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Preparing Professionals for Educational Partnerships: An Interdisciplinary Approach

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An interdisciplinary course was developed in the Graduate School of Education at the University of Utah, team taught by faculty members from the Departments of Educational Administration, Educational Psychology, Educational Studies, and Special Education. This unique course was designed to provide prospective teachers, special educators, school psychologists, counselors, and administrators insights into conceptual and practical components of collaborative problem solving and conflict management. This article describes the initial development and implementation, as well as content, activities, assignments, and evaluation procedures of this course.

The education of all youth is the shared responsibility of classroom teachers, special educators, administrators, related professionals, and parents. When parents and educators pool their knowledge, efforts, and resources, they are able to achieve outcomes they could not achieve alone. (Hudson, Correa, Morsink, & Dykes, 1987, pp. 192-193)

By their very nature, schools are social systems in which individuals from diverse backgrounds, orientations, and theoretical frameworks come together to achieve a shared goal: educating our youth. This is no easy task, given the array of problems and conflicts facing educators every day. Collaborative problem solving is one viable means of achieving this goal (Correa, 1990; Friend & Cook, 1990; Zins, Curtis, Graden, & Ponti, 1988). Interdisciplinary collaboration is useful for

promoting a common language, knowledge base, and an understanding of the diverse and complex functions of schools and schooling. Familiarity with roles, responsibilities, and techniques among related professions enhances delivery of services through educational partnerships (Blaine & Sobsy, 1983; Golightly, 1987). In theory and practice, collaborative efforts result in positive professional interdependence in order to achieve a common, agreed-upon goal (Villa & Thousand, 1988).

There are many ways of conceptualizing and defining collaboration (cf. Friend & Cook, 1990; Phillips & McCullough, 1990; West, Idol, & Cannon, 1989). For purposes of this article, we adopted Friend and Cook's (1990) definition of collaboration as "a style for interaction between at least two co-equal parties voluntarily engaged in shared decision-making as they work toward a common goal" (p. 72). In school settings, teachers, special educators, school psychologists, counselors, and administrators are expected to collaborate to meet the educational and social needs of all children. Effective collaboration requires several skills and attitudes including the ability to take the perspective of others, speak a common language, manage conflict, conceptualize school problems in a broad fashion, and share resources, knowledge, and skills.

A major barrier to the establishment of collaboration in the schools, however, is the isolated preservice preparation of professionals (Allen-Maeres & Pugach, 1982; Prasse & Fafard, 1982; Pugach & Allen-Maeres, 1985). Specific practices and techniques must be explored, modeled, and rehearsed at this preparatory level (Pugach & Allen-Maeres, 1985). Universities must be cognizant of similarities and relationships among disciplines, and provide coursework and applied experiences for prospective professionals that will facilitate collaboration (Golightly 1987; Humes & Hohenshil, 1987). Implementing collaborative problem solving will have implications in the way that roles, relationships, and the organizational structure of the school are conceptualized and operationalized. Therefore, preservice programs must also provide an awareness of the change process and the effect it will have on professional practice.

In answer to this call, one university attempted to address these critical issues and preservice needs. The Graduate School of Education at the University of Utah promotes the practice of interdisciplinary collaboration among faculty in preparing professionals for educational partnerships. Thus, a novel interdisciplinary course was developed and team taught by faculty members from the departments of Educational Administration, Educational Psychology, Educational Studies, and Special Education. Individual faculty members across departments with teaching and research interests in educational collaboration and problem solving were recruited to conduct the course. The purpose of the course

was to provide prospective teachers, special educators, school psychologists, counselors, and administrators' insights into conceptual and practical components of collaborative problem solving and conflict management. Our primary intent was to provide students with a unique interdisciplinary training experience, wherein the elements of collaboration, problem solving, shared decision making, and conflict management could be operationalized and practiced in simulated role-play activities. The overall objective was to prepare preservice professionals to function as effective collaborators in educational settings upon completion of their respective graduate programs.

The purpose of this article is to describe the initial development and implementation, as well as content, activities, assignments, and evaluation procedures of this course. Because the course is still in its infancy, we will explain narratively our observations and experiences to date. Subjective reactions of instructors and students will be provided to serve as preliminary indicators of course effectiveness, and provide directions for future planning.

COURSE DEVELOPMENT AND IMPLEMENTATION

Six faculty members representing regular education, special education, educational administration, school psychology, and school counseling were involved in the conceptualization, development, and implementation of the course. Faculty met several times during the summer months to coordinate the course objectives, content, faculty responsibilities, activities, and evaluation procedures.

