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University Partnerships

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Objectives

The Illinois Mathematics and Science Partnership (IMSP) program represents an important response to a very critical need in students' mathematics and science achievement. The program is designed to improve the performance of students by encouraging universities and schools to collaborate in programs that improve mathematics and science teaching. Each of the IMSP programs is comprised of a graduate level program granting a Master's Degree for participants that incorporates collaboration between STEM organization or business, universities, and local school districts and service agencies. In addition, each grant incorporates teacher action research aligned to project goals.

Theoretical Framework

Evaluating the effectiveness of these collaborations is pivotal to determining the effectiveness of this state level initiative. There are several key guidelines for effective STEM evaluations (Lawrenz & Huffman, Lawrenze, Thomas, & Clarkson 2006). The incorporation of qualitative and quantitative methodologies, performed according the relevant rigorous standards for each, provides a more complete understanding of outcomes. Other considerations in addition to methodology are key in an effective STEM evaluation. The attention to community context, learner-diversity, knowledge needs, and the use of assessment to provide feedback were keys to increasing the recruitment and retention in STEM education programs (Scott, Milam, Stuessy, Blount, & Bentz, 2006).

Evaluation as a process for strengthening collaboration between stakeholders is a common theme in STEM evaluation literature. Through the evaluation process, partnerships reflect formatively on their implementation and consider their progress toward longer-term program goals. The pivotal role

of context, respect, communication, and cooperation recur in various accounts of partnerships between

organizations (Miller, Williamson McDiarmid, Luttrell-Montes, 2006).

One of the guiding principles of the IMSP is that the program funds partnerships, not individual

institutions, to accomplish project goals. Research has identified a number of factors that contribute to

successful collaborations, including an environment that brings together partners with common needs;

membership characterized by diversity and respect; a structure that reflects flexibility, collaborative

decision-making and clearly defined roles; group members with a stake in outcomes; open and frequent

communication; a vision that is shared and developed collaboratively; and resources including in-kind

contributions from all stakeholders in addition to outside resources (Mattessich & Monsey, 1992, Hays,

Hays, DeVille, & Mulhall (2000), Lewis (2000), Mattessich, Murray-Close, & Monsey (2001), HUD (2002a,

2002b), Mattessich (2003), Metzler (2003), Scherer (2004).

In this "planning stage" evaluation, a framework to characterize the nature of the funded

partnerships was established. Results from qualitative analyses were triangulated with quantitative

survey results to provide a more complete picture of the nature of the collaboration across sites (see

Logic Model in Appendix A). Successful transition to the implementation of the project is the primary

outcome.

In the future "implementation stage" of the project, the state-level evaluation is focused on the

synthesis of local evaluation results to evaluate the overall effect of program intervention components

on key program outcomes. Data from local evaluations provide specific contextual factors of each

partnership affecting implementation and outcomes (see Figure 1 in Appendix B). The cross-site

evaluation will use these local evaluation results in a systematic way as an indicator of the effectiveness

of the IMSP project overall. By applying meta-analyses to this multisite evaluation, a global statistical

summary of program effectiveness for the individual sites as well as across sites will be more meaningful

and accurate (Kalaian, 2003). These meta-analyses will be applied in future Implementation Phases to model outcomes.

Finally, all grants have integrated teacher action research into their programs. Analyses at the state level for the projects are grounded in qualitative meta-study and meta-ethnography. The goal of the meta-synthesis is to maintain the uniqueness of the individual interpretations, reveal differences, and identify ways the findings are similar to each other to advance knowledge and produce a comprehensive view (Saiu & Long, 2005) to facilitate knowledge development (Thorne, Jensen, Kearney, Noblit, & Sandelowski, 2004). The state-level framework for synthesizing the teacher action research includes reflection by a purposive sample of teacher researchers and accommodates the anticipated diversity in teachers' underlying philosophical and methodological approaches (Cassell & Johnson, 2006). The self-reflections are a part of the synthesis itself as teachers adopt an "attitude of inquiry" (Marshall & Reason, 2007) and reflect on the purpose, methods, findings, and conclusions of their research. As data become available in Years 3 and 4, they will be used to construct larger narratives or general theories about the problems that the teacher-researchers investigated and the outcomes they achieved (Sandelowski, Docherty, & Emden, 1997).

The current report summarizes the work in the Year One Planning Phase to establish the nature of the IMSP Partnerships and the effectiveness of the planning process for preparing projects for implementation.

Methodology

Participants

There are eleven universities partnered with school districts across twenty-four grants. (Some university partners have multiple grants). Grants encompass elementary, life sciences, earth and space

science, environmental science, secondary math, physics, chemistry, IT/pre-engineering, and health

science technology. Approximately 600 teachers will participate.

State-Level MSP Evaluation Data Sources for Quality of Partnerships

Partner Interviews

Site visits were completed for all grants in Spring 2008 (see Appendix C for protocol).Site

evaluators summarized interview field notes and project artifacts in Program Profiles for each IMSP

grant. Principal Investigators for each grant completed a member check process through an online

survey. Interviews focused on Partnership Composition, Organizational Structure, Action Plan and

Operational Guidelines, and Qualities of the Partnering Relationship / Maintaining the Partnership.

Grant profiles were coded using QSR N6 software.

Partner Surveys

Surveys were adapted from studies of university - community coalitions (Wolff, 2003). The

surveys incorporated questions related to partners' satisfaction with the collaboration in terms of vision,

leadership, communication, and technical assistance. Surveys were completed online by university,

school, and industry partners. Response rate was 90% with 234 out of 260 participants responding.

Descriptive analyses indicated the internal consistency for each survey type (higher education, industry,

and school) was strong with α_{IHE}= .978 (n=89), $\alpha_{Industry}$= .924 (n=12), and α_{School}= .974 (n=44). Attrition in

responses due to the "not applicable" response choice which caused the listwise deletion of cases in

analyses with Cronbach's alpha may have inflated the measure. Statistical analyses were conducted

using SPSS 16.

Extant Data

State documents were used to establish successful transition to the implementation phase of the program. Data from these records included start dates for implementation and budget figures for the planning phase of the grant.

Results

Content analyses resulted in partnership profiles across six dimensions: diversity of stakeholders, contributions of partners, geographic diversity, organizational structure, logistical "housing" of the IMSP, formal agreements to support collaboration, and decision makers. Data from partner surveys were triangulated with profile data for partnership quality (see Table 1 in Appendix E). Descriptive statistics were used to examine trends across the six partnership dimensions. This paper presents results for exploratory questions about the nature of the partnerships as well as effectiveness of the planning process in terms of successful transition into the implementation phase of the program.

Question 1. What was the composition of partnerships for the planning? How diverse were the stakeholders in positions of power?

Planning phase partners were primarily higher education (typically faculty with administrative support from multiple colleges) and school partners (typically administrators and teachers). Half of the grants also named an industry or government agency that exists outside their higher education institution as a formal partner. Typical industry or government partners were museums, labs, and science and technology centers. While some of the relationships were well-formed before the IMSP, several partners indicated that these collaborations were new and a direct result of the IMSP.

Just as the partnership compositions vary across grants, stakeholders held different positions of power across partnerships. Profiles fell loosely into two categories: 1) partnerships with positions of

power shared across industry, school, and higher education partners; and 2) partnerships with positions of power held mainly by higher education partners.

Grants were coded according to these two categories. Profile summary data indicate that 30% (n=7) of partnerships were characterized by mainly higher education partners in positions of power.

