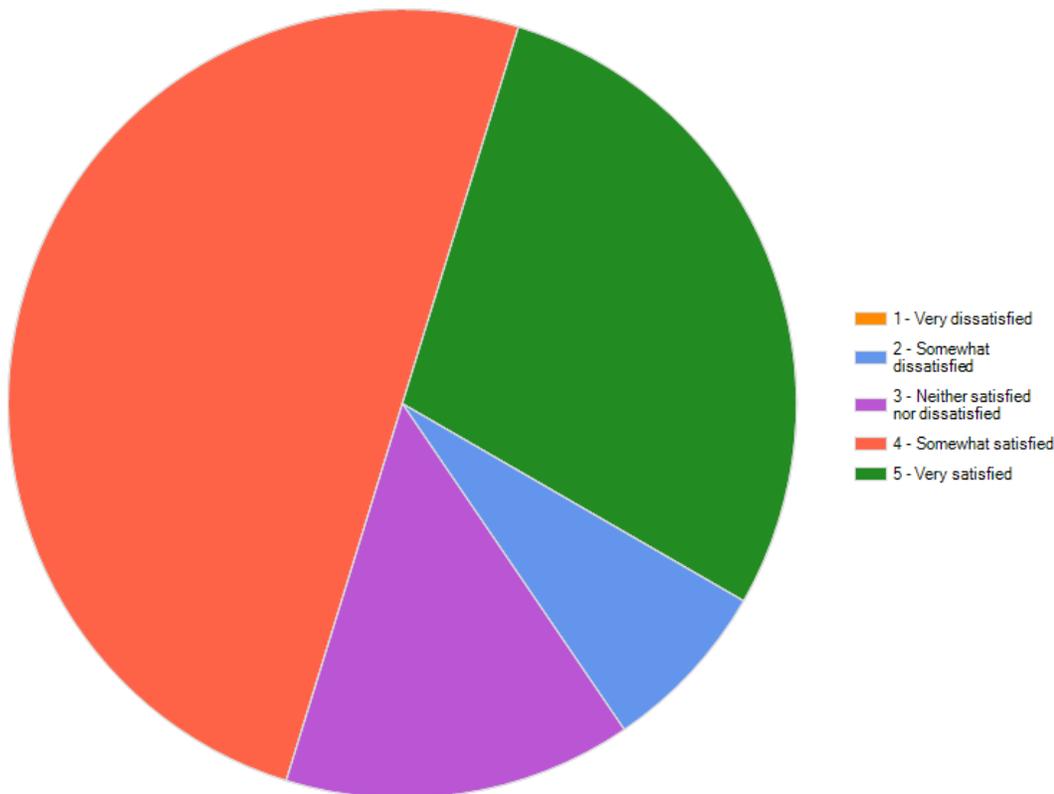
Question 3 was about whether the organization was predominantly participant-led, predominantly management-led, or balanced in between those poles. Chart 2, below, suggests that the Collaboration members feel that the most predominant decision-making structure demonstrated is equally shared leadership. More than a third of members felt this to be true, and the remaining members were almost evenly divided as to whether they felt the organization to be more participant-led or more management-led.

Chart 2: Extent to which the Collaboration is participant-led



Participants' satisfaction with this organizational structure is reflected in Chart 3. Overall, participants seem satisfied with the decision-making structure of the Collaboration as they perceive it. Of respondents, 79% were very or somewhat satisfied. A total of 14% were neither satisfied nor dissatisfied, and 7% were somewhat dissatisfied.

Chart 3: Satisfaction with current organizational structure



Perceptions about meetings (scheduling, start and stop on time, frequency, participation, respect for everyone's voice, and effective use of time) are depicted in Chart 4, below. The most common response to the query about meetings being scheduled at a relatively convenient time was "somewhat agree." Specifically, 79% of respondents either strongly agreed or agreed that meetings were scheduled at a relatively convenient time, and 21% disagreed somewhat.

