This is to certify that the

dissertation entitled

The Roles of Stakeholder, Process, and Facilitation Variables in the Collaborative Activities and Climate of School-to-Work Coalitions

presented by

Raymond E. Legler

has been accepted towards fulfillment
of the requirements for

Ph.D. degree in Psychology

Thomas M. Reischl
Major professor

Date 7/27/98

THE ROLES OF STAKEHOLDER, PROCESS, AND FACILITATION VARIABLES IN THE COLLABORATIVE ACTIVITIES AND CLIMATE OF SCHOOL-TO-WORK COALITIONS

By

Raymond E. Legler

A DISSERTATION

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Psychology

1998

ABSTRACT

THE ROLES OF STAKEHOLDER, PROCESS, AND FACILITATION VARIABLES IN THE COLLABORATIVE ACTIVITIES AND CLIMATE OF SCHOOL-TO-WORK COALITIONS

By

Raymond E. Legler

Factors thought to influence collaboration in school-to-work (STW) coalitions are investigated. Literature from the field of organizational theory that examined collaboration is reviewed. Hypotheses predicted that stakeholder diversity, interdependence, written agreements, and communication would influence climate, while partnership size, resource sharing, planning, and coordination would affect activities. Path analysis of the data revealed the primary importance of planning and coordination. Diversity and resource sharing predicted activities, written agreements and communication predicted climate, and interdependence influenced both activities and climate. Implications for collaboration and future research are discussed.

This dissertation is dedicated to my mother, Barbara Joan Legler, and to children living in poverty.

ACKNOWLEDGMENTS

I would not have been able to complete my graduate studies and this dissertation without the help of many family members, friends, faculty, and other students. Thanks to my siblings Andrew, Jean Marie, Kathleen, and many other family members for their support and encouragement. I greatly appreciate the assistance of my committee chair, Tom Reischl, my "co-chair", Gloria Kielbaso, and committee members Bob Caldwell and Ralph Levine, who helped me formulate and clarify my ideas and believed in the importance of the work. Thanks to David Loveland for his assistance with data analysis. Finally I'd like to thank my undergraduate research assistants Andrea Crosthwaite, Jill Huppenbauer, Heather Klouda, and Karen Mueller for their efforts in helping collect the data for this study.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

ECD . . . . . Early childhood development

FOC . . . . . Fractionated organizational community

GAO . . . . . General Accounting Office

PIC . . . . . Private industry council

STW . . . . . School-to-Work

Chapter 1

INTRODUCTION AND LITERATURE REVIEW

Introduction

The past fifteen years have seen increasing attention paid to the inability of the United States to adequately prepare non-college-bound youth for employment. Several significant publications such as A Nation at Risk (U.S. Commission on Excellence in Education, 1983), The Forgotten Half (Grant Foundation Commission on Work, Family, and Citizenship, 1988), and America's Choice: High Skills or Low Wages (Commission on the Skills of the American Workforce, 1990) have sounded the alarm to educators, industry, government, parents and students that the U.S. must dramatically change the way it goes about educating and preparing young people to compete in an increasingly global economy. As Hoyt (1994) states, "In no other industrialized country are the transitions from school to work left so much to chance as in the United States" (p.189).

The failure of the U.S. education system to adequately prepare students, particularly non-college-bound youth, to enter the world of work occurs for several reasons. High school curricula typically do not include subject areas or activities that

relate material to potential employment requirements and experiences (U. S. General Accounting Office (GAO), 1993). Teachers are seldom aware of the specific skills and abilities required in the private sector; this is perpetuated by the fact that employers rarely have input on school curricula and have no formal channels through which to familiarize school personnel of job requirements (Hoachlander, 1994). Finally, inadequate career exploration and preparation usually leave non-college-track students without the necessary knowledge or skills to compete for high-wage jobs after graduation (GAO, 1993). Students not headed for college are not provided assistance in understanding the need for school-to-work opportunities (Bishop, 1988).

We cannot expect schools to solve a problem of such magnitude on their own. In order to prepare students for the world of work, the world of work has to be involved in the preparation of students. School-to-work (STW) transition programs hold the promise of involving businesses and other key stakeholders in the secondary education system to assist students in preparing for employment or further education after graduation.

School-to-work transition programs are intended to change the way students learn, and to clarify for students the relationship between their high school education and future employment (Whiting, 1993). These programs attempt to integrate traditional academic courses and career education that involves real-world work experience (Goldberger, Kazis, & O'Flanagan, 1994). Through school-based activities that are applied and experiential, work-based activities that relate employment training to academics, and connecting activities that link education to employment, STW

programs are part of an education reform movement that has the potential to dramatically improve students' skills and opportunities (School-to-Work Opportunities Act, 1994).

Along with substantial changes in educational curricula, collaborative alliances that involve schools, businesses and other key stakeholders are the defining component of the school-to-work approach. Extensive research exists in the areas of experiential learning and career exploration, yet little analysis has been done of the collaborative processes within these alliances (Legler, 1997). STW programs are gaining increased attention and use, and this could lead to substantial changes in educational policy throughout the United States. If this country is planning to make school-to-work programs the norm, it is essential that the collaborative process be thoroughly examined so that these alliances will function as intended. This will ensure that the time and money invested in the STW approach will be spent effectively, and enable young people to make smooth transitions into employment.

This study examined the impact of several factors thought to influence the processes and outcomes of collaboration that occur within STW coalitions. Based on reviews of STW literature and literature generated through analysis of collaboration from an organizational theory perspective, this study collected data from 150 STW coalitions in order to examine the relationship between critical variables in the collaborative process.

Analysis of collaboration in the STW field, using information about effective coalitions developed in organizational theory literature, has several important potential

benefits. The ideas that have been generated on collaboration from an organizational perspective can help guide theory and research on STW coalitions. This work could aid existing STW programs in identifying and addressing gaps in their coalitions - allowing them to become more effective and improve outcomes for students. New coalitions could benefit by incorporating necessary components from the beginning. Finally, by borrowing concepts that have already been developed, STW programs can avoid having to 'reinvent the wheel' when shaping their coalitions and can focus on improving the transition process for students.

The next sections review literature on STW transition, collaboration, and coalitions. First is a review of background literature on the history of the STW movement. Then the need for STW programs is documented, and the promise of STW programs to solve these problems is described. After this, a review of research on coalitions is presented. Next is a review of literature on organizational climate, and the present study is described.

This review begins with a brief history of the career and vocational programs that have preceded STW efforts. Following this is a discussion of the issues that precipitated the need for school-to-work transition programs, and a description of the underlying philosophies of the STW movement. Then a review of theoretical, case study and quantitative literature on coalitions is presented. Finally, a review of literature on organizational climate examines the utility of this variable in analyzing the relationship between ecological factors and organizational outcomes.

Background

Historical Precursors of School-to-Work Programs. School-to-Work programs evolved from several different types of career education programs including vocational and technical education, tech-prep, apprenticeships, cooperative education, and internships, among others. The following section presents a brief history of the STW movement, and presents definitions of these preceding programs.

The roots of the school-to-work transition movement are found in the long history of vocational and technical education. As far back as the late 1800s, trade schools were offering the first formal vocational training (Hoachlander, 1994). A series of Federal laws, beginning with the Smith-Hughes Act of 1917, has supported the growth of vocational education programs. The most important Federal acts since then have been the Vocational Education Act of 1963 and the Perkins Vocational Education Act of 1984. This program of legislation provided substantial Federal funding to support the growth of vocational programs and institutions, and led to the development of several different types of programs designed to assist students in preparing for jobs.

In addition to vocational education, the concept of STW transition is based on the idea that career-oriented experiences should compliment traditional academic preparation. In order for young people to fully understand the benefits of education, they should have the chance to observe and take part in activities both inside and outside the classroom that demonstrate the application of what they learn in school.

As Dewey (1959) observed:

> "How many students, for example, were rendered callous to ideas, and how many lost the impetus to learn, because of the way in which learning was experienced by them? How many acquired special skills by means of automatic drill so that their power of judgement and capacity to act intelligently in new situations was limited? How many came to associate the learning process with ennui and boredom? How many found what they did learn so foreign to the situations of life outside the school as to give them no power of control over the latter?" (p. 248)

STW programs attempt to avoid the criticisms of education leveled by Dewey by providing students with opportunities to connect education in the school setting to future career activities.

STW programs build upon strategies and techniques that have been used by schools for several decades to help prepare students for employment. One approach, vocational education, refers to a broad category of secondary education programs that attempt to prepare students for a specific occupation after high school. These programs frequently offer training in a particular field during one part of the school day, and students also take regular academic courses such as math and English. Examples of such programs include those that prepare students for jobs as nursing assistants, auto mechanics, or secretaries. Vocational education courses often operate in isolation from the rest of the academic curriculum, are frequently not linked to post-secondary

programs, and generally involve limited private sector participation (Hoachlander, 1994).

Cooperative education is another approach to preparing youth for employment, and involves students attending school for part of their day and spending the rest of the day working at a business or organization in the community. This work is paid and students usually earn academic credit at the same time. However there is usually little linkage between what is studied at school and the tasks performed at work, and students rarely acquire credentials that can assist them in obtaining employment after graduation (Choy, 1994).

Tech Prep and apprenticeship programs are the two programs that most closely resemble school-to-work programs. Tech prep (also known as 2+2) is a coordinated program that links secondary education, usually the last two years, with a community college program that leads to an associate's degree in a particular field. The high school classes are usually applied vocational classes and employers are generally involved in shaping the curriculum of the entire program. Apprenticeships involve the integration of academic and vocational training, with students working and learning on the job. These programs typically lead to credentials that are accepted throughout a particular field.

While most of these vocational education programs involve some cooperation between schools and other agencies or employers, the amount and extent of cooperation are usually quite limited. These vocational efforts have been unable to prepare the vast

majority of young people for the job market. The consequences of inadequate preparation are severe for individual young people and the country as a whole.

The scope of the problem. The U.S. General Accounting Office (GAO), among others, has published a series of reports documenting the severe negative personal and social consequences of inadequate career preparation for the majority of young people. Two reports in particular highlight the problems that the United States is facing regarding the issue of STW transition.

The first GAO report (1990) documents the results of a study that examined the United States' efforts to prepare non-college youth for the labor force, and compared them to those of other countries. For this report the GAO reviewed literature on how the U.S. attempts to prepare its youth for work, as well as literature on the work force preparation strategies of England, Germany, Japan and Sweden. GAO investigators then visited those countries, observing education and training systems and meeting with individuals knowledgeable on those systems. In addition the GAO consulted with experts on U.S. and foreign job training efforts.

The findings of this report indicated that "U.S. education and training often provide inadequate preparation for employment" (GAO, 1990, p. 2). The GAO estimated that almost 30% of young people age 16-24 (nine million) lacked skills for entry level jobs. In addition they found that the U.S. was lagging behind some of its primary international competitors in guiding school-to-work transition and having students acquire academic and occupational skills that employers need. The GAO concluded that our inability to provide young people with skills that will facilitate

employment continues to lead to increased social spending on unemployment, welfare and crime.

A second GAO report (1993) arrived at similar conclusions. For this study the GAO reviewed literature on STW transition, consulted with experts in the field and conducted a telephone survey of all 50 states and the District of Columbia. GAO investigators then conducted sight visits of five model STW programs operating in Florida, New York, Oregon, Tennessee and Wisconsin. The investigators contacted school district officials, principals and teachers as well as business and labor representatives.

The GAO (1993) confirmed conclusions from the earlier report, finding that "the U.S. secondary education system...increasingly does not serve youth effectively" (p. 4). The best students are college-tracked, a few are in vocational education, but the rest are not well prepared to enter the job market. The report also states that while 15% of high school freshmen end up graduating and going on to obtain a bachelor's degree within six years of graduation, 85% do not. This means that if they receive no specific skill training in high school, which most students do not, then the vast majority of young people face a difficult time finding quality employment.

In addition, the report points out that in the past many people could obtain semi-skilled, high-wage manufacturing jobs - but today there are fewer of these jobs and the ones that exist require higher skills. Finally the report reiterated the earlier finding that "Experts often find school-to-work transitions in the U.S. to be lacking in comparison with some of our principle foreign competitors" (p. 1).

Other literature corroborates the findings of the GAO that the U.S. does a poor job of preparing young people for employment. Fifty percent of adults in their late twenties still have not found steady employment (Osterman & Ianozzi, 1993). Inadequate preparation for life after high school leaves young people without the ability to obtain jobs that will provide sufficient wages (Cochrane, Mattai, & Huddleston-Mattai, 1994). Catterall (1985) states that one year's cohort of unprepared youth, including unprepared high school graduates and high school drop-outs, may loose an estimated $150-$300 billion in income over their lifetimes, or about $135-$300 thousand per individual. Left on their own, this group has a difficult time in the job market and are either unemployed or are working in jobs with little chance of advancement (Grant Foundation Commission, 1988).

In addition to the economic consequences of inadequate career preparation, the deleterious psychological effects of unemployment have been confirmed by many researchers (Brenner, 1973; Catalano, Dooley & Jackson, 1981; Dooley & Catalano, 1980; Johnson & Abramovitch, 1987; Turner, Kessler & House, 1991; Dooley, Catalano, & Wilson, 1994). School-to-work programs are designed to prevent unemployment and its subsequent psychological and economic consequences by equipping students with the skills they will need to obtain employment after high school.

Although student outcomes are the main focus of STW efforts, the results of inadequate student preparation for employment have implications for the communities in which these youth live and the country as a whole. The Committee for Economic

Development (1987) estimated that the unprepared youths from one year could cost the government at least $10 billion in expenditures on social issues such as unemployment, welfare and crime. Beyond budget implications, insufficient skill preparation affects the United States' ability to compete economically with other countries. If the United States wishes to maintain its economic strength, we must respond to the challenge of preparing youths with the skills currently needed by employers.

Issues such as these have driven those concerned with students' transitions to work to propose dramatic changes in how we conceptualize the education process in this country. The STW movement is a major paradigm shift for the education system, changing the role of the student from a passive recipient of information to an active participant in the educational process. This involves a dramatic transformation of teaching methods, and the inclusion of the private sector in shaping curricula.

While the STW approach is starting to spread, the consequences of our failure to move more quickly to address the issue of school-to-work transition are enormous. The next section describes in detail how STW programs can address the individual and social consequences of inadequate career preparation.

The STW solution. School-to-work programs are intended to facilitate the transition from secondary education to employment or higher education by changing academic curricula, and linking school-based learning and work-based experiences. The STW approach to preventing unemployment focuses on the interaction of the student and his or her environment when addressing issues of school curriculum and teaching methods. These environmental factors affect how students learn, and how they

perceive the usefulness of education. In addition the inclusion of school-based experiential learning techniques and work-based experiential activities creates an active and challenging environment in which students are engaged participants in their learning.

Although about 30 percent of high school students experience some type of vocational education, these vocational classes and programs are often criticized for being outdated, for paying too little attention to academic skills, and for training students for occupations that are not in demand (GAO, 1990). The aim of STW programs is to change the general curriculum - making academic courses applied and experiential, and offering all students the opportunity to gain skill training, and experience in the job market. Essential to this effort are coalitions of key stakeholders in the school-to-work process that combine their resources and coordinate their efforts to help students move smoothly from high school to employment.

As stated in the School-to-Work Opportunities Act of 1994, the main components of the STW approach include school-based activities, work-based activities and connecting activities. This involves actual training in employment activities both inside and outside the school building, along with activities that connect the two. School-based activities refer to changes in curricula and teaching methods that make learning more experiential, including the use of different work-related examples and assignments. These activities can also include problem solving and working in groups.

Work-based activities refer to experiences outside the classroom that provide students opportunities to discover how their academic skills might be applied in

employment settings. Bailey and Merritt (1992) argue that it is important to supplement classroom instruction with meaningful experiences in workplace environments through activities such as internships, apprenticeships, and cooperative education. This allows students to observe and understand the linkages between what they learn in school and how it can be used on the job.

Activities that can connect school-based and employer-based in STW programs ideally include (but are not limited to) employer participation on policy and advisory boards, employer activities in the classroom, and teacher internships in industry (GAO, 1991). In addition collaborative activities often include the sharing of resources such as funding, equipment, facilities and personnel - usually on the part of employers.