The primary goal of the course was to promote and make operational methods to establish a collaborative ethic within school settings. The course was cross-listed between the departments of Educational Psychology and Educational Administration. This allowed students from various disciplines to register for required allied or elective hours in their respective programs. The class met weekly for 10 weeks, for 2 ½-hr sessions. Students in the course represented the spectrum of educational professions. Approximately equal participation on the part of all prospective professionals was desired, however, enrollment was unfortunately unevenly distributed among the disciplines. Specifically, there was a shortage of students to take the perspective and role of a classroom teacher. To alleviate this situation, class members who had had previous experience as classroom teachers were assigned to assume the role of classroom teachers for class activities.

The instructors met periodically throughout the quarter to evaluate course progress, discuss student needs, modify course content, and

make ongoing decisions regarding course structure. These meetings served as a type of formative evaluation throughout the implementation of the course.

COURSE OBJECTIVES AND CONTENT

The instructional objectives of the course were to: (a) learn various approaches to role and behavior change theories; (b) understand the role and function of educational personnel within a school system (i.e., principal, school counselor, school psychologist, classroom teacher, and special education teacher); (c) understand and apply a collaborative model of problem solving; (d) learn intervention strategies and skills involved in team problem solving; and (e) gain experience in collaborative problem solving with specific school related problems. To meet these objectives, a number of content areas were addressed via lectures, discussion, and team activities.

The course foundation was based primarily on role, change, and collaboration theories. Building upon these conceptual bases, students examined traditional and emerging roles in schools, and were exposed to operational and procedural guidelines for collaboration. Finally, class members synthesized and applied various concepts through active role playing with actual school problems and issues. Specifically, problem-solving groups comprised of students representing each discipline were formed early in the course. Group members gained experience in collaborative problem solving through discussions and simulated role plays with hypothetical case scenarios. These same groups remained intact throughout the remainder of the quarter to develop and solidify relationships among members, enhance group trust and cohesion, and function in the simulated exercises.

An outline of the course content is presented in Table 1. A brief description of each of the course content areas is provided below. Interested readers are referred to the original sources for more information regarding salient theories, concepts, and practices.

The Collaborative Ethic

Early in the course, the collaborative ethic (Phillips & McCullough, 1990) was introduced as a framework for educational problem solving. Specifically, the ethic was discussed in terms of definitional considerations, general characteristics, core assumptions, and implementation issues (i.e., barriers). The collaborative ethic was defined as a set of values or principles which endorse collegial (as compared to independent) styles

TABLE 1
Course Outline

<i>Session</i>	<i>Topics Covered</i>
1	Overview of Course Theory of Change in Schools Role Theory
2	Collaborative Ethic Role and Function of the Principal
3	Role and Function of the School Counselor Role and Function of the School Psychologist
4	Role and Function of the Special Education Teacher Role and Function of the Teacher
5	Role and Change Theory Revisited Team-Building
6	Collaborative Problem-Solving
7	Conflict Resolution Theory, Procedures, and Intervention Strategies
8	Case Studies and Team Building Experience
9	Case Studies and Team Building Experience
10	Case Studies and Team Building Experience
11	Team Building Evaluation (conducted during Final Exam week, outside of formal class time)

of interaction between at least two co-equal parties who voluntarily engage in a decision-making or problem-solving relationship (Friend & Cook, 1990). We emphasized the importance of shared efforts to achieve a commonly defined mission regarding the education of children, and the benefit of enabling educational personnel to access and develop new and creative alternatives. As such, educational collaboration was presented as a dynamic process, and not an end product, static role, or concrete function. The stated goals included both remediating or solving existing problems and instilling knowledge and skills among professionals to prevent similar problems in the future (Curtis & Meyers, 1989; Gallessich, 1985). Other important concepts relating to interdisciplinary collaboration (e.g., assumptions, benefits, and barriers) were borrowed from Curtis and Meyers (1989), Friend and Cook (1990), Phillips and McCullough (1990), West (1990), and West et al. (1989).

In the course, we emphasized that organizational structures must be developed to allow, facilitate, and enhance collaborative interactions. Due to the dynamic nature of collaborative problem solving, the formats vary depending on the problem context and may include the triadic consultation model, team brainstorming, prereferral intervention, special education referral, or parent-teacher collaboration. Thus, students were not trained to serve in any of these isolated capacities per se.