Positions of power are held by various levels of University staff [University Profile].

Stakeholders in positions of power are the IMSP PI and [University] staff [University Profile].

The majority of partnerships were described in terms of positions of power that was shared across diverse stakeholders (70%, n=16).

The principal investigator… is facilitator of leadership, but there's been leadership from everyone in their particular expertise, school district, teachers, industry partners. Leadership depends on the context. Organizational chart is a circle and leadership flows around it [University Profile].

The project has developed a strong partnership with [district] teachers. The teachers are engaged in most decisions in the grant [University Profile].

Industry, school, and higher education partners made different contributions to the IMSP planning across grants. A few grants (n=3, 13%) were characterized by more limited input in terms of information or limited feedback into the planning of the IMSP from industry or school partners.

PI stated: Met with [school district] in fall, "informed them" of what they were trying to do. Primary role of school to serve as liaison, wanted input on courses so they could design courses to meet their needs [University Profile].

For a larger segment of grants (n=4, 17%), school and/or industry partners played a larger role in the planning phase, but their contributions were still focused on providing information or review of work completed by the university partner.

Teachers were involved in the summer meetings, also went to Springfield meeting, Informal feedback is provided through [school district] IMSP coordinator [University Profile].

[Center] staff coordinate and lead grant activities. Faculty in the CAS and education departments are developing the course sequence and methods of instruction for program courses. According to team members, collaboration between the CAS and SOE departments had been good for years before the grant. The collaboration with the chemistry department is new to this grant. [District] staff provide feedback to suggestions and help to ensure that the program meets the district's needs [University Profile].

Finally, the majority of grants (n=16, 69%) were characterized by a balance of input from all partners in a collaborative/coordinated process that was continuous through the planning phase.

About half of IMSP partnerships are basically local to the community surrounding the university (n=12, 52%). The other partnerships are characterized by a diverse geographic dispersion of industry and school partners. The distance ranges from 40-50 miles to out-of-state partners.

Question 2. How were the IMSPs organized, where are they housed, and who were the decision-makers?

The organizational structure of the IMSPs were analyzed in terms of the organizational structure of their planning teams, where their IMSP is housed, and which stakeholders were the primary decision-makers. IMSP grants used different structures to organize planning activities(see Figure 2 in Appendix E). A few grants were organized in a simple dyadic relationship between the university and the school

partner (n=2, 9%). Other grants adopted a moderately complex structure of a primary planning team

with representatives across stakeholders (n=6, 26%). Finally, a majority (n=15, 65%) of IMSP grants

organized in more complex structures with multiple planning, steering, and advisory committees guiding

the process.

Most IMSPs (n=17, 74%) are situated in the colleges that are partnering from the university (see

Figure 5). A smaller group of grants (n=6, 26%) have housed their IMSP in an outreach-oriented center in

the university.

Decision-making across stakeholders varied in the planning phase (see Figure 6). While all

partners sought information from various representatives, there were differences in who ultimately

made important decisions in the grant. For some grants (n=5, 22%), one stakeholder (e.g.,

representatives from one college in the university partnership) was primarily responsible for making the

decisions.

> *The co-PIs provide updates to the department but are able to work independently to make*
>
> *decisions about the program* [University Profile]

> *PI stated there is no advisory board, only internal and external evaluators. [Center staff], and*
>
> *STEM committee are informed and input sought. Input is sought on course structure and*
>
> *scheduling of classes from school district* [University Profile].

For other grants (n=5, 22%), decisions were made jointly primarily across higher education partners.

> *Most decisions about the program appear to be made collaboratively among the co-PIs.*
>
> *Administrators of relevant schools, colleges, departments, programs and offices have been*
>
> *supportive of the degree program option and the grant goals throughout the university approval*

process. The ROEs and school representatives appear to have been actively consulted about the program and its design [University Profile].

Most decisions about the program appear to be made collaboratively among the co-PIs. The deans of the two colleges are new, and very interested in continuing cooperation. They "met from the beginning" about the program [University Profile].

Finally, just over half of the partners (n=13, 56%), decisions were made jointly across all partners in the IMSP.

According to participants who attended the site visit interview, the decision-making in this project appears to be collaborative. [District] staff are involved in planning and in decision-making and the evaluator is helping to facilitate the process [University Profile].

Decisions are made collaboratively with the team. The team includes [University] staff, [District] administrators, and teachers [University Profile].

Question 3. What was the scale of the IMSP and what formal agreements were in place to support communication and collaboration?

Grant participants who complete the program will obtain master's degrees with various endorsements across the programs. More than half of partners (n=12, 52%) indicated they did not have formal agreements between partners defining and supporting collaboration (see Figure 5). These agreements were generally statements of roles and responsibilities for partners and participants. Some participants also described agreements signed by school districts ensuring access to student data as part of the formal agreements [see University Profiles].

Question 4. To what extent was there a mutual need, trust, respect, and enthusiasm between partners and stakeholders across MSP grants?

Partnership profiles and Partner survey results were analyzed in terms of the characteristics associated with quality partnerships, including mutuality & trust, leadership, resources, and collaboration and mechanisms of communication.

In site visits, participants across partnerships consistently reported a shared need, enthusiasm, trust with the planning process.

… participant reported that this interdisciplinary approach has been interesting and exciting receiving support from everyone. Another stated that this project and the other MSPs are contributing to a growing enthusiasm around the university focused on STEM education… teacher stated she is excited that there is now a chance for her and other practicing teachers to get an advanced degree in biology [University Profile].

Input was not only requested, but valued and used. People wanted your opinion…The perception of respect has something to do with listening, and genuine attention to all that was said… A commitment to tasks at hand meant respect to the team leader… The district showed respect for teachers' interests and their strengths. The fact that it was a very diverse group and there were so many different strengths represented built respect [University Profile].

Partners were surveyed for feedback on the planning process by the state ERC. The surveys asked for satisfaction ratings in four categories: vision, leadership, communication, and technical assistance. Overall, survey respondents across partner types (industry, school, and higher education) were generally positive about the planning process in terms of the vision, leadership, communication, and technical assistance of their local IMSP (see Table 2 - Table 6 in Appendix E). Survey respondents were generally positive about the planning process in terms of the vision, leadership, communication, and technical assistance of their local IMSP.

Survey results showed that satisfaction with these four areas ranged from 78-83% for higher education partners(n=147), 89-98% for industry partners (n=16), and 77-88% for school partners (n=72). A closer look at survey results revealed common patterns across these dimensions.

Vision was operationalized in terms of clarity of IMSP goals, planning process used to prepare objectives, follow-through on activities, efforts to promote collaboration, planned collaborative action between STEM professionals and teachers, processes used to assess needs, participation of representatives with a variety of interests, diversity of partners, respect for partner contributions, and shared resources. A closer look at a subset of items showed high levels of satisfaction, particularly for school and industry partners (see Table 8).

Narrative comments from survey respondents support the positive ratings of their IMSP vision. The compliments focused on the IMSP in general as well as specific comments praising the school partners and individual leaders.

"The vision and support of this…program has been absolutely spot on. The direction that this program is headed will continue to provide an outstanding opportunity for teachers and partners" [Survey Respondent, Vision Comments].

"The elementary program and committee process has been collaborative with equal contributions and voice throughout the development process" [Survey Respondent, Vision Comments].

Some respondents described their progress as well as barriers facing their grant.

"...I believe that our planning process has gone much better than expected. Initially I didn't think that we would have as successful collaboration across departments within the College due to past issues and I was proven wrong. We have had..." [Survey Respondent, Vision Comments].

