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K–20 Partnerships: Literature Review and Recommendations for Research

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K–20 Partnerships:
Literature Review and Recommendations for Research

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with
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1.0 Overview

Partnerships, particularly those in health care and business, have been successful in addressing persistent problems, developing new technologies and processes, and improving coordination of services between semi-autonomous organizations.[2] Whether involving people who work in different organizations or those who work in different subdivisions of the same organization, partnerships achieve goals by accessing previously isolated financial, intellectual, cultural, and social capital developed by diverse groups and directing this capital toward improvement (Fisher & Duncan Fisher, 1997).

Policy makers and others hope that lessons learned about the role of partnership in generating innovations in business and health care will transfer to education, and that educational partnerships can generate the innovative thinking and systematic actions necessary to address the ambitious goals of the No Child Left Behind Act of 2001 (2002). In particular, the National Science Foundation's Math and Science Partnership (MSP) program[3] and the U.S. Department of Education's Teacher Quality Enhancement (TQE) programs[4] have the explicit goal of forming partnerships between K–12 districts and institutions of higher education—which we call *K–20 partnerships*—to create innovative solutions to persistent instructional improvement problems and help transform K–12 and institutions of higher education (IHEs).

The MSP and TQE programs emerged in the wake of the publication of policy statements and the enactment of legislation that sought to bridge the schism between K–12 and IHEs (see, e.g., Holmes Group, 1990; Goodlad, 1991, 1988; School-to-Work Opportunities Act of 1994; Carl D. Perkins Vocational and Technical Education Act of 1998). In attempting to diagnose the causes of poor student performance and lagging public education reform in the U.S., the authors of these policy statements and the sponsors of this legislation consistently pointed to a lack of articulation between K–12 and higher education systems and institutions. They reasoned that weak articulation led to a proliferation of conflicting student standards, inconsistent application of placement examination scores, student opportunity inequalities, and poor instructional quality (Hodgkinson, 1985, 1999; Lewison & Holliday, 1997). "If only we could get along," these statements seem to say, "the ingredients are there to do great things."

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[1] The authors thank Natalie Tran of the SCALE Research and Evaluation Team for her comments on this work.

[2] Rhetoric about partnership value abounds, particularly in highly competitive business markets. A few examples of studies showing strong association with problem solving, technology/process development, and service coordination are Dutta and Weiss (1997), Lang and Gordon (1995), and Uzzi (1997), although a more comprehensive review may point to additional and more recent sources.

[3] See www.nsf.gov/ehr/MSP.

[4] See www.ed.gov/programs/heatqp/faq.html.

While partnerships between K–12 and higher education hold potential for mitigating persistent problems in education, ongoing research is testing the efficacy of partnerships in practice. This literature review provides researchers and evaluators information about what we know about the form, function, and achievements of K–20 partnerships, and how we know what we know. The review is based on an analysis of 36 rigorous and frequently cited K–20 partnership studies. We believe this review updates and extends previous literature reviews (Clark, 1988; Smedley, 2001; Kingsley & O'Neil, 2004) by focusing primarily, but not exclusively, on research/evaluation studies that define and describe K–20 partnerships.

2.0 Method

We undertook a systematic literature review, following criteria established by EPPI-Centre,[5] to answer the following questions:

1. What inquiry methods have been used to study K–20 partnerships, and what is the rigor of the methods?

2. How is partnership defined?

3. What do we know about the formation (inputs), process (throughputs), and results (outputs and outcomes) variables associated with partnership?

The goal of the EPPI-Centre criteria is to develop and disseminate reliable research syntheses in health, education, and public welfare fields. The general method includes the steps listed below:

1. *Establish selection criteria.* Given the limitations of available resources, we were unable to conduct a comprehensive search. Thus, before beginning the review, we decided to focus on empirical studies of K–20 partnerships appearing in juried journals in the past 10 years that had a transparent methodology.

2. *Conduct an initial scan.* Based on four keywords (*K–20 partnership*, *K–16 partnership*, *K–12 partnership,* and *school-university partnership*), we identified potential sources in three electronic journal databases—Ingenta, JSTOR, and ERIC[6]— and Google Scholar.

