

## DOCUMENT RESUME

ED 386 744

CS 215 050

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TITLE The Collaboration of Two Professors from Two Disparate Disciplines: What It Has Taught Us.  
PUB DATE 3 Dec 94  
NOTE 23p.; Paper presented at the symposium "Collaboration Pays Off: An Advance Program for At-Risk College Freshmen Teaches a Few Lessons to the Students, Faculty, and the Institution," at the Annual Meeting of the National Reading Conference (44th, San Diego, CA, November 30-December 3, 1994). For related papers, see CS 215 049-051.  
PUB TYPE Reports - Descriptive (141) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC01 Plus Postage.  
DESCRIPTORS \*Biology; \*Content Area Writing; \*Cooperation; Higher Education; \*High Risk Students; \*Interdisciplinary Approach; Program Descriptions; Program Effectiveness; Summer Programs; \*Team Teaching  
IDENTIFIERS \*Point Loma Nazarene College CA

## ABSTRACT

The dynamics of planning together, team teaching, troubleshooting problems, reflecting on and assessing a program's impact on students, and navigating the paths of institutional proposals and approvals together has become a process of professional growth for 2 professors who developed a summer program for provisionally admitted students. Point Loma Nazarene College in San Diego, California, provides special academic support for these students through its Program Quick Start, a collaborative, cross-disciplinary project involving the fields of literature and biology. The only comprehensive volume on university-level collaboration among professors is the ASHE-ERIC Higher Education Report entitled "Faculty Collaboration: Enhancing the Quality of Scholarship and Teaching" (Austin and Baldwin, 1991). Perhaps the best theoretical basis for academic collaboration is that which perceives collaboration as a mechanism by which a new negotiated order emerges among a set of stake holders. Their collaboration resembles "configurational unity," and their team is an example of "ideational unity." These professors' arrangement also resembles specialist, generalist, and interactive teams as described in the professional literature on collaboration. The professional advantages offered by team teaching include improved teaching, professors experiencing new learning, and diminished teacher isolation. Disadvantages include the extra time team teaching takes, a loss of autonomy, and alienation from departmental colleagues. Differences exist, however--one professor wants to fully integrate the two courses, the other insists that the program not replace his responsibilities to his discipline and to his department. Their collaboration is based on their common concern for nurturing individual at-risk freshmen students, and the use of writing assignments to develop conceptualization in biology. (RS)

The Collaboration of Two Professors from Two Disparate Disciplines:  
What It Has Taught Us

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Symposium Title

Collaboration Pays Off: An Advance Program for At-Risk College  
Freshmen Teaches a Few Lessons To Students, Faculty, and the  
Institution

National Reading Conference, San Diego  
Area IX: Policy Issues  
Saturday, December 3, 1994

CS215050

## The Collaboration of Two Professors from Two Disparate Disciplines: What It Has Taught Us

Darrel Falk and I feel reasonably proud of the program that we created with our dean's help. It is not perfect, of course, and we continually brainstorm about how we can improve what we do for Program Quick Start students. But, interestingly, the dynamic of planning together, team teaching, troubleshooting problems together, reflecting on and assessing the program's impact on students, and navigating the paths of institutional proposals and approvals together has become an unusual process of professional growth for the both of us.

### One Team's Process At a Glance

In the mid-1980s, before Darrel arrived on the PLNC campus, I had approached several PLNC scientists who taught general education courses, asking if they would be interested in interfacing their courses with my freshman composition course during a regular school term. Although I had long since cast my lot with the arts, I had enjoyed the sciences through my years of general education and was convinced that undergraduates at PLNC would be well served by an integration of the disciplines in the general education curriculum. The associate dean of students in charge of academic advisement had dreamed aloud in the early

eighties that a summer support program for incoming students was what PLNC needed, and I responded that I would like to be involved in such a program someday. But all of my colleagues in science said that their lab research schedules would not allow them the time for collaboration. I wasn't surprised. The hard sciences' publication record on our campus equaled that of all the other disciplines on campus put together. But if I could find a scientist who would agree to work with me, his or her participation would bring credibility to my proposal to the academic dean. Collaborations in the arts were common, but the interface of freshman writing with a hard science would be more noteworthy.