"While we had strong commitment from Bradley U. faculty, we did not get that much involvement from the district administration. Possibly having traveling meetings or conferences over the internet would help" [Survey Respondent, Vision Comments].

Leadership was defined in terms of the competence of the IMSP leader, sensitivity to cultural issues, opportunities for taking a leadership role, trust that partners afforded each other, and transparency of decision-making. Partners reported high satisfaction across the items, including ratings of the strength of the leadership, opportunities for them to take a leadership role, and the transparency of decision-making (see Table 9).

Narrative comments again indicate very positive regard for the IMSP leadership.

"the faculty leader has worked especially hard at involving the STEM disciplinary faculty and coordinating with them to set up the new degree" [Survey Respondent, Leadership Comments].

"Professors … seem to be doing an excellent job" [Survey Respondent, Leadership Comments].

"It's great" [Survey Respondent, Leadership Comments].

Communication was rated in terms of media use to promote IMSP, communication among partnership members, communication between IMSP and broader community, extent to with partners are listened to and heard, working relationships with school officials, and information on issues and available resources. Similar to other ratings, industry partners reported the highest satisfaction with the process (see Table 10).

"I receive several emails weekly which update me on current discussions, decisions to be made and other information pertinent to this IMSP program. The communication level is very high from this group" [Survey Respondent, Communication Comments].

"This was easy since we were all represented around the table and each institution was responsible for sharing and disseminating information to their respective constituencies" [Survey Respondent, Communication Comments].

"The Core Planning Team had a consistent meeting time throughout the term of the planning grant. Each member was dedicated to making this time a priority..." [Survey Respondent, Communication Comments].

Finally, respondents rated technical assistance in terms of training and technical assistance provided by IMSP faculty and staff, help given in understanding IMSP requirements, help given to address concerns, working relationships with industry and school partners, and information on issues and available resources.

Because it was a planning year, there was likely less need for technical assistance from the local IMSP. However, comments indicate that when appropriate, local IMSP partners were satisfied with the technical assistance they received.

"I observed the implementation of 2 lesson plans. I was very impressed with the competency of the IIT Faculty" [Survey Respondent, Technical Assistance Comments].

"The project leaders are always available and responsive to any technical need that may arise" [Survey Respondent, Technical Assistance Comments].

"All the technical assistance was appropriate especially in the creation of the SMART website" [Survey Respondent, Technical Assistance Comments].

5. What were the factors influencing successful transition to the implementation phase of the project?

Successful transition to the implementation phase was defined as the on-time launch of course-work by teacher participants in the graduate program activities. Funded projects were categorized as "implemented on-time," "delayed 6+ months," or " not implemented." Descriptive statistics were generated to examine trends in implementation status across grant characteristics, including average budget, average months of planning, Carnegie university designation, as well as all of the partnership characteristics classifications generated from site visits.

Overall, 63% (n=15) projects transitioned on-time to the implementation phase, 17%(n=4) were delayed 6+ months, and 21% (n=5) did not transition to the implementation phase (see Table 7). The average budgets were comparable across status categories and indicated that the average budget of the delayed grants was almost $20,000 more and the not implemented grants were about $15,000 less than the implemented grants (Implemented= $185,221, Delayed= $208,853, and Not implemented= $169,076). Finally, the delayed grants participated in slightly fewer planning months (on average) and the not implemented projects participated in slightly more planning months than the implemented projects (Implemented=15.2, Delayed=13, Not Implemented=16.7).

Examination of patterns based on university characteristics such as Carnegie designation or public/private status did not reveal clear trends (see Table 8 and Table 9). Projects at all Carnegie levels (Doctoral/Research Universities; Master's Colleges and Universities - larger programs; Research Universities - high research activity;, Research Universities - very high research activity) as well as public and private were categorized as both Implementing On time or Not Implementing/Delayed Implementation.

Finally, there were no clear patterns across the different categories of partnership characteristics for geographic diversity, diversity of stakeholders, contributions of partners, and

organizational partners (see Table 10 to Table 13). For each characteristic, there were projects with every category code that achieved all implementation status levels.

Discussion

The influence of the organizational choices and evolution of power structures over the life of the IMSP implementation cycle may provide important guidelines for future partnerships.

Planning phase partners were primarily higher education and school partners. Administrative support at the university and in the districts was indicated across the grants. The majority of partnerships were described in terms of positions of power that was shared across diverse stakeholders. The majority of grants were characterized by a balance of input from all partners in a collaborative/coordinated process that was continuous through the planning phase. These trends indicate a clear strength in the representativeness of the grants that should provide a sound foundation for the future implementation work of the IMSP.

It appears that for the most part, the IMSP grants have sufficiently complex organizational structures to act as a sustaining force. Vidal, Nye, Walker, Manjarrez, & Romanik (2002) characterized durability in terms of organizational structure that will be sustained. Though simple structures make short-term management tasks easier, more complex structures can provide longevity to the partnerships. Vidal et al. (2002) also noted the positive influence of housing these types of partnerships in outreach centers where relationships and resources are geared toward working with agencies outside of the university structure. Most IMSP grants have not positioned their local IMSPs within the organizational structure of an outreach center. The influence of this organizational choice will be treated as one important moderating variable in the implementation phase to consider its impact. There was also considerable variability in the decision-making process across IMSP grants.

Finally, successful transition to the implementation phase was not clearly related to average budget, average months of planning, Carnegie university designation, or partnership characteristics' classifications generated from site visits. Generally speaking, trends in these areas were not systematic and there was no clear combination of budget, planning time, higher education institution type or partnership composition that ensured successful planning results.

Clearly, mutual need, respect, trust, and enthusiasm are strengths in these IMSP grants. The importance of defining these partnerships in measurable ways to capture the complexity of their nature provides a firm foundation for understanding the evolution of these structures over the life of the implementation cycle and provides important guidelines for future partnerships.

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Program Logic Model
Meta-Analyses to Examine the Effectiveness of Illinois Math Science Partnerships
Developed by Elizabeth Oyer for the Illinois Evaluation Research Coordination

Inputs	Partnership Strategies / Activities	Prerequisite Outcomes	Intermediate Outcomes	Long Term Outcomes
Resources	*CCSSO Outcome A* *High Quality, Rigorous PD*	*CCSSO Outcomes B & C* *Changes in Teacher Content Knowledge, Instructional Practice and Curriculum*	*Rigorous, High Quality Math & Science Programs*	*CCSSO Outcome D & E* *Student Ach, Sustained Administrative Support Systems*
Federal $$ State $$ K-12 In-Kind $$ Support Community Matching $$ Partners State Agencies Local K-12 Agencies Institutions of Higher Ed STEM Professional Organizations STEM Industry	Incentive programs for new teachers as well as in-service teachers; Needs Assessment	Recruiting Programs targeting under-represented groups	Increased Pool of Highly Qualified Math & Science Teachers -Increased % of elementary & secondary school teachers with academic majors or minors or group majors or minors, in math/eng/or the sciences	•Increased student ach in Math/Science •Increased enroll. in advanced Math/Science courses •Increased part. in AP/IB prog. for Math /Science (as applicable) •Increased enroll/matriculation in STEM post-sec. programs (as applicable) •Increased student confidence

	•Needs Assessment
	•High Quality/Rigorous
	  –Workshops/Institutes
	  –Graduate Degrees/Endorsements
	  –Distance Learning Programs
	  –Training Teachers to Train Others
	•Partnerships between STEM professionals and teachers
		Sustainable high quality graduate and endorsement programs producing teachers with increased subject matter knowledge in Math/Science		

