



New Model of University-Community Partnerships

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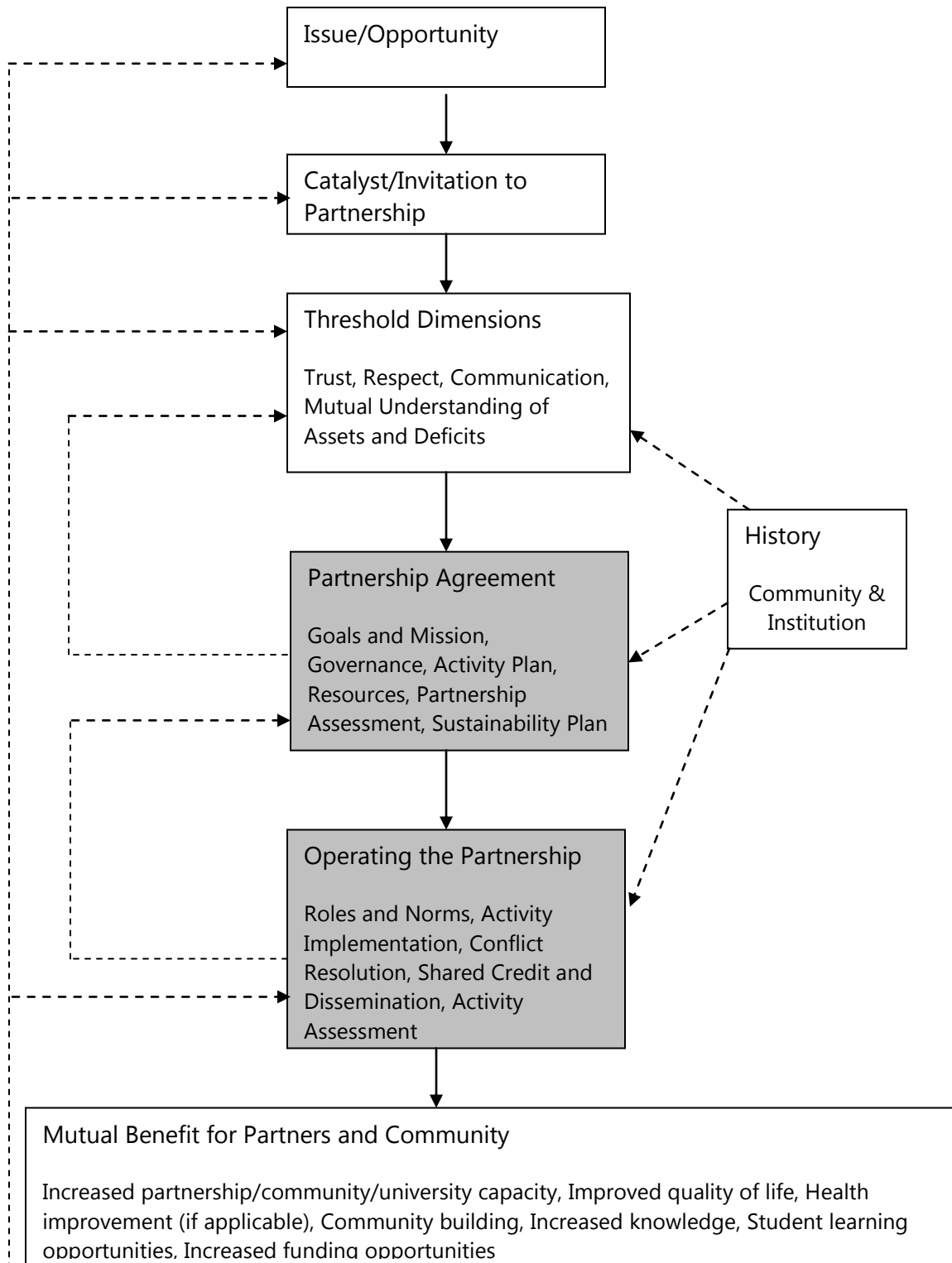
Introduction

