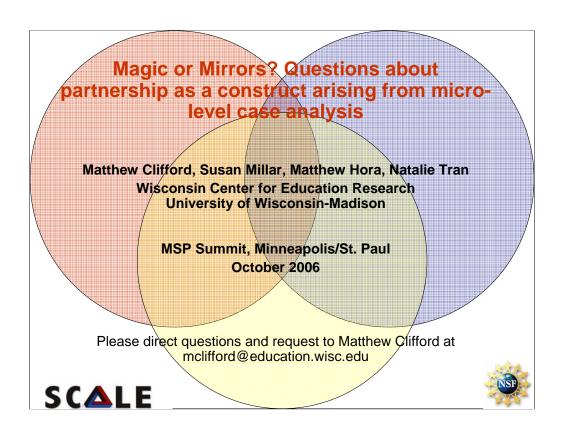


Proposal language: Math and Science Partnerships are policy-initiated efforts to leverage and focus the capabilities of institutions of higher education and K-12 school districts on issues of teacher workforce quality. While K-12 and higher educational institutions frequently share concerns about and have vested interests in teacher workforce quality issues, cross-institutional partnerships infrequently form, and when they do, they rarely achieve their intended goals. MSP evaluation efforts aim to determine the relative efficacy of partnership in achieving organizational improvements, teacher workforce quality improvement, and student learning changes. However, associating outcomes with partnership, we believe, is difficult given ambiguity in the construct and processes. In short, partnership appears to be where the "magic" happens. But what is that magic, and how is it accomplished?

This paper presents a preliminary cross-case organizational analysis of K-20 partnership. The paper is "preliminary" because it is an analysis of two (of a proposed four) cases of K-20 partnership for professional development design. Drawing upon the literature, we first argue that K-20 partnerships can take different forms and have a range of characteristics. We suggest that a community of practice, as defined by Wenger (1998), can be one form of K-20 partnership. Next, we conduct a micro-level analysis of two K-20 partnerships. Our analysis discusses actors' differing motivations and roles, and describes partnership operations. We show that policy-initiated partnerships are begun with needed financial capital, but this policy initiative does not necessitate a departure from "business as usual." The cross-case analysis shows joint and facilitated activities among K-20 actors develop new understandings and opportunities among actors that transforms partnership to a community of practice, which harnesses IHE and K12 talents to develop solutions to pressing local problems. We conclude with questions about "partnership" as a construct.



#### Introduction

**Speakers:** Matthew Hora and Natalie Tran are SCALE evaluators at UW-Madison's WCER, and act as external evaluators to SCALE. Matthew Clifford and Susan Millar are same.

**SCALE overview:** SCALE is a comprehensive MSP attempting to improve math and science teaching in large, urban school districts such as LA, Providence, Madison, and Denver. The SCALE effort is large. As of May 2006, approximately 180 people were actively engaged in designing and implementing intervention efforts. You can think of SCALE as a "partnership of partnerships" because SCALE sponsors multiple types of local interventions to meet the goals, and distributes learning gained through interventions to others.

The authors of this paper— which is forthcoming— are members of 1 of 4 research/evaluation groups within SCALE. Our focus is on describing how and why K-20 partnerships, as organizations, form and function to lead instructional improvement in large urban school districts. We do research and process evaluation. Our colleagues look at end-user (teacher, student, and school) participation; district & university policy/practice changes associated with participation; and teacher & student learning outcomes.

**Caveats:** The research presented here is incomplete, though we believe the available data support the argument that we wish to make. Our purpose here is to engage you in thinking about the status of "partnership" as a construct and our relative ability to associate instructional improvements with partnerships. We

# Our thesis: To understand partnership effects, further definition of partnership, as a construct, is necessary

#### Our evidence

- 1. Literature Review results: View of research/evaluation
- 2. Preliminary Case results: View from the field

#### Our work

- 1. SCALE: A comprehensive, 5 year MSP focusing on instructional reform in 4 large, urban school districts. SCALE is a "partnership of partnerships."
- 2. RET: Research and evaluation team. Four lines of work to determine SCALE results and describe processes.

**Purpose:** NSF has made a significant investment in MSPs, in hopes that K-20 partnerships will inspire scaled, sustainable instructional and organizational changes that result in student learning increases. While the effects (and often partnership goals) are clear, we are suggesting that "partnership" remains a fuzzy construct. Without understanding what partnership is, as an organization, it will remain difficult to attribute effects to it.