	•Needs Assessments •Instruction on using data, Curricula selection, technology use, critical use of research, questioning	Teachers with improved teaching skills in Math/Science		
	•Mentoring by experienced teachers •Upgrading status of math/science teaching •Vision of math/science career as lifelong learning	Teachers with higher job satisfaction in K-12 school settings		
	Needs assessment, Curriculum alignment, articulation locally and with Institutes of Higher Education	Curricula that has scientific, research basis	Improved K-12 Math & Science Curriculum	•IHEs committed to sustained program support •LEA Admin. support and sustained collaborative decision-making with participating teachers
		Appropriate integration of technology		
		Object-, experiment-, or problem-based learning activities		
		Rigorous state & local standards aligned with post-secondary standards for STEM majors		

Appendix B

Figure 1. MSP Evaluation Model

Meta-Analysis of Mathematics & Science Partnerships for Illinois

MA – MSP = Meta-Analysis of Math & Science Partnerships

PNA = Planning / Evaluation Needs Assessment

IDC = Data Collection for Implementation Levels

AR = Analysis / Reporting on progress toward outcome

LP = Local Partnership Evaluations

PNA = Planning / Needs Assess.

IDC = Implementation & Data Collection

AR = Data Analysis and Reflection on Program

Appendix C
Site Visit Evaluation Framework

Partnership Process	Focus	Analysis Question	Data Source
1) Partnership Composition	Size and diversity of partnership decision-makers and stakeholders	Who are the partners across Illinois MSP grants? How diverse are the stakeholders in positions of power? What are the contributions of the partners? What is the geographic dispersion of the partnership?	Interview and Site Visit Protocols
2) Organizational Structure	MSPs will categorize their organizational structure based on HUD's Office of University Partnerships (HUD, 2002, pp. 5.20-5.22).	How are the IMSPs organized? Where is the IMSP located? Who are the decision-makers?	Artifact Analyses Interview and Site Visit Protocols
3) Action Plan and Operational Guidelines	Review of the IMSP program and articulation of formal commitments and understandings between all partners.	What is the scale of the IMSP project? What formal agreements are in place to define, establish, and support communication and collaboration between partners?	Artifact Analyses Interview and Site Visit Protocols
4) Qualities of the Partnering Relationship and Maintaining the Partnership	Characteristics are associated with quality partnerships: • Mutuality & trust • Leadership • Resources • Collaboration and mechanisms of communication.	To what extent is there a mutual need, trust, equality in decision-making, resource exchange, transparency, respect, representation, enthusiasm, and sustained understanding between partners and stakeholders across MSP grants? To what extent is leadership collaborative and transformational?	Artifact Analyses Interview and Site Visit Protocols Interview and Site Partner Satisfaction Survey (Adapted from Wolf, 2003).

For site visits in Year 1 Planning Phase

1. Partnership Composition.

History: What is history of the university in the community or with the partners? Did the university (or parts of it) have experience with or a record of engagement in community outreach, community service or applied research in the past? [Were these efforts coordinated? Was there a pre-existing partnership/program within the University that preceded the IMSP? If so, what role does that office have on the work of the IMSP? What is the relation between the IMSP and the program? Is there a University unit that oversees the work of this center? What was the relationship between the university and the community partners in the IMSP prior to the ISBE application?]

> For collaboration between colleges within IHE: What was the relationship among the colleges prior to the IMSP? Were their prior relationships with each other similar or different? In what way?

Process. What was the process for creating the IMSP? [How did the IMSP partners develop the application to ISBE? Did community or school partners contribute to the application, review the draft, etc.? How did the IMSP partners refine the partnership relationships after receiving the grant? Are there any groups that should have been included that were not part of the IMSP?]

> For collaboration between colleges within IHE:: Did both/all schools participate in developing the IMSP proposal? How were the roles defined? How were responsibilities assigned?

Staffing. How is the IMSP staffed? [Have new staff been hired to conduct the work of the IMSP? What positions were filled? Where did the candidates come from? How many staff members work (will work) for the IMSP? What policies are in place for the replacement of staff as needed?]

> For collaboration between colleges within IHE: Are IMSP staff drawn from both/all institutions? Are faculty and students from both/all institutions involved in IMSP?

Context. What is the school environment for IMSP reform? [What are the major educational initiatives in the city/region/state? How has the IMSP related to these efforts? Can the IMSP have improved coordination with other programs to achieve greater outcomes? Are there resources for and attention to these issues? What is the context for university funding? What other programs are competing for university resources and attention?]

> For collaboration between colleges within IHE: How does the institutional context for the IMSP differ among the schools?

2. Organizational Structure of Partnership.

Structure. What is the structure of this IMSP? Does the IMSP have an advisory board(s) and what is its role? Is there a sense of equity among the partners? [Who are the board members and what are their respective affiliations? What is the governance of the IMSP? How are decisions made? By whom? Are community / school perspectives valued and respected? What are the roles of the university, community/ school in the IMSP? To what degree have university-community/school relationships constituted a partnership? (Not at all, somewhat, to a moderate degree, to a great degree)]

> For collaboration between colleges within IHE: What are the respective roles of the colleges in the IMSP? Do all schools participate equally in governance and decision-making? How is accountability by each school to the partnership determined? How are imbalances in institutional resources compensated for? Is the IMSP seen as an opportunity for faculty and student collaboration among the schools, or as individual efforts under a single banner?

Location within the University. Is there a specific space designated for the IMSP within the university? What parts of the university are involved with the IMSP? What structures, policies and/or practices of the university support community outreach or hinder outreach activities? [Where is the IMSP physically housed? What was the rationale for its placement? Is the IMSP embraced by the leadership of the university? If so, how?]

> For collaboration between colleges within IHE: Where is the IMSP located in the consortium? Why?

Artifacts: IMSP Membership list, IMSP/ IHE organizational chart

3. Action Plan and Operational Guidelines

IMSP Program Areas. What is the nature of the IMSP program and how ambitious is it? [What program areas does the IMSP address? What is the scope and sequence of the new program?]

> For collaboration between colleges within IHE: Are program areas divided by schools? If so how? Or do the schools work jointly on the same project areas?

Operational Guidelines. What formal agreements are in place to define, establish, and support communication and collaboration between partners? Who established these guidelines?

Artifacts: Logic Model, Evaluation Framework, Data Analysis Plans, IBHE proposal

For site visits in Years 1 -4 Planning and Implementation Phases

4. Quality of Partnerships

Mutuality & Trust. Do the goals and objectives of the IMSP address mutual needs across partners? What are the perceptions of trust across partners? Is there a sense of safety for sharing of information and resources? What steps have partners taken to build trust? What is the nature of most interactions between partners? Face-to-face? Email? What was the nature of relationships between partners before the IMSP? How respectful is the IMSP to differences in cultural and organizational norms, values, and beliefs? How transparent are the IMSP operations? Is their equality in decision-making? Is there reciprocal

accountability? Is there a balance in the representation of all partners in the IMSP? Does leadership across partners work closely together? Is there enthusiasm surrounding IMSP goals and activities?

> For collaboration between colleges within IHE: What is the nature of relationships between colleges? Is there a sense of equality in decision-making and resources? Is there a respect for differences in cultures? Is there shared enthusiasm for the IMSP?