Figure 1 presents a new, theoretical model of university-community partnerships. The new model takes dimensions of the five sets of principles discussed in the previous section and creates linkages between them, producing a process through which partnerships develop, encounter, and potentially resolve, issues at different stages. It is proposed that in order to be successful, partnerships will address the dimensions in the order outlined, before moving on to the next stage. Thus, there is a hierarchy to the process. A detailed description of the issue, catalyst, threshold dimensions, and partnership outcomes is provided in previous work (Gass, 2008). However, it should be noted that the threshold dimensions are not tangible constructs. A decision is not made to communicate with a partner, or trust partner. These are processes that are inherent in any relationship. Trust and respect can increase through the actions of other partners or through communication. Communication is not negotiated or planned like an evaluation or budget. What a partner says and how they say it impacts the partnership, through honest communication, partners learn about one another, learning about their respective organizations, and making the decision to move forward.

The next step for the partnership, and the focus of this paper, is to come to an agreement, either a written document or a verbal commitment based upon trust and mutual understanding (Seifer and Maurana, 2000). This is the formalizing of the partnership, and the tangible evidence of the next major step in the partnership, which will be implementation. As opposed to the threshold dimensions, which are processed and acknowledged internally by participants in the collaborative, the partnership agreement is developed through negotiation of the goals and mission of the partnership, creation of a governance structure, community-based activities, a partnership assessment plan, and a plan for sustaining the partnership, if desired. After the negotiations are completed, and the participating organizations agree to form a partnership, the operation of the partnership can get underway.

The operation dimensions of a partnership differ from the threshold dimensions in that: operation dimensions can be addressed at different times. For example, it may be ideal to have a dissemination plan in place at the time a partnership agreement is developed, yet a partnership will not fail if it not included. As the partnership moves forward, a dissemination

Figure 1: The Path to University-Community Partnership



plan may be clearer, especially if years have passed since the partnership's inception. However, not having clear goals in the partnership agreement may prevent a partnership from succeeding.

The purpose of proposing this model is to build upon the work of Maurana, Israel, Lasker, Holland and others, who have attempted to identify the necessary dimensions of university-community partnerships. Their work is the foundation of this model. The Campus Compact group has issued a challenge to experts in the field to develop indicators of partnership success (Campus Compact, 2004). Others point out that traditional assessment tools and methodologies do not adequately measure partnerships (Weiss, Anderson, and Lasker, 2002). Thus, I propose a plan to empirically test the new model of partnership.

The goal of this research project is to answer the question: is there a universal series of stages through which university and community partners proceed, as these entities work together to create a partnership? To determine if the proposed model of university-community partnership is a valid representation of the partnership process, it must be determined what dimensions are present in university-community partnerships? The literature and proposed model provide a template, but only through empirical evaluation will a set of dimensions be developed. To allow for a more detailed description of analyses and results, only the relationship between the partnership agreement dimensions and the next phase of the model, operating the partnership, will be discussed in this paper.

Methods

Participants

A total of 23 partnerships were awarded grants by a statewide community-health foundation in 2004, the first year of awards for this program. Per grant rules, partnerships were to take place within one Midwestern state, and include at least one faculty member from a medical school and one community-based partner. In terms of partnership participants, there were a total of 28 faculty, with seven of the 28 participating in two partnerships. The seven faculty listed in multiple partnerships were asked to complete a survey for each partnership in which they were involved, bringing the number of potential faculty surveys to 35.

For the community partners, there were a total of 87 people that participated in funded partnerships. Three of 87 participated in two partnerships. The three community partners listed in multiple partnerships were asked to complete a survey for each project in which they participated, bringing the maximum number of completed surveys to 90.

Survey Data Collection

A detailed description of the survey development process is outlined in a previous article (Gass, 2008). A total of 125 surveys were mailed to faculty and community partners. The first survey mailing yielded a total of 36 completed surveys, 26 from community partners and 10 from

faculty. A second mailing three weeks later produced 22 completed surveys, 12 from community partners and 10 from faculty. For the third and final recruitment attempt, an e-mail was sent to all non-respondents four weeks later. Seven completed surveys, four from community partners and three from faculty were returned. A total of 65 completed surveys were returned for an overall response rate of 52%. Community partners completed 42 surveys, accounting for 47% of the community partner population, while faculty completed 23 surveys, accounting for 66% of the population. No statistically significant differences were found, in terms of partnership characteristics, between those that responded to the survey, and those that did not (Gass, 2008).