School-to-work systems strive to change the way students learn, by employing experiential learning techniques and using real-world examples throughout the curriculum. The ultimate goals of these approaches are to make students active participants in their education, to teach young people how to think rather than to simply regurgitate facts, and to assist them in choosing a path that will lead to employment.

Within the education community, teachers and administrators are beginning to realize that outdated methods of instruction usually involving lecture, memorization, and testing are insufficient to impart the knowledge and skills students need to become competitive in the marketplace (Choy, 1994; U.S. General Accounting Office, 1993). Experiential learning has received increased attention recently as one method that can make students active learners and participants in their education (Kolb, 1984; Atkinson & Murrell, 1988).

Experiential learning consists of moving away from text and lecture-based approaches to instruction, and involving students in activities and tasks that are based on real-world examples. These techniques are extremely well suited for STW efforts because they enhance classroom learning, and embody the goal of exposing students to real-world job situations before graduation. The main goal of the experiential learning approach is to actively involve students in the process of education. By employing experiential learning techniques, actively involving students in their education and equipping them with the skills they need to succeed on their own, school-to-work strategies have the potential to empower young people and give them control over their future.

Along with school-based changes in curricula, work-based experiences can provide opportunities for students to see how the knowledge they learn in school can be applied in the real world. Experiences for all students - such as paid employment, internships, apprenticeships and job shadowing - give students a chance to understand the usefulness of their academic training. This can be extremely valuable in impressing upon young people the need to stay in school and excel academically. In addition it provides valuable job experience and training, while linking academic and employment skills.

STW Coalitions. The School-to-Work Opportunities Act of 1994 mandates the inclusion of connecting activities in STW programs. These typically involve the inclusion of workplace examples in school curricula, academic instruction during worksite training and collaborations between schools and employers. School-to-work

programs are usually based on extensive partnerships between schools, businesses, and other key stakeholders. Partnerships comprised of representatives from business and education for the purpose of preparing students for employment began to arise in the 1970s. The Comprehensive Employment and Training Act of 1973 led to the creation of private industry councils (PICs) that continue to operate under the Job Training Partnership Act of 1983. While PICs and other similar coalitions form the basis of cooperation for the purpose of moving people into employment, they rarely involve the extensive collaboration on curricula changes that STW programs promise.

STW coalitions are intended to go beyond this initial stage of collaboration, allowing schools, businesses and other groups with a stake in the school-to-work transition process such as parents, students and community members to work together in a coordinated effort to fundamentally change school curricula and teaching methods. In addition these coalitions can allow the private sector formal channels through which they can provide schools with input on job requirements, share resources and provide opportunities for students to gain employment experience.

Coalitions are defined in several ways. One recent review of coalition literature (Butterfoss, Goodman, & Wandersman, 1993) notes two particularly useful definitions: "an organization of individuals representing diverse organizations, factions or constituencies who agree to work together in order to achieve a common goal" (Feighery & Rogers, 1989, p. 1); and "an organization of diverse interest groups that combine their human and material resources to affect a specific change the members are

unable to bring about independently" (Brown, 1984, p. 4). These definitions are very similar to those found regarding collaboration.

Collaboration has been described as "The pooling of resources...by two or more stakeholders to solve a set of problems which neither can solve individually" (Gray, 1985, p. 912); "Collaboration occurs when a group of autonomous stakeholders of a problem domain engage in an interactive process, using shared rules, norms, and structures, to act or decide on issues related to that domain" (Wood & Gray, 1991, p. 146); "Collaboration is a temporary social arrangement in which two or more social actors work together toward a singular common end requiring the transmutation of materials, ideas and/or social relations to achieve that end" (Roberts & Bradley, 1991, p. 212). These definitions of 'coalition' and 'collaboration' share much in common. For the purposes of this review coalitions are seen as organizations of key stakeholders in the STW process that work together to facilitate students' transitions from education to employment. Collaboration is the process through which these stakeholders act to change the education system and provide opportunities for businesses, parents, students and others to participate in improving STW transitions.

Coalitions of key stakeholders that operate to improve the school-to-work transition process are important for several reasons. Since the primary goal of these programs is to prepare students for employment, the inclusion of employers in the coalitions creates opportunities for students to visit businesses and acquire actual experience in the private sector. Coalitions allow businesses formal opportunities that they do not currently have to share information with schools about job requirements, to

share resources such as supplies, equipment, and funding, and to participate in decisions regarding the student transition process - facilitating increased commitment by business to the STW process. Active involvement of community members in the decision-making process can lead to participative ownership (Kelly, 1988), and the inclusion of faculty, parents and students in decisions on STW issues can broaden support for STW programs, and allow input from these interested parties that can facilitate a sense of ownership and strengthen the coalition.

In light of the fact that the collaborative process within STW coalitions is so essential to their effective functioning, it is crucial that we understand the collaborative activities within these alliances in order to ensure cooperative collaboration that leads to positive student outcomes. An examination of these coalitions using ideas and theories borrowed from organizational theory and research will be helpful in identifying weakness in STW alliances, and will provide the basis for a theoretical model of an effective school-to-work coalition. By strengthening the collaborative process, STW coalitions can mature and focus their attention and energy on facilitating the transition process for students.

The next section of this paper reviews literature on collaboration and coalitions. First, theoretical and review literature is analyzed. Next a series of case studies is discussed. Finally several quantitative analyses of coalitions and interorganizational structures are reviewed.

Collaboration in Coalitions

The use of collaborative alliances to address a variety of social issues has been growing (Logsdon, 1990), largely due to the fact that organizations have failed to "conceptualize problems and organize solutions at the domain level" (Gray 1985, p. 914). By this, Gray refers to the usual practice of most organizations of viewing problems and solutions primarily in terms of their own organization, without taking into account the role of the environment and other organizations in problem causation and solution.

A review of the literature on coalitions by Butterfoss, Goodman and Wandersman (1993) documents several ways in which coalitions can be useful. Coalitions can allow organizations to become involved in issues without having sole responsibility for solving problems, develop public support for issues, expand the power of groups and individuals through collective action, and decrease the duplication of efforts. In addition coalitions can bring resources from multiple areas to focus on an issue, can recruit more members to assist in solving problems and allow the flexibility necessary to identify and employ new resources. The following section presents and discusses theoretical and review literature regarding coalitions.

Theoretical and Review Literature. In a review of organizational literature, Schermerhorn (1979) defined interorganizational development as "the application of social science knowledge to the creation of planned, systematic and mutually beneficial cooperative relationships between otherwise autonomous organizations". Interorganizational cooperation and interorganizational systems are terms used in

organizational theory in much the same ways that the terms collaboration and coalition are used.

Schermerhorn (1979) found substantial evidence that the incidence of organizations engaging in cooperative relationships was growing quickly. He sighted cases in both the private and public sector, but noted that the literature did not provide sufficient information to guide practitioners regarding the application of interorganizational theories. Schermerhorn's synthesis of the literature led to the generation of an interorganizational development intervention model comprised of four action goals. These goals included: 1. Actions designed to raise mutual awareness of and trust among organizations, as well as to identify common interests; 2. actions designed to convince organizations to cooperate; 3. the design of interorganizational structures and processes; 4. evaluation of interorganizational performance. Several of these ideas are found throughout the literature on interorganizational and coalition development.

In a theoretical article that discussed the development of interorganizational domains, Trist (1983) described these domains as "functional social systems that occupy a position in social space between the society as a whole and the single organization" (p. 270). The author argued that referent organizations are crucial for domain development. A referent organization is a group of stakeholders that come together voluntarily to regulate and develop actions directed toward dealing with a common issue - in other words, a coalition. Trist goes on to suggest that domain formation occurs through a process of shared appreciation regarding an issue, and is followed by

domain identification and the setting of an agreed-upon direction for a development pattern.

Referent organizations have three general functions. These include: 1. The regulation of relationships and activities by setting rules, determining membership and maintaining values from which goals and objectives are set; 2. Appreciation of issues and the development of a shared image of the future; 3. Infrastructure support such as the sharing of resources and information (Trist, 1983). The author argues that resource mobilization may be a particularly significant issue.

Finally the article pointed out the importance of proactive individuals who can identify and connect with others who share an appreciation of the issue at hand. Citing terms such as "reticulist" and "novelty detectors", Trist (1983) states:

> "In such individuals new appreciations of emerging meta-problems originate and build up as they interact with other network members who tend to form a selectively interdependent set. They learn the art of walking through walls. Without carriers of this kind it is difficult to see how the process of appreciative restructuring can take place fast enough or go far enough to permit emergent domains to be organized in time and on a scale that will allow the oncoming meta-problems to be contended with." (p. 280)

Trist and Schermerhorn appear to concur on the importance of agreement among organizations regarding their mutual problems and interests, as well as on the necessity of structure and regulation of coalition activity.

In a comprehensive examination of over 100 pieces of literature, Cummings (1984) reviewed work on transorganizational development. Based on this analysis the author proposed an integrative framework for transorganizational system functioning. Cummings suggested an input-processing-output model, stipulating that interaction processes are affected by inputs such as "organizations' motivations to interact and organizations' assessments of each other" (p. 375). Interactive processes, such as coordination of effort, in turn affect collective performance. The author argued also that environmental influences such as resource scarcity can affect organizations' motivations to interact.

Cummings (1984) went on to cite literature documenting the influence of communication on the ability of organizations to understand the extent of their mutual problems and identify resources for solving them. In addition, the author stated: "...studies have found that recognition of the scale and complexity of shared problems and awareness of organizations' common interests and interdependence are precursors to engagement in joint problem solving" (p. 378). Other findings of this review included the importance of leaders who can promote communication, coordination, and structure that includes the formalization of rules, policies and procedures.

Other literature reviews also suggest that mutual goals and the potential to share resources are two key determinants to collaborative activity (Butterfoss, Goodman, &

Wandersman, 1993; Hord, 1986; Oliver, 1990). In addition, coordination of efforts has been linked to successful collaboration (Butterfoss, et al., 1993; Oliver, 1990), as have communication and planning (Butterfoss, et al., 1993; Hord, 1986). Finally, Butterfoss, et al. argue that diversity among stakeholders, a convener and the formalization of rules and procedures can be instrumental in facilitating and maintaining coalitions.

Arguably the most influential theoretical contributions to the field of collaboration have been made by Gray and her colleagues (Gray, 1985, 1989; Gray & Hay, 1986; Gray & Wood, 1991; Wood & Gray, 1991). Gray (1985) stated that the primary factors that lead to the need for collaborative alliances include increasingly turbulent environments, problems that are too large or difficult for single organizations to deal with and an increasing degree of interdependence within organizational domains or fields.

In a proposed process model of collaboration, Gray (1985) expanded on McCann's (1983) model that included problem-setting, direction setting, and structuring. Problem setting is comprised of the identification of key stakeholders and mutual acknowledgment of shared problems. In direction setting, "stakeholders articulate the values which guide their individual pursuits and begin to identify and appreciate a sense of common purpose" (Gray, 1985, p. 74). Finally, structuring involves negotiations aimed at an agreed-upon regulative framework for the problem domain.

Gray (1985) generated 12 propositions that she argued would facilitate the three processes described above. Among the most important are: The stakeholder set needs to reflect the complexity of the problem; problem-setting efforts are enhanced when stakeholders expect that the benefits of collaborating will outweigh the costs; the greater degree of recognized interdependence among stakeholders, the greater the likelihood of initiating collaboration; collaboration will be enhanced by conveners who possess legitimate authority and who can serve as reticulists to rally other stakeholders to participate.

Further explication of the collaborative process by Gray (1989) included discussion of the need for collaborators to identify and share resources and to establish specific, formal ground rules. Also important is the need to set an agenda, one that outlines what the goals and objectives of the coalition will be.

An overview of several school-business partnerships (Otterbourg & Timpane, 1986) affirms the applicability of many of the above findings to the STW process. A discussion of 8 school-business partnerships asserted that schools and businesses are in the process of realizing that they need each other in addressing their mutual problems, and that collaboration could be beneficial. Resource sharing was seen as advantageous, as was an individual organization that could provide leadership for the partnerships. In this context, schools may desire financial and in-kind resources from businesses, while businesses are attempting to improve the pool of human resources available to them when seeking employees. Lastly, planning, coordination and communication were cited as important aspects of partnership functioning.

Several common themes run throughout the theoretical and review literature. These include the importance of a comprehensive and diverse set of stakeholders. As much as possible, coalitions should attempt to include all individuals and organizations that have a direct stake in the issue or issues being addressed by the coalition. Perhaps as important is the need for stakeholders to believe that they share a common interest, and that they need to work together in order to solve their mutual problems. Other factors that can positively affect the collaborative process include the active presence of a convener - a person or organization that can galvanize stakeholders and convince them of their interdependence, as well as agreement upon and formalization of rules and policies. Finally, the sharing of resources and processes such as communication, coordination, and planning help to organize and activate coalition operations. These findings are summarized in Table 1.

The above review revealed several factors that could influence coalition development. The next portion of this review discusses empirical case studies that provide further evidence of the importance of these variables to coalition effectiveness. Several authors have noted that the majority of research on coalitions consists largely of anecdotal reports and case studies (Butterfoss, et al., 1993; Cummings, 1984; Schermerhorn, 1979). This is an accurate assessment, although there are a few quantitative studies that are relevant to the discussion and those are reviewed also.

Empirical literature. In an examination of a fractionated organizational community (FOC), Selsky (1991) described a coalition of social service organizations that formed in response to the decrease in resources that many such agencies

Table 1- Summary of Key Variables Identified in the Theoretical and Review Literature

Key variable	Authors identifying the variable
Mutual understanding of problem/interdependence	Butterfoss, et al. (1993), Cummings (1984), Gray (1985), Hord (1986), Oliver (1990), Otterbourg & Timpane (1986), Schermerhorn (1979), Trist (1983)
Convener/leader	Butterfoss, et al. (1993), Cummings (1984), Gray (1985),Otterbourg & Timpane (1986),Trist (1983)
Formalization/rules	Butterfoss, et al. (1993), Cummings (1984), Gray (1989),Schermerhorn (1979), Trist (1983)
Resources/sharing	Butterfoss, et al. (1993), Cummings (1984), Gray (1989), Hord (1986), Oliver (1990), Otterbourg & Timpane (1986),Trist (1983)
Communication	Butterfoss, et al. (1993), Cummings (1984), Hord (1986), Otterbourg & Timpane (1986),Trist (1983)
Planning	Butterfoss, et al. (1993), Hord (1986), Otterbourg & Timpane (1986)
Stakeholder diversity	Butterfoss, et al. (1993), Gray(1985)

experienced during the 1980s. The coalition was comprised of 148 organizations that addressed a variety of social issues involving the disabled, senior citizens, women and youth services, housing and many others. The primary functions of the FOC were to facilitate a resource-sharing network, a bulk purchasing program, educational programs and advocacy.

The author sent surveys to a stratified sample of half the organizations, performed a content analysis of board minutes and employed participant observation. Of the 74 members to whom surveys were sent, 50 completed and returned them (68%). Over half (52%) of the respondents cited cost savings as one of the main reasons they joined the FOC, and 52% also stated the opportunity to exchange or share information. When asked to cite the two most important services of the FOC, vendor discounts and information were each cited by 17 respondents (34%). The resource exchange program was the third most important program, stated as most important by 13 respondents (26%).

Considering that the primary reasons for the formation of the coalition were shrinking funding and the formation of a resource-sharing program, these results are not too surprising. However they do provide evidence for the ideas that resource sharing, interdependence and communication are key factors in the formation and operation of coalitions. Based on this case study, Selsky (1991) formulated several guidelines for collective networks. Among them is the proposition that networks "must be designed, with attention paid to explicit policies, an independent resource base, and active engagement" (p. 109). The author also stressed the importance of identifying

and working with the essential resources needed by the organizations, as well as the presence of a development activist who can procure the participation of organizational leaders.