Artifacts: Meeting agendas, minutes

Leadership. Who are the leaders of the IMSP? [Who led the development of the IMSP application? Are there one or more persons taking leadership? What is their role in the institution? What is their continuing role in the IMSP? Was there participation from the top levels of the institution?]

> For collaboration between colleges within IHE: Is leadership for the IMSP shared among the colleges? Is there a key person at each school leading the IMSP? Is there participation from top levels at both/all schools?

Resources. Has the IMSP received matching funds? [From what sources? How does this compare with the initial proposal? Are there adequate resources to accomplish IMSP goals? Are resources sufficient for all partners?] limited not just to financial resources but extending to managerial and technical skills, contacts, information and the like;

> For collaboration between colleges within IHE: How will resources be divided among the institutions? Did all/both schools provide matching funds?

Artifacts: Budget summary/narrative

Communication. What are the guiding principles for your IMSP? Is there shared decision-making between partners? What are the primary vehicles for communication? Is there a formal management and communication plan? How are conflicts resolved in the partnership?

Artifacts: Meeting agendas, meeting minutes, newsletters, websites, other forms/policy statements

For site visits in Years 2 – 4 Implementation Phase

5. Performance and Outcomes

Performance. How has the IMSP performed? [What areas did the IMSP address most successfully? How? What areas was the IMSP not successful in addressing? Why? Did the IMSP areas addressed serve community/school priorities? Has the IMSP pursued the major strategies it originally planned? If not, why not?] Did the IMSP program produce benefits to the community/school and to the University? What were the major outcomes from the IMSP activities?

> For collaboration between colleges within IHE: What was the performance of the collaboration between colleges? In addition to discussing the performance of each of the participants, explain how well the IMSP performed as a collaborative.

Capacity Building. Were there capacity building outcomes from the IMSP activities? [Did the IMSP assist community organizations or schools? How? Which ones? What were the results of that assistance? Did the

capacity of the organizations increase? In what ways? Did the IMSP efforts lead to changes in the skills of any of the members of the participating organizations? Were there capacity building outcomes for the university as a result of the IMSP?]

Community / School Outcomes. Were there changes in the physical, institutional or economic conditions of the community/school in the areas that the IMSP focussed on? [What were they? How much did the IMSP contribute to those results?]

Community / School Change. Was there any change in the level of social capital (e.g. civic engagement, health of community institutions, trust between community and the
institution) in the community? [How much did the IMSP contribute to those changes?]

Information and Knowledge. What were the outcomes in information and knowledge? [Who used this information and, and how? Did IMSP efforts yield reports, articles, etc. derived from IMSP data, information bases, or experiences? If so, were these reports accessible to the community? How were they distributed, or made available? Did community members contribute to them? If new information bases were developed were they useful to the community? To the university? To the Department? To the city or other agencies? Was the information used? How? Did the IMSP reports contribute to applied research? Basic theory?]

Institutional Change. Did the IMSP lead to changes in attitudes, values or
behaviors of the participating organizations? [Did the IMSP lead to changes in attitudes, values, policies, practices or behaviors of the university? E.g., in hiring, tenure and promotions, procurement, etc. How did the IMSP lead to changes in the content of university courses? To new courses? Changes in degree programs? To new programs? Did the
IMSP lead to changes in the means or methods of instruction and the dissemination of information in the university?]

For site visits in Year 4 Implementation Phase

3. Sustainability

"Profitability" of the Partnership for Community/Schools. Did the IMSP provide benefits to partner organizations or projects? Examples. Were there "costs" (time, effort, funding, etc.) or obstacles to the community partners working with the IMSP? What were they? [Did the community partners find the benefits of the IMSP outweigh their costs? Could the IMSP have increased the benefits to the partners? How? Could the IMSP have reduced the costs to the partner organizations? How?]

"Profitability" of the Partnership for the University. Did the University benefit from participating in the IMSP? [How? What costs or obstacles did the University incur by participating in the IMSP? Did the benefits to the University outweigh the costs it incurred? Were any of the costs or benefits unanticipated]?

> For collaboration between colleges within IHE: Did each of the participating schools benefit from the partnership with the community/schools? With each other? Did the consortium present more costs or obstacles to the participating institutions?

Fairness. Were the benefits derived from the partnership fair and commensurate with the contributions made by the partners? [Were the benefits to the community/school partners greater than the benefits to the university? About the same? Or less than what the university received?]

> For collaboration between colleges within IHE: Did the participating institutions derive benefits commensurate with their contributions? Did one school gain more or incur greater costs than the others?

Future of the Partnership. Do the partners believe that the IMSP should be continued? [Do they believe it will be? Why or why not? If so, will they continue to participate? Should the composition of the IMSP partnership in the future be the same? Should new partners be added? Should some partners be replaced? Examples. Should the activities of the IMSP in the future be the same? Should new activities be added? Should some activities be dropped? Examples.]

> For collaboration between colleges within IHE: Will the institutional partnership continue? Has it led to other collaborative efforts among the participating institutions?

Institutionalization. Is the IMSP institutionalized in the university or on a trajectory toward institutionalization? [Have the functions of the IMSP been integrated into the university? How? Did the IMSP efforts lead to changes in the structure and policies of the participating organizations? E.g., creation of new units, reorganization or change in mission of old units, changes in budgeting practices, hiring practices, purchasing, creation of new coordinating agencies or collaborations, or changes in the mission of the university?]

> For collaboration between colleges within IHE: Has each school integrated the functions of the IMSP? Have policies and structures of all/both institutions been influenced by the IMSP?

Resources to Sustain the Partnership. Are there resources now available to sustain the IMSP? [If not, are the partners taking reasonable and timely steps toward securing such resources? What other sources of funding have supported the IMSP? Was the IMSP successful in finding private funding for the partnership? Have resources been identified to continue the partnership after IMSP funding expires? If yes, from what sources? In what amounts? Are there any new sources of funding? If not,what is the strategy to respond to the expiration of IMSP funding?]

> For collaboration between colleges within IHE: Will all/both institutions continue to support the partnership?

IMSP Teacher Satisfaction Survey[1]
(This Survey Omitted for Year One Planning Phase)

Please indicate your level of satisfaction with each aspect of your MSP participation.
(Likert scale: Very Satisfied – Very Dissatisfied)

Vision and Mutuality

1. Clarity of the vision for IMSP goals and objectives
2. Planning process used to prepare the IMSP objectives
3. Follow-through on IMSP activities
4. Efforts to promote collaborative action with other educators
5. Efforts to promote collaborative action with STEM professionals outside the university
6. Processes used to assess teachers' needs
7. Processes used to assess my students' needs
8. Participation of influential people in the IMSP that represent teachers' interests
9. Diversity of partners and participants
10. Respect, acceptance and recognition of my contributions to reaching the IMSP goals
11. Resources provided by my district and/or school to support my commitment to the IMSP grant

Leadership

12. Strength and competence of IMSP leadership
13. Sensitivity to cultural issues
14. Opportunities for me to take leadership roles
15. Trust that partners and participants afford each other

Communication

16. Use of the media to promote awareness of the IMSP goals, actions, and accomplishments
17. Communication among members of the partnership
18. Communication between the IMSP and the broader community
19. Extent to which IMSP participants are listened to and heard
20. Working relationships established with school officials
21. Information provided on issues and available resources
Comments:

Technical Assistance:

22. Strength and competence of IMSP faculty and staff
23. Training and technical assistance provided by faculty and staff

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[1] Adapted from Annual Satisfaction Survey for Community Coalitions. Wolff,T (2003).. A practical approach to evaluating coalitions. In T.Backer(Ed.) Evaluating Community Collaborations. Springer Publishing

24. Help given the participants in meeting IMSP requirements
25. Help given the participants to become better able to address and resolve their concerns

Progress and Outcomes:

26. My progress in learning new content through the IMSP grant.
27. My progress in using new instructional resources through the IMSP grant.
28. My progress in using new STEM technologies through the IMSP grant.
29. My progress toward meeting endorsement or certification requirements.
30. My access to STEM industry experts through the IMSP grant.
31. My access to mentors because of the IMSP grant.
32. Fairness with which resources and opportunities are distributed
33. Capacity of IMSP teachers to give support to each other
34. IMSP grant's contribution to improving science and/or mathematics instruction in my school.