Regression Analyses

A series of logistic regressions were performed to test the relationships between the partnership agreement dimensions and operating the partnership dimensions, as proposed in the partnership model. In the first series of logistic regressions, the variables representing the partnership agreement dimensions were individually regressed upon each of variables associated with the operating the partnership dimensions, to assess the unique variance for each independent variable. In addition, all of the independent partnership agreement dimensions variables were entered into a regression model simultaneously, and regressed upon the dependent operating the partnership variables to assess the overall variance accounted for by the threshold dimensions as a whole. In the partnership model, it is proposed that the partnership agreement dimensions of Goals and mission, governance, resources, partnership assessment and sustainability plan are to be agreed upon before the participating university and community organizations can proceed to begin implementing programs and activities. Roles and norms, Activity Implementation, Conflict Resolution, Shared Credit and Dissemination, Activity Assessment represent the operating the partnership dimensions. Thus, the purpose of this regression analysis is to investigate how much the partnership agreement dimensions actually contribute to partnership operations. This analysis also assumes that the threshold dimensions have already been addressed.

For this research project, $p < .10$ was labeled statistically significant. The maximum sample size for community partners is 42 and for faculty, the maximum sample size is 23. Considering the lack of statistical power between these two samples, achieving the standard significance level needed to reject the null hypothesis of $p < .05$ will be difficult. Thus, the use of $p < .10$ will allow for the discussion of differences that may be substantial when looking at contributions of variance and beta scores in a regression analysis, but lack the statistical power to show statistically significant results.

A detailed variable recoding process was discussed in previous work (Gass, 2008). Table 1 shows the names of the recoded variables. This study was reviewed and approved by the Institutional Review Board of the University of Wisconsin-Milwaukee.

Results

When each independent variable is regressed individually upon the dependent variable of Organizational Culture, representing the partnership dimension of roles and norms, only one is statistically significant, Partnership Mission ($\text{Exp}(B)=5.73$, $p<.05$), as shown in Table 2. The total amount variance accounted for by Partnership Mission was $R^2=.092$.

When all of the independent variables are entered into the logistic regression model simultaneously, two independent variables are statistically significant. Partnership Mission ($\text{Exp}(B)=14.98$, $p<.05$) remains statistically significant and has a large increase in the odds ratio. Also, Partnership Rules ($\text{Exp}(B)=0.70$, $p<.05$), representing the partnership dimension of governance, is also statistically significant, albeit with a very small odds ratio. The entire model accounts for approximately 20% of the variance found in the dependent variable, $R^2=.208$.

The next dependent variable is the aggregate variable Conflict Resolution, which assessed the perceived frequency of conflicts among the partners and if the conflicts are resolved. The results for this series of regressions are reported in Table 2. When each of the independent variables were regressed individually upon Conflict Resolution, only one variable was statistically significant, Partnership Rules ($\text{Exp}(B)=3.20$, $p<.10$), representing the partnership dimension of governance. The total variance accounted for by Partnership Rules was $R^2=.041$. When all of the independent variables are entered into the logistic regression model simultaneously, no variable is statistically significant.

A similar trend was found for the next two dependent variables, shown in Table 3, both representing the partnership dimension of shared credit and dissemination. One independent variable, Partnership Assessment had a statistically significant relationship with both of the dependent variables. For the dependent variable Dissemination, the total variance accounted for by Partnership Assessment ($\text{Exp}(B)=3.93$, $p<.10$) was $R^2=.054$. For the dependent variable Shared Credit, the total variance accounted for by Partnership Assessment ($\text{Exp}(B)=4.13$, $p<.10$) was $R^2=.080$. When all of the independent variables were entered into logistic regression models for both Dissemination and Shared Credit, none of the independent variables were statistically significant.

The final dependent variable in this series of analyses is Activity Assessment, as seen in Table 4. When all of the independent variables are regressed individually upon Activity Assessment, only one was statistically significant, Partnership Mission ($\text{Exp}(B)=2.55$, $p<.10$), representing the partnership dimension of goals and mission. The total variance accounted for by Partnership Mission was $R^2=.039$. When all of the independent variables are entered into the logistic regression model simultaneously, the results are much different. Here, two independent variables are statistically significant, Partnership Influence ($\text{Exp}(B)=3.29$, $p<.10$) and Budget Process ($\text{Exp}(B)=0.20$, $p<.05$). The total variance accounted for by the entire model is $R^2=.140$.