**2 prongs to argument**: We make this argument with data from the professional literature and from the field.

## Lit Review Findings: What is a partnership?

**Motivation to join:** Survive changes in environment, expand services, exchange knowledge

Partnership definition: Many names, many definitions

**Purposes:** Achieve some ends that will ultimately improve participating organizations

**Success factors:** Shared goals, trust among leaders, formalized agreements

**Results:** Some succeed, but do they most do not meet intended goals. Partnership participation has been correlated with business vitality.

\*Clifford, Hora, & Smith are completing this literature review, which will be made available in April, 2007

#### Literature Review overview:

**Literature review looks at** the motivations, purposes, success factors, outcomes associated with partnership

**Criteria for selection:** Empirical and theoretical work from juried journals in business, education, and healthcare from the past 10 years. After setting these broad criteria, we will further narrow our search to education.

**Process:** 15 Keyword search of Jstor, Ingenta, ERIC, Google Scholar initially.

**Numbers:** Clearly, partnership literature is not scarce. For example, over 2000 cites in ERIC for K-16 partnership alone. Currently, we have identified 79 articles meeting our criteria, and our EndNote database is populated by 46. Of the 46, 13 education articles and of these, only 3 had N>1. Those three are cross-case analyses.

**Status:** Sharable database will be completed in December, with a draft of lit review available in March.

## **Preliminary findings:**

Two conclusions: (1) Partnership, as an organization and construct, is an ambiguous term in the literature; (2) There is clearly a lot of interest in partnership, and understanding its role in knowledge development and organizational improvement.

**Takeaway point:** Given #1 & #2, we remain skeptical that partnership participation springs forth great outcomes, we think it may be more complex, and we want to know what goes on under the hood.

#### **View from the Field: Case Methods**

Question: How and why are K-20 partnerships built and

function to lead instructional changes?

**Design:** Multi-case study of partnership practice

**Sample:** 4 K-20 partnerships with track record of success in

curriculum development or teacher professional

development

**The purpose** in presenting preliminary results from case study is to show that partnership, as a construct, could use further definition and to point to potential fruitful ground for defining terms and useful methods.

#### Multi-case development overview

**Design:** 4 cases under development that look at micro-level social processes in k-20 partnership. All cases drawn from within SCALE.

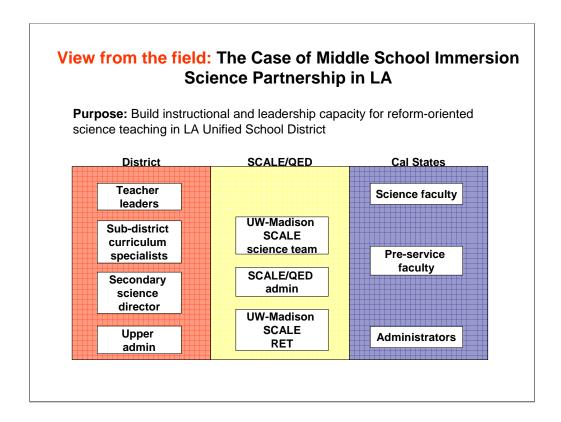
**Purpose:** Focusing on social processes might open up the "black box" of the organization to analysis, enabling us to understand commonalities and diversity of K20 partnership and the reasons for each. Thematic analysis, we hope, will bring greater specificity to the construct.

**Sample:** Commonality among cases is that partnerships all working on curriculum development and/or professional development design, which are two key instructional leadership tasks.

**Sample:** Cases were chosen for effectiveness: Solid initial outcomes shown in terms of student or teacher learning arising from curriculum implementation or teacher professional development.