Please indicate how much you agree or disagree with the following statements.
(Likert scale: Strongly Agree – Strongly Disagree)

Job Satisfaction

35. In most ways, being a STEM teacher is close to my ideal.
36. My conditions of being a STEM teacher are excellent.
37. I am satisfied with being a STEM teacher.
38. So far I have gotten the important things I want to be a STEM teacher.
39. If I could choose my career over, I would change almost nothing.

Sustainability (Omitted for Year One Planning Phase)

40. I received important professional benefits from my participation in the IMSP.
41. The benefits I received were worth the time, effort, and cost I invested in the IMSP.
42. The benefits I received were commensurate with the contributions I made to the IMSP.
43. I strongly believe the IMSP should be continued.
44. I will participate fully in IMSP activities in the future.
45. The IMSP activities need to be dramatically improved to make it worth my investment.
46. I will continue to integrate IMSP strategies and materials into my classroom instruction.
47. I have access to the resources I need to continue to integrate IMSP strategies and materials into my classroom instruction.
48. My district will support my continued integration of IMSP strategies and materials into my classroom instruction.

IMSP School Partner Satisfaction Survey[2]

Please indicate your level of satisfaction with each aspect of your IMSP partnership.
(Likert scale: Very Satisfied – Very Dissatisfied)

<u>Vision and Mutuality</u>

1. Clarity of the vision for the IMSP goals and objectives
2. Planning process used to prepare the IMSP objectives
3. Follow-through on IMSP activities
4. Efforts to promote collaborative action
5. Efforts to promote collaborative action between STEM professionals and teachers
6. Processes used to assess teachers' needs
7. Processes used to assess students' needs
8. Participation of influential people in the IMSP that represent a variety of interests
9. Diversity of partners and participants
10. Respect, acceptance and recognition of my contributions to reaching the IMSP goals
11. Resources provided by the partner districts and/or school to support the IMSP grant

<u>Leadership</u>

12. Strength and competence of IMSP leadership
13. Sensitivity to cultural issues
14. Opportunities for me to take a leadership role
15. Trust that partners and participants afford each other
16. Transparency of decision-making.

<u>Communication</u>

17. Use of the media to promote awareness of the IMSP goals, actions, and accomplishments
18. Communication among members of the partnership
19. Communication between the IMSP and the broader community
20. Extent to which IMSP participants are listened to and heard
21. Working relationships established with school officials
22. Information provided on issues and available resources

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[2] Adapted from Annual Satisfaction Survey for Community Coalitions. Wolff,T. (2003). A practical approach to evaluating coalitions. In T.Backer(Ed.) Evaluating Community Collaborations. Springer Publishing

Technical Assistance:

23. Strength and competence of IMSP faculty and staff
24. Training and technical assistance provided by faculty and staff
25. Help given the participants in meeting IMSP requirements
26. Help given the participants to become better able to address and resolve their concerns

Progress and Outcomes (Omitted for Year One Planning Phase):

27. Progress in improving teachers' content knowledge through the IMSP grant
28. Progress in teachers' access and use of new instructional resources through the IMSP grant
29. Progress in teachers' access and use of new STEM technologies through the IMSP grant
30. Teachers' progress toward meeting endorsement or certification requirements
31. Effective collaboration between STEM industry experts and teachers' through the IMSP grant
32. Teachers' access to mentors through the IMSP grant
33. Fairness with which resources and opportunities are distributed
34. Capacity of IMSP teachers to give support to each other
35. IMSP grant's contribution to improving science and/or mathematics instruction in schools

Please indicate how much you agree or disagree with the following statements.
(Likert scale: Strongly Agree – Strongly Disagree)
Sustainability (Omitted for Year One Planning Phase):

36. My district received important professional benefits from participation in the IMSP.
37. The benefits my district received were worth the time, effort, and cost invested in the IMSP.
38. The benefits my district received were commensurate with the contributions made to the IMSP.
39. I strongly believe the IMSP should be continued.
40. I will participate fully in IMSP activities in the future.
41. The IMSP activities need to be dramatically improved to make it worth my district's investment.
42. The composition of the IMSP needs to be expanded or changed to be more effective.
43. My district has changed the structure, policies, or functions to institutionalize the IMSP goals and activities.
44. My district intends to sustain IMSP activities after the expiration of grant funds.
45. My district is actively seeking alternative funds to sustain IMSP activities after the expiration of grant funds.

IMSP Industry Partner Satisfaction Survey[3]

Please indicate your level of satisfaction with each aspect of your IMSP partnership.
(Likert scale: Very Satisfied – Very Dissatisfied)

Vision and Mutuality:

1. Clarity of the vision for the IMSP goals and objectives
2. Planning process used to prepare the IMSP objectives
3. Follow-through on IMSP activities
4. Efforts to promote collaborative action between partners
5. Efforts to promote collaborative action between STEM professionals and teachers
6. Participation of influential people in the IMSP that represent a variety of interests
7. Diversity of partners and participants
8. Respect, acceptance and recognition of my contributions to reaching the IMSP goals
9. Resources provided by the partner organizations to support the IMSP grant

Leadership:

10. Strength and competence of IMSP leadership
11. Sensitivity to cultural issues
12. Opportunities for me to take a leadership role
13. Trust that partners and participants afford each other
14. Transparency of decision-making.

Communication:

15. Use of the media to promote awareness of the IMSP goals, actions, and accomplishments
16. Communication among members of the partnership
17. Communication between the IMSP and the broader community
18. Extent to which IMSP participants are listened to and heard
19. Working relationships established with school officials
20. Information provided on issues and available resources

Technical Assistance:

21. Strength and competence of IMSP faculty and staff
22. Training and technical assistance provided by faculty and staff
23. Help given the participants in meeting IMSP requirements
24. Help given the participants to become better able to address and resolve their concerns

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[3] Adapted from Annual Satisfaction Survey for Community Coalitions. Wolff,T. (2003). A practical approach to evaluating coalitions. In T.Backer(Ed.) Evaluating Community Collaborations. Springer Publishing

25. Progress in improving teachers' content knowledge through the IMSP grant
26. Progress in teachers' access and use of new instructional resources through the IMSP grant
27. Progress in teachers' access and use of new STEM technologies through the IMSP grant
28. Teachers' progress toward meeting endorsement or certification requirements
29. Effective collaboration between STEM industry experts and teachers' through the IMSP grant
30. Teachers' access to mentors through the IMSP grant
31. Fairness with which resources and opportunities are distributed
32. Capacity of IMSP teachers to give support to each other
33. IMSP grant's contribution to improving science and/or mathematics instruction in schools

Please indicate how much you agree or disagree with the following statements.
(Likert scale: Strongly Agree – Strongly Disagree)

Sustainability (Omitted for Year One Planning Phase):

34. My organization received important professional benefits from participation in the IMSP.
35. The benefits my organization received were worth the time, effort, and cost invested in the IMSP.
36. The benefits my organization received were commensurate with the contributions made to the IMSP.
37. I strongly believe the IMSP should be continued.
38. I will participate fully in IMSP activities in the future.
39. The IMSP activities need to be dramatically improved to make it worth my organization's investment.
40. The composition of the IMSP needs to be expanded or changed to be more effective.
41. My organization has changed the structure, policies, or functions to institutionalize the IMSP goals and activities.
42. My organization intends to sustain IMSP activities after the expiration of grant funds.
43. My organization is actively seeking alternative funds to sustain IMSP activities after the expiration of grant funds.