In a case study that focused on the role of interdependence in the formation of alliances designed to solve social problems, Logsdon (1991) discussed the formation of two coalitions. The first was a successful effort at cross-sectoral collaboration designed to improve a regional transportation system, and the second was an alliance formed to create comprehensive regulations for underground chemical storage tanks.

Logsdon (1991) hypothesized that the interaction of perceived interdependence and the stakes for a potential participant in a coalition determine whether or not an organization will participate in a coalition. Specifically he felt that both perceived interdependence and the stakes of a situation have to be high for collaboration to occur. If one or the other are low, an organization will either work on the problem alone or allow others to solve it.

The first case involved the highway system in the Silicon Valley. Initially, both stakes and interdependence were low among stakeholders in the area. As the region grew and traffic became a greater problem, a task force was set up and it concluded that the transportation issue was a regional problem that could not be dealt with by individual companies. Interdependence was acknowledged. However no action was taken for several years. Traffic continued to increase to the point where employees experienced significant commuting problems and the recruitment of new employees

became difficult. Productivity began to decline as absenteeism and morale problems rose.

Finally the stakes had grown to the point where action was necessary. The firms worked together through the transportation task force to raise money and campaign for tax increases to fund new highway projects. A ballot measure was then passed by the voters to provide the funding necessary to begin dealing with the problem. In this case, both interdependence and stakes started out low. Interdependence grew, but it was not until the stakes also rose that the organizations collaborated actively to solve their shared problem.

The second case Logsdon (1991) examined concerned hazardous chemical storage by high-technology firms. Initially the companies took pride in their safety records. Then five companies separately discovered leaks in their tanks. Tests of drinking water in the area showed no problems until a well near one plant was closed due to contamination. The stakes rose dramatically as the public learned of the problem and began to pressure public officials.

As each of the other companies revealed that their tanks were leaking tanks also, officials and the companies realized that regulation by individual cities could not prevent pollution from leaking across municipal boundaries. At this point interdependence had increased as well, and the need for regional regulation of the problem became clear. A task force of public and private participants formed and created region-wide regulations for chemical storage tanks.

These two cases point out the importance of acknowledged interdependence in the formation and operation of coalitions. The author presented evidence that an organization must feel a certain problem is important enough to act on, and that the solution requires cooperation with other organizations, if coalition participation is to occur.

In an analysis of a coalition formed for the purpose of recommending changes to a state school system, Roberts and Bradley (1991) outlined five elements of the collaborative process. First, a transmutational purpose is necessary that involves shared, goal-directed activity among stakeholders in order to shape a set of objects, ideas or relations into a developed product. Second, voluntary, mutually agreed-upon membership is required. Third, organization is essential. The authors state: "Because work is complex and elaborate, involving a creative, transmutational process, planning and coordinating task-specialized activities is required. Mutual interdependence necessitates joint decision-making and an agreed-upon set of norms and rules to determine direction, organization, and action" (p. 212). The fourth element of collaboration is an interactive process. Roberts and Bradley (1991) stressed that due to the nature of collaborative activity - that it typically involves ongoing technical, organizational and process difficulties - sustained, self-critical interaction and communication among participants is essential. Finally, the authors posited that collaboration has a finite life span and ends once the goal has been achieved.

The researchers collected data on the collaborative process within the education-reform coalition through interviews, observation and the analysis of archival records

and responses to a survey of 61 participants. They found that, while there were some disputes regarding the appropriateness of the participation of some stakeholders, all stakeholders did continue to participate. In addition, the coalition established a planning model that included group process procedures and technical guidelines, and agreed upon norms and rules to govern behavior. In terms of interaction, Roberts and Bradley (1991) found that members explored and discussed differences, worked collectively and built relationships. Participants continually evaluated and reexamined their work, and scheduled retreats and special sessions to assess their progress.

The authors concluded that in general the data were consistent with their hypothesized elements of collaboration. The main problem they found was that although specific roles and rules were established, adherence to them was sometimes inconsistent and this occasionally caused friction and problems with decision-making. In summary, common goals, broad stakeholder membership, planning and coordination, and extensive communication appeared to facilitate the collaborative process.

The above case studies provide further substantiation of the findings of the theoretical and review articles presented earlier. Components such as the presence of a convener, formalization of rules, the importance of resources, and the role of communication were highlighted in Selsky's (1991) study of a social service coalition. Roberts and Bradley (1991), in their examination of an education reform coalition, stressed the importance of planning, coordination, and the inclusion of a broad base of stakeholders. Finally, the significance of acknowledged interdependence among stakeholders was emphasized in all three case studies. The next section presents an

analysis of several quantitative studies that provide further evidence of the significance of the variables described so far. The first is a study of a single organization, but is included because it provides important data on the relevance of several of the factors discussed above.

A study by Campion, Medsker and Higgs (1993) examined the relationship between work group characteristics and effectiveness. Group characteristics included job design, interdependence, group composition, context and process. Effectiveness criteria included productivity, satisfaction and manager judgements. The researchers collected data from 391 employees, 70 managers and archival records from 80 work groups in a large organization.

The authors found a correlation of .22 ($p < .05$) between task interdependence and potency (belief by a group that it can be effective). Task interdependence refers to the interaction and dependence that employees experienced in accomplishing their work. Task interdependence was also significantly correlated (.28) with communication/cooperation within group. In addition the researchers found a significant relationship (.18) between potency and communication/cooperation between groups.

This study also found significant correlations between a composite measure of interdependence and variables such as productivity (.20), employee satisfaction (.20) and manager ratings of effectiveness (.18). A composite measure of group composition that included heterogeneity and relative size of the group also correlated significantly with productivity (.21), employee satisfaction (.19) and manager rating of effectiveness

(.36). Finally, communication/cooperation within group was significantly related to productivity (.18) and effectiveness (.18).

Campion, et al. (1993) acknowledged several limitations of their study. They stated that statistical power was only moderate for small effect sizes and the reliability of some scales was low. Also, they noted that since they used aggregated data, passive observation and a static research approach, they could not make causal inferences or examine change over time. Therefore they concluded that the findings of their study should be seen as propositions for future research.

The findings of this research provide some empirical evidence for several of the relationships described in the theoretical and case study literature. Further evidence is found in the following study that examines the relationships among independent organizations within the same field. While these organizations do not form a coalition, this study moves a step closer to providing quantitative data relevant to collaboration.

Research exploring patterns of interorganizational relationships and the role of coordination (Hall, Clark, Giordano, Johnson & Van Roekel, 1977) examined dyadic relationships among organizations that served troubled youth. The investigators examined relationships among a total of 76 organizations in 12 cities. They distributed 3,853 questionnaires to the staff of these organizations, of which 2,311 (60%) were returned.

Initial examination of correlations among the variables found that frequency of interaction between organizations was strongly related to coordination ($r=.60$), and person-to-person interaction was also significantly related to coordination ($r=.51$). A

series of step-wise multiple regressions was performed with coordination as the dependent variable. Positive assessment of the other organization had a significant regression coefficient (.41), as did frequency of contact (.19). Conflict had a significant negative coefficient (-.29). In situations where formal agreements were in place, regression analysis with coordination as the dependent variable found the coefficient for frequency of contact rise to .23, and the negative coefficient for conflict grow to -.83. It may be that formal agreements improve communication and its impact on coordination, and limit the extent of conflict.

In contrast with the relationship between frequency of contact and coordination was the positive relationship between frequency of contact and conflict ($r = .30$). The authors hypothesized that coordination and conflict could simultaneously be results of frequent contact. Another inconsistent finding was that while a formal agreement led to a stronger relationship between coordination and frequency of contact, as well as a strong negative relationship between coordination and conflict, positive assessment of other organizations dropped out of the regression equation. Hall, et al. (1977) suggested that this could be due to the fact that the issues related to positive assessment had been resolved before the agreement was reached and were no longer important issues.

Other issues with this study included the fact that organizational dyads were studied, and not the relationships among members of a coalition designed for collaboration. In addition, the researchers explained that since they were asking each organization about its dyadic relationship with several other organizations, their

instrument used only one item for each of the 14 variables of interest. While reliability was impossible to assess objectively, the authors stated that the observational and archival data that they gathered suggested that they had obtained valid information.

This study provides evidence of the importance of coordination in interorganizational relationships. It also lends support to the theory that coordination is related to communication and positive interorganizational relations, and can moderate conflict. Finally, the study by Hall, et al. (1977) strengthens the claim that formal agreements can have a positive impact on interorganizational relationships.

Another early quantitative study of interorganizational relationships (Schmidt & Kochan, 1977) examined the connections between U.S. Training and Employment Service offices and community organizations with which they interacted. The researchers hypothesized that both exchange and power-dependency theories could be used to conceptualize interorganizational relationships. Specifically, they proposed that the greatest frequency of interaction would occur when both organizations perceived benefits from interacting.

The investigators obtained questionnaire data from the directors of 157 community organizations and 23 employment service district offices on ten dimensions of organizational relationship. After constructing a correlation matrix of all dyadic interactions, factor analysis of the correlations provided evidence to support the hypotheses. Three factors emerged, two of which accounted for 56% of the total variance. The first factor described cooperative relationships in which members interacted because of the perceived benefits from collaboration. This factor included

frequency of interaction, benefits from interaction, formalization of agreements, influence of the other organization, importance of the other organization and compatibility of goals. The other main factor characterized conflictual relationships and included variables such as extent of tension and conflict, and bargaining. The authors also found that the highest frequency of interaction occurred among organizations that mutually perceived high benefits to interactions.

While this study only examined interorganizational dyads and not a true coalition, Schmidt and Kochan (1977) provided further empirical evidence for the importance of acknowledged interdependence in interorganizational relationships. They demonstrated that variables such as perceived benefits of interaction, shared goals and formalization of agreements are related to frequency of interaction.

A longitudinal study by Van de Ven and Walker (1984) described dyadic relationships among child care and health organizations. It examined the mobilization coordination efforts of 14 early childhood development (ECD) organizations, and the dyadic relationships among those organizations and 110 other agencies. The investigators hypothesized several relationships, among them: 1. that resource dependence and domain similarity (the degree to which organizations have the same services, clients and personnel skills) at time 1 would determine communication at time 1; 2. that communication at time 1 would affect formalization of the relationship at time 1; 3. resource dependence, formalization and domain similarity at time 1 would predict monetary transactions at time 2; 4. communication and domain similarity at time 1 would affect consensus at time 2.

Three waves of questionnaires were administered to the directors of the 14 ECD organizations and the directors of the other organizations over three years. Analysis of the data using LISREL confirmed many of the hypothesized relationships, but the overall fit of the model was not strong. After dropping insignificant paths and variables with poor measurement properties, and adding modification indices, the model was retested.

The final model revealed that resource dependence at time one was a significant predictor of communication at time one, and consensus and monetary transactions at time two. Communication at time one influenced formalization at time one and consensus at time three. Finally, domain similarity at time one determined consensus at time three, and formalization at time one affected monetary transactions at time two.

The primary finding of this study was that resource dependence was a central issue in interorganizational collaboration. The authors stated: "First, the perceived need for resources to achieve organizational goals is clearly the most important factor that stimulates interorganizational coordination" (Van de Ven & Walker, 1984, p. 617). Also, the study documented the importance of communication, formalization of agreements and domain similarity. The investigators conclude by noting that while the longitudinal nature of the study strengthened their ability to make causal inferences, the fact that they revised their model in an exploratory manner suggests that caution be used in any attempts to generalize their findings. None the less, they suggest that parts of the model may be considered valid topics for further research.

These quantitative studies provide more substantial evidence of the importance of several key components of coalitions. Several studies found that acknowledged interdependence was a significant factor (Campion, et al., 1993; Schmidt & Kochan, 1977), as was the role of formalized rules and procedures (Hall, et al., 1977; Schmidt & Kochan, 1977; Van de Ven & Walker, 1984) and the sharing of resources (Van de Ven & Walker, 1984). In addition, communication appeared to be a fundamental component (Campion, et al., 1993; Hall, et al., 1977; Schmidt & Kochan, 1977; Van de Ven & Walker, 1984), and Hall, et al. supported the idea that coordination was related to positive coalition outcomes. Finally, Campion, et al., suggested that diversity among group participants was related to productivity, satisfaction, and effectiveness.

An analysis of school-to-work literature that examined the extent to which STW coalitions include these essential elements for collaboration (Legler, 1997) found several important components missing. This study began with an extensive search of the PsychINFO and ERIC data bases, and examined 524 abstracts that contained key words such as 'school to work', 'collaboration,' 'coalition' and 'evaluation.' A review of 524 abstracts revealed 24 case studies that contained information about the collaborative process.

The researcher then used a qualitative approach (content analysis) to code the articles on critical dimensions of collaboration such as stakeholders, conveners, acknowledged interdependence, written agreements, communication and coordination. Results indicated that while many coalitions included several primary components for

successful collaboration, many were missing key stakeholders such as faculty, parents and students. In addition, only 25% of the cases reported the involvement of a convener, and only 33% discussed the use of written agreements. Less than half of the cases attended to the issues of communication (42%) or planning (37%).

Legler (1997) performed a cluster analysis of the cases to determine patterns among the coalitions. The analysis revealed three clusters. The first consisted of cases that included many of the key components of collaboration, and these cases also had high levels of coalition activities - the outcome variable for the study. The second cluster appeared to be a group of cases in a pre-collaborative stage. This group reported a large amount of planning, communication and written agreements, but were low on all other variables. The third cluster included cases that were low on variables such as agreements, a convener, communication and planning, but reported large amounts of coalition activities. The author hypothesized that this group included communities involved in extensive vocational education efforts for several years, but had not yet built a collaborative infrastructure.

The author acknowledged several weaknesses of the study. First, it was likely that many of the items that were coded less often may have been present in the coalitions but were simply not mentioned in the articles. This possibility was particularly likely for items such as communication, a process that often takes place informally and may not have been seen by the authors of the articles as important to discuss. Regardless, the fact that certain items were not mentioned may have indicated that they were not receiving the attention they deserved.

Another issue was that frequently research that does not demonstrate effectiveness does not get submitted for publication. In addition, there may have been a number of studies that did demonstrate extensive efforts at collaboration, but were reported to school districts or states and were never published.

The researcher suggested that an ideal STW coalition would include not only schools and businesses, but teachers, parents, students and community groups as well. Also, acknowledged interdependence, a convener and written agreements would facilitate the collaborative process. Finally, Legler (1997) suggested that coalitions should pay greater attention to processes such as communication and planning in order to strengthen collaboration.

The literature reviewed above revealed a general pattern of essential elements related to successful interorganizational collaboration. First, a broad base of stakeholders brings together parties with the ability to influence the success of the coalition. This allows for the largest possible pool of ideas and resources, broadens support for the coalitions efforts and reduces the need for a few organizations to bear the burden of problem-solving on their own.

Second, several factors appear to influence the creation and development of coalitions. They include the presence of a leader or convener, an individual or organization which can convince stakeholders of the need to collaborate and provide direction for the coalition. Equally important is the belief by stakeholders that their participation in the coalition will result in positive outcomes, and that their interests are interdependent with the other stakeholders - that is, they can not solve the problem on

their own. This interdependence is typically related to the need to share resources, including financial, human and natural resources. The extent to which collaborative relationships are formalized, typically in the form of clearly outlined rules, policies and goals, also appears to be critical for coalition development.

Third, the collaborative process itself seems to be facilitated by frequent and effective communication, and by coordination and planning of interorganizational objectives and activities. All of these variables can affect coalition functioning and outcomes such as participant satisfaction and consensus, and the effectiveness with which coalition goals are addressed and achieved.

In considering the extent to which the goals of STW coalitions are met, the Federal legislation that currently funds coalitions throughout the country identifies school-based, work-based, and connecting activities as essential outcomes. Evaluating the implementation of school-based and work-based activities could be accomplished through the use of objective measures of student activities outside the classroom and curriculum changes in the classroom. Assessing connecting activities (including collaboration) could be more difficult. One construct that has been used to evaluate organizational process in business and education is organizational climate.