Members generally agree that meetings to start on time – about 93% either strongly agreed or agreed somewhat - but they were much less likely to agree that the meetings stop on time. Only 64% strongly agreed or agreed somewhat that meetings ended on time.

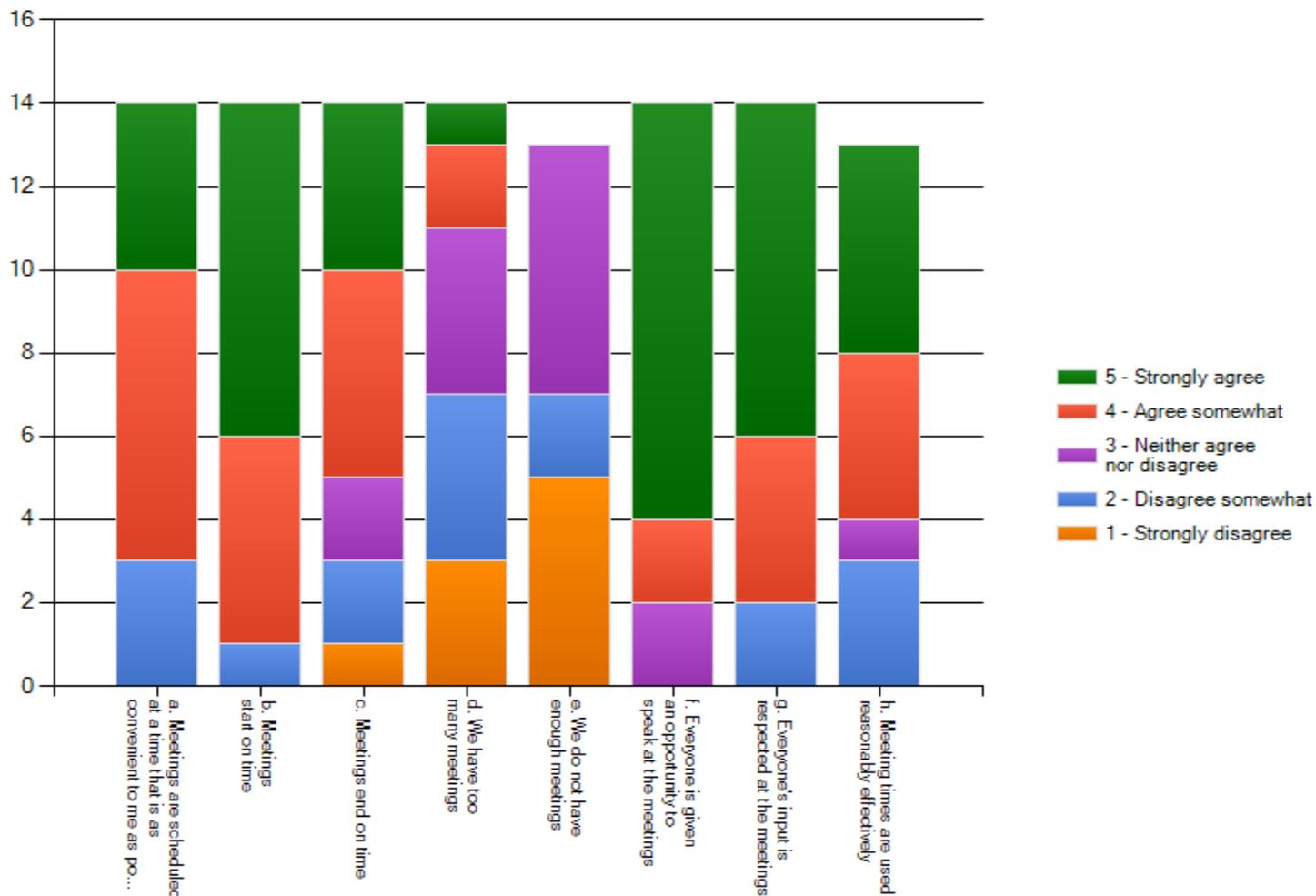
With regard to frequency of meetings, most respondents ranged from being neutral to disagreeing that there were too many meetings. A total of 79% ranged from neutral to disagreeing strongly that there were too many meetings. Only 7% of people strongly agreed that there were too many meetings. With regard to the idea that there might be too few meetings, people were universally

either neutral or in disagreement. Thus, essentially no one thinks there are too few meetings, and a minority of the membership believes there are too many meetings.