I did find a colleague in the humanities who worked with me one quarter, and afterward we determined quantitatively that my freshmen were eventually able to write far better essays in history than the other freshmen who did not have the benefit of my intervention. Negotiating the administrative logistics of this relationship was not easy, however. The various deans never said that they were interested and would like to see our data after our intervention was concluded. So I decided not to push my ideas for a while.

Then in 1991, in an administrative reorganization, the liberal arts received their own dean, David Strawn, and a new faculty committee was formed called the First-Year Experience. Coincidentally Darrel Falk and I were nominated to serve on the committee in its first year, presumably because we both taught

large numbers of freshmen. We hardly knew each other, but we quickly were impressed with each other's concern for poorly-prepared new college students on our campus. While attending a Freshman-Year Experience conference together later that school year, we began to talk about what the two of us might do together to address our concern. We used 1992-93 to plan and propose Program Quick Start (PQS) and 1993-94 to make some revisions in our design. Now in 1995-96, after the second summer of the optional program, we are proposing a policy change that has serious implications for both PQS, future at-risk students, and the college at large--that it be required of provisionally-admitted freshmen.

Early in 1992 Darrel and I visited with our new dean to introduce our idea of a summer program. He was immediately supportive and worked with us step by step through the proposal process, as evidenced by the fact that the name of the program was his own creation. The First-Year Experience Committee quickly endorsed our proposal and sent it to the Academic Policies Committee. This watchdog group over undergraduate curricular changes invited Darrel and me to a meeting, during which several members expressed grave concerns, among them that seven units of academic study constituted too much work for a five-week term for at-risk freshmen. We, too, had been concerned about this, but reasoned that given the low teacher-student ratio and the added tutor-mentors, as well as the scheduled study and tutorial sessions, ours was a reasonable expectation. From the

beginning we had determined that the program would include regular college courses, not watered-down pre-college curricula; we had also concluded that, for many high school seniors graduating in mid-June, a program of more than five weeks (the standard summer school session on our campus), beginning earlier than the second week of July, would not be a reasonable expectation.

In our various roles, Darrel and I divide our tasks fairly evenly, with the exception that Darrel has taken on a slightly heavier role to free me to work more on doctoral studies; this is true of our interfacing with other PLNC offices and with parents of prospective students. Aside from coordinating various lessons and writing assignments, we share the roles of telephoning and corresponding with prospective students and their parents, we throw a reception for students and their parents at the beginning of the summer program, and we make reservations for various PQS activities. This year we have added the responsibility of meeting with our most recent alumni about once every ten days--sometimes all together but more often in smaller groups. We have also collaborated on surveying PQS students and alumni and on composing both the original and the more recent institutional PQS proposal documents.

The Theoretical Literature and the Falk-Bowles Case  
Collaboration is a hot topic in business, education, and other professions. But educational research literature has

little to say about faculty collaboration in higher education, per se. While it is true that educational research conference programs, scholarly journals, and publishers' catalogs are amply supplied with studies of university researcher with elementary or secondary classroom teacher and, more recently, with teacher educators' examinations of their own practice, perhaps while holding short-term assignments in elementary and secondary classrooms, little research has focused on cases of college professors in collaboration.

Most of the scholarly literature on academic collaboration focuses on either joint work in research or collaboration in team teaching. But since the Falk-Bowles collaboration has been a grassroots effort from concept, through proposal, to program and assessment, and now to a critical policy proposal crossroads, I will not make the usual dichotomy between doing research and doing teaching. Rather, I will address the theoretical degrees and types of "team-ness" and the tension between teams and departments.