Rather, it was emphasized that problems can be addressed at various levels depending on the contextual determinants of the problem, and outcomes can be student-specific or realized at a broader systems level.

Change Theory

A second general content area reviewed in the course was change theory. Students were provided with skills for understanding the processes underlying successful change because comprehensive change at the building level must occur if educators are expected to collaborate (L. J. Johnson, Pugach, & Devlin, 1990). We suggested that change will require a redefinition of roles that may, in turn, require modification of existing organizational and operational structure of the school itself. Students were reminded that change is a difficult process given that the organizational framework of the school is often not amenable to change (Daft, 1986; Skrtic, 1987).

Students were familiarized with organizational factors and psychological dynamics of change as described by Fullan (1985). In essence, prospective professionals learned that establishing and maintaining collaborative relationships requires a change of roles and perhaps the operational structure of the school itself. These changes may be enhanced if educators have a theoretical awareness of change processes and role theory, coupled with a systematic plan for problem solving.

Role Theory

The course included an examination of role theory as it provides a strong conceptual basis for an interdisciplinary preservice experience in educational problem solving. An integration of seven basic principles of role theory was provided. These include: (a) roles are associated with social positions (Biddle, 1979), (b) roles exist within complex social systems (Biddle, 1979; Turner, 1988), (c) roles are induced through a series of experiences wherein expectations for role behavior are shared and enforced by norms and values associated with professional roles (Biddle, 1979; Toffler, 1981), (d) consensus is not necessary for norms and values to function and exert influence over the members of a group (Schein, 1985), (e) new members of a group commonly learn their roles through socialization processes, (f) role stress results when behaviors critical to the role conception are incongruent with expected or actual behaviors (Diamond & Allcorn, 1985; Latack, 1984), and (g) verbal and nonverbal communication play a significant part in the quality of the group's interactions and the meanings that members of the group share.

This body of research and theory contributed to students' expanded

view of the potential for teams of professionals to work together more frequently and effectively in schools. It also provided them with a deeper sensitivity to the barriers to team work and the costs and benefits of professionals working together. A theoretical understanding of role theory concepts assisted students in their examination of the specific educational roles within the school. Specifically, traditional and reconceptualized roles of the school principal, counselor, psychologist, special education teacher, and regular classroom teacher were examined next.

The role of the principal. In the course, the changing role of principal in schools was discussed. It was suggested that changes in the principal's role often relate to an identified need to reflect, synthesize, and unify the professional action of principals (Hart, 1990). In both traditional and change-oriented environments, however, principals continue to exert formal and informal influence over the work of all other adults in schools. Principals' formal control over resources and rewards, accepted authority to act for the group, and expected leadership in team and work group efforts make them influential members of team efforts to address the problems of teaching and learning in schools. Thus, their ability to collaborate effectively with other school personnel is critical.

The role of the school counselor. In the course, the role of the school counselor was discussed in the context of its history, commitments, and role functions. The present range of counselor functions, including individual and group counseling, assessment (particularly as related to life decisions), consultation, and some involvement in training and organizational development, were described.

The course attempted to integrate the information about school counseling conceptually as well as behaviorally by asking the students: "What do you want to know about the counselor that will help you use the counselor in solving problems in the school and will help you in your own role functioning?" Concluding the session, students were then asked to define the counselor's role, and to reflect on how this might impact (negatively and positively) their own professional roles.

The role of the school psychologist. In describing the role and function of the school psychologist, it was suggested during course discussions that the primary responsibility of the school psychologist is to apply the knowledge base of psychology to the diverse problems that are faced when attempting to educate children (Siegel & Cole, 1990). Given the increasing numbers of students at risk and children in need of mental health services, it was suggested that the most appropriate role

of the school psychologist may be best conceptualized as indirect providers of services (Gutkin & Conoley, 1990). For example, as a consultant or member on an intervention assistance team, school psychologists can contribute their knowledge of the problem-solving process, learning concepts, child development, intellectual and social functioning, and child and family relations. It was argued that functions such as collaboration, consultation, organizational development, and research are the most efficacious use of school psychologists' time and efforts.

Students were reminded that all dimensions of the direct-indirect continuum are important functions of the school psychologist. Considering the range of activities appropriate for school psychologists, the context of a presenting situation should dictate the level at which a school psychologist intervenes. However, the decision of how to intervene must be based primarily in response to the question of "how can the educational, social, and emotional experiences of students be enhanced?" The importance of collaboration with colleagues, and the role that the school psychologist can play in fostering collaborative educational relations was thus clarified.