Table 1: Variable Recoding

Survey Items	Spearman's Rho	Criteria to Create Dichotomous Aggregate Variable	New Variable
Threshold Dimensions			
Perception of Trust Valued Contributions	.61***	Perception of Trust+Valued Contributions=2	Trust and Respect
Community Needs Awareness Community Asset Awareness	.53***	Comm Needs Aware+Comm Asset Aware=2	Community Awareness
Self Assessment Understanding Partner Capacity	.22*	Self Assess+Understanding Partner Capacity=1	Understanding Capacity
Partnership Agreement Dimensions			
Mission Clarity Mission Alignment	.26**	Mission Clarity+Mission Alignment=2	Partnership Mission
Budget Participation Budget Understanding	.39**	Budget Participation+Budget Understanding=2	Budget Process
Partnership Sufficiency Organizational Sufficiency	.39***	Prtnrshp Sufficiency+Org Sufficiency=2	Funding Sufficiency
Operating the Partnership Dimensions			
Culture Change Cultural Understanding	.27**	Culture Change+Cultural Understanding=1	Organizational Culture
Conflict Conflict Resolution	N/A	Conflict+Conflict Resolution=1	Conflict Resolution
Outcome Match Outcome Development	.39**	Outcome Match+Outcome Development=2	Activity Assessment

*p<.10, **p<.05, ***p<.01

Table 2: Partnership Agreement Variables Regressed Upon Operating the Partnership Variables

	Organizational Culture			Conflict Resolution	
	Unique Variance	Full Model n=56		Unique Variance	Full Model n=57
	Exp(B)	Exp(B)		Exp(B)	Exp(B)
Goals and Mission			Goals and Mission		
Partnership Mission			Partnership Mission		
n=62, R ² =.092	5.73**	14.98**	n=64, R ² =.016	1.81	1.47
Governance			Governance		
Partnership Rules			Partnership Rules		
n=62, R ² =.014	0.51	0.70**	n=64, R ² =.041	3.20*	3.35
Partnership Influence			Partnership Influence		
n=62, R ² =.001	1.20	1.60	n=64, R ² =.006	0.69	0.54
Resources			Resources		
Budget Process			Budget Process		
n=61, R ² =.012	0.55	0.66	n=63, R ² =.000	1.10	1.68
Funding Sufficiency			Funding Sufficiency		
n=61, R ² =.005	1.49	1.65	n=63, R ² =.002	1.23	0.69
Partnership Assessment			Partnership Assessment		
n=63, R ² =.017	2.04	2.49	n=65, R ² =.014	1.77	1.43
Sustainability Plan			Sustainability Plan		
n=62, R ² =.010	1.67	0.57	n=63, R ² =.003	1.30	1.27
		R ² = .208			R ² = .088

*p<.10, **p<.05, ***p<.01

Table 3: Partnership Agreement Variables Regressed Upon Operating the Partnership Variables—2

	Dissemination			Shared Credit	
	Unique Variance	Full Model n=56		Unique Variance	Full Model n=56
	Exp(B)	Exp(B)		Exp(B)	Exp(B)
Goals and Mission			Goals and Mission		
Partnership Mission			Partnership Mission		
n=60, R ² =.028	1.57	0.95	n=62, R ² =.035	2.50	2.58
Governance			Governance		
Partnership Rules			Partnership Rules		
n=60, R ² =.007	1.68	0.86	n=62, R ² =.023	2.37	1.59
Partnership Influence			Partnership Influence		
n=60, R ² =.007	0.66	0.60	n=62, R ² =.002	0.81	0.38
Resources			Resources		
Budget Process			Budget Process		
n=59, R ² =.025	0.39	0.36	n=61, R ² =.018	2.07	2.62
Funding Sufficiency			Funding Sufficiency		
n=61, R ² =.009	1.69	1.45	n=61, R ² =.000	0.87	0.55
Partnership Assessment			Partnership Assessment		
n=61, R ² =.054	3.93*	3.51	n=63, R ² =.080	4.13**	3.25
Sustainability Plan			Sustainability Plan		
n=60, R ² =.011	1.73	2.07	n=62, R ² =.000	1.05	0.53
		R ² = .093			R ² = .134