Organizational Climate

Definition. One of the earliest definitions of organizational climate characterized it as a set of characteristics that describe an organization, that distinguish it from other organizations, that are relatively stable over time, and that influence the behavior of members (Forehand & Von Gilmer, 1964). Other definitions emphasize

the fact that climate is a perceptual variable, one that reflects organizational members' subjective impressions of their environment (Dastmalchian, Blyton, & Adamson, 1989; Glick, 1985; Lawler, Hall, & Oldham, 1974; Schneider & Snyder, 1975). One assumption about climate is that individuals in a particular work group, level, or organization will have fairly similar perceptions of their shared climate (Hellriegel & Slocum, 1974).

The concept of organizational climate is rooted in basic ecological theory, and has been fundamentally influenced by Lewin and Murray (Joyce & Slocum, 1979). Phenomenological psychology and field theory address the relationship between an individual and his or her environment. Organizational climate is a particularly useful construct when attempting to understand the relationships between environmental factors in a particular organization and the behaviors and attitudes of the members therein. Schneider and Reichers (1983) note that climate provides an alternative to motivation theories by adding the role of perception.

There are several aspects of organizational climate that have been somewhat controversial. This includes debate about the dimensionality of the construct, whether it is an independent, dependent, or mediator variable, and the appropriate level of analysis. These topics are addressed in the next sections.

Dimensionality. Several authors have discussed the extent to which climate is multi-dimensional, and the literature is inconsistent on whether it duplicates factors such as satisfaction. In a study of 522 insurance company members, Schneider & Snyder (1975) found correlations between climate and satisfaction for some groups, but

not others. They argued that a logical distinction between climate and satisfaction is possible if the variables are properly conceptualized and assessed at the appropriate level. A later review of theory and research found support for the idea that climate and satisfaction can be separated (Schneider & Reichers, 1983). The authors went on to suggest that climate is multi-dimensional, and that climate perceptions should be descriptive and not evaluative. In contrast to the idea that climate and satisfaction are separate constructs, a study of 8938 non-supervisory employees of a large utility (Schnake, 1983) found that partialing job satisfaction out of responses to organizational climate questionnaires improved the dimensionality of the climate instrument.

Much of the literature does agree that climate is multi-dimensional. A review of the literature by Joyce and Slocum (1979) supported the idea of a 'core set' of climate dimensions, not all of which are relevant in all settings. These authors suggested that organizations contain multiple aggregate climates due to the nature of perception and because of real differences in what individuals perceive. Other reviews of the literature also support the proposition that climate is multi-dimensional and that organizations may have climates <u>for</u> something like service, achievement, or safety (Schneider & Reichers, 1983) or may include dimensions such as communication, conflict, warmth, and leadership (Glick, 1985).

<u>Climate as independent vs. dependent variable.</u> In addition to a lack of consensus on the dimensions of climate, research and theory are not clear on whether climate is fundamentally an independent variable capable of affecting individual and organizational performance, a dependent variable that is caused by organizational

characteristics, or an intervening variable that mediates the relationship between organizational traits and outcomes. Literature reviews that have examined the usefulness of climate as an independent variable have found substantial evidence to indicate its affect on other variables. Hellriegel & Slocum (1974) found research evidence indicating that organizational climate was related to job satisfaction in terms of interpersonal relationships, group cohesiveness, task involvement, and other variables. They stated that a relationship between climate and job performance was found in numerous studies. Similarly, Schnake (1983) reviewed the literature and also concluded that the research supported links between climate and satisfaction, performance, and quality of work group interaction.

More recent empirical studies have further substantiated the relationship between climate and important organizational outcomes. A longitudinal study of 63 employees of a new hotel franchise (Jackofsky and Slocum, 1988) indicated that climate affects job satisfaction, perceptions of leader behavior, and intention to leave the organization. Further, these authors found no relationship between demographic variables and the formation of climate. Ostroff (1993), in her study of 533 teachers in 29 secondary schools, found that while both organizational climate and personal orientation (individuals' preferences and beliefs about their work environment) were significantly related to work attitudes and behaviors, there was no interaction between these variables. Finally, a study of biographical and climate factors in 4 public sector organizations (Gunter & Furnham, 1996) found climate factors were better predictors of satisfaction and pride than were demographic factors. While these studies have

examined the impact of climate on individual and organizational variables, other research has focused on climate as a dependent variable.

The review by Hellreigel and Slocum (1974) mentioned above also analyzed literature on climate as an outcome of other factors. They found that evidence that level of organizational hierarchy, perceived degree of bureaucratization, decision-making, and other variables can affect climate. Other authors have similarly argued that climate could be the result of organizational size, centrality of decision making, and technology (Payne & Pugh, 1976), and physical location within the organization (Joyce & Slocum, 1979).

Schneider and Reichers' (1983) classic review of theory and research on climate etiology concluded that symbolic interactionism, selection/attraction/attrition, and structural views are all useful in attempting to explain the causes of climate. Other authors have also found support in the literature for the importance of symbolic interactionism, physical setting, and culture (Ashforth, 1985), as well as organizational structure and departmental affiliation (Jackofsky and Slocum, 1988).

Since there is considerable research that demonstrates climate as both an independent and dependent variable, several authors have argued that it is in fact an intervening or mediating variable - one that both influences and is influenced by several organizational factors (Dastmalchian, et al., 1989; Gunter & Furnham, 1996; Helriegel & Slocum, 1974; Schneider & Hall, 1972). Climate can affect leadership style and group process, and can in turn be affected by technology, organizational, and individual variables - making it useful in understanding the relationship between organizational

structure and job attitudes (Joyce & Slocum, 1979). Conceptualizing climate as an intervening variable reconciles much of the debate regarding the use of climate in the understanding of organizational processes. While researchers have debated the dimensionality and operationalization of climate, perhaps the most contentious aspect of this construct is the appropriate level of analysis.

Levels of analysis and methodology. Shortly after climate started gaining attention in the literature as a useful tool in organizational theory, discussion began on whether climate is an organizational or individual-level variable (Guion, 1973). This topic has received much attention in the literature, with several authors emphasizing the psychological aspect of climate (Glick, 1985; James & Sells, 1982; Joyce & Slocum, 1979; Schneider & Reichers, 1983). Possibly the most often-cited review of literature on climate focused specifically on this issue (James & Jones, 1974). In this article the authors grouped studies into three categories: (a) multiple-measurement/ organizational attribute, (b) perceptual measurement/ organizational attribute, and (c) perceptual-measurement/ individual attribute. Most of the discussion centered on the wisdom of using perceptual/individual-level measures to assess organizational-level variables. The authors submitted that this approach might have been logically inconsistent and used simply as a matter of convenience.

James and Jones (1974) suggested the term psychological climate when taking an individual attribute approach, and organizational climate when climate is regarded as an organizational attribute. They also proposed that, for organizational variables that can be measured objectively as well as perceptually, measures of individual perception

may be validated by demonstrating a substantial relationship between objective and perceptual measures. Finally, the authors argued that, from a methodological standpoint, variables more amenable to subjective measurement be validated by exhibiting small within-group variance, and that variance should be related more to differences in situations than individuals. Other authors have also addressed these methodological issues.

As discussed above, the level-of-analysis issue can lead to difficult methodological decisions. Attempting to study system/organizational-level variables through the use of individual-level data may be a logical inconsistency. Research on the aggregation of climate scores has been mixed (Joyce & Slocum, 1979), but some have concluded that research supports the aggregation of climate scores and that aggregation allows for description of organizational settings in psychological terms that have meaning for individuals (Jackofsky & Slocum, 1988).

A review of this issue by Glick (1985) emphasized that choice of level of analysis should be determined by the researchers' question(s) of interest. The individual level of analysis is appropriate for studying psychological climate, but does not provide accurate estimates of organizational-level processes. The author suggested that aggregation of psychological climate should only occur if the aggregate level of analysis - the organization - is the level of interest. "Over-reliance on composition rules to define organizational climate as a simple aggregation of psychological climate negates the traditional criteria of construct validity and measurement reliability for organizational climate at the organizational level of analysis" (p. 605).

Glick (1985) goes on to propose that individual perceptions about organizations can be used to assess organizational climate, and that accurate informants should report on the organization's climate and not their psychological or work-group climate. The reviewer concludes by stating that, unless individual-level perceptual agreement is very low, the aggregate perceptual measure of organizational climate may be reliable and valid.

To review, research on climate has included analysis of a variety of related issues - several of which have yet to be clearly resolved. The literature contains discussion of climate's multi-dimensionality, and debate on its distinctiveness from other constructs such as satisfaction. Organizational climate has been studied as an independent, dependent, and intervening variable, and has been employed in multiple levels of research. Methodological concerns regarding level of analysis and aggregation have also gained attention. It appears that climate can be useful in examining the relationships between structure, culture, and other organizational factors, and both individual and organizational-level outcomes, if care is taken to conceptualize and measure at the appropriate level.

Summary

The above literature review revealed several factors that appear to be related to the effectiveness of coalitions. Several of these factors, such as acknowledged interdependence, the presence of a convener, written agreements, and resource sharing have been described in the literature as conditions which can initiate and facilitate collaboration. Equally important is a broad base of stakeholders that have a vested

interest in the problem domain. Other components, such as communication, coordination, and planning, are interactional variables that can occur continually and appear to be fundamental collaborative processes. While the literature is useful in supplying theory and documenting case studies that highlight the importance of these key factors, there is a substantial lack of quantitative studies that explore the relationships among and impact of these important variables on coalition effectiveness.

In terms of school-to-work, coalition effectiveness might be measured in a variety of ways. Federal legislation funding these partnerships outlines school-based, work-based, and connecting activities as the essential components of the STW process. School-based activities include practices (e.g. curriculum changes) and exercises designed to link academics to vocational skills. Work-based activities consist of internships, job shadowing, and other experiences designed to expose young people to employment situations and relate their academic skills to applied examples. Connecting activities focus on the links between school and the outside world, and include collaborative efforts to foster these links.

The literature reviewed to this point suggests several variables that could be important to STW coalitions, and the research by Legler (1997) implied that these coalitions may be missing several components essential to effective collaboration. What is needed is field research that investigates the extent to which these factors influence the collaboration and effectiveness of STW coalitions. This is the subject of the present study.

The present study

This investigation builds on existing theory and research by collecting and examining data from currently-operating STW coalitions. Information is compiled on the key variables described above, as well as on several measures of coalition effectiveness such as school and work-based activities. In addition, organizational climate is examined in an attempt to measure the collaborative process. This allows an analysis of the extent to which key variables identified in the literature affect STW coalition functioning.

The predictor variable domains in this study are stakeholders, facilitating conditions and processes. Stakeholder variables include Number of Stakeholders (item 1), Stakeholder Involvement (item 1c), School Inclusion (item 1d), and Stakeholder Diversity (total organizations from item 1a and 1b). Number of Stakeholders is the total number of participants in the coalition. Extent of Stakeholder Involvement is the average rate of participation of the top ten most active stakeholders, as measured on a 1-5 scale. School Inclusion is measured as the percentage of high schools in the community that are actively involved in the coalition. Diversity is a measure of the breadth of representation in the partnership, and reflects the number of different types of stakeholders (e.g., businesses, parents, community organizations) involved in the partnership out of a total of 13 possible types.

Facilitating condition variables include Written Agreements (sum of items 2a-2d), Acknowledged Interdependence (sum of items 4-6), and Resource Sharing (sum of items 7a-7f). Written agreements reflect the extent to which partnerships have

produced written documents that outline such things as the mission of the partnership and rules of operation. Acknowledged interdependence is a measure of the extent to which members felt that they shared similar goals and that their involvement in the partnership would serve their interests. Resource sharing is a measure of the number of different types of resources shared among members.

Process variables include Communication (items 8-11b), Planning (items 12-14) and Coordination (items 15-17). Communication is measured by the sum of a 5-item scale designed to assess the extent of information sharing and openness to opinions. Planning is a 4-item scale that measures the extent to which planning has been used in the implementation of partnership activities. Coordination is a 3-item scale that measures the extent to which the partnership was able to organize its activities.

The outcome variable domains for this study are Partnership Activities (items 18a-19h) and Organizational Climate (items 20-30). Partnership Activities measures the number of different types of activities in which students participate outside the classroom, as well as the number of different types of curriculum changes that the partnership has instituted. Organizational Climate attempts to measure the quality of interpersonal interactions and internal functioning in the partnership. While climate is conceptualized here as a dependent variable, it is also a measure of the collaborative process and as such is also seen as an intervening variable that can affect the activities of the partnership. The hypotheses, variables, and items are shown in Table 2.

Hypothesis 1: Among stakeholder variables, the Number of Stakeholders will predict Partnership Activities. The literature reviewed in the previous section supports

the argument that more student activities and curriculum changes will take place if there is a greater number of stakeholders. The more stake holders involved, the greater the amount of resources, ideas, and opportunities should be available to carry out activities. This should allow more students to participate in work-based activities, and for more resources for curriculum development and teacher training.

Hypothesis 2: Stakeholder Diversity will be positively correlated with partnership Climate. Theory discussed in the above review suggests that if a broad range of stakeholders is represented, members will feel they have more support, there will be more ideas generated in solving problems, and stakeholders will be able to share costs. In addition, inclusion of a broad range of stakeholders reduces the possibility that important issues will be overlooked, and that important stakeholders not included in the coalition might create barriers to the progress of the coalition. Broad representation of interests should facilitate a climate more conducive to collaboration.

Hypothesis 3: Among facilitator variables, Written Agreements and Acknowledged Interdependence will predict partnership climate. A clear understanding of mutual problems and goals, which are explicitly delineated in writing, will lead to more positive interpersonal interactions and sense of togetherness. This should be reflected in a more positive partnership climate.

Table 2- Summary of Hypotheses, Variables, and Items

Hypothesis	Variables	Items
1. Partnership size will predict level of activities	Number of stakeholders	Total item 1
	Partnership activities	Sum 18a-19h
2. Stakeholder diversity will be positively related to climate	Diversity of stakeholders (types of orgs represented)	Total orgs. from 1a & 1b
	Climate	Sum of 20-29
3. Facilitating conditions will predict climate	Written agreements	Sum of 2a-2d
	Acknowledged interdependence	Sum of 4, 5,6
	Climate	Sum of 20-29
4. Resource sharing will be positively related to activities	Resource sharing	Sum of 7a-7f
	Partnership activities	Sum 18a-19h
5. Processes will predict activities	Planning	Sum of 12-14
	Coordination	Sum of 15-17
	Partnership activities	Sum 18a-19h
6. Communication will be positively related to climate	Communication	Sum of 8-11b
	Climate	Sum of 20-29

Hypothesis 4: Resource Sharing will be positively correlated with Partnership Activities. Sharing resources should allow partners to combine their funds, supplies, and equipment - creating a larger pool of resources than any one partner could marshal alone. A greater amount of resources will aid partnerships in enacting more curriculum changes and creating more opportunities for student activities.

Hypothesis 5: Planning and Coordination will predict Partnership Activities. Partnerships that engage in greater a quantity and quality of planning and coordination will have better success at implementation. This should increase partnerships' abilities to engage in activities such as curriculum changes and sustain work-based activities for students.

Hypothesis 6: Communication will be positively correlated with Partnership Climate. A greater quantity and quality of communication will allow members to understand each other's problems, needs, and goals, and this will facilitate collaboration. This high-quality collaboration should be evidenced in a more positive climate.

The next section of this study outlines a plan to evaluate the relationships among the variables described above. The methods section includes a description of the sampling procedure, research design, an explanation of the instrument and the data collection procedure.

Chapter 2

METHOD

Design

The study employed a cross-sectional design, collecting information from a representative sample of partnerships over a six-week period.

Sample size and power

According to Cohen's (1988) procedures for determining power and sample size for correlations, expected effect size and level of significance are critical. Empirical evidence from the literature reviewed above provided support for hypothesizing conservative correlation sizes of approximately .20 for this study. In order to achieve power of approximately .80 ($p < .05$), a sample size of 150 is needed. For the hypotheses with multiple predictors, regression with expected R^2 of approximately .20 and 3 predictor variables requires a sample size of at least 54. The sample size for this study is 150.