The role of the special educator. The role of the special educator was examined from two perspectives in course discussions. The traditional role of the special educator is based on the premise that students with special needs "will benefit from a unique body of knowledge and from smaller classes staffed by specially trained teachers using special materials" (Lipsky & Gartner, 1989, p. 19).

The course provided students with a reconceptualized role of the special educator that reflects the collaborative ethic in contrast to the traditional role. From this perspective, students learned that special education serves as a process that utilizes a wide range of existing resources and expertise within the school building, rather than a separate system or treatment (Bickel & Bickel, 1986). In addition to the traditional role of providing direct instructional support to students with special needs, the role of the special educator must be expanded to include that of an adjunct or support person. As such, professionals in the school could voluntarily access the specialist's expertise in addressing and resolving challenging learning and behavior problems (L. J. Johnson et al., 1990; Stainback & Stainback, 1989). This role reconceptualization requires a significant shift from the traditional role of the special educator as a technician who autonomously provides instruction in separate and specialized classrooms to that of a partner in identifying and implementing strategies prior to referrals and placement of students in special education.

The role of the teacher. The role of the classroom teacher was discussed from three main perspectives: (a) the diverse expectations society has of teachers, (b) the complexity of the task of teaching, and (c) the development of new role expectations for teachers.

In the course, we discussed the many ways of construing the phenomenon called "teaching." Students discovered that the complexity of teachers' jobs lies in integrating various roles as they work with students in classrooms. The importance of recognizing the complexity and intensity of the task was emphasized. Furthermore, the course discussions revealed that the teachers' role is likely to become even more complex in the future. Several recent education reform initiatives have focused on restructuring and elaborating the teachers' role. Career ladders and site-based management systems are placing teachers in new leadership roles in their schools and school districts (Hart, 1990). The Holmes Group initiated reform of teacher education (Holmes Group, 1985, 1990) and the proliferation of alternative routes to teacher certification (Feistritzer, 1990; Stoddart, 1991) are placing greater emphasis on the role of teachers in preservice teacher education and mentor programs. These initiatives have blurred the distinction between the role of teachers, school administrators, and university faculty and emphasize the need for teachers to develop skills in the collaborative decision-making process.

Team Functioning: Dynamics And Mechanics

After the various educational roles were described from traditional and reconceptualized vantage points, the focus of the course turned to the topic of teaming and collaborative problem solving. This was accomplished through a series of discussions and small group activities. The dynamics of team development, evolution, and membership were discussed, followed by a presentation of procedural and operational guidelines for collaborative problem solving. Finally, the important issues of identifying and managing within-group conflict were addressed.

Team building. The team building discussion relied heavily on D. W. Johnson and F. P. Johnson's (1987) description of the essential elements of effective teams: positive interdependence, individual accountability, face-to-face interaction, collaborative skills, and group processing. Because the concepts were articulated in required readings, class time was spent applying the theory to individual and team behavior and performance.

Positive interdependence was defined as a linkage among group mem-

bers such that each individual's work is beneficial and necessary for individual and group success in meeting specific goals (D. W. Johnson & F. P. Johnson, 1987). In positive interdependence, each student was faced with questions such as, "In what situations do you best function interdependently?"; "What keeps you from functioning interdependently?"; and "What helps you function interdependently?" Participants further explored interdependence as it related to goals, rewards, roles, tasks, and resources. In each area, students were asked to acknowledge their individual attitudes, responses, and behavior, and then as a group to identify the interdependence potentially operating within their team.

The focus in *individual accountability* centered on increasing team members' perceptions that their contributions to the group effort are identifiable and that they must fulfill their responsibilities in order for the group and themselves to be successful. This application linked accountability with a model for open communication and high information-sharing. Specifically, a Jo-Hari window activity was implemented, which required group members to identify personal openness and responsiveness to self and others. The model was then extended to explore openness and responsiveness of entire teams.

Face-to-face interaction was discussed as important in groups to increase individual participation and efforts. This was demonstrated by using two models of defining interpersonal communication. Four interpersonal styles common to groups (i.e., conventional, manipulative, speculative, and risky) were described, and a matrix depicting these styles was constructed. Students were asked to identify: (a) the interpersonal style evident in their groups, (b) the styles used most and least by each member, and (c) team strengths and weaknesses. A form accompanied each exercise to allow each individual and the team as a whole to evaluate the extent to which they were applying the concepts within their team.