Appendix E

Table 1. Profile Classifications

Grant	Diversity of stakeholders in positions of power	Contributions of the partners	Geographic diversity	Organizational structure	Logistical / Programmatic "housing" of IMSP	Formal agreements define and support collaboration	Decision Makers	Number of Months of Planning	Successful Progress to Implementation Phase
University A	IHE partners	Collaborative/coordinated continuous process	No	Moderately complex	One or more colleges	No	Jointly across partners		
University B	IHE partners	Limited input	Yes	High complexity	One or more colleges	No	One stakeholder		
University C	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	One or more colleges	No	Jointly by IHE stakeholders		
University D	Diverse Stakeholders	Collaborative/coordinated continuous process	No	High complexity	Outreach-oriented center	Yes	Jointly across partners		
University E	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	Outreach-oriented center	Yes	Jointly across partners		
University F	IHE partners	Limited input	No	Simple	One or more colleges	No	One stakeholder		
University G	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	One or more colleges	No	Jointly across partners		

University H	IHE partners	Input mostly information/review	No	Moderately complex	One or more colleges	No	One stakeholder
University I	Diverse Stakeholders	Collaborative/coordinated continuous process	No	Moderately complex	One or more colleges	Yes	Jointly by IHE stakeholders
University J	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	One or more colleges	Yes	Jointly by IHE stakeholders
University K	Diverse Stakeholders	Collaborative/coordinated continuous process	No	High complexity	Outreach-oriented center	No	Jointly across partners
University L	IHE partners	Input mostly information/review	Yes	High complexity	One or more colleges	Yes	Jointly across partners
University M	Diverse Stakeholders	Input mostly information/review	No	High complexity	Outreach-oriented center	No	One stakeholder
University N	Diverse Stakeholders	Collaborative/coordinated continuous process	No	High complexity	One or more colleges	No	Jointly across partners
University O	Diverse Stakeholders	Collaborative/coordinated continuous process	No	High complexity	Outreach-oriented center	No	Jointly across partners
University P	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	One or more colleges	Yes	Jointly across partners
University Q	Diverse Stakeholders	Collaborative/coordinated continuous process	No	Moderately complex	One or more colleges	Yes	Jointly across partners

University R	Diverse Stakeholders	Collaborative/coordinated continuous process	No	High complexity	Outreach-oriented center	Yes	Jointly across partners
University S	IHE partners	Input mostly information/review	Yes	Simple	One or more colleges	No	One stakeholder
University T	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	Moderately complex	One or more colleges	No	Jointly across partners
University U	IHE partners	Limited input	Yes	High complexity	One or more colleges	No	Jointly by IHE stakeholders
University V	Diverse Stakeholders	Collaborative/coordinated continuous process	Yes	High complexity	One or more colleges	No	Jointly across partners
University W	Diverse Stakeholders	Collaborative/coordinated continuous process	No	Moderately complex	One or more colleges	Yes	Jointly by IHE stakeholders

Figure 2. Organizational Structure

Organizational Structure

- Simple 9%
- Mod. Complexity 26%
- High Complexity 65%

Figure 3. IMSP Housing

IMSP "Housing"

Outreach Center 26%

Within College(s) 74%
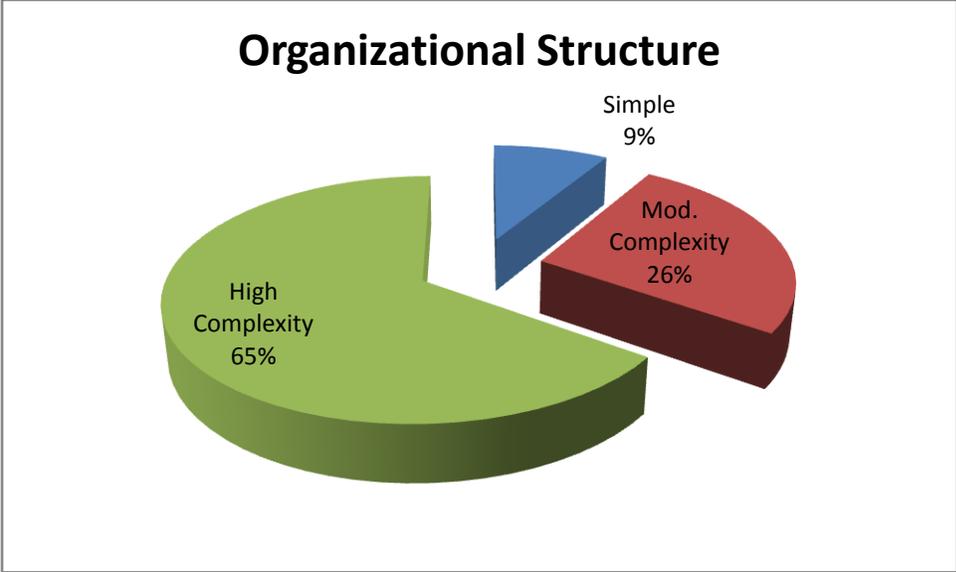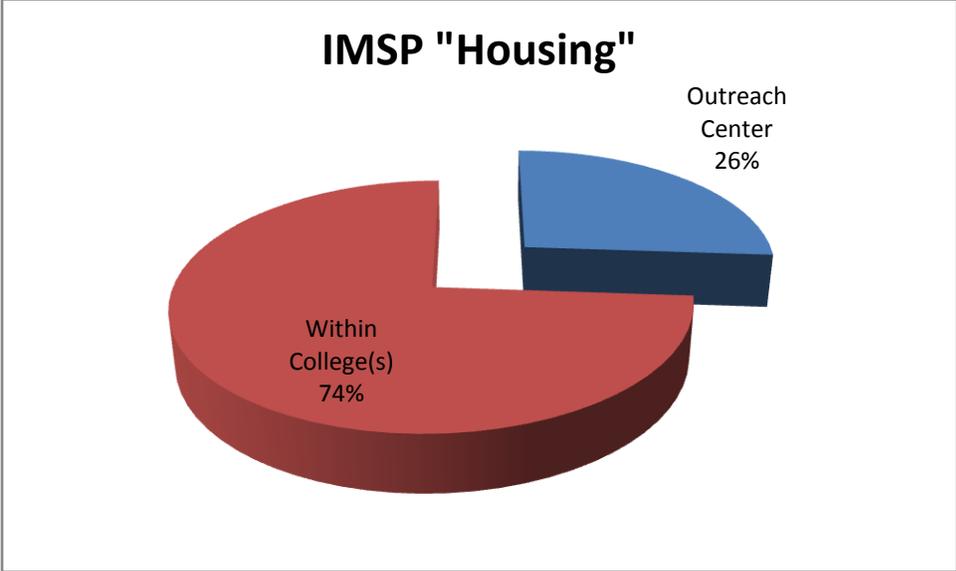
Figure 4. Decision-Making