*p<.10, **p<.05, ***p<.01

Table 4: Partnership Agreement Variables Regressed Upon Operating the Partnership Variables—3

	Activity Assessment	
	Unique Variance	Full Model n=57
	Exp(B)	Exp(B)
Goals and Mission		
Partnership Mission		
n=62, R ² =.039	2.55*	1.29
Governance		
Partnership Rules		
n=62, R ² =.010	1.81	0.79
Partnership Influence		
n=62, R ² =.030	2.33	3.29*
Resources		
Budget Process		
n=62, R ² =.025	0.44	0.20**
Funding Sufficiency		
n=61, R ² =.002	0.78	0.46
Partnership Assessment		
n=63, R ² =.026	2.24	2.57
Sustainability Plan		
n=62, R ² =.019	2.00	1.16
		R² = .140

*p<.10, **p<.05, ***p<.01

In comparing the discrepant findings, this may be another situation where significance of one independent variable, in this case Partnership Mission, is mediated another variable, Partnership Influence. A more detailed discussion of the relationship among these variables will be provided in the following section.

Discussion

Partnership Agreement Dimensions

It is theorized that the partnership agreement dimensions are discussed between the partners until a mutually agreed upon resolution to each dimension is reached. Following the model, the

individual partners have already achieved a threshold level of trust, feelings of respect and being respected, communication processes, an understanding of the community and an understanding of the capacity of the organizations involved in the partnership. Now, the partners begin to develop, through discussion and negotiation, the goals and mission of the partnership, the governance structure of the partnership, allocate resources, create partnership assessment guidelines, and possibly discuss long-term sustainability. It is through the development of these partnership dimensions that the partnership becomes official, and the organizations agree to work together to address an issue in the community.

The results of the regression analyses show that five of the seven partnership agreement variables have statistically significant relationships with at least one of the dependent operating the partnership variables. As with the previous set of regressions discussed in earlier work (Gass, 2008), both Funding Sufficiency and Sustainability Plan did not have any statistically significant relationships in the regression models. These results confirm that Funding Sufficiency and Sustainability Plan are either located in the wrong group of partnership dimensions or not valid constructs to be included in a model of university-community partnership development. The results of this series of analyses are shown in Table 5 and Figure 2.

The major finding among these variables is that three distinct partnership agreement dimensions lead to the creation of a valid, mutually developed activity assessment. The relationships among these variables are clear cut and logical, such that, in order to develop a valid assessment of the community intervention, the partnership will have clear goals and mission that align with the mission of the individual partner organizations, partners will have a say in the development of the assessment, participate in the allocation of resources, and possess an understanding of the resources available to the partnership. Presumably, resources may be allocated to implement the activity assessment.