3. *Narrow the search.* The initial scan yield was relatively high. We used citation tracking, which is a form of snowball sampling, to limit the search to frequently cited articles. Although we began with a focus on K–20 partnerships, citation tracking pointed to important research in the business and health care literatures. For purposes of comparison, we included sources from those fields.

[5] The Evidence for Policy and Practice Information and Co-ordinating Centre (EPPI-Centre; eppi.ioe.ac.uk/cms/) is a division of the Social Science Research Unit at the Institute of Education, University of London.

[6] Ingenta searches 8,000 journals, including those in the social sciences; JSTOR searches 1,002 journals, including those in the social science; ERIC is an education-specific citation database.

4. *Create a descriptive map.* We described the range of literature we encountered during the review, including justifications for including articles that did not meet the basic review criteria.

5. *Synthesize literature.* Using EndNote citation management software, we abstracted articles and assigned keywords to enable analysis.

6. *Analyze the literature.* To answer our research questions, we synthesized descriptive statistics and characterized the research and key concepts to identify important variables.

Figure 1 displays the review process. The initial four-keyword scan yielded 1,940 sources. Citation tracking narrowed the search, resulting in 186 articles that were reviewed. Of these, 112 were screened out because they did not meet basic criteria for rigor. Of the 74 sources that met the criteria for rigor, 51 were empirical studies, and 16 were literature reviews (7 theoretical works were included because they were frequently cited by researchers). Full document review further narrowed the search, eliminating sources that, contrary to the impression given by their abstracts and titles, did not actually focus on K–20 partnerships. For example, 15 of the 51 empirical studies actually investigated the effects of interventions designed and implemented by K–20 partnerships, and not the impact of K–20 partnership as an intervention or phenomenon. The review presented here focuses almost entirely on the 36 empirical studies that met basic criteria for rigor and focused on K–20 partnerships.