Decision-Making

One stakeholder
22%

Joint across IHE
22%

Joint across partners
56%
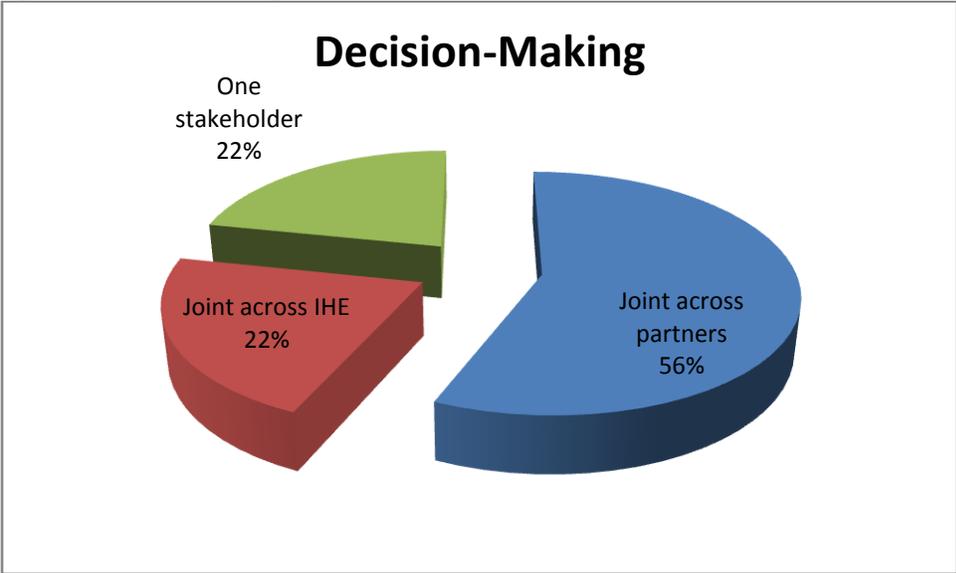
Figure 5. Formal Agreements

Formal Agreements
Defining Collaboration

Formal
Agreements Yes
39%

Formal
Agreements No
61%
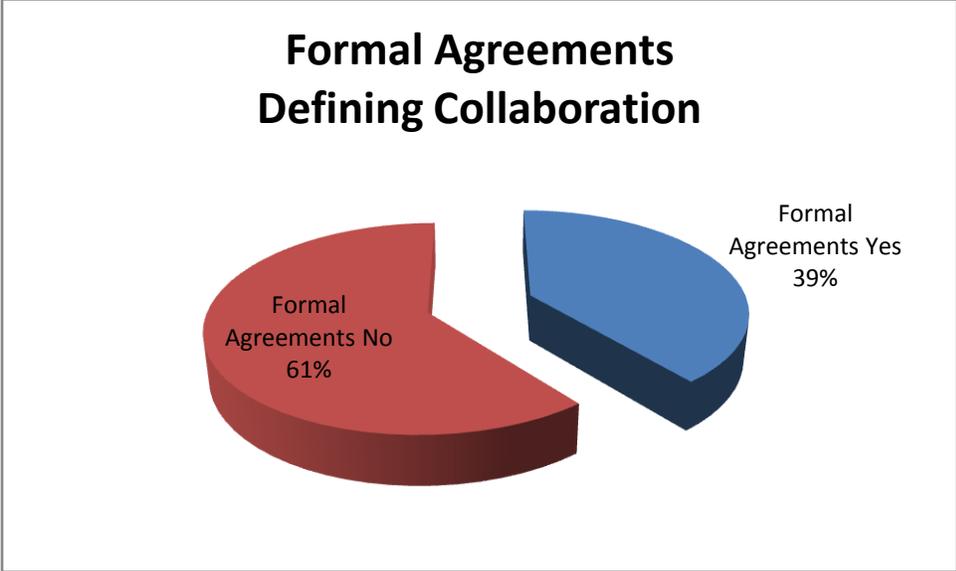
Table 2. Survey Results Overall

	Average % Satisfied/Very Satisfied		
	IHE	**Industry**	**School**
Vision	83	98	86
Leadership	86	98	88
Communication	78	89	77
Technical Assistance	83	94	84
Number of Respondents	147	16	72

Table 3. Vision Survey Items

	Average % Satisfied/Very Satisfied		
	IHE	**Industry**	**School**
Efforts to promote collaboration	92	100	93
Participation of representatives with a variety of interests	85	100	91
Diversity of partners	89	93	93
Respect for partner contributions	94	100	93

Table 4. Leadership Survey Items

	Average % Satisfied/Very Satisfied		
	IHE	**Industry**	**School**
Strength of IMSP leader	87	100	93
Opportunities for leadership	93	100	85
Transparency of decision-making	78	100	82

Table 5. Communication Items

	Average % Satisfied/Very Satisfied		
	IHE	**Industry**	**School**
Communication among partners	84	100	87
Extent to which partners are heard	83	93	89
Info on issues and avail resources	88	93	85

.

Table 6. Technical Assistance Survey Items

	Average		
	% Satisfied /Very Satisfied		
	IHE	Industry	School
Help given by IMSP to resolve their concerns	81	93	86
Working relationships with school and industry partners	81	100	80

Table 7. Summary of Implementation Status

	Implemented	Delayed 6+ months	Not Implemented	Total
N	15	4	5	24
%	63	17	21	100
Average Budget	$185,221	$208,853	$169,076	
Average Planning Months	15.2	13	16.7	

Table 8. Implementation Status by Carnegie Category

	Implemented (N)	Delayed/Not Implemented (N)	Implemented (%)	Delayed/Not Implemented (%)
Doctoral/Research Universities	4	2	26.7	22.2
Master's Colleges and Universities (larger programs)	5	2	33.3	22.2
Research Universities (high research activity)	5	4	33.3	44.4
Research Universities (very high research activity)	1	1	6.7	11.1
Total	15	9		

Table 9. Implementation Status by Public/Private Category

	Implemented	Delayed/Not Implemented	Implemented (%)	Delayed/Not Implemented (%)
Public	8	4	53.3	44.4
Private	7	5	46.7	55.6
Total	15	9		

Table 10. Implementation Status by Geographic Diversity

Geographic Diversity	Implemented	Delayed/Not Implemented	Implemented (%)	Delayed/Not Implemented (%)
Yes	9	2	60	22.2
No	6	7	40	77.8
Total	15	9		

Table 11. Implementation Status by Diversity of Stakeholders

Diversity of stakeholders in positions of power	Implemented	Delayed/Not Implemented	Implemented (%)	Delayed/Not Implemented (%)
Diverse Stakeholders	10	7	66.7	77.8
IHE partners	5	2	33.3	22.2
Total	15	9		

Table 12. Implementation Status by Contributions of Partners

Contributions of the partners	Implemented	Delayed/Not Implemented	Implemented (%)	Delayed/Not Implemented (%)
Collaborative/coordinated continuous process	10	6	66.7	66.7
Input mostly information/review	2	3	13.3	33.3
Limited input	3	0	20.0	0.0
Total	15	9		

Table 13. Implementation Status by Organizational Structure

Organizational structure	Implemented	Delayed/Not Implemented	Implemented (%)	Delayed/Not Implemented (%)
High complexity	10	6	66.7	66.7
Moderately complex	3	3	20.0	33.3
Simple	2	0	13.3	0.0
Total	15	9		