Theory relating to *collaborative skills, attitudes, and processes* contributing to effective teams was limited to cohesion, trust, openness, and norm building. This discussion highlighted the relationship of the previous elements to collaboration and focused more precisely on the team functioning as a whole. Norm building was the point of application as each team identified the norms functioning within its team and determined those that facilitated their work and those that detracted from it. This application initiated the focus on *group processing*, or the means whereby the team ascertained how well it was functioning. The teams then evaluated their level of cohesion, trust, and openness as evidenced during their first experience together as a team.

Collaborative problem solving. A general problem solving model incorporating concepts from Bergan and Kratochwill (1990), Conoley

(1989), and Zins et al. (1988) was presented in the course as the framework for collaborative problem solving. Likewise, portions of a training curriculum developed by West et al. (1989) provided information regarding critical issues surrounding each stage of the process. Figure 1 depicts the stages of problem solving as reviewed and practiced in the course.

To promote a systematic approach to educational collaboration, students were provided with worksheets and strategies to allow teams to progress from initial determination and clarification of a problem, to brainstorming and choosing among alternatives, to development and evaluation of a strategy or action plan. A case scenario was provided to the problem-solving groups, and students practiced each stage of problem solving in break-out sessions.

The problem-solving model begins by identifying and defining the problem to be addressed as a team (Bergan & Kratochwill, 1990; Zins et al., 1988). Because this is often considered the most critical stage of the

FIGURE 1 Flowchart depicting stages of collaborative problem solving. From *Knowledge Base for the Beginning Teacher* (p. 250) by J. C. Conoley, 1989, New York: Pergamon. Copyright 1989 by Pergamon. Reprinted by permission.

problem-solving process (Bergan & Tombari, 1976), a great deal of attention and discussion centered on this issue. Key considerations concerned taking an ecological-systems perspective (Gutkin & Curtis, 1990), determining the appropriate organizational level for intervention, identifying the "real" problem, and formulating a behavioral definition of the problem (Zins et al., 1988). The need for data collection was acknowledged, and teams were encouraged to recycle through the steps of problem identification continuously as new data clarified the nature of a problem.

After problems were identified and clarified, problem analysis involved analyzing the various factors and components that may be contributing to the problem situation. From a systems perspective, the identification of environmental conditions surrounding a problem (i.e., antecedents, consequences, sequential events) as well as driving and restraining forces were highlighted. Following analysis, teams explored alternatives or intervention options through brainstorming activities. Unique and specialized expertise of various team members was highlighted during brainstorming, and at this stage in particular, students received first-hand experience of the benefits of pooled skill and knowledge. Specific rules for brainstorming were adhered to during the generation of alternatives (i.e., generate as many ideas as possible; think creatively; withhold all qualitative judgments of alternatives; use active listening; record all ideas quickly and accurately).

Following brainstorming, team members combined and modified alternatives, and chose practical intervention options. A specific action plan was then developed to provide direction to the team. A modified version of an action plan form developed by West et al. (1989) was used by group members. These forms allowed students to include in their action plans explicit information on intervention implementation (i.e., who is involved and their respective responsibilities, specific procedures to employ, and time and place of plan implementation).

The next stage of problem solving involved actual implementation of the intervention. Although plans were not actually implemented in role-play situations, it was emphasized that team members should remain actively involved during this stage. Important activities of team members may include checking on treatment progress informally, providing technical and personal support to the treatment agents, monitoring integrity of treatment implementation, and offering assistance in training or intervention. In the final stage of problem solving, team members reconvened to evaluate the procedures. The need for data-based decisions was emphasized to evaluate programs empirically and systematically. Finally, team problem solving involved determining the necessary next steps (i.e., establishing plans for modification, generalization, and follow-up; Zins et al., 1988).

Along with the concrete steps of problem solving, teams were encouraged to evaluate their own group efforts throughout the process. Strategies for summative and formative evaluation were discussed. It was suggested that summative evaluation (i.e., the effectiveness of the team at solving referral problems) can be considered at the individual case level or at a larger systems level (e.g., impact of the problem solving team in relation to larger school issues). Formative evaluation (i.e., the ongoing evaluation of team processing and functioning) allows members to identify factors that might enhance team effectiveness and development.