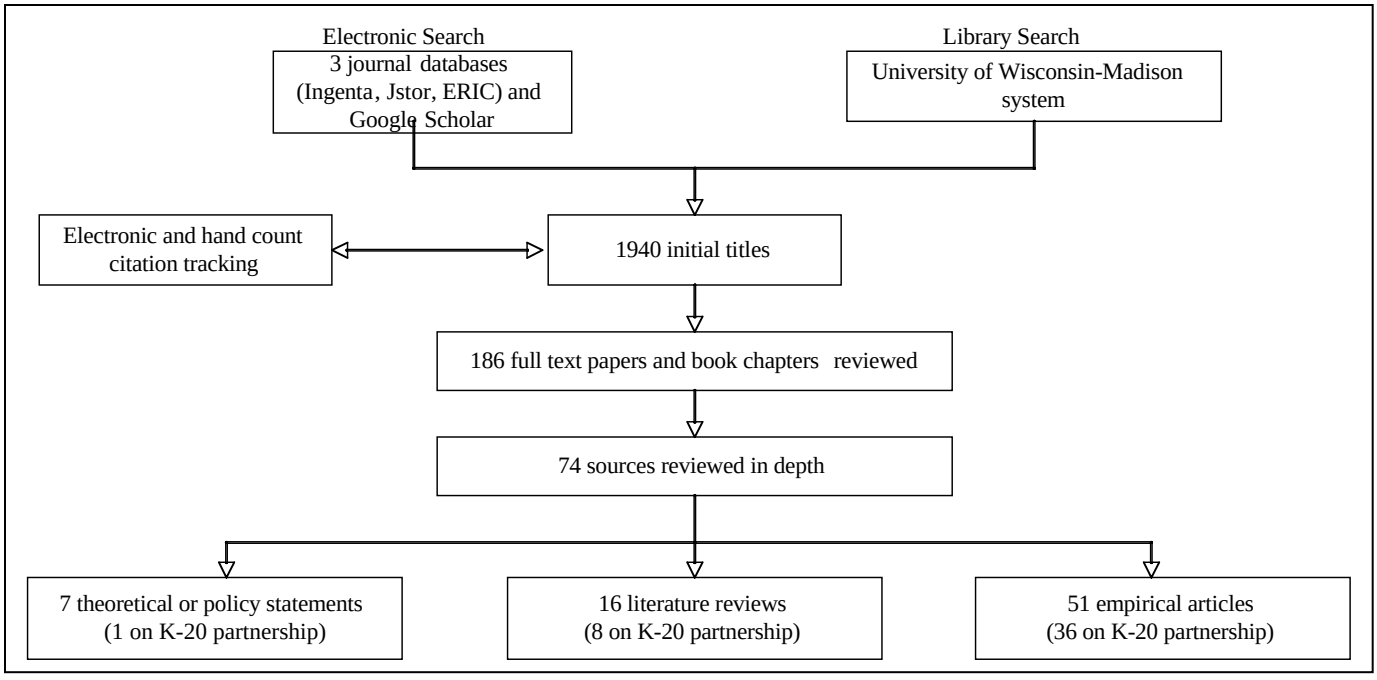

Figure 1. **Summary of sources contributing to the review.**

Given the number of articles identified in the initial scan, it is unclear if the reviewed articles are representative of the field. Findings should be read with this limitation in mind.

3.0 Responses to Literature Review Questions

As noted above, this literature review is informed by the following three questions:

1. What inquiry methods have been used to study K–20 partnerships, and what is the rigor of the methods?

2. How is partnership defined?

3. What do we know about the formation (inputs), process (throughputs), and results (outputs) variables associated with partnership?

Below, we address each of these questions in turn.

3.1 Research Methods Used and Their Rigor

To answer the first research question, we undertook a second screening of the 36 empirical articles identified for this review that focused on K–20 partnerships. We assigned keywords to the articles and then reread them to answer the following questions:

- What are the predominant approaches taken by the studies? Answering this question involved describing the methodologies and questions presented in each article.

- How rigorous are the studies? Answering this question required assessment of the following commonly accepted indicators of methodological quality: (a) researcher position (external researchers are considered more rigorous); (b) sampling method; (c) size of samples; and (d) degree to which the researchers reported following prescribed and established methods.[7]

The analysis enabled us to determine (a) the types of questions being asked about K–20 partnerships (the phenomenon) and (b) the maturity of the field. For example, in a mature field, one would expect to find predictive models and hypothesis testing using studies with a large number of cases.

We classified the 36 studies focusing on K–20 partnerships into three types: (a) case studies, (b) multi-case studies, and (c) survey studies (see Table 1), using the following criteria:

- A *case study* may use a mix of qualitative and quantitative methods to explore a single phenomenon, or unit of focus, as it is situated in an environment.

- A *multi-case study* may use both qualitative and quantitative methods to explore or test emergent theories about a phenomenon through development and analysis of two or more cases.

[7] An additional hallmark of research maturity and rigor is the existence of replication studies. Our review of 186 education research studies did not locate a single replication study. However, the review may not be representative of the field. Given this limitation, the status of replication studies is not reported in this review.

- A *survey study* involves the collection of qualitative or quantitative data across a large number of cases to test theory.

As previously noted, sources also were classified according to two other indicators of rigor: researcher position and sampling method. *Position* characterizes the official capacity of researchers with respect to intervention administration. An *internal* position indicates that the research was conducted by one or more people who also had responsibility for design or implementation of the intervention. An *external* position indicates the research was conducted by one or more people whose main responsibility was to evaluate, and not implement, the intervention. Although researchers can take steps to reduce biases or conflicts of interest associated with an internal position and external researchers can certainly be biased, position is a rule-of-thumb indicator for rigor in the field. Sampling method also provides a method of ensuring study rigor. For example, a convenience sample—where study units are selected in an arbitrary or unstructured manner—is less rigorous than a sample selected using random assignment—where treatment and control groups are assigned before the intervention and processes/results compared. A rigorous purposeful sample intentionally selects research subjects to explore certain phenomena or a specific subsample for certain reasons, which are made transparent by the researchers.