Sampling Procedure

Under the Federal School-to-Work Opportunities Act of 1994, eight states were initially funded with awards totaling $43 million. These states - Kentucky, Maine,

Massachusetts, Michigan, New Jersey, New York, Oregon, and Wisconsin - have been operating the longest under the legislation and have had the most time to implement their partnerships. In addition, eight other states have been identified by the national STW evaluator (Mathematica Policy Research) as also having made significant progress in implementing their programs. These states are Arizona, Florida, Maryland, North Carolina, Ohio, Pennsylvania, Utah, and Vermont.

Partnerships were selected from each of the 16 states listed above. In order to ensure a representative sample from within each state, a combination of purposive and random sampling was used. The goal was to include partnerships of varying sizes and complexities, therefore the 3 largest partnerships (by population) in each state were selected, and then a random selection of other partnerships was made. In order to ensure a sample size of 150, 12 partnerships were selected from each of the 16 states for a total of 192.

Respondents

The respondents consisted of the individual in each coalition that was the most knowledgeable about the collaborative processes and activities in their partnership. In the majority of cases this person was the primary administrator of the partnership. The primary administrator was asked if he or she was the person in their coalition most knowledgeable about collaboration and STW activities in that partnership. If the administrator acknowledged that they were the most knowledgeable person in their partnership regarding these issues, then he or she was interviewed. If the administrator felt that there was another partnership member who was more knowledgeable, then that

person was contacted and interviewed. This situation occurred 7 times. The vast majority of interviews were completed by the primary administrator of the partnership.

Characteristics of the sample of partnerships are presented in Table 3. Age is the number of years each partnership was in existence at the time of the interview. Size is the number of people involved in the partnership. Number of Businesses is the number of businesses reported as participating in the partnership. Diversity, as described previously, is a measure of the breadth of representation in the partnership of different types of stakeholders (types of schools, agencies, and organizations). The maximum possible for this variable is 13. Finally, Percent of high schools involved is the percent of the total number of public high schools in the community that participated in the partnership.

Of the 150 interviews that were administered, 137 contained complete data on all the variables involved in 5 of the 6 hypotheses. One of the variables, partnership size, was problematic. Respondents were asked how many people were involved in their partnership. Only 100 respondents were able to provide data on this variable. Many respondents could not answer because they did not posses the information or were unable to estimate the number of members. The average size of the partnerships for which data was available (N=100) was 29.69, and ranged from 5 to 90 participants. The average age of the partnerships was 2.37 years, and ranged from a minimum of 1 year to a maximum of 8 years. Respondents were also asked how many businesses were involved in the partnership. The mean number of businesses involved in each partnership was 180, and ranged from 3 to 3000.

Table 3- Demographics of the Partnerships

Variable	Mean	SD	Minimum	Maximum
Age	2.37	1.27	1	8
Size*	29.69	17.09	5	90
Number of businesses	180	400.88	3	3000
Diversity	10.77	1.73	5	13
Percent of high schools involved	89%	22.63	10%	100%

N=137
*N=100

Breadth of representation in the partnership is measured by the variable Diversity, and as described previously consists of the number of different types of stakeholders (e.g. schools, business organizations, community agencies) represented in the partnership with a maximum possible of 13. In the current sample, the average diversity was 10.77, and ranged from 5 to 13. Respondents reported that the percentage of high schools in the community that were involved in the partnership averaged 89%, with a low of 10% and a high of 100%.

Respondents were also asked if school-to-work activities were taking place in their community before the 1994 legislation that provided Federal support for STW partnerships. Slightly more than half of the respondents indicated that STW activities were taking place in their communities prior to the 1994 legislation. For these partnerships, the average number of years that STW activities were taking place was 8.25, and ranged from 1 to 30 years.

Finally, respondents were asked about their background and about the perspective with which they more closely identified - that of business, education, or both equally. The majority of respondents (48.3%) felt they understood both the education and business sides of the issue. Of the rest, 41.5% felt they understood better the education side of STW, while only 10.2% identified with the business community.

Measures

Data was collected through the use of structured, closed-ended survey questions (see Appendix A). The instrument was designed specifically for this study, and

included new items generated from the literature as well as items used in previous research (Dastmalchian, Blyton, & Adamson, 1989; Schnake, 1983). Table 4 shows statistics for each of the scales included in the measure. All of the scales had acceptable levels of internal consistency, ranging from .67 for the planning scale to .84 for the climate scale.

Confirmatory factor analysis was used to check colinearity. Analysis of the scales using LISREL revealed a substantial problem with colinearity, so the scales were refined by deleting items from each scale that were highly correlated with items from other scales, or revealed extreme skewness or curtosis. For reasons described in the Results section, the Planning and Coordination scales were combined into Planning/Coordination. Even after the scales were refined the chi-square of the CFA was still 145.96, indicating a continued coliniarity problem. Given the exploratory nature of this study and the creation of these measures for it, the following results should be viewed with caution pending further research and refinement of these scales. The final scales used in the analyses are shown in Table 5.

Procedure

Telephone interviews were administered to key informants from partnerships in 16 states. Undergraduate research assistants, enrolled as Psychology 490 students, were trained to assist the primary researcher in conducting the interviews. Research assistants received readings and instruction regarding STW concepts and telephone interviewing techniques. They met weekly with the primary investigator to receive

Table 4 - Initial Scale Statistics

Scale	# Items	Mean	Variance	SD	Alpha
Interdependence	3	11.52	3.24	1.80	.76
Communication	5	21.20	6.99	2.64	.73
Coordination	3	11.08	4.65	2.15	.70
Planning	4	14.08	8.52	2.92	.67
Climate	11	45.27	29.59	5.44	.84

Table 5 - Refined Scale Statistics

Scale	Items	Mean	Variance	SD	Alpha
Interdependence	4,5,6	11.54	3.13	1.77	.75
Communication	9,11,11b	12.87	2.88	1.70	.61
Planning/ Coordination	13,14, 15,16	14.13	8.14	2.85	.70
Climate	20,21,24 25,28	20.92	7.93	2.82	.74

training and practice in interviewing skills, and then to review progress and address problems in the interview process. Before students were allowed to begin interviewing they conducted mock interviews until they achieved a 90% accuracy rate. This was determined by having students perform mock interviews, comparing the information they recorded to the predetermined answers of the interviewee, and then calculating the percentage of correct recorded responses. See Appendix B for an outline of the student training and data collection procedure.

After training, the primary researcher and 4 research assistants conducted telephone interviews with coalition members to collect the necessary data. Each partnership was assigned a call sheet that logged the contact attempts and dispositions of each attempt (see Appendix C).

Chapter 3

RESULTS

This study hypothesized relationships between three sets of predictor variables (stakeholder, process, and facilitating) and two outcome variables (Activities and Climate). Correlations between all of the predictor variables and each of the outcome variables were calculated in order to evaluate bivariate relationships. Regression analyses were performed to explore relationships between groups of predictor variables and each of the outcome variables. Finally, path analyses using LISREL were done based on the findings of the regression analyses. These analyses allowed inspection of multiple relationships while simultaneously accounting for measurement error.

Analysis of the data began with an examination of the zero-order correlations among the predictor and outcome variables shown in Table 6. The first hypothesis of this study had to do with stakeholder factors and their relationship to Partnership Activities. A significant correlation was expected between Partnership Size and Activities. As can be seen in Table 6, this relationship was small ($r = .14$) and not statistically significant.

Table 6 - Zero-Order Correlations among Predictor and Outcome Variables

	Size†	Diversity	Inter-Dependence	Resource Sharing	Written Agreements	Communication	Coordination	Planning	Activities	Climate
Size	1.0									
Diversity	.09	1.0								
Inter-dependence	.13	.08	1.0							
Resource Sharing	.22*	.36*	.30*	1.0						
Written Agreements	-.02	.32*	.13	.26*	1.0					
Commun-ication	.03	-.08	.46*	.10	.27*	1.0				
Coordina-tion	.04	.23*	.39*	.33*	.15	.32*	1.0			
Planning	-.06	.22*	.52*	.40*	.27*	.39	.60*	1.0		
Activities	.14	.36*	.26*	.40*	.21*	.10	.33*	.39*	1.0	
Climate	.14	.11	.53*	.22*	.33*	.57*	.38*	.49*	.18*	1.0

* $p < .05$
N=137
†N=100

The next step in the analysis was to regress all of the other predictor variables on each of the outcome variables. This was done in order to examine the relative contribution that each predictor variable made in explaining variance in each of the outcome variables. The results of each of these regressions are shown in Table 7. In regressing the predictors on the outcome variable Partnership Activities, Interdependence, Resource Sharing, and Diversity were significant predictors. Regression of the predictors on Climate revealed that Interdependence, Written Agreements, and Communication significantly predicted this outcome variable.

While bivariate correlations between Planning, Coordination, and each of the outcome variables were substantial, these variables were not strong predictors of either of the outcome variables when entered into the regression equations. Planning and Coordination were also correlated with each of the other predictors, and strongly ($r=.60$) with each other. These results, along with a reexamination of the items in each scale, suggested that the two scales might be measuring the same construct. Based on this information, these two variables were combined into one new variable, Planning/Coordination. The reliability of this new scale ($a=.78$) was higher than the reliabilities of the two individual scales (Planning $a=.67$; Coordination $a=.70$).

Table 7 - Regression of Predictor Variables on Outcome Variables

Predictor Variables	Standardized Beta	t-value
Interdependence	.27	3.19*
Resource sharing	-.02	-.22
Written Agreements	.16	2.13*
Coordination	.08	.89
Planning	.09	1.01
Communication	.35	4.46*
Diversity	.04	.47

Outcome Variable: Climate
* $p < .05$

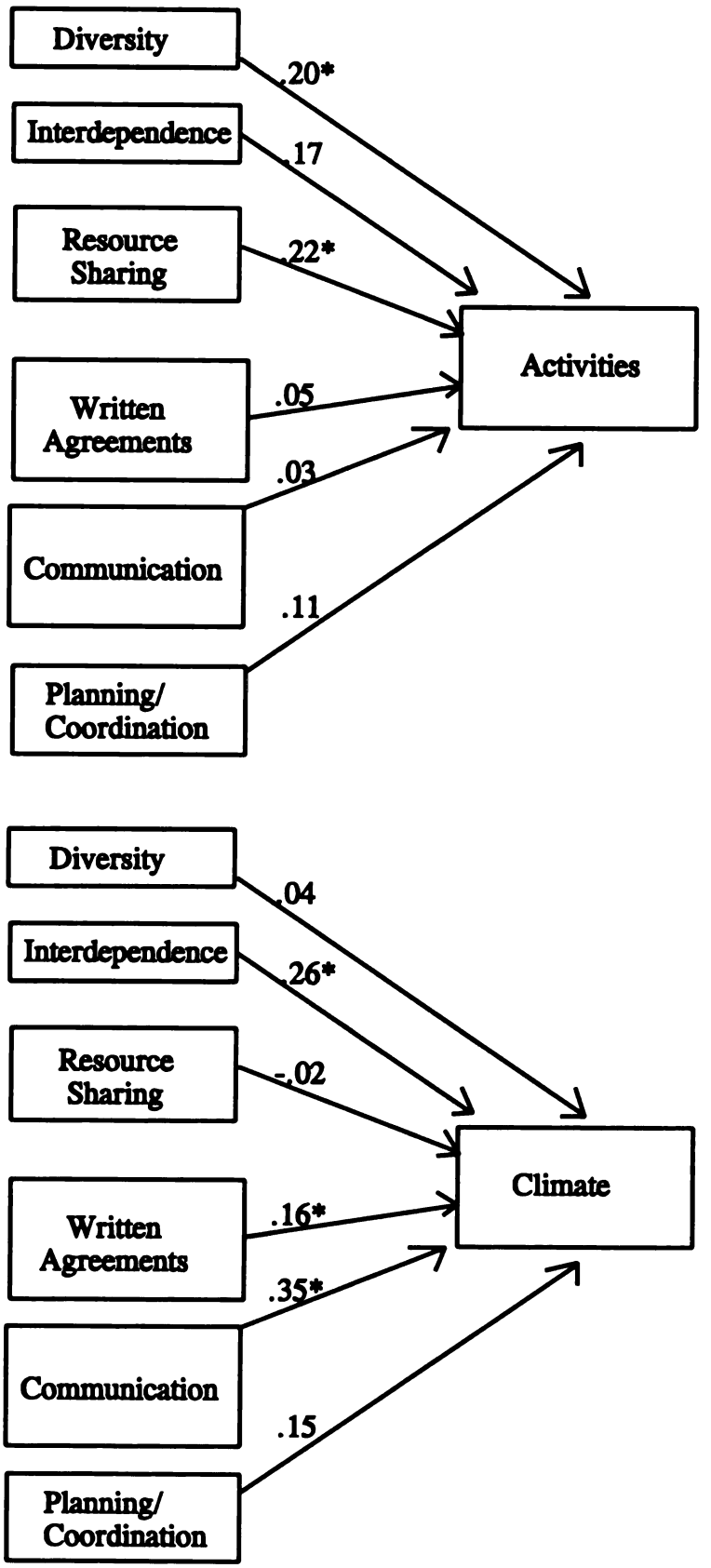
Predictor Variables	Standardized Beta	t-value
Interdependence	.21	2.19*
Resource sharing	.22	2.45*
Written Agreements	.09	1.00
Coordination	.11	1.12
Planning	.03	.28
Communication	-.05	-.56
Diversity	.18	2.10*

Outcome Variable: Activities
* $p < .05$

After the regression analyses, a series of path analyses was conducted using LISREL. In the first analysis all of the main predictor variables, except the stakeholder variables discussed previously, were used to predict each of the two outcome variables (see Figure 1). Fit indices for this model indicated a good fit (chi-square=.89; agfi=.94), but this initial model provided little explanatory power in terms of understanding the relationships among the variables. This analysis confirmed that the Planning/Coordination variable was not a statistically significant predictor of either of the outcome variables. However, given the high correlations between the individual Planning and Coordination variables and the other predictors observed in the initial zero-order matrix (Table 6), a second path analysis was performed with Planning/Coordination predicting each of the other predictor variables and the outcome variables (Figure 2).