Conflict management. In a discussion on conflict resolution, the properties, sources, and various types of conflict and conflict situations were defined. Both personal (e.g., belonging, control, personality, involvement) and impersonal (e.g., time, energy, task, information) sources of conflict were identified. Effective ways of avoiding conflicts were also described, such as: (a) avoiding arguing for one's own judgments, (b) changing one's mind simply to avoid conflict and promote harmony, (c) avoiding conflict-reducing techniques, and (d) not perceiving differences of opinion as detrimental (Rosenfield, 1973). Controversies were then classified as constructive or destructive on the basis of the processes by which they are managed and by their outcome. For example, as a process, defining controversy as a problem is constructive, whereas defining controversy as a "win-lose" situation is destructive. It was emphasized that in groups where cohesion and positive relationships among members are high, controversies can have a constructive outcome. In groups where cohesion and relationships are poor, controversies are likely to result in destructive outcomes.

There was a tendency for class members to view conflict, differences, and controversy as negative, and hence, to feel apprehensive about acknowledging or addressing conflictual situations. Viewing conflict as functional and potentially positive became a priority. We attempted to instill in students that conflict has the functional properties of setting group boundaries, reducing tension, maintaining social interaction under stress, clarifying objectives, and encouraging collaboration and a more efficient division of labor (Mack & Snyder, 1971). Nevertheless, students appeared to have difficulty internalizing the conceptual benefits of conflict, seemed to have minimal experience in conflict management, and struggled throughout the quarter to manage conflict effectively.

Finally, conflict management was reviewed with the students. This included a discussion on various strategies for reducing the perception of conflict and processing information. Most basic was identifying variables to facilitate an understanding of conflict processes and out-

comes. For example, variables such as conflicts of interest, role expectations, norms, and previous conflict interactions are important in the perception of conflict situations. Students were encouraged to consider these factors when faced with potential conflict situations in their problem solving groups.

Application of the conflict management concepts emphasized both individual and team analysis of attitudes and behavior surrounding conflict. Teams began by sharing what they had learned about conflict from their recent team problem solving experience. Throughout the discussion of conflict resolution, team members described their own attitudes and behaviors to their team members.

ACTIVITIES

To maximize students' internalization of the concepts of collaboration, class activities were conducted weekly. For the last two and one-half class sessions, students engaged in collaborative role plays, during which time they adopted their prescribed professional roles and worked as a team to identify and analyze a given problem and develop an action plan geared toward problem resolution. Students were given individual and team evaluation forms to evaluate their performance throughout the remainder of the course and in preparation for the final role-play assignment. Students also audiotaped each session and were given the opportunity to review their tapes prior to the next class session.

CLASS ASSIGNMENTS AND EVALUATION PROCEDURES

Readings and Reaction Papers

Selected readings from each of the content areas were required (see Table 2). The assigned readings formed the basis for three reaction papers. The purposes of the papers were to demonstrate: (a) a knowledge of the course content; (b) an ability to analyze critically theories, concepts, readings, and discussions; and (c) an ability to apply the information presented in class and in the readings to actual work settings. The papers were eight to ten pages in length, and students had a choice between two topics for each paper (i.e., "Role Theory" or "The Collaborative Ethic," "Change Theory" or "Team Building," "Collaborative Problem Solving" or "Conflict Management"). Papers were worth a total of 40 points. Up to 15 points were awarded for demonstration of

TABLE 2
Required Readings for Collaborative Educational Problem-Solving Course^a

Role Theory
Biddle (1979). Role theory: Expectations, identities, and behaviors (Glossary of key terms and concepts).
Owens (1987). Role theory (pp. 98–103).
Louis (1980). Toward an understanding of career transitions.
Collaborative Ethic
West (1990). Educational collaboration in the restructuring of schools.
Friend & Cook (1990). Collaboration as a predictor for success in school reform.
System Change
Fullan (1985). Change processes and strategies at the local level.
Goodlad (1984). Chapter 2: We want it all.
Owens (1987). Sociotechnical system theory (pp. 104–110).
Team Building
D. W. Johnson & F. P. Johnson (1987). Team building.
Gibson, Ivancevich, & Donnelly (1988). Work teams.
Conflict Resolution
Walton (1969). Diagnostic model of interpersonal conflict.
Collaborative Problem Solving
Zins, Curtis, Graden, & Ponti (1988). Chapter 4: Step-by-step process of helping teachers help their students.
Ohio State Board of Education. (1986). <i>Intervention Assistance Teams: A model for building level instructional problem solving</i> .