Table 1
Study Methods and Rigor of 36 Empirical Studies of K–20 Partnerships

Research approaches	# of studies	Position	Sampling	Number in sample
Single-case studies	25	19 internal 1 external 5 not stated	All convenience samples	All based on single case of partnership
Multi-case studies	3	All external	All purposeful	3 cases; 4 cases; and 7 cases
Survey studies	8	All external	5 convenience 3 purposeful 0 randomized	5 studies sampled multiple individuals from a single partnership; the other 3 included 57, 16, and 21 partnerships. Highest number of survey respondents was 199.

Single-case studies. Of the 36 empirical studies on K–20 partnership, 25 were single-case studies. While studies of this type are best positioned to explore phenomena, they have limited generalizability or explanatory power. Additionally, the majority of the 25 single-case studies were classified as lacking rigor because (a) 78% (19) were conducted by internal researchers with vested interests in program success, (b) all involved convenience sampling for case and informant selection, and (c) all involved single cases of well-established partnerships.

Table 2 presents a classification of the research purposes and questions employed by the single-case-study researchers. Note that some articles stated more than one purpose.

Table 2
Research Purposes and Questions for the 25 Single-Case Studies

Research purpose	# of articles	Research questions
Identify organizational conditions associated with success/failure	16	• What preconditions contribute to or inhibit successful partnerships? • How, if at all, do the diverse perspectives and backgrounds of K–12 and IHE participants contribute to educational renewal?
Determine relationship of partnership to organizational and other forces	1	• How does partnership work fit with organization work?
Investigate partnership dynamics	2	• How do partnerships change over time?
Explore organizational practices as related to collaboration	14	• How can collaborative relationships be established between K–12 and higher education partners?

The single-case studies tended to employ an interpretivist framework to develop a grounded theory, which is useful for exploring a phenomenon from multiple perspectives and synthesizing commonalities across participants and data types. Despite the relatively large number of single-case studies, none developed or tested predictive partnership models. Rather, the researchers identified partnership features that they, or others, believed were associated with success, as they variously defined it.

This said, the empirical researchers who conducted these case studies developed similar lists of features that they associated with partnership success, despite differences in context and case selection criteria. This finding should be heartening to researchers interested in conducting meta-analyses of the K–20 partnership literature because it suggests more comprehensive reviews may be useful for model building.

Multi-case studies. Three of the reviewed articles presented multi-case studies, which are useful for building and testing theories about phenomena where multiple, interacting variables may be present. When well constructed and implemented, multi-case studies have more explanatory power than single-case studies. We judged the three multi-case studies we reviewed to be of mixed quality: although all were conducted by external researchers and used a purposeful sample of similar partnerships, only one (Frymier & Flynn, 1992) involved an adequate number of cases (7) to build theory. On this question of using cases to build theory, Yin (1994) and other case methodologists recommend involving four or more purposely selected, similar cases and testing emergent theories against additional counterfactual cases.

All three of the multi-case studies identified factors indicating K–20 partnership success (reported in Section 3.3). One of the studies also described differences in partnership configurations (Frymier & Flynn, 1992), while a second identified obstacles to collaboration (Bullough & Kauchak, 1997).

Survey studies. Survey studies were the second most frequently used method for studying K–20 partnerships: Of the 36 empirical studies, 8 used surveys as the primary method of data collection. For a study to be classified as a survey study, the researchers had to have administered a survey form or used a questionnaire protocol to gather participant data. The quality of survey studies was mixed: although all were conducted by external researchers, five surveyed participants from a single partnership, which limits the generalizability of their findings.

The survey studies looked for associations between partnership features and indicators of success. All but one associated partnership participation with participant workplace positions and organizational supports/structures. The Walker, Gosz, and Huinker (2005) study attempted to associate student learning gains, instructional quality, and partnership participation using a value-added study of one partnership.