#### Status:

Cases employed document review, observation, and interview. Two cases have been developed at this point. We report on aspects on 1 case here to conserve time. As a framework, we are using distributed leadership which has been used to understand the practices associated with professional community development. Distributed leadership seeks to describe organizational practices, and the reasons those organizational practices are effective, but distributed leadership studies have



#### Case overview

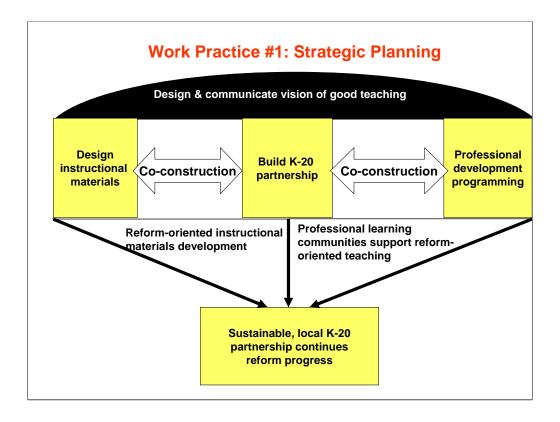
Partnership purpose: ms immersion science partnership is to build instructional and leadership capacity in LA unified school district. In short, to build and sustain instructional improvement efforts that get good science teaching happening and schools and sets teachers on a trajectory of change. Big task, particularly in LA Unified, which is the second largest school district in the country and has an operating budget that rivals some countries' economies. Instructional change is on the scale of 10000 science teachers. The partnership for this effort began in 2003, really, and produced teacher professional development and instructional materials supportive of reform-oriented science. Each has been well received, and there is a small number of teachers and students now implementing. Where implemented, results show promise in terms of teacher learning, teacher implementation, and student learning (see King, 2004; Osthoff, forthcoming; Tucker, 2006). Because the group has produced strong outcomes, and because they were engaged in professional development and curriculum development, we included them in our study.

At time of **data collection**, partnership involved 42 district, SCALE/QED, and Cal State educators. Case built through nearly 100 hours observation time of group processes, which was audio recorded. 14 interviews of partnership members. Document review, which included official documents and emails.

**District personnel** included teacher leaders, sub-district curriculum specialists (who organie professional development events and provide direct service to teachers, traditionally), the science director, and upper level administrators.

**SCALE/QED actors**. QED is a TQE grant leveraged by CSUDH with SCALE assistance, and works in concert with SCALE. We classify these two organizations as 'intermediaries' that include the SCALE RET.

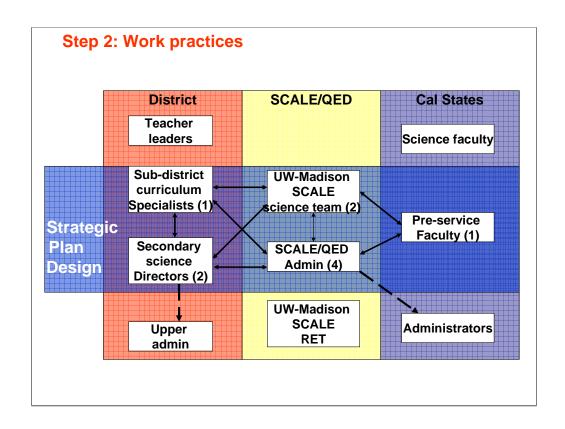
Finally, **CAL State faculty** and staff play key roles in the partnership. Pre-service faculty– which include STEM faculty and education faculty. Science faculty, who do not regularly work with preservice teachers. And administrators.



Group practices were organized around design tasks intended to represent and facilitate group work, and help group to achieve their mission. Case showed that, over 8 month period, group produced 23 "artifacts," 10 of which set stipulations on group working operations. In other words, the group officially developed 10 procedures. We'll focus on two here to make our point.

First is strategic planning. This is a graphic representing the tripartite mission of the MS immersion science team that was developed by 10 group members, all of whom were upper level administrators or intermediaries. No teachers were involved in strategic planning.

This is a graphic used by the LA Secondary Science Immersion team to explain its work. Their belief is that building a partnership must occur simultaneously with professional development program design and instructional materials development because, in LA Unified, district size, staff turnover, and funding issues challenge efforts. Here, partnership is seen as a way to insulate change efforts from these changes. By getting many local actors from different institutions involved in the same initiative and believing the same things, the effort can be sustained over time.



The strategic planning process is represented here. The Secondary Science Group is made up of district, SCALE/QED intermediaries, and Cal State professors. By intermediary, we mean that SCALE/QED are "professional change facilitators" whose job, as staff, is to make this partnership work. You can see that each organization, like most, has a vertical hierarchy (which is simplified in the graphic).