^aComplete citations for the required readings are available in the reference list.

knowledge; 15 points for students' ability to analyze the readings critically; and 10 points for application. Two faculty members read each paper and assigned points independently. Faculty members then met, discussed personal reactions to individual papers, wrote comments collaboratively, and assigned final scores.

Video Tape Assignment

The final project required students to videotape their team problem-solving process. Student problem-solving teams were given a hypothetical case scenario, and they were required to implement the problem solving techniques and procedures presented throughout the course in addressing the needs of the case. Teams were required to schedule approximately 1 hr in a teaching lab equipped with video recording equipment. The team was videotaped as they addressed the problem identified in the scenario in a collaborative role-playing situation.

An evaluation matrix and observation forms were developed by the course instructors to analyze student videotapes objectively (see Figures 2 to 4). Process and outcome (product) variables were evaluated for individual and group performance. Specifically, students were evalu-

VIDEO TAPE PROJECT**(80 points)**

	INDIVIDUAL	TEAM
PROCESS	1 20 pts.	2 20 pts.
PRODUCT	3 20 pts.	4 20 pts.

Cell 1 = Individual Performance
(tape evaluated by faculty team)

Cell 2 = Team Performance
(tape evaluated by faculty team)

Cell 3 = Individual Product - Individual Team Members
Evaluate the Team's Process
(paper evaluated by faculty dyads)

Cell 4 = Team Product - Team Collectively Evaluates
The Team's Process
(paper evaluated by faculty dyads)

FIGURE 2 Evaluation matrix for final videotape project.

ated on their individual performance as a team member, and teams were evaluated in terms of their collaborative process skills. Likewise, individual students were required to write a reflection paper that outlined their perceptions of the team's process, and each team was required to provide a final product (i.e., action plan with brief paper generated by the team). The faculty viewed the videotapes as a group, provided independent ratings of individual student and team performance, and finally, discussed reactions and assigned scores.

CONCLUSION

Like our students, we learned many things throughout this course. We were surprised to discover that many students were reluctant to engage in collaborative activities. The degree of resistance varied among

NAME _____		ROLE _____				POINTS = _____	
Demonstrated Evidence of:		4 = Excellent	3 = Good	2 = Satisfactory	1 = Poor		
COMMENTS:							
1.	Role Integrity (content/expertise)	4	3	2	1		
2.	Role flexibility	4	3	2	1		
3.	Contributing to Team Processing	4	3	2	1		
4.	Responsiveness to Team Process/Effort	4	3	2	1		
5.	Communication Skills	4	3	2	1		

FIGURE 3 Individual student evaluation form for final videotape project.

groups. Specifically, some of the course participants appeared to be uncomfortable relying on their peers in meeting course requirements. The shared outcomes of team activities that resulted in individual and group grades seemed threatening to some students. Paradoxically, some students did not appear to assimilate the collaborative ethic in a course designed to foster collaborative problem solving. This resistance was likely due to students' lack of familiarity with an evaluation procedure of this nature. The course instructors addressed this issue by encouraging students to appraise their respective teams honestly and objectively, confront conflicts and disagreements constructively, and reflect upon their team's dynamics and effectiveness openly. It was hoped that through these practices, students would internalize the concepts of the collaborative ethic and develop important collaborative skills. However, the degree to which individuals and groups of students assimilated these concepts varied tremendously.

The developmental stages of learning were clearly evident in student behavior. Students often attempted initially to integrate and apply abstract concepts at a concrete level. Many participants perceived collaborative problem solving as a product rather than a process. A number of students were concerned with arriving at the right answer in a given scenario as opposed to focusing on steps of sharing resources and expertise to reach a common goal. Although some structure is necessary for the problem-solving process, many students interpreted this to mean strict adherence to a series of absolute, prescribed stages with no room for flexibility.

Some students perceived the concept of parity at a concrete level as well. We attempted to define parity as the appreciation of diverse skills and expertise to promote shared problem solving. Several students,

Team Process Evaluation

GROUP MEMBERS:		POINTS:
1.		
2.		
3.		
4.		
5.		