The partnerships studied through survey methods varied in size and configuration. For example, Edelen-Smith and Smith (2002) examined IHEs and K–12 organizations participating in the National Network for Educational Renewal, a group composed of 41 IHEs that form partnerships with K–12 institutions, while Landal and Ohana's (2006) research was based on one MSP involving 6 IHEs, 28 school districts, and a museum. LaGuardia (1999) purposely sampled 21 K–20 partnerships that had existed for 5 or more years and whose goals included improving K–12 student learning. Using a literature review, LaGuardia developed a predictive model that linked partnership sustainability to (a) common goals, (b) trust and respect, (c) shared decision making, (d) clear focus, (e) feasible agenda, (f) leader commitment, (g) adequate financial support, (h) long-term organizational commitment, (i) information sharing, and (j) collaboration. Based on structured telephone questionnaires with partnership administrators, LaGuardia found all factors to be present in a high percentage of successful partnerships.

Although our literature review included multiple evaluations and research studies that associated teacher quality or student learning improvement with partnership, the researchers' methodologies were rarely adequate to support those claims. Except for the Walker et al. (2005) study noted above— which sought to associate partnership-developed curricula and professional development programs with learning gains—the survey studies we reviewed developed no direct evidence or causal models to show that partnership, however defined, was present and a causal factor.

Conclusions about research methods used and their rigor. On its face, the argument that K–20 partnerships support innovation and change has some validity. Certainly, bringing K–12 and IHE educators together to work on persistent problems of student learning and instructional quality makes sense because, as Hodgkinson (1995, 1999) has suggested, both share responsibility for educating the U.S. population. In the business and health care sectors, partnerships have also been associated with innovation (Dutta & Weiss, 1997; Klijn, 1996), as well as with profitability (Mohr & Spekman, 1994), organizational vitality (Lang & Gordon, 1995; Uzzi, 1997), and increased efficiency (Provan & Milward, 1995). However, if the studies included in this literature review are representative of the field, the empirical foundation supporting claims about the value of K–20 partnerships is relatively weak. The majority of reviewed studies:

- Involved single-case studies;
- Employed convenience samples to assess partnership success, as defined by, for example, leader satisfaction, partnership longevity, or development of programs or materials; and
- Identified organizational features associated with success but provided little data about the success rates of K–20 partnerships or the features of unsuccessful partnerships, with the result that little is known about attempted K–20 partnerships that were not successful.

Based on this review, we conclude that the quality of available research on K–20 partnerships might be improved by:

- Conducting a meta-analysis of studies to more adequately identify weaknesses in the existing literature;
- Developing multi-case studies that include counterfactual cases to test emergent theories;
- Redefining success in terms of organizational health/vitality, organizational alignment to indicators of effective schools, and, depending on partnership goals, teacher quality improvement;
- Examining education sector conditions and "environmental shocks" that prompt the need for partnership; and
- Drawing on interorganizational research studies from the business and health care fields to design more rigorous studies and to test the transferability of business/health care study findings to the U.S. public education context.

3.2 Definition of Partnership

As an early step in the inquiry process, researchers and evaluators must define what they are (and are not) studying. Previous literature reviews of K–20 and other partnership studies have concluded that researchers/evaluators commonly do not adequately define *partnership* (Kingsley & O'Neil, 2004; Clark, Sirotnik & Goodlad, 1988). However, these reviews have not analyzed the ways in which researchers defined partnership. In our review, we examined the empirical studies on K–20 partnerships for patterns in how partnership was defined. We found that researchers and evaluators either (a) did not define partnership, (b) defined partnership as an organization populated by members of two or more other organizations, (c) defined partnership by comparing it to other forms of organization, or (d) defined partnership but failed to specify sufficiently specific indicators. We discuss each of these patterns below.

Partnership is not defined. The majority of the articles we reviewed did not define partnership, although they reported outcomes that the researchers attributed to a partnership. The articles tended to reference theoretical work, which is included in this review, but they did not tend to provide or discuss a definition or validate that the organization to which they attributed effects was indeed a partnership. Without a definition, attribution of outcomes to partnership is difficult to establish.

Partnership is defined by its members. The second pattern we identified in the literature was to define partnership as an organization comprised of members from two or more organizations. We view this approach as problematic because the definition of *organization* remains ambiguous. Without specifying what organization means, evaluators could view partnerships as encompassing a broad range of relationships (Podolny & Page, 1998). For example, some researchers considered partnerships to be formalized entities with legal standing,[8] while others viewed them as loosely coupled networks of individuals who, upon occasion, interact in dyads, but not as a single group (Podolny & Page, 1998; Vangen & Huxham, 2003; Edelen-Smith & Smith, 2002).