With regard to participation and input, most respondents indicated that they believe everyone is given the opportunity to speak at meetings. – 86% either strongly agreed or agreed somewhat, and the remainder were neutral. With regard to being respected, again, the most common response was strongly agree or agree somewhat (total of 86%), but a minority of members (14%) stated they disagreed somewhat that everyone’s input was respected at meetings.

Seventy-seven percent of respondents indicated that they strongly agreed or agreed somewhat that meeting times were used effectively. Eight percent were neutral, and the remainder (23%) disagreed somewhat that meeting times were used effectively.

Chart 4: Scheduling, timing, frequency, and use of meetings



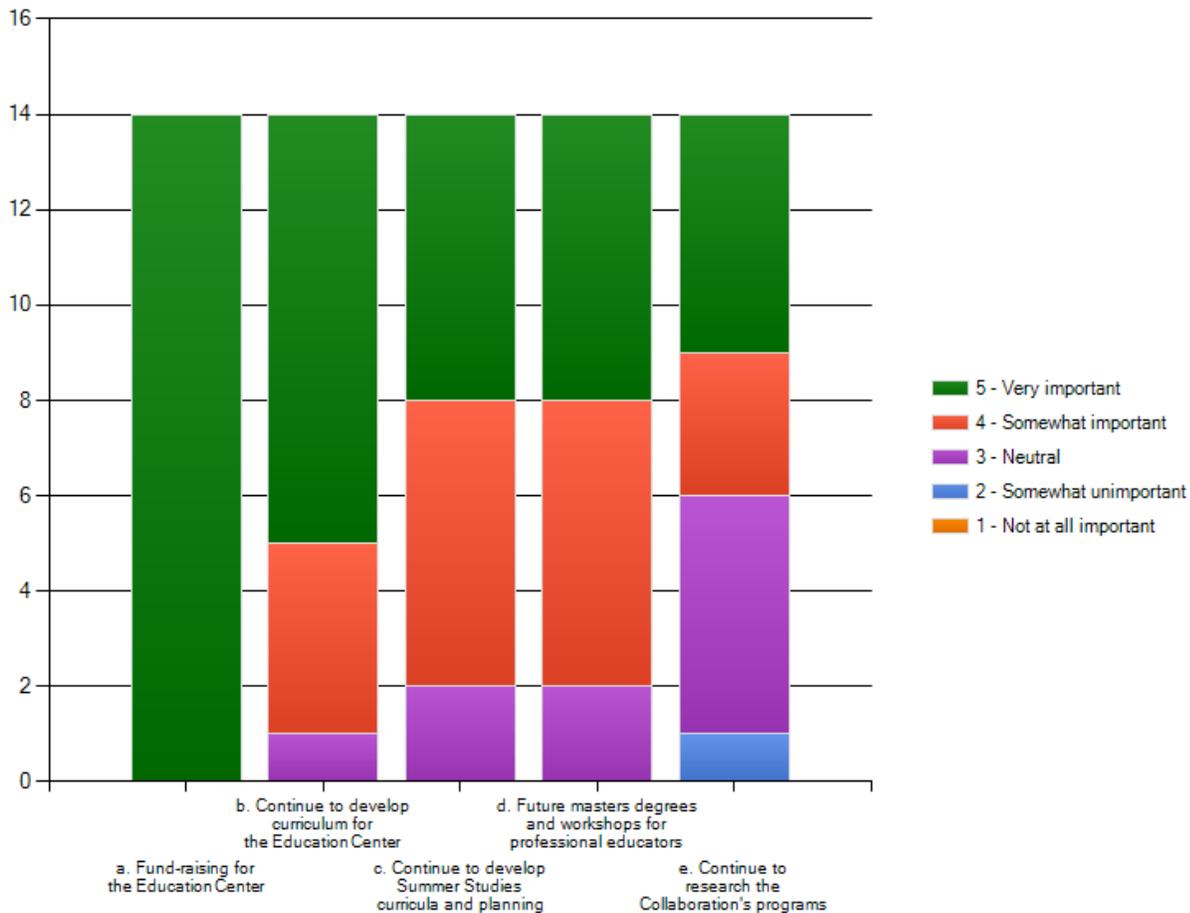
The summary of the preceding section is that most people believe meetings are scheduled reasonably conveniently and begin on time. People are more likely to disagree about meetings ending on time. With regard to meeting frequency, people appear to feel neither overwhelmingly that there are too many meetings (although some people do think this is the case) nor that there