Scale: 4 = Excellent 3 = Good 2 = Satisfactory 1 = Poor

COMMENTS:

1. Task Orientation (Integrity of problem-solving steps)	4	3	2	1
2. Role Clarification (Implicit and/or explicit agreement on and adherence to group roles, goals, and tasks, relative to problem context)	4	3	2	1
3. Communication/Collaboration (Clear language; Appropriate use of summarization; Demonstration of trust and openness)	4	3	2	1
4. Participation of Group Members (Shared responsibility in problem definition, problem analysis, plan development and plan evaluation; Appropriate contributions, relative to problem context)	4	3	2	1
5. Conflict Management (Problems identified and defined; Differences in opinions/ideas clarified)	4	3	2	1

FIGURE 4 Team evaluation form for final videotape project.

however, interpreted parity as meaning to have identical, rather than diverse, knowledge bases and expertise. They tended to focus on roles from a traditional perspective in relation to how they were trained to function and had difficulty conceptualizing how different professionals could share equal decision-making and problem solving status. For example, one special educator commented, "How can I be equal to a classroom teacher and help solve problems when I have not been trained to work in a regular education classroom?" Consequently, instead of perceiving their colleagues as co-equals in the problem-

solving process, students appeared to cling to very traditional role delineations.

For some students, acknowledging and dealing with conflict proved to be extremely stressful, and each team chose to address conflict in a different manner. Despite prompting by instructors, some failed to deal with conflict openly and constructively. Other students, however, developed a comfortable style of addressing difficulties through humor, genuineness, and direct approaches. This situation may be alleviated in part by establishing the collaborative groups very early in the course (e.g., in the first or second session), and address potential conflict and its management as an initial objective.

In sum, we learned that reconceptualizing roles and responsibilities as a means of facilitating collaboration is a difficult process even at the preservice level. Although all of our students were preservice in the sense that they were preparing for new roles in the educational profession, their previous experiences (as classroom teachers, etc.) exerted powerful influence on their values, beliefs, and expectations. Earlier opportunities for team activities and problem solving, demonstrating interdisciplinary collaboration throughout the teaching process, and facilitating collaboration through continuous group monitoring by students and faculty may address some of these difficulties.

The realities of implementing interdisciplinary preservice programs in higher education to prepare professionals for educational partnerships are daunting and are no less challenging than the call for shared responsibilities within public education. Regardless of the fact that many professionals recognize the inherent value of interdisciplinary programming, many major barriers impede the establishment of such programs. These include organizational, pragmatic, practical, and emotional barriers. A comprehensive investigation of institutions of higher education (IHE) in Ohio concluded that IHEs are not organized nor philosophically prepared to implement interdisciplinary collaboration (Tomkins, Landers, & Weaver, 1989; Weaver, Coons, Landers, & Tompkins, 1990). Furthermore, most institutions cannot afford to revise existing professional preparation programs (Grosenick & Reynolds, 1978). Implementing interdisciplinary programs requires significant coordination efforts from various departments (Golightly, 1987), requiring individuals within institutions of higher education to be proactive in seeking colleagues across departments in persistent pursuit of collaborative values (Weaver et al., 1990). Such collaborative ventures can be very demanding in terms of faculty time and energy. Indeed, we learned that significant investment and commitment by instructors was necessary to coordinate and implement an interdisciplinary course. At the same time, however, collaboration among faculty provided a good

model for students who were asked to engage in similar collaborative activities within the course context.

From an emotional perspective, there remains in both professional preparation programs and public school settings resistance to change and persistence to maintain the status quo. "Turf issues" among disciplines pervade (Sapon-Shevin, 1987), and reconceptualizing traditional practices can be threatening and stressful. However, professionals working together and trusting each other can facilitate successful programs and minimize emotionally laden barriers. The importance and relevance of interdisciplinary partnerships requires a strong commitment and on-going efforts to enhance educational services in schools.

Working together to bring about educational partnerships must be initiated through incremental steps working within the existing system rather than implementing a comprehensive overhaul of programs. Creating temporary, experimental programs is a viable procedure. As well, existing courses that are germane and applicable to collaborative preparation of educators must be identified. These courses ideally cut across various departments, such as general education, special education, educational psychology, educational administration, curriculum and instruction, social work, family and consumer studies, and communication. Once appropriate courses are identified, they must be made available to all prospective educational professionals.

Although these recommendations represent modest, minimally intrusive methods of interdisciplinary awareness and training, more direct methods are also necessary. Structured, interdisciplinary courses cross-listed and cotaught by individuals across domains are necessary to explore theoretical and professional issues fully, and to integrate collaborative perspectives into preservice preparation programs. When funds are lacking, development and procurement of federally funded personnel preparation grants is a viable mechanism (Weaver et al., 1990). Indeed, this represents a critical training area, and one that is likely to be a priority in preparing educational professionals in the near future.

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