This second path analysis revealed statistically significant relationships between Planning/Coordination and the other predictors, but not between Planning/Coordination and either of the outcome variables. The direct path from Planning/Coordination to Activities was .09, and the path from Planning/Coordination to Climate was .06. The small size of these paths provides further evidence that planning and coordination affect activities and climate indirectly through the other predictor variables. This analysis also provided information on which of the other predictors was related to the outcome variables. Figure 2 shows that Diversity, Interdependence, and Resource Sharing were significantly related to Activities. In addition, Interdependence, Written Agreements,

Figure 1 - Full Model



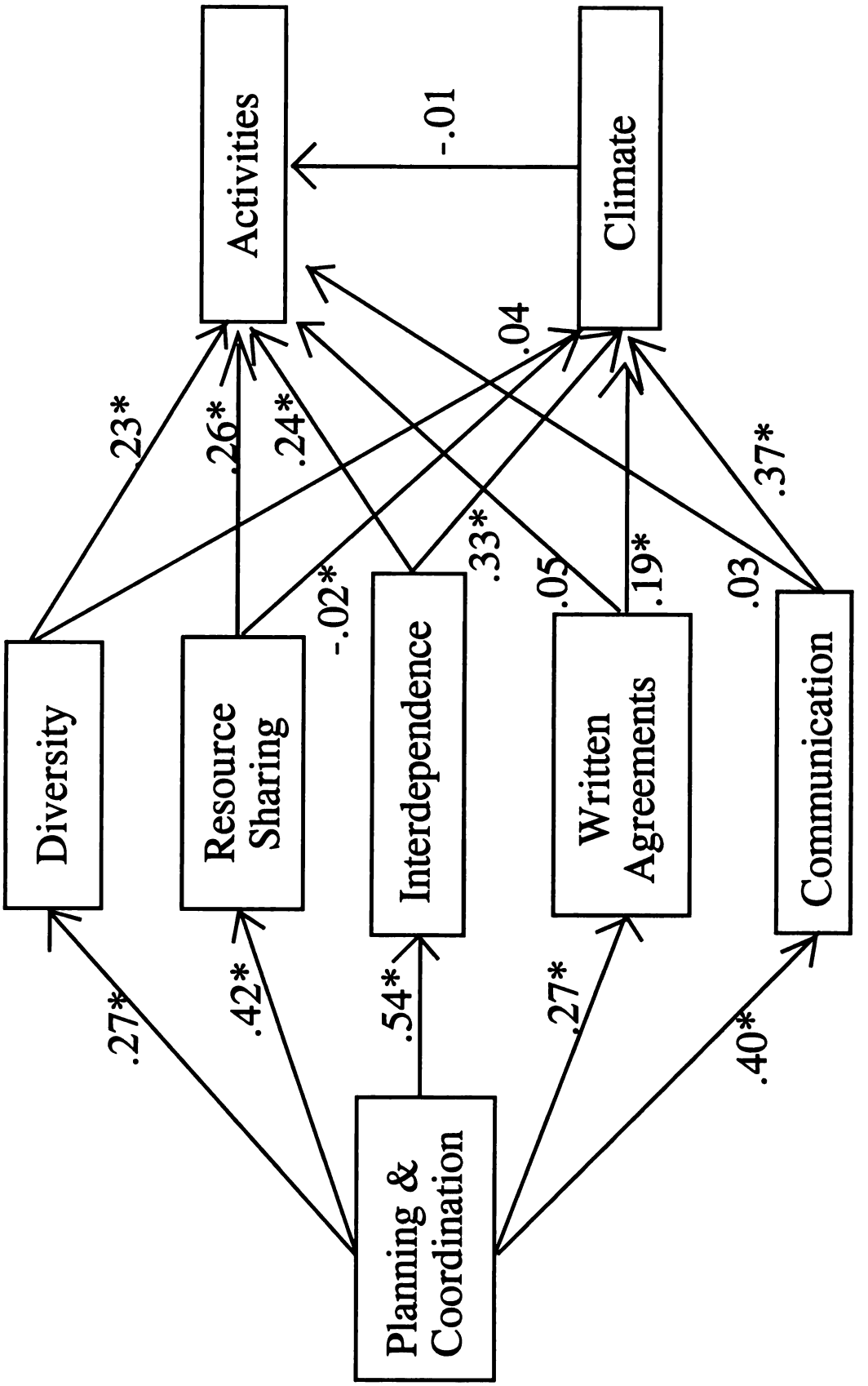


Figure 2 - Second Model

and Communication significantly predicted Climate. Goodness of fit indices (chi-square=65.49; agfi=.68) indicated that this model fit the data less well than the first model. However, the second model was more useful in understanding the relationships between the predictor and outcome variables. The findings of the second LISREL analysis suggested the final model, shown in Figure 3.

The final model revealed that Planning/Coordination predicted Diversity, Resource Sharing, Interdependence, Written Agreements, and Communication. In turn, Diversity, Resource Sharing, and Interdependence predicted Activities. Climate was also predicted by Interdependence as well as by Written Agreements and Communication. In order to examine the possible influence of Climate on Activities, a path between these two outcome variables was also included in this model. The model revealed no relationship between these variables. Diversity, Resource Sharing, and Interdependence accounted for 29% of the variance in Activities, while Interdependence, Written Agreements, and Communication explained 35% of the variance in Climate. Goodness of fit indices for this final model (chi-square=115.0; gfi=.86) indicated a poor fit statistically. This model does, however, does provide a picture of the relationships that makes sense from a theoretical standpoint.

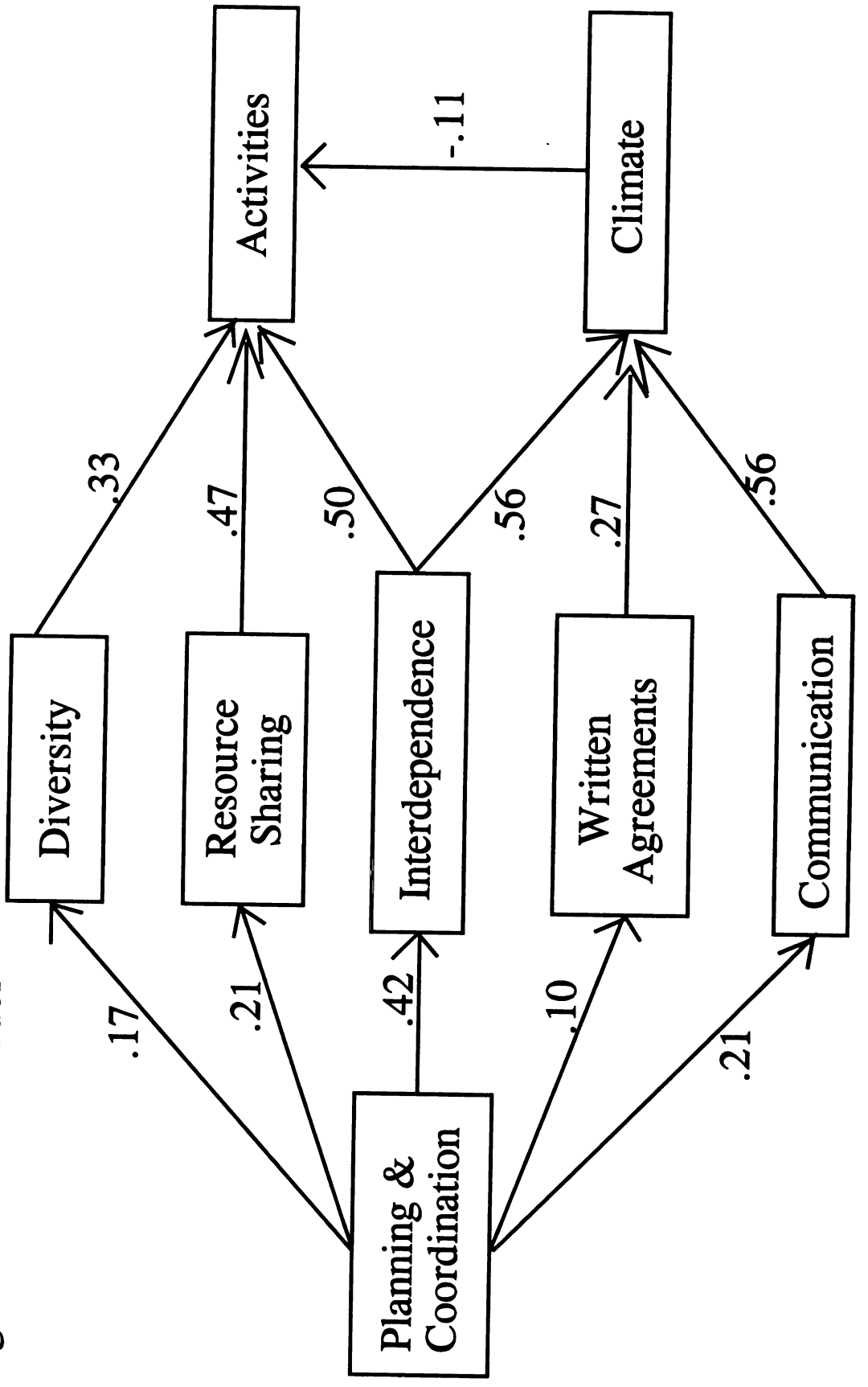


Figure 3 - Third Model

Chapter 4

DISCUSSION

This study was designed to test six hypotheses regarding collaboration in school-to-work coalitions. Data was collected from 136 partnerships on their size, diversity of representation, written agreements, interdependence, resource sharing, planning, coordination, and communication. This data allowed examination of the relationships between the above mentioned factors and the activities and climate of the partnerships. The hypotheses outlined expected relationships between the predictors Size, Resource Sharing, Planning, and Coordination and the outcome variable Activities. The hypotheses also delineated relationships between the predictors Diversity, Written Agreements, and Interdependence and the outcome variable Climate. This chapter begins by discussing the hypothesis regarding Size, and then examines the impact of Planning/Coordination on the other predictors and the outcome variables. Next the role of Interdependence is addressed. The effects of Diversity and Resource Sharing on Activities are considered, followed by an evaluation of the roles that Written Agreements and Communication played in predicting Climate. The chapter concludes with discussions on the implications of these findings for STW and other coalitions, and for future research.

The first hypothesis of this study was that the size of the partnerships (total number of number of stakeholders) would predict partnership activities. The correlation between Size and Activities was small, and failed to support the hypothesis that Size would predict Activities. It is possible that this lack of relationship was due to the problems mentioned earlier in attempting to collect data on Partnership Size and the resulting small sample size for this analysis. Many respondents were unable to provide information on the size of their partnerships because that information was not immediately available during the interview. While many respondents knew the size of their partnership, others would have had to spend time collecting the information from records or other members. Given the limited resources available for this study, and the limited amount of time most respondents were able to devote to the interviews, it was impossible to collect good data on this variable. Future studies that attempt to examine the effect of size on partnership outcomes may wish to write participants in advance of interviews or examine partnership records directly.

While not hypothesized, one might expect to find a relationship between size and diversity. It seems logical that as the size of a partnership increases, the number of different types of stakeholders might also increase. In fact, the correlation between Size and Diversity was small ($r = .08$). It may be that, while partnerships work to increase the number of participants (particularly businesses), they fail to think about recruiting in terms of breadth of representation. In particular, attention to the recruitment of parents, non-profit organizations, labor unions, and colleges could broaden community support for school-to-work coalitions. This in turn could lead to

increased financial support, as well as an increased number of work-based experiences for students.

Examination of the final model of the data (Figure 3) allows analysis of the other five hypotheses. One of those was that Planning and Coordination would predict Partnership Activities. While these individual variables were significantly correlated with Activities, regression and path analyses showed that in fact their combined effect actually influenced Activities indirectly through Diversity, Resource Sharing, and Interdependence. Similarly, Planning/Coordination affected Climate through Interdependence, Written Agreements, and Communication.

Strong planning and coordination appear to be the foundation for positive partnership outcomes. These findings support the conclusions of several theoretical and review articles that planning and coordination are essential to the formation of effective coalitions. The results of the present study demonstrate that planning and coordination are not simply important for successful collaboration, but influence all of the other factors thought to facilitate collaboration. Planning/Coordination was a significant predictor of Interdependence, Diversity, Resource Sharing, Written Agreements, and Communication.

Several authors have suggested that planning and coordination are important to the effective implementation of coalitions. Trist's (1983) theoretical discussion of the development of inter-organizational domains suggested that domain formation includes the setting of an agreed-upon direction for development. In this case the author saw the creation of a coalition and planning for the development of the coalition as connected.

Cummings' (1984) literature review argued that interactive processes such as coordination of effort affect collective performance. This author felt that the ability of a coalition to achieve its goals depended on coordination of participant activities. Similarly, other authors' reviews of the literature (Butterfoss, Goodman, & Wandersman, 1993; Hord, 1986; Oliver, 1990) have linked coordination and planning to successful collaboration. The findings of the current research add further evidence to support the primacy of planning and coordination in the formation and success of coalitions.

The results of the current study also suggest that planning and coordination may go hand-in-hand with the ability of participants to understand the extent to which their problems and goals are interdependent. Results described above demonstrated a significant relationship between Planning/Coordination and Interdependence. This supports the findings of past research that emphasized the influence of interdependence among coalition members. For example, Schermerhorn's (1979) review of inter-organizational literature led to the generation of four action goals for inter-organizational development that included the design of structures and processes. Another goal in this model included actions designed to raise mutual awareness, trust, and identify common interests - i.e. interdependence. So two of the model's four goals (the others being recruitment and evaluation) focus on planning and interdependence. The current study's findings support this link between planning and interdependence.

In addition, the findings of the present research on the importance of planning and coordination provide evidence for Gray's (1985) position that partnerships need to

engage in direction setting and structuring when forming a coalition. Gray defined structuring as negotiation aimed at an agreed-upon regulative framework for the problem domain. Planning and coordination certainly involve negotiation designed to reach consensus on how to approach mutual problems. Gray described direction setting as the explication of the values of the participants and the identification of a sense of common purpose. This definition mirrors that of interdependence. The present findings support Gray's position that direction setting and structuring are central to the effectiveness of a coalition. These data provide evidence that planning and coordination can facilitate acknowledged interdependence, and, as discussed below, that interdependence can influence the activities of coalitions.

It appears that planning and coordination, in addition to helping participants realize their interdependence, can also help to increase the diversity of the group. Results of this study indicate that Planning/Coordination was related to Diversity. This link may occur as the participants plan their goals and objectives and realize that key players have been left out - compelling them to approach potential members and persuade them to join the coalition. Also, high levels of planning and coordination could make participation in the coalition a more attractive option for potential new members. Most people would probably avoid joining a group that is seen as disorganized.

As mentioned above, this study also found significant relationships between Planning/Coordination and Communication, Written Agreements, and Resource Sharing. The process of planning and coordinating coalition activities necessitates

communication, and this could explain the link between these two variables. As the planning stage allows participants to confirm their interdependence, it may also allow them to become more acquainted and begin to understand each other's communication styles. Interpersonal familiarity and appreciation of mutual issues might facilitate communication.

In addition it is reasonable to expect that as the planning and coordination process facilitates interdependence and communication, it could facilitate the production of written agreements. As stakeholders plan their approaches to the problems they face and move toward agreement on goals, objectives, and strategies, the products of this process might be written agreements that clarify the mutual understandings at which the participants have arrived. This could explain the relationship between Planning/Coordination and Written Agreements.

Similarly, a planning and coordination process that results in an increased sense of interdependence, improved communication, expanded diversity of representation, and written agreements on cooperation may lead participants to the realization that immediate goals may require them to combine resources. By definition, the formation of a coalition is the result of a problem or problems that are too big for any one stakeholder to address individually. Situations such as this usually require participants to share resources in order to achieve multi-lateral goals. The planning and coordination process that facilitates mutual understanding and trust could lead stakeholders to decide to relinquish some control of their resources in order to reach a goal that they could not achieve alone.

In summary, Planning and Coordination were initially expected to have direct effects on Activities. While there were significant correlations between these predictors and Activities, the current findings suggest that Planning/Coordination actually affect Activities and Climate through their impact on Interdependence, Diversity, Resource Sharing, Written Agreements, and Communication. It appears that substantial attention to the organization of the partnership early in its development can affect several factors that influence partnership outcomes. The next section of this chapter focuses on evaluation of the last four hypotheses.

The effect of Interdependence on Activities was not one of the hypotheses of this study. Rather, it was expected that Interdependence would predict Climate. The results show that Interdependence influenced both Activities and Climate. As the processes of planning and coordination allows participants to appreciate their interdependence, the members may begin to develop a sense of understanding and trust. Understanding and trust can lead to a positive and supportive working environment, and that could explain the influence of Interdependence on Climate. Also, acknowledged interdependence may provide members the motivation they need to commit time, energy, and other resources to the implementation of coalition objectives. If members believe that commitment of their personal and organizational resources will benefit them, they might be more inclined to devote those resources to the partnership, and this could explain the relationship between Interdependence and Activities.

It is possible that the process of planning the coalition's goals and objectives, and attempting to coordinate their activities, facilitates the ability of participants to

understand each other's positions. This may force the stakeholders to realize that their problems and goals are indeed interdependent. Once that interdependence is faced and acknowledged, the participants may become motivated to collaborate and work toward mutual goals. In this view, the process starts with planning and coordination of potential actions aimed at addressing perceived mutual problems, moves through a stage of increased realization of interdependence, and results in positive climate and increased motivation to collaborate and take collective action toward multi-lateral objectives.

The hypothesis that Diversity would predict Climate in the coalitions was not supported. In fact, it was found that Stakeholder Diversity affected Partnership Activities and not Climate. It may be that a diverse group of stakeholders generates a broad range of ideas about the implementation of partnership objectives, and this leads to larger numbers and types of activities than would be realized by a more homogeneous group. A diverse group of stakeholders in a STW partnership may also provide more opportunities for students to participate in work-based and other types of vocational experiences.