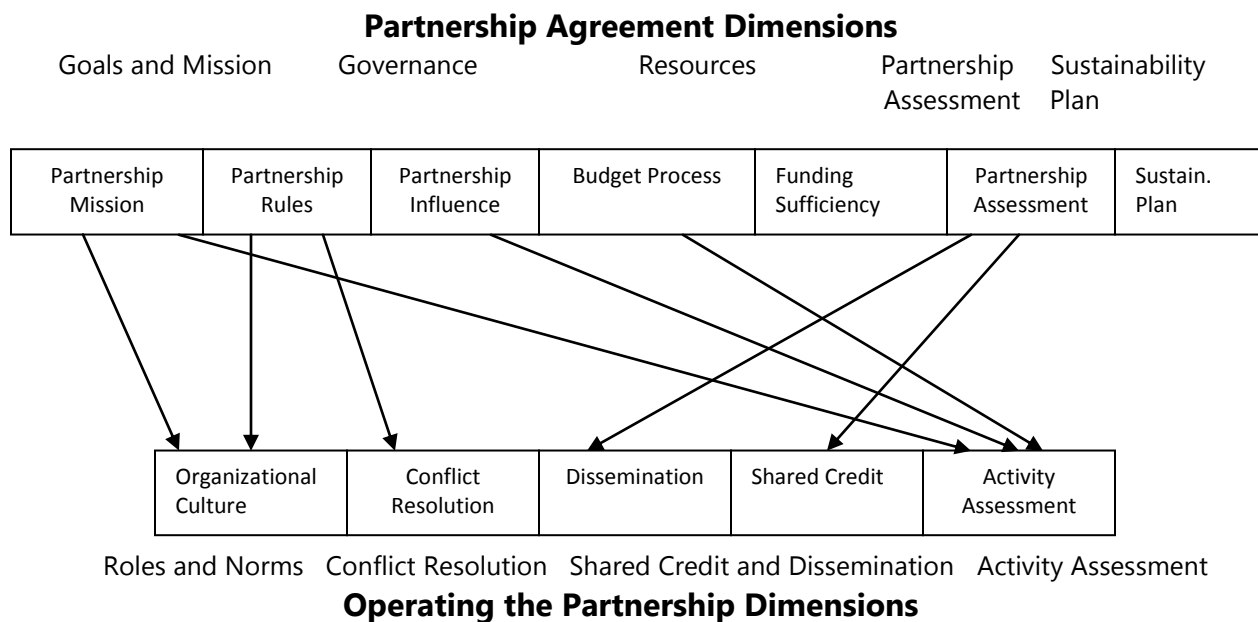
It is also possible that having an influence in partnership decision-making, participating in budget development, and understanding available resources serve as a proxy for some concept of working together. It makes sense that having a clear mission would lead to good outcome measures; thus, partnership mission was statistically significant when controlling for other variables. However, the survey items that assess perceived influence in decision-making and participating in the budget process have a similar language when compared to the survey items used to create the aggregate variable Activity Assessment. All of these questions focus on involvement in the development process of the partnership and activities. Therefore, it is possible that these results are the product of survey semantics, in that variables that reflect mutually developing components of the partnership have a predictive relationship with a similar variable.

The other dependent variable that had statistically significant with multiple independent variables was Organizational Culture. In the case, having clear goals and mission for the partnership that are relevant to participating organizations and establishing clear rules for the governance of the partnership, leads to increased knowledge of organizational culture.

Table 5: Relationships Between Partnership Agreement Dimensions and Operating the Partnership Dimensions

Independent Variables: Partnership Agreement Dimensions	Dependent Variables: Operating the Partnership Dimensions
Partnerships that develop clear goals and mission that align with the goals and mission of partner organizations will lead to...	...changes and understanding in the organizational cultures of the partner, and the mutual development of valid activity assessment tools.
Partnerships that develop clear rules for decision-making will lead to...	...changes and understanding in the organizational cultures of the partner, and prevent conflict among the partners.
Partnerships in which partners hold perception of having an influence in partnership decision-making will lead to...	... the mutual development of valid activity assessment tools.
Partnerships that have a budget development process that includes, and is understood, by all partners will lead to...	... the mutual development of valid activity assessment tools.
Partnerships that engage in a regular partnership progress assessment will lead to...	...sharing information about the partnership with the wider community and sharing credit among all partners for accomplishments.

Figure 2: Relationships Between Partnership Agreement Dimensions and Operating the Partnership Dimensions



Clear goals and mission for the partnership that are relevant to partner organizations and establishing clear rules for the governance of the partnership, are both the products of clear and honest communication, as discussed in the threshold dimension analyses. Therefore, it could be argued that as the partners are developing and discussing the goals and mission, and establishing the rules for partnership governance, learning about organizational culture is taking place. For example, one partner may want to implement strict rules of governance. In the case of MCW, the community partners learned firsthand the culture of the medical school through the IRB process. Also, organizational culture may be learned through the development of the goals and mission, as the partners discuss what is important to each of their organizations. The academic partner may set out goals that are testable and assessable through quantitative methods, while the community partner may seek to increase their capacity to provide quality services to the community. By negotiating and establishing mutually beneficial goals, partners begin to see how the other organizations operate, and thus, reciprocal learning occurs.

The other findings for the partnership agreement variables are quite logical and straightforward. First, if a partnership had established clear rules for decision-making, there is significantly less conflict among the partners. While there is no evidence in any of the data to see if conflict occurred during the development of the rules, it can be argued that developing rules early prevents conflict later on in the partnership.