Membership, an attribute of this second way of defining partnership, was equally problematic because researchers did not specify the types of relationships included under the term *partnership*, thus making the term excessively broad. Because essentially all organizations maintain agreements and undertake some work jointly with people from other organizations, it would follow, using this definition, that essentially all activities involving more than one organization would be partnerships. For example, public K–12 schools have service agreements with various companies for vending machines, have referral procedures in place with other government agencies, and have contracts with curriculum publishers. Each organization interacting with a school, it could be argued, acts as a "member" in assisting the school to accomplish its work. But are each of these relationships a partnership?

Partnership is defined by comparison to other forms of organization. The third pattern in the literature was to define partnership by associating it with other terms that also were under-defined. For example:

> In this article, we present glimpses of partnership nested within a network of schools that have chosen to work closely with Miami University. (Badiali & Flora, 2000, p. 146)

> Higher education consortia are forming K–12 partnerships and alliances that are linking with individual public schools and their school systems. (Druckman & Peterson, 2002, p. 11)

In these examples, Badiali and Flora (2000) and Druckman and Peterson (2002) defined the term *partnership* by associating it with networks, consortia, and alliances, but without defining the latter terms. Thus, it is unclear what a partnership is and how it contrasts with other forms of organization. Our review found that researchers and evaluators also associated and contrasted partnerships with joint ventures, collaboratives, advice networks, strategic alliances, and cooperatives. Interestingly, terms like *authentic partnership* and *true partnership* also appeared in the research articles, raising the question of what an "inauthentic" or "untrue" partnership might be. The business and health care literature also included contractual agreements and outsourcing arrangements under the partnership umbrella, while the legal literature included administration-union contracts.

[8] Kochan and Rubinstein (2000) viewed the Saturn automobile company as a partnership between management and a labor organization, Lang and Gordon (1995) considered large law firms to be partnerships, and Robinson and Darling-Hammond (2005) considered professional development schools to be partnerships between teacher education programs and K–12 districts.

Our analysis also identified a categorical ambiguity in researchers' use of the term. The reviewed research supported the use of partnership as an umbrella term describing either (a) multiple types of organizations (akin to a phylum in biology) or (b) a particular type of K–12 and IHE interaction (akin to a genus or species in biology). As an example of the latter point, Badiali and Flora (2000) considered partnerships to be a species of interactions occurring within a K–12 and IHE network. Categorical differences suggest differences in researcher definitions. Greater categorical clarity would enable practitioners, researchers, and evaluators to more easily identify research results, design organizations to suit needs, and test partnership effects.

Partnership is defined but without sufficiently specific indicators. A minority of studies contained a priori partnership definitions that provided observable and measurable features to distinguish partnerships from other forms of organization but failed to specify the number or amount of those features necessary for a group to be deemed a partnership. This pattern is best exemplified by two quotations. In the first, Goodlad (1991) offered a definition that is the most often-cited definition found in our review of educational literature:

> A school-university partnership represents a planned effort to establish a formal, mutually beneficial interinstitutional relationship characterized by the following:
>
> - Sufficient dissimilarity among institutions to warrant the effort of seeking complementarity in the fulfillment of some functions.
>
> - Sufficient overlap in some functions to make clearly apparent the potential benefits of collaboration.
>
> - Sufficient commitment to the effective fulfillment of these overlapping functions to warrant the inevitable loss of some present control and authority on the part of the institution currently claiming dominant interest. (p. 59)

While Goodlad (1991) said a "sufficient" amount of dissimilarity, overlap, and commitment are necessary, he did not specify what he meant by the term. Nor did he say if all three characteristics are necessary for a group to be considered a partnership.