These findings provide evidence for the assertions of Butterfoss, Goodman, and Wandersman (1993) and Gray (1985) that stakeholder diversity can be instrumental in facilitating and maintaining a coalition. This research also supports the findings from Roberts and Bradley's (1991) study of a coalition formed to change a state school system. That investigation found that broad stakeholder membership facilitated the collaborative process. By including a broad range of stakeholders that involves those with a vested interest in the issue, members of a coalition will be in a better position to

understand all facets of the problem. This could assist the coalition in generating possible solutions that address all of the main factors of the mutual problem. Involving those stakeholders with the power and resources necessary to achieve partnership goals can increase the capacity of the partnership to initiate change and decrease the possibility of alienating a stakeholder with the ability to impede its progress.

While there was a small ($r = .11$) bivariate correlation between Diversity and Climate, this relationship all but disappeared in the regression and path analyses. The variance in Climate was better explained by Interdependence, Written Agreements, and Communication. The initial hypothesis that greater diversity would lead to a more positive climate was based on the assumption that a greater variety of representation would bring more ideas and perspectives to the partnerships, and that this in turn might enhance climate. In fact, greater diversity, and its accompanying perspectives and interests, may actually lead to conflicts and friction. It is possible that, while these conflicts may be necessary to the growth of the partnership in terms of working through important differences among participants, this friction may contribute to a less positive climate. This is one possible explanation for the lack of relationship between diversity and climate. However, Interdependence and Written Agreements were significant predictors of Climate. Along with Communication, these variables accounted for 41% of the variance in the Climate variable.

The present research also supported the hypothesis that Resource Sharing would predict Activities. Theoretical and review articles by Cummings (1984), Hord (1986), Oliver (1990), Otterbourg & Timpane (1986), and Trist (1983) highlighted the

importance of resource sharing in the collaborative process. Selsky (1991) found that resource sharing was the primary reason for the formation of the coalition in that study. Resources such as supplies, equipment, buildings, and money can allow participants the ability to implement objectives and engage in activities that move partnerships toward achieving their goals. Perhaps most importantly, resource sharing can allow participants to achieve goals collectively that none of them could have accomplished individually. For example, a coalition formed to increase school-based health services may find that no individual participant could afford to pay for the cost of a placing a nurse in a school full-time. Participants might be able to share the cost of such a service, leading to an increase in access to health care that would have been impossible for any one participant to afford.

The hypothesis of this study that predicted a relationship between Written Agreements and Climate was supported by the data. These findings strengthen the position of Butterfoss et al. (1993), Cummings (1984), Gray (1989), Schermerhorn (1979), and Trist (1983) that the formalization of rules through the production of written agreements facilitates collaboration. These results also reinforce the findings from Selky's (1991) study of a coalition of human service agencies that networks should spend time developing specific policies during their design. By producing written documents that clearly outline the goals, objectives, and procedures of the coalition, members can decrease the likelihood of confusion and uncertainty about these issues in the future. Written agreements provide a common reference point for participants, and help ensure that work done in the planning and coordination stage provides stability to

member relationships. If every one is "on the same page", the possibility of conflict may be reduced. This could explain why Written Agreements are related to Climate, as opposed to Activities.

Finally, the hypothesis that Communication would be related to Climate was also supported by the data. This closely mirrors the finding by Van De Ven and Walker (1984) that communication, as measured during the first year of the study, predicted consensus during the third year of the study. Good communication allows members to understand each others' needs, constraints, and concerns. By addressing these issues openly and honestly, members can begin to trust each other and feel confident that their concerns are being heard and understood. This can contribute to a positive climate in a coalition.

While not an initial hypothesis of the study, I expected that there would be a relationship between Climate and Activities. The literature on climate, while not completely clear on the exact role of this construct, has found connections between climate and organizational outcomes such as productivity. The zero-order correlation between these variables was statistically significant, but disappeared when entered into the model. In this particular set of data, the initial link between Climate and Activities is explained by the relationships among the other variables in the model. There are several possible explanations for this.

It may be that problems in measurement prevented an accurate assessment of the role of climate in this data set. Another possibility is that positive climate is not necessary for partnership activities, but is important in other ways. Positive climate

may influence factors such as the longevity of the coalition, allowing it to stay together over a longer period of time. This may in turn affect factors such as stability of membership, and the ability of the coalition to attract new members, public support, or resources. The correlation between Age of the partnership and Climate in this study was small ($r = .12$, $p < .1$), so this explanation requires further research. Finally, the lack of a strong, positive relationship between Climate and Activities may mean something completely different. It may be an indication that positive partnership climate is simply insufficient for the implementation of activities, and that in fact a climate that is very positive inhibits partnership activity. A moderate level of conflict may be a positive sign that divergent stakeholder interests are being considered and important issues are being addressed rather than avoided or glossed over. Therefor a coalition that prides itself on pleasant working relationships should not become complacent. Partnerships with positive climates should take care to ensure that they are addressing all important issues, even controversial ones, and continue taking actions designed to achieve mutual goals.

The findings of this study have several implications for school-to-work partnerships. Most importantly, participants need to spend the necessary time planning how the partnership will go about accomplishing its goals, and coordinating the activities of its members. These two factors could have significant effects on the rest of the partnership's activities and its ability to achieve its goals. As the analyses above demonstrated, planning and coordination affected every one of the other predictor variables. School-to-work partnerships should spend the time necessary to plan, as

specifically as possible, how they will ensure diversity of representation and what their goals and objectives will be. Attention to communication skills and channels during the planning and coordination process can assist members in realizing that they need to work together and acknowledging their interdependence. For schools and educators, this means accepting the roles of the business, parents, community groups, and others in improving the education process. For businesses, it means understanding that their participation in the education system will ensure a pool of qualified job applicants. For community groups, parents, students, and others it means accepting the fact that they must be involved in the process if they wish to see quality educational and economic opportunities for all young people.

STW partnerships need to make sure that they record, understand, and adhere to agreements reached during the planning process. Documents such as a mission statement, statement of goals, or rules of operation regarding curriculum changes, internships, and apprenticeships can help ensure that members are united on their commitment to the STW process, avoid conflicts due to disagreements on these issues, and experience a productive climate. Making diversity of membership a priority, by including businesses, educators, parents, students, community members, and labor groups can increase the ability of a partnership to implement activities. Sharing resources can also improve the ability of partnerships to implement experiential activities in classrooms and at places of employment.

While this study provides support for the importance of the variables discussed above in the functioning of school-to-work coalitions, these finding have implications

beyond STW partnerships. Coalitions are being used to address an ever increasing number of social issues (McMillan, Florin, Stevenson, Kerman, & Mitchell, 1995). The results of this research could be used to improve collaboration and outcomes of coalitions formed to address a wide variety of community problems including social services for youth, substance use prevention, violence prevention, and many others.

Much more research on these issues is needed in order to determine the relative importance of the variables in this study. The present study had several weaknesses that could be addressed in future investigations. First, the research design employed here was cross-sectional. Longitudinal studies that examine the impact of the key variables over time could provide further evidence regarding their impact on different aspects of coalitions functioning and in different contexts. Longitudinal research also has the potential to examine interactions, and to help sort out the question of climate as an intervening versus outcome variable. Similarly, further examination of the role of planning and coordination and the interaction of these variables with other predictors of activities and climate could be facilitated by longitudinal research.

Second, this research relied on information from one key informant in each coalition. This is problematic for several fairly obvious reasons. No one individual could be expected to possess completely accurate information on all aspects of a coalition. Further, even though respondents were asked about conditions of the coalitions, by definition their responses were subjective. Personal experiences and views could have biased their responses.

In attempting to control for one possible source of response error, partial correlations were computed between Communication and Climate, Interdependence and Climate, and Agreements and Climate while controlling for Job Satisfaction. As discussed in the literature review (Schnake, 1983), controlling for job satisfaction can improve the measurement of climate. The partial correlations in this case showed no decrease in the correlations between these variables. This provides support for the argument that satisfaction, as it was measured for this study, did not affect the relationships between Communication, Interdependence, Agreements, and Climate. Yet there are countless other sources of bias in many of the other relationships studied. Future research that uses more objective measures of coalition functioning, such as direct observation and archival data, could reduce measurement error.

The main methodological concern with this study is the apparent weakness of the survey instrument, particularly the colinearity of the Interdependence, Communication, Planning/Coordination, and Climate scales. Confirmatory factor analysis revealed a high degree of correlation among items of different scales. This makes it difficult to interpret the results with certainty. This study, and the instrument it employed, should be viewed as first steps in the process of measuring and interpreting the relationships among important factors in the collaboration process. Future research efforts aimed at collecting and analyzing quantitative data on coalitions will need improved measuring instruments in attempting to replicate the findings of this study. A more direct approach to data collection could go a long way toward avoiding some of the problems encountered in this study. Difficulties experienced due to the

participation of individual informants and a faulty measure could be avoided by direct examination of partnership records, direct observation of stakeholder interactions, and interviews with several or all participants.

This study examined the extent to which facilitating variables, processes, and breadth of stakeholder representation affected outcomes in 150 school-to-work coalitions in 16 states. These outcomes included work-based activities for students, curriculum changes, and organizational climate. Results highlight the fundamental importance of planning and coordination in the implementation of STW coalitions. Planning and coordination influenced every other predictor variable, demonstrating their primary role in the collaborative process. The results also indicate that coalitions should work on including stakeholders that represent a wide variety of interests. Written agreements that clearly document the mission, objectives, and rules help participants avoid misunderstandings and share common, mutually agreed-upon goals. This may facilitate collaboration and help partnerships accomplish activities.

Resource sharing can lead to more coalition activities, and communication appears to be related to a more positive organizational climate in terms of cooperation, cohesiveness, and organization. In summation, it appears that partnerships that take the time to think ahead and attempt to organize their approach to collaboration can increase their ability to agree, share, and cooperate. This may allow partnership members to work together smoothly and make steps to reach their mutual goals.

Appendix A

Survey Instrument

STW COLLABORATION SURVEY

Survey #_____

State_____

Partnership_____

Age of partnership_____

Were STW efforts taking place in the community before the partnership was formed?

1=YES 0=NO

If so, for how long?_____

Could you please tell me a little about your background?

(CHECK THE CALL LIST TO SEE WHERE YOU'RE CALLING, I.E. A SCHOOL, A BUSINESS, ETC. - WE WANT TO KNOW WHAT JOBS THEY DO NOW IN ADDITION TO STW, AND WHAT JOB THEY HAD BEFORE THEIR STW POSITION

(BASED ON THEIR RESPONSE ABOVE, PROMPT TO FIND OUT WHOSE INTERESTS THEY IDENTIFY WITH THE MOST, I.E. EDUCATION, BUSINESS, ETC.

1=EDUCATION
2=BUSINESS
3=OTHER

STAKEHOLDERS

1. The first topic I'd like to cover concerns the participants in your partnership. How many people are involved in your partnership?

   #_____

   (IF AROUND 10 OR LESS) Could you tell me the names of the people who participate in your partnership?

   (IF MORE THAN 10) Could you tell me the names of the 10 most active people in your partnership?

   FOR EACH PERSON:

   1a. What organization are they affiliated with (high school, business, PTA)?

   1b. What is their role in the partnership? (Do they have a title like treasurer, or do they represent a constituency, like teachers or businesses?)

   1c. How frequently do each of them participate (daily, weekly, monthly)?

   CODES: 1=LESS THAN MONTHLY
   2=MONTHLY
   3=BIWEEKLY
   4=WEEKLY
   5=DAILY

   1d. What percentage of the following schools in your community does your partnership work with:
   (RECORD ON PAGE 4.)

   High schools

   Grade schools

   Vocational schools, skill centers or trade academies

CHECK-OFF PARTICIPANTS; PROMPT

(Below, check off the participants from page 2. Prompt to see if other stakeholders listed below, but not checked, are in the coalition.)

	Represented? (check if yes)	Approx %
Education		
High schools		
Grade schools (k-8)		
Vocational schools, skill centers, trade academies		
Community colleges		
Four-year colleges/universities		
Teachers/teacher organizations		
Students/student organizations		
Businesses and Labor		
Private sector companies/employees		
Business organizations		
Labor unions		
Others		
Parents/parent organizations		
Community groups		
Government agencies		

WRITTEN AGREEMENTS

2. The next topic I'd like to discuss concerns the rules, policies and goals of your partnership. Can you tell me if your partnership has any of the following written documents:

Check if they have written:

2a. Mission statement

_____

[Document(s) that describe the partnership's overall purpose, philosophy, or reason for existing]

2b. Statement of goals/objectives

_____

[Document(s) that describe the specific aims or activities of the partnership]

2c. Procedures for implementing STW activities

_____

[Documents that describe the methods or approaches that the partnership uses to implement student activities, curriculum changes, or other activities]

2d. Rules of operation

_____

[Documents that describe policies, regulations, or guidelines governing partnership or member activities]

ACKNOWLEDGED INTERDEPENDENCE

The next section of this interview focuses on whether or not the members of your partnership feel that their problems and goals are interconnected.

4. To what extent are members of your STW partnership convinced that their involvement in the partnership is necessary for the success of their interests or organization?

   1=NOT AT ALL CONVINCED
   2=SLIGHTLY CONVINCED
   3=MODERATELY CONVINCED
   4=VERY CONVINCED
   5=COMPLETELY CONVINCED

5. To what extent do the individual members of your STW partnership understand that their interests are interdependent with the other members of the partnership - that they share similar needs, goals or problems?

   1=NOT AT ALL
   2=TO A SMALL EXTENT
   3=TO A MODERATE EXTENT
   4=TO A SIGNIFICANT EXTENT
   5=COMPLETE UNDERSTANDING

6. To what extent are the individual members of your STW partnership convinced that their participation in the partnership will benefit their interests and lead to positive outcomes for their own organization/group?

   1=NOT AT ALL CONVINCED
   2=SLIGHTLY CONVINCED
   3=MODERATELY CONVINCED
   4=VERY CONVINCED
   5=COMPLETELY CONVINCED

RESOURCE SHARING

7. Next I'd like to know about resources in your partnership. Can you tell me which of the following resources, if any, members have shared with the other partnership members:

Check if:

7a. Members have shared equipment or supplies _____

7b. Members have shared rooms, facilities, buildings _____

7c. Members have shared financial resources _____

7d. Members have shared training resources/assisted in training of other members _____

7e. Members have shared personnel/ provided for personnel time for STW activities _____

7f. Members have shared resources for publicity/promotion of STW activities _____

COMMUNICATION

I'd like to ask you next about communication among the members of your partnership. Please indicate the extent to which you agree or disagree with the following statements.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

8. The members exchange information freely in this partnership.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

9. The members of the partnership are afraid to express their real views.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

10. If we have a decision to make, everyone is involved in making it.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

11. We tell each other the way we are feeling.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

11b. In this partnership everyone's opinion gets listened to.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

PLANNING

Now I'd like to ask you about the planning process in your partnership. By planning I mean designing, organizing and outlining your goals, objectives, procedures and policies.

12. How **often** does your partnership spend time designing, organizing and outlining your goals, objectives, procedures and policies?

    1=NEVER -▸ GO TO #17
    2=ONCE A YEAR
    3=ONCE EVERY SIX MONTHS
    4=ONCE A MONTH
    5=ONCE A WEEK

13. To what extent has your planning process helped your partnership conduct school-based activities such as curriculum changes?

    1=NOT AT ALL
    2=TO A SMALL EXTENT
    3=TO A MODERATE EXTENT
    4=TO A LARGE EXTENT
    5=TO A VERY LARGE EXTENT

13b. To what extent has your planning process helped your partnership conduct work-based activities such as job shadowing or internships?

    1=NOT AT ALL
    2=TO A SMALL EXTENT
    3=TO A MODERATE EXTENT
    4=TO A LARGE EXTENT
    5=TO A VERY LARGE EXTENT

14. To what extent has the planning process in your partnership allowed you to anticipate various problems and issues that have arisen?

    1=NOT AT ALL
    2=TO A SMALL EXTENT
    3=TO A MODERATE EXTENT
    4=TO A LARGE EXTENT
    5=TO A VERY LARGE EXTENT

COORDINATION

The next few questions have to do with coordination of efforts in your partnership.

15. To what extent are the activities, such as partnership efforts on curriculum changes and student internships, organized and coordinated?