are too few. People generally feel that everyone is given an opportunity to speak at meetings and that everyone's input is respected, although a minority of respondents did not agree that everyone's input is respected at the meetings. Responses concerning efficiency of use of meeting time were largely positive. The distribution of responses to this question may indicate that respondents feel that meeting time is used efficiently most of the time but not always.

When people were asked what could have added to the quality of the Collaboration's work within the past year, the most common response was "nothing." One participant stated, "Sherry should be commended. She is an outstanding leader and she gets results. I have enjoyed every moment working with Sherry and the team." One stated more consistent attendance among partners would have been helpful. Another suggested that agenda items did not need to be repeated to accommodate late attendees, and meeting could be ended when agenda items had been addressed. Another indicated that increased funding would have added to the quality of the Collaboration's work within the past year.

Participants were asked how important they felt each of a number of specific items that might be addressed in the coming year to be. Answers are graphically depicted in Chart 5. Chart 5 indicates that respondents in the Collaboration all feel fund-raising to be very important. One hundred percent of respondents strongly agreed that this was a priority. They attribute slightly less importance to development of curricula, further development of the Summer Studies curricula and programming, and master's degrees and workshops. However, it was still the case that 93% either strongly agreed or agreed somewhat that continuing to develop curricula was important. Eighty-six percent either strongly agreed or agreed somewhat that the summer studies program and master's degrees and workshops were a priority. Respondents were less positive in their response to the idea of continued research of the Collaboration's work together.

Chart 5: Importance of activities for the Collaboration in the coming year



When asked what additional activities the Collaboration should devote additional time and energy to in the coming year, the following responses predominated:

- STEM school:
 - Fund raising and grant writing
 - Communications: “With the bill signing, our project has become more public. I think we need to make sure everyone is comfortable discussing the project and answering questions with people both within and outside their organizations.” “Communications and marketing campaign for the school.” “More education of the public (families and individuals) about the Collaboration and the upcoming school.”
 - Concrete plans for physical design and conceptual design “more concrete plans for connection between the school and local businesses in order to demonstrate how STEM material will be brought in from outside and how students will leave the confines of the building to take advantage of STEM opportunities.”
 - Governance work

- Other projects that have already been committed to
 - Continue to use committee structure
 - Outreach to the after-school program
 - Mechanisms for reaching schools that did not have representation among the masters program cohorts
- Other committee work

In short, many respondents felt that the Collaboration should continue to pursue its current agenda, making use of the gains that have been realized this year to move planned projects, particularly the STEM school, forward. Respondents did feel that the Collaboration would have additional responsibilities for communication with the public in the coming year.

The last question was about what else respondents wished to share about their thoughts and feelings about the Collaboration's work together in the coming year. The comments here were about diverse topics. Respondents indicated that monthly meetings were not always necessary, expressed some disappointment about the visit from Governor Quinn not having been more accessible to long-time partners, indicated they felt their voices had been "heard," expressed positive regard for Dr. Eagle's leadership ("Sherry has done a great job facilitating this partnership. There is a mutual respect among all of the partners which makes this collaboration a strong one!"), and addressed the year to come. "We've done good work conceiving and designing various components/aspects of the school; now the "rubber meets the road" - work begins in earnest... developing and implementing. Strong project management, and strong facilitation of work groups will be essential ... don't forget to continue involving the partners so that the vision can be realized..."