Similarly, Catelli, Padovano, and Costello (2000) defined an *authentic partnership* between schools and universities this way:

> Whether the relationship is symbiotic or organic, what is clear is that in authentic partnership, as opposed to other types of joint ventures, the school and university do act as equal partners. They agree at the outset to work side by side on pre-selected matters pertaining to schooling and teacher education—often sharing physical resources, monies, personnel and administrative decisions either immediately or in later phases of their partnership relationship. More specifically, their ultimate goals are to institutionalize the partnership in their respective settings, create an inter-institutional structure that will permit change and improvement to occur at both levels, and strive toward a new seamless system of education. Formal contracts or letters of understanding forecasting their intent and outlining the terms of the initial phases are characteristic of these partnerships. (p. 227).

Goodlad (1991), Catelli et al. (2000), and eight other articles defined some key features of partnership, and each suggested that the features represent a range of characteristics. For example, Goodlad's definition (above) implies that partners must be sufficiently homogenous and heterogeneous. The authors did not, however, articulate indicators for the range of features that would establish a floor and ceiling for partnership.

Conclusions. Our analysis suggests that the reviewed literature presents a substantial amount of ambiguity about how partnership is defined. When it was defined, partnership was associated with other ill-defined terms, or defined by its participants without specifying the relationship among them, or defined but without providing sufficiently specific indicators. Without a more precise definition, researchers and evaluators will be challenged to test the efficacy of partnerships as a tool for educational improvement.

3.3 Findings on Partnership Formation, Processes, and Results

As we stated above, the empirical studies of K–20 partnerships tended to associate features (either of participating organizations or of the partnership itself) with results. To determine if patterns pertaining to partnership success or failure or other partnership features existed in the reviewed literature, we read all articles in full and synthesized and coded article claims. An initial list resulted in identification of 62 factors associated with K–20 partnership success. Only one article identified factors linked to partnership failure. We then grouped the initial list of 62 factors into the following general categories that are commonly used to organize findings resulting from organizational analysis:

- *Input factors:* Preconditions or antecedent variables
- *Process factors:* Partnership features and throughput variables
- *Process outputs:* Direct results of a process that can lead to outcomes
- *Outcomes:* Performance achievements or levels

We noted that each category had four types of characteristics:

- *Partnering organization characteristics:* The features of Organization A or Organization B[9]
- *Partner relations characteristics:* Characteristics of the interactions between Organization A and B
- *Partnership characteristics:* The features of the organization formed by Organizations A and B
- *Environmental characteristics:* The local, national, and international context and forces in which Organizations A and B operate

[9] Although many K–20 partnerships involve more than two organizations, for brevity we use only two organizations (A and B) in these examples.

Table 3 uses these categories and characteristics to present the educational partnership features that researchers claimed to be associated with partnership formation, outputs, and outcomes. The most frequently cited features were (a) leader will and endorsement, (b) shared purposes and goals, (c) open communication, (d) established governance structure, (e) adequate resources, and (f) trust. The last feature, trust, is cross-categorized because it appears as an input, process, and outcome of partnership.

If the reviewed articles are representative of the field, the thematic analysis represented in Table 3 points to strengths and limitations in the research base. One strength is that multiple, independent researchers studying K–20 partnership and partnership outcomes, as they are variously defined, arrived at similar conclusions about success and failure factors. Given this strength, future researchers may build on these conclusions by investigating how, if at all, these factors interact and why. For example, some research on business partnerships has suggested that the degree to which partnership decision making is shared varies with partnership goals and partner investment. Identified variables may be more or less salient under certain conditions, but the reviewed education research does not articulate this range of conditions.

Table 3 also points to several limitations of the reviewed literature that future research may address:

- *Maturity of sampled partnerships.* The majority of the research we reviewed was conducted in the context of mature K–20 partnerships, and thus it identified features of partnership success based on observations or interviewee recollections of mature partnerships. Few implementation studies documented partnership formation and early development.

- *Nature of research questions.* Like many school reform studies, the reviewed K–20 partnership literature identified features—mainly structural features—of partnerships as organizations. While such studies provide signposts or benchmarks for administrators and faculty to attain, they provide little guidance on *how* partnerships form and function.