Strategic planning— charting the course for the next year— occurs over 3 days of face-to-face meetings. You can see from the representation that stategic planning horizontally integrates partners across organizational lines (blue box). However, horizontal integration is facilitated by SCALE/QED actors, whose job in the end is to write up a strategic plan that represents different points of view. Similarly, knowledge exchange is facilitated by SCALE/QED.

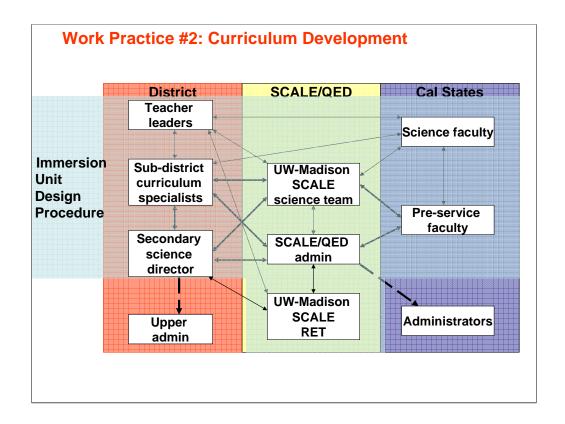
The graphic also shows that strategic planning vertically integrated people within the district, who reported that they rarely saw or worked closely with people above/below them.

A common feature of the two cases that we have developed is the role of upper level administrators. In the two cases, upper level administrators gave the okay to begin partnering, but then the work was carried out and tighter supervision provided by middle administration.

## **Work Practice #2: Curriculum Development**

Step	Involving	
1. Establish common vision,	Secondary Science Advisory Group	
knowledge about teaching/learning	Immersion Design Team	
	Immersion white paper	
	Standards & Research	
	Secondary science trainer meetings	
	SCALE meetings	
2.Select key concepts for	Secondary Science Advisory Group	
Immersion Unit development	District Science Branch	
	STEM & ED faculty	
	SCALEnet virtual meeting space	
	Design meetings	
5. Writing/reviewing Immersion	UW-Madison writers	
Units	STEM & ED faculty	
	SCALE RET	
	Textbooks, Lessons, Materials	

A second artifact is the curriculum design procedure. There are 5 steps in the procedure, each of which draws upon the knowledge of respective groups and each involves interaction of respective groups. Thus far, SCALE Immersion group has produced 3 middle school science immersion units using this procedure, and the hope is to build elementary and high school units in the next several years. The SCALE RET is testing the value of units in terms of diffusion among the system, policy supports, and student learning.



The representation shows that the procedure brings more people together into the group, building it as a professional community. It shows that the UW-Madison group is not the lone facilitator, but that people—using face to face meeting and electronic communication—talk together and exchange ideas.

Important to note that this procedure was enacted by three different groups simultaneously. Did not happen as a large group

Task	Group Configuration	Number	Effect on Group	Leaders
Strategic Planning	Coordinated	10	Knowledge exchange Org Integration	Intermediary
Curriculum design	Parallel	20	Integration Knowledge exchange Small cross- org communities	Multiple, but separate  Coordinated by intermediary
Professional Development design	Collaborative	38	Integration Knowledge exchange Large community Part of movement	Multiple with intermediary fading from view

This is a summary of the case, and issues arising from it.

The point here is to show that partnership, even among a group of individuals, shifts with the task and over time. Leaders played different roles in the partnership, depending on the context and the task.

#### **Initial Conclusions**

**Social Capital:** Financial capital brings people together, social capital builds partnership. Artifacts—like procedures—can enable coconstruction of solutions and, in the process, builds social capital

**Leaders:** Intermediaries or "boundary spanners" build knowledge of partners and help shape artifacts

**Partnership Definition:** A partnership is an organization intended to improve participating organizations by accomplishing work that the organizations, alone, could not accomplish.

Many partnership types, even within a "partnership"

Role of tasks & contexts?

## **Questions for consideration**

What do you see as the implications for evaluation of MSPs?

How, from your perspective, could practitioners use this work?

How, from your perspective, could researchers use this work?

What else needs to be explored?

What are the ramifications of "sector" differences?

Possible background & graphic organizer

## **Initial Conclusions**

## Partnership Typology

Partnership Type	Group interactivity	Domain 1 (e.g. "risk")	Domain 2 (e.g. "trust")
"Arms-Length"	?		
Strategic Alliance	<b>++ ++</b>		
Coalition	000		
Collaborative			
Professional Community			