    1=NOT AT ALL
    2=TO A SMALL EXTENT
    3=TO A MODERATE EXTENT
    4=TO A LARGE EXTENT
    5=TO A VERY LARGE EXTENT

16. To what extent has your partnership been able to identify and address overlaps and gaps in STW efforts and activities?

    1=NOT AT ALL
    2=TO A SMALL EXTENT
    3=TO A MODERATE EXTENT
    4=TO A LARGE EXTENT
    5=TO A VERY LARGE EXTENT

17. How well do the different parts of your STW program fit together and complement each other?

    1=NOT AT ALL
    2=SOMEWHAT WELL
    3=MODERATELY WELL
    4=VERY WELL
    5=EXTREMELY WELL

STUDENT ACTIVITIES

18. Now I'd like to ask you about student activities in your partnership. Can you tell me which of the following STW activities students participate in?

Check if students participate in

18a. Worksite visits/job shadowing

_____

18b. Paid work experience

_____

18c. Unpaid work experience/ internships

_____

18d. Apprenticeship programs that lead to skill certificates

_____

18e. Student enterprises that involve students in marketing a product or service

_____

CURRICULUM CHANGES

19. The next part of the interview focuses on curriculum changes in the schools. Could you please tell me, which of the following changes in school curricula has your partnership has been able to implement?

Check if implemented

19a. Purchasing and/or implementing **experiential, contextual or applied** academic curricula _____

19b. Revising vocational classes to cover career issues, or provide linkage to academic material or courses _____

19c. Revising academic courses to cover career issues, or provide linkage to vocational material or courses _____

19d. Pairing academic and vocational teachers for team teaching in classrooms _____

19e. Grouping secondary school teachers together to develop or teach a joint curricula that emphasizes a specific career area _____

19f. Implementing block scheduling to create more time for contextual or project-based instruction _____

19g. Career exploration activities or courses implemented or expanded _____

19h. The use of career majors or pathways that determine students' courses or plans of study_____

ORGANIZATIONAL CLIMATE

The last section of this interview focuses on the attitudes and relationships among the members of your partnership. For each item please indicate the extent to which you agree or disagree with the statement.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

20. The members of the partnership have respect for each other's goals.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

21. The parties in this organization keep their word.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

22. In this organization negotiations take place in an atmosphere of good faith.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

23. A sense of fairness is associated with dealings between members.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

24. There are feelings among members of the partnership which tend to pull the group apart.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

25. There is constant bickering in the partnership.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

26. People are proud of belonging to this partnership.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

27. The policies and goals of this partnership are clearly understood.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

28. Things often seem to be pretty disorganized in this partnership.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

29. There is a lot of warmth in the relationships among members of this partnership.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

30. This partnership knows exactly what things it has to get done.

1=strongly disagree
2=disagree
3=neither agree nor disagree
4=agree
5=strongly agree

30a. What percentage of the people in your partnership would agree with the ratings you just gave about the relationships among members?

_____

JOB SATISFACTION

These last few questions ask about how you feel about your participation in the partnership. Please indicate how satisfied you are with each of the following aspects of your role.

1 = very dissatisfied
2 = dissatisfied
3 = neither satisfied or dissatisfied
4 = satisfied
5 = very satisfied

31. The friendliness of the people you work with in the partnership.

1 = very dissatisfied
2 = dissatisfied
3 = neither satisfied or dissatisfied
4 = satisfied
5 = very satisfied

32. The respect you receive from the people in the partnership.

1 = very dissatisfied
2 = dissatisfied
3 = neither satisfied or dissatisfied
4 = satisfied
5 = very satisfied

33. The chances you have to accomplish something worthwhile.

1 = very dissatisfied
2 = dissatisfied
3 = neither satisfied or dissatisfied
4 = satisfied
5 = very satisfied

34. The chances you have to do something that makes you feel good about yourself as a person.

1 = very dissatisfied
2 = dissatisfied
3 = neither satisfied or dissatisfied
4 = satisfied
5 = very satisfied

Appendix B
Student Training Outline

Psychology 490 - Assessment of School-to-Work Coalitions
Student Training Outline

Week 1 Discussion of research plan and expectations of students

Assigned reading: A Proposal to Examine the Collaborative Processes within School-to-Work Coalitions

Week 2 Discussion of STW and the research proposal

Assigned reading: Lavrakas (1993), Telephone Survey Methods. Chapters 1, 4, & 5

Week 3 Discussion of telephone survey methods

Assigned reading: Berg (1989), Qualitative Research Methods for the Social Sciences. Chapter 3.

Week 4 Discussion of interviewing techniques

Week 5 Presentation of example interview; practice interviews

Week 6 Practice interviews

Week 7-9 Mock interviews; reliability checks

Week 10-15 Partnership interviews
Data entry
Weekly meetings to monitor progress & discuss problems

Appendix C

Call Sheet

STW COALITION SURVEY
CALL SHEET

Phone #_____ Survey #_____

Name _____ Site/State _____

Contact attempts	Date	Time	Result	Interviewer
1				
2				
3				
4				
5				
6				

NOTES

1. _____

_____

2. _____

_____

3. _____

_____

References

Ashforth, B. (1985). Climate formation: Issues and extensions. Academy of Management Review, 10, 837-847.

Atkinson, G., & Murrell, P. (1988). Kolb's experiential learning theory: A meta-model for career exploration. Journal of Counseling and Development, 66, 374-377.

Bailey, T. & Merritt, D. (1992). School to work transition and youth apprenticeship in the U.S. New York: Manpower Demonstration Research Corporation.

Bishop, J. (1988). The motivation problem in American high schools. Ithaca: Cornell University.

Brenner, M. (1973). Fetal, infant and maternal mortality during periods of economic instability. International Journal of Health Services, 3, 145-159.

Brown, C. (1984). The art of coalition building: A guide for community leaders. New York: The American Jewish Committee.

Butterfoss, F., Goodman, R., & Wandersman, A. (1993). Community coalitions for prevention and health promotion. Health Education Research, 8 (3), 315-330.

Cammann, C., Fichman, M., Jenkins, D., & Klesh, J. (1983). Assessing the attitudes and perceptions of organizational members. In S. Seashore, E. Lawler, P. Mirvis, & C. Cammann (Eds.), Assessing Organizational Change. NY: Wiley.

Catalano, R, Dooley, D. & Jackson, R. (1981). Economic predictors of admissions to mental health facilities in a non-metropolitan community. Journal of Health and Social Behavior, 22, 284-297.

Catterall, J. (1985). On the cost of dropping out. Los Angeles: Institute for Research on Educational Finance and Governance.

Choy, S. (1994). School-to-work opportunities: Issues in state and local governance. In U.S. Department of Education (Ed.) School-to-work transition: What does research say about it. Washington, D.C.: U.S. Government Printing Office.

Cochrane, D., Mattai, P.R., Huddleston-Mattai, B. (1994). Non-college-bound urban minority youth: Issues of transition. In A. Pautler (Ed.), High School to Employment Transition: Contemporary Issues. Ann Arbor: Prakken.

Commission on the Skills of the American Workforce (1990). America's choice: High skills or low wages. Washington, D.C.: National Center on Education and the Economy.

Committee for Economic Development (1987). Children in need: Investment strategies for the educationally disadvantaged. New York: Author.

Cummings, T. (1984). Transorganizational development. In B. Staw & L. Cummings (Eds.), Research in organizational behavior, Vol. 6. Greenwich, CT: JAI Press.

Dastmalchian, A., Blyton, P., & Adamson, R. (1989). Industrial relations climate: Testing a construct. Journal of Occupational Psychology, 62, 21-32.

Dewey, J. (1959). Experience and education. NY: Macmillan.

Dooley, D., Catalano, R., & Wilson, G. (1994). Depression and unemployment: Panel findings from the epidemiologic catchment area study. American Journal of Community Psychology, 22, 745-766.

Dillman, D. (1978). Mail and telephone surveys. New York: Wiley.

Dooley, D. & Catalano, R. (1980). Economic change as a cause of behavioral disorder. Psychological Bulletin, 87, 450-468.

Feighery, E., & Rogers, T. (1989). Building and maintaining effective coalitions. Guide No. 12, How-To Guides on Community Health Promotion. Palo Alto: Stanford Health Promotion Resource Center.

Forehand, G., & Von Gilmer, B. (1964). Environmental variations in studies of organizational behavior. Psychological Bulletin, 62, 362-381.

Glick, W. (1985). Concepts and measurement of organizational and psychological climate: Pitfalls in multi-level research. Academy of Management Review, 10, 601-661.

Goldberger, S., Kazis, R., & O'Flanagan (1994). Designing and implementing quality worksite learning for high school students. NY: Manpower Demonstration Research Corporation.

Grant Foundation Commission on Work, Family, and Citizenship (1988). The forgotten half. Washington, D.C.: Author.

Gray, B. (1985). Conditions facilitating interorganizational collaboration. Human Relations, 38, 911-936.

Gray, B. (1989). Collaborating: Finding common ground for multiparty problems. San Francisco: Jossey-Bass.

Gray, B., & Hay, T. (1986). Political limits to interorganizational consensus and change. Journal of Applied Behavioral Science, 22 (2), 95-112.

Gray, B. & Wood, D. (1991). Collaborative alliances: Moving from practice to theory. Journal of Applied Behavioral Science, 27 (1), 3-22.

Guion, R. (1973). A note on organizational climate. Organizational Behavior and Human Performance, 9, 120-125.

Gunter, B. & Furnham, A. (1996). Biographical and climate predictors of job satisfaction and pride in organizations. Journal of Psychology, 130, 193-208.

Hall, R., Clark, J., Giordano, P., Johnson, P. & Van Roekel, M. (1977). Patterns of interorganizational relationships. Administrative Science Quarterly, 22, 457-474.

Hellriegel, D. & Slocum, J. (1974). Oragizational climate: Measures, research, and contingincies. Academy of Management Journal, 17, 255-280.

Hoachlander, E. (1994). Industry-based education: A new approach for school-to-work transition. In U.S. Department of Education (Ed.) School-to-work transition: What does research say about it. Washington, D.C.: U.S. Government Printing Office.

Hord, S. (1986). A synthesis of research on organizational collaboration. Educational Leadership, February, 22-26.

Hoyt, K. (1994). A proposal for making the transition from schooling to employment. In A. Pautler (Ed.) High school to employment transition: Contemporary issues. Ann Arbor: Prakken.

Jackofsky, E., & Slocum, J. (1988). A longitudinal study of climates. Journal of Organizational Behavior, 9, 319-334.

James, L., & Jones, A. (1974). Organizational climate: A review of theory and research. Psychological Bulletin, 81(12), 1096-1112.

James, L. & Sells, S. (1982). Psychological climate: Theoretical perspectives and empirical research. In D. Magnusson (Ed.) Toward a Psychology of Situations: An Interactional Perspective. Hillsdale, NJ: Erlbaum.

Johnson, L. & Abramovitch, R. (1988). Parental unemployment and family life. In A. Pence (Ed.) Ecological research with children and families: From concepts to methodology. New York: Teacher's College Press.

Jones, A. & James, L. (1979). Psychological climate: Dimensions and relationships of individual and aggregated work environment perceptions. Organizational Behavior and Human Performance, 23, 201-250.

Joyce, W., & Slocum, J. (1979). Climates in organizations. In S. Kerr (Ed.) Organizational Behavior. Columbus, OH: Grid.

Joyce, W., & Slocum, J. (1984). Collective climate: Agreement as a basis for defining aggregate climates in organizations. Academy of Management Journal, 27, 721-742.

Kelly, J. (1986). An ecological paradigm: Defining mental health consultation as a preventive service. In J. Kelly & R. Hess (Eds.) The ecology of prevention: Illustrating mental health consultation. New York: Hawthorn.

Kolb, D. (1984). Experiential learning. Englewood Cliffs, NJ: Prentice-Hall.

Lawler, E., Hall, D., & Oldham, G. (1974). Organizational climate: Relationship to organizational structure, process, and performance. Organizational Behavior and Human Performance, 11, 139-155.

Legler, R. (1997). School-to-work coalitions: A theoretical model for effective collaboration. Manuscript in preparation.

Logsdon, J. (1991). Interests and interdependence in the formation of social problem-solving collaborations. Journal of Applied Behavioral Science, 27, 23-37.

McCann, J. (1983). Design guidelines for social problem-solving interventions. Journal of Applied Behavioral Science, 19 (2), 177-192.

McMillan, B., Florin, P., Stevenson, J., Kerman, B., & Mitchell, R. (1995). Empowerment praxis in coalitions. American Jopurnal of Community Psychology, 23(5), 699-728.

Moussavi, F., Jones, T., & Cronan, T. (1990). Explaining psychological climate: Is perceptual agreement necessary? Journal of Social Psychology, 130, 239-248.

Oliver, C. (1990). Determinants of interorganizational relationships. Academy of Management Review, 15, 241-265.

Otterbourg, S., & Timpane, M. (1986). Partnerships and schools. In P. Davis (Ed.), Public-private partnerships: Improving urban life. NY: Academy of Political Science.

Osterman, P. & Ianozzi, M (1993). Youth Apprenticeships and School-to-Work Transition: Current Knowledge and Legislative Strategy. Philadelphia: National Center on the Educational Quality of the Work Force.

Ostroff, C. (1993). The effects of climate and perceptual influences on individual behavior and attitudes in organizations. Organizational Behavior and Human Decision-Making Processes, 56, 56-90.

Payne, R., & Pugh, S. (1976). Organizational structure and organizational climate. In M. Dunnette (Ed.), Handbook of Industrial and Organizational Psychology. Chicago: Rand McNally.

Roberts, N. & Bradley, R. (1991). Stakeholder collaboration and innovation: A study of public policy initiation at the state level. Journal of Applied Behavioral Science, 27, 209-227.

Schermerhorn, J. (1979). Interorganizational development. Journal of Management, 5 (1), 21-38.

Schmidt, S., & Kochan, T. (1977). Interorganizational relationships: Patterns and motivations. Administrative Science Quarterly, 22, 220-234.

Schnake, M. (1983). An empirical assessment of the effects of affective response in the measurement of organizational climate. Personnel Psychology, 36, 791-807.

Schneider, B., & Hall, D. (1972). Toward specifying the concept of work climate: A study of Roman Catholic diocesan priests. Journal of Applied Psychology, 56, 447-455.

Schneider, B. & Reichers, A. (1983). On the etiology of climates. Personnel Psychology, 36, 19-39.

Schneider, B. & Snyder, R. (1975). Some relationships between job satisfaction and organizational climate. Journal of Applied Psychology, 60, 318-328.

School-to-Work Opportunities Act of 1994, Pub. L. No. 105-402.

Selsky, J. (1991). Lessons in community development: An activist approach to stimulating interorganizational collaboration. Journal of Applied Behavioral Science, 27, 91-115.

Trist, E. (1983). Referent organizations and the development of inter-organizational domains. Human Relations, 36 (3), 269-284.

Turner, J., Kessler, R. & House, J. (1991). Factors facilitating adjustment to unemployment: Implications for intervention. American Journal of Community Psychology, 19, 521-542.

U.S. General Accounting Office (1990). Training strategies: Preparing non-college youth for employment in the U.S. and foreign countries. Washington, D.C.: U.S. Government Printing Office.

U. S. General Accounting Office (1991). Transition from School to Work: Linking Education and Worksite Training. Washington, D.C.: U.S. Government Printing Office.

U. S. General Accounting Office (1993). Systemwide education reform. Washington, D.C.: U.S. Government Printing Office.

U. S. General Accounting Office (1993). Transition from school to work: States are developing new strategies to prepare students for jobs. Washington, D.C.: U.S. Government Printing Office.

U. S. Commission on Excellence in Education (1983). A nation at risk. Washington, D.C.: Author.

Van de Ven, A., & Walker, G. (1984). The dynamics of interorganizational coordination. Administrative Science Quarterly, 29, 598-621.

Whiting, B. (1993). School-to-work transition: Reaching for scale in big cities. Paper presented at the Linking School and Work in Urban Areas conference, Chicago.

Wood, D., & Gray, B. (1991). Toward a comprehensive theory of collaboration. Journal of Applied Behavioral Science, 27, 139-162.