- *Vaguely defined constructs.* The studies' emergent themes routinely included constructs such as trust, respects, will, and communication that, if present, enable or inhibit partnership formation and functioning. However, the construct definitions and supportive text were frequently insufficiently descriptive or instructive to inform further research. As we observed in Section 3.2, the reviewed research did not specify the amount or combination of variables necessary for partnership success or failure in a given task or set of tasks.

- *Separation of organization from context.* A strength of qualitative research is its ability to describe and explore how environment influences organizations and vice versa. However, the reviewed literature tended to focus on the interpersonal dynamics of actors within partnerships, often at the expense of macro-level factors (e.g., policy and economic shifts) that enable or impede interorganizational work.

4.0 Conclusion

This review located 186 theoretical and empirical articles about K–20 partnerships. Using a standard, systematic review process, 112 of these studies were eliminated because they did not

Table 3

Features of K–20 Partnerships Identified by Reviewed Empirical Studies and Literature Reviews

Input factors	Process factors	Process outputs	Outcomes

Partnering organization characteristics
• Policies and incentives
• Leader will and endorsement
Partner relations characteristics
• Trust and respect among partners
• Power relations among partners
• Expectation of tangible, mutual benefits
• Shared purpose or problem
Partnership characteristics
• Formal agreements
Environmental characteristics
• Social hierarchy and status quo
	Partner relations characteristics
	• Open communication
	• Goal focus
	• Proactive leadership
	• Trust and respect among partners
	• Deprivatization and questioning of practice
	• Joint work and resource exchange
	• Leadership stability
	Partnership characteristics
	• Established governance structure
	• Adequate resources
	• Boundary crossers
	• Accountability measures
	• Evaluation
	• Number of goals
	• Cross-staffing
	• Celebration of accomplishments
	• Diversity
		• Partnership formation or formalization
		• Curriculum development
		• Teacher professional development
		• Articulation agreements
		• Professional development school
		• Research
			Partnering organization characteristics
			• Organizational vitality
			• Organizational learning
			• Individual learning
			• Identity shift
			Partner relations characteristics
			• Trust and respect among partners
			• Power equalization
			• Increased collegiality
			• Shared language
			Partnership characteristics
			• Dynamism
			• Sustainability
			• Outcomes/goals attainment
			  • Partner satisfaction
			  • Teacher change
			  • Student learning
			  • Curriculum change
			• Other innovations
			Environmental characteristics
			• Social hierarchy and status quo

meet basic criteria for rigor or took partnership-designed interventions as their unit of focus rather than partnership itself. Of the 74 studies that met the criteria for rigor, 51 were empirical studies, 36 of which focused on K–20 partnerships. These 36 were reviewed for (a) methods, (b) partnership definition, and (c) findings. While the sample size of this literature review places limits on the findings, the review provides evidence that research in this area is just beginning to describe the roles K–20 partnerships can play in student learning, teacher quality, and educational systems improvement, and is not well positioned to build associations between partnership processes, programs, and outcomes.

This conclusion is based on the following findings:

- Educational partnership researchers infrequently cited or built upon interorganizational studies from within education or other fields to test the theory that partnerships could effect instructional changes.

- Partnership was under-defined or ill-defined in the majority of reviewed studies.

- The majority of reviewed studies were single-case organizational analyses, which have limited explanatory power.

- The research findings described partnership structures, partner organizations, and the nature of partnership relations, but did not answer questions about how partnerships accomplish tasks or build predictive partnership models.

We conclude that more research needs to be done. Specifically, we recommend that researchers:

- Clarify and explain a definition of partnership that includes an elaborated explanation and sufficiency benchmarks and that is drawn from theory and research in other fields and from existing education research;

- Develop, preferably through empirical study or meta-analysis, a partnership taxonomy that describes different types of partnerships and the ways that they differ;

- Conduct cross-case analyses that include counterfactual cases in order to build models; explore within-partnership variable interactions; and explore partnership environmental influences, if any;

- Develop partnership databases to enable better sampling techniques and studies with larger samples;

- Study the link, if any, between partnership participation, school and college organizational vitality, and engagement in change; and

- Conduct a larger literature review, or expand this one, to make more definitive statements about K–20 partnership.

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