Finally, reviewing the activities of the partnership against the goals and mission established in the grant proposal leads to the dissemination of information about the partnership to outside stakeholders and sharing credit for the activities of the partnership. This is the assessment of how the partnership is functioning and if the partnership is on track, implementing activities that are relevant to the original ideas put forth several years prior as the grant was being developed. This process allows the partners to report success and problems back to the community where the partnership is operating, the funding source, peers at a professional conference, or in the local media. If the role of disseminating is shared, and the partners all bear responsibility for problems, the relationship among the partners is strong, and may lead to positive outcomes later in the model.

Limitations

One of the limitations of this project is generalizability. Since it was required that medical school faculty serve as the academic partner, it could be argued that some of the partnerships did not develop “naturally”. In looking at the model, the catalyst to forming the partnership may have been the funding available; as opposed to truly deciding a partnership was the most appropriate format to address a community health issue. Thus, some of the partnerships studied for this project may have been forced for the sake of access to money.

In addition, the focus of these partnerships was specifically on health-related topics. Therefore, the issues a partnership could address were limited. While many non-health related

organizations served as community partners, their level of expertise in certain topical areas may have impacted respondent's view of the partnership. The dynamics of the partnership, and thus the potential data that could be collected, may be different if the topic were something related specifically to churches, such as a food bank.

The topic of health can be addressed effectively from a broader, societal perspective, than through education, prevention, and preventive medicine. For example, one of the major barriers to quality healthcare is money. It could be argued that creating a job training program for inner city residents, improving their ability to find work, increase their income, and obtain health insurance, could be a more effective way to address chronic disease, obesity, and preventive medicine than an diabetes education program based in a church or community center. By specifically addressing health issues, the larger societal issues that impact individuals' quality of life, which includes health, cannot be addressed by this program, and thus, limit the ability to generalize these results with other partnerships that have a community capacity-building focus.

Another limitation impacting generalizability is the sample size of this study. One hundred twenty-five was the maximum possible number of survey respondents. Sixty-five surveys were returned. While a 52% response rate for a survey conducted through the mail might be considered excellent, a sample size of 65 limits analysis options. To compensate for the small sample size, aggregate variables were created in the analyses, to ensure that some of the assumptions of logistic regression were met, specifically the 10:1 ratio of cases to variables. Creating aggregates may have reduced the variation among the variables, by merging survey items that were related to each other in theory, but still uniquely independent in terms of the operationalized construct.

In addition to merging variables, the recoding of the Likert scale responses into dichotomous impacted the variation in the survey items. In an effort to address two issues, ordinal level data and severe skewness in the outcome distributions of the survey data, the variables were recoded to compare the highest possible answer on a three or four-point scale against the rest of the response categories in the logistic regressions. For example, respondents that indicated there was "some development" of trust in the partnership, which was the third point in the four-point scale, were reclassified together with those respondents that indicated there was "little or no" development of trust. Therefore, some of the relationships between the variables that were non-statistically significant in the regression model may, in fact, be statistically significant. With a larger sample size, and presumably more normally distributed data, a more detailed understanding of the dimensions of partnership may be obtained.

Another aspect of the sample size to be discussed is the relationship between organizations and the individuals that represent them. This paper, and the theoretical model, are focused at the organizational level. In the real world, these partnerships succeed or fail based on interpersonal relationships. While organizations are relatively stable, people come and go. Further analysis is needed to study the impact of interpersonal relationships on partnerships.

Finally, the chronology of the study should be addressed. At the time the data was collected, the partnerships had been operational for about one year. Some of the slower developing partnerships may not have been ready to address Operating the Partnership dimensions. Follow up data should be collected to assess relationships between the dimensions over time.

Conclusion

This study builds upon previous work (Gass, 2008) and continues to provide evidence in support of a chronological process through which university-community partnerships develop. Concepts such as goals and mission, governance, budget development, and partnership self-assessment are debated, negotiated, and ultimately agreed-upon by the participants. Through this negotiation phase, the partnership is then able to address organizational culture issues that promote or hinder collaborative success, resolve conflict, identify appropriate and mutually beneficial modes of dissemination, effectively assess the impact of the partnership through measuring programmatic outcomes.

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