III. Summary and recommendations

In general the responses to the survey seem to suggest that most participants in the Collaboration are committed to the Collaboration's current course. They are strongly committed to fund-raising for the STEM school and are thinking and strategizing about what will be needed to make the school a success. They emphasize communications, public education and marketing. They also mentioned the need for continued work in establishing a governance structure for the new Partnership School. In addition, respondents emphasized the need to establish or build relationships with community partners in order to realize the vision of the community as a laboratory. They find the structure of using agendas to guide use of meeting time effective and appreciate the efficiency of the use of subcommittees while recognizing the importance of strong facilitation in subcommittee work.

Responses do suggest that respondents continue to be sensitive to the need to make optimal use of their time investment. They want to ensure that meetings are used as efficiently as possible, do not take place when they are not necessary, and end on time. These seeming trends likely are consequent of the many demands placed on the partners in the Collaboration in their professional settings. Nonetheless, they express appreciation for the achievements of the past year (the word

“accomplishments” was the most heavily referenced word in all of the open ended responses) as well as for the leadership that was necessary to realize these achievements. They praise specifically Dr. Eagle’s work in facilitating the partnership. In terms of work to come, the respondents recognized the challenge of realizing the vision that has been created but referenced the “determination of the leadership and the members” as well as their continuing commitment to the work.

Appendix A: Survey Questions

Survey of Aurora University Mathematics and Science Education Center Collaboration Members

- 1) Below are some of the accomplishments of the Collaboration in the 2010-2011 school year. For each one, please click the radio button that shows how important you think this activity was.

	1 – Not at all important	2 – Somewhat unimportant	3 – Neutral	4 – Somewhat important	5 – Very important
a. Establish agreement across four districts and Aurora University to start the Center planning					
b. Develop and pass legislation authorizing the multi-district partnership school					
c. Establish criteria for selection of students					
d. Establish criteria for selection of leadership					
e. Develop curricula for summer studies, pilot, and implement					
f. Develop objectives from the common core standards in mathematics to serve as the foundation for the mathematics curriculum in the partnership school					
g. Begin fund-raising for the school					

2. Please provide feedback below about your perception of how the Collaboration's time and other resources were used this year and your responses to those activities.

3. Please click the radio button that shows the degree to which you think the Collaboration is participant-led.

1 – Very participant-led	2 – Somewhat participant-led	3 – Equally shared leadership	4 – Somewhat management-led	5 – Very management-led

4. Please click the radio button that shows how satisfied you are with the current organizational structure.

1 – Very dissatisfied	2 – Somewhat dissatisfied	3 – Neither satisfied nor dissatisfied	4 – Somewhat satisfied	5 – Very satisfied

5. Please click the radio button that shows your agreement with the following statements.

Item	1 – Strongly disagree	2 – Disagree somewhat	3 – Neither agree nor disagree	4 – Agree somewhat	5 – Strongly agree
a. Meetings are scheduled at a time that is as convenient to me as possible					
b. Meetings start on time					
c. Meetings end on time					
d. We have too many meetings					
e. We do not have enough meetings					
f. Everyone is given the opportunity to speak at the meetings					
g. Everyone's input is respected at the meetings					
h. Meeting times are used reasonably effectively					

6. What could have added to the quality of the Collaboration in the past year?

7. Please click the radio button that shows how important you think each of the proposed activities is for the Collaboration in the coming year.

	1 – Not at all important	2 – Somewhat unimportant	3 – Neutral	4 – Somewhat important	5 – Very important
a. Fundraising for the Education Center					
b. Continue to develop curriculum for Education Center					
c. Continue to develop Summer Studies curricula and planning					
d. Future masters degrees and workshops for professional educators					
e. Continue to research the Collaboration's programs					

8. What additional activities do you think that the Collaboration should devote time and energy to in the coming year?

9. What else would you like to share about your thoughts and feelings about the Collaboration's work together in the coming year?