#### The Foremost Monograph and Collaboration v. Independence

The only comprehensive volume on university-level collaboration among professors is the ASHE-ERIC Higher Education Report (No. 7), by Austin and Baldwin (1991), entitled Faculty Collaboration: Enhancing the Quality of Scholarship and Teaching. In addition to introductory sections on the trend toward collaboration in academic life as well as in business and in other professions, Austin and Baldwin address difficult

questions in such areas as multiple authorship and minority issues as well as a series of recommendations for faculty and for administrators. The heart of the small volume, just over one hundred pages, summarizes findings on collaborative scholarship and research and collaborative teaching and offers an integrated theory of collaboration.

Austin and Baldwin's section on research and scholarship cites a healthy number of sources published since the 1970s, but the chapter on teaching is dependent, mainly, on key sources from the 1970s, a period when team teaching was instituted in many institutions as a way to handle the crush of students. (See definition of hierarchical team teaching model below.)

Although little research has been conducted to measure the outcomes of particular collaborative arrangements or to compare such efforts to independent ones, Johnson and Johnson (1983; cited in Austin & Baldwin, 1991, p. 30) conclude that group performance is superior to solitary efforts even by experts. Kohn (1986; cited in Austin & Baldwin, 1991, p. 30) also explains that a group's potential is greater than the sum of the contributions of the individual members and further concludes that independent work is plagued by wasted time and talent, as well as the duplication of efforts.

#### Negotiated Order Theory

Perhaps the best theoretical basis for academic collaboration is that which perceives collaboration as "a mechanism by which a new negotiated order emerges among a set of

stake holders" (Gray, 1989, p. 227). ". . . [N]egotiated order refers to a social context in which relationships are negotiated and renegotiated. The social order is shaped through the self-conscious interactions of participants" (Gray, 1989, p. 227). Together the stake holders build a reframed conceptualization of the problems or issues, cemented by their "joint appreciation" of the needs they are addressing (Trist's term, 1983, cited in Gray, 1989, p. 229).

Negotiated order theory emphasizes five essential dynamics in successful collaborations. First, the participants are motivated to combine their efforts to accomplish what one of them alone could not do. Second, during the collaborative give-and-take, the participants encounter new points of view and approaches. By grappling with new ideas and approaches, the players arrive at new understanding, new ideas, and possibly new solutions. Third, joint ownership is essential for true collaboration: the individuals must agree on the group's decisions. Fourth, responsibility for the consequences of those joint decisions must be shared by the individuals in the team. And fifth, collaboration is not static; it is a process and changes over time. The roles, processes and even the goals of the team evolve over time (Gray, 1989, pp. 11-16). Oja and Smulyan (1989) indicate that as a collaborative research team works "through interpersonal issues," they emerge with a new sense of the corporate goals of the project, "they interact differently," and they approach their work in new ways (p. 55;

cited in Austin & Baldwin, 1991, p. 49).

#### Four Degrees of Team-ness

As one should expect of any particular case, the relationship between Darrel Falk and me does not fit many of the presuppositions of the scholars writing on topics related to professorial collaboration. But studying several typologies has been helpful to my analysis of the work that the two of us have done together. In their book on team teaching, LaFauci and Richter (1970) describe four degrees of "team-ness": "mere adjacency"; "mechanical interdependence"; "configurational unity"; and "ideational unity." In the least-connected mode, mere adjacency, teachers share space and students and little more. Mechanical interdependence, higher on the "team-ness" ladder, usually includes a common learning situation and joint evaluation of teaching.

Configurational unity, still more intensely teamed, involves an interrelatedness prescribed in a written curriculum, but on a practical level is merely a coordination and integration of disparate fields into a central design.

Ideational unity, on the other hand, is defined by the team's common goals and increased rapport as the individuals strive together to achieve those ends. [place quote marks]

The Falk-Bowles team enjoys more than merely mechanical interdependence: We do far more than share students and teaching space. But in that our work is limited by the discipline-specific syllabi of the separate courses, it looks like

configurational unity, and in that the professors conceived the program from their individual concerns for institutional mission and in that we continue to remold the program to serve students better and to prepare it for institutionalization, our team is an example of ideational unity.

#### Five Models of Faculty Teams

Austin and Baldwin offer five models of faculty teams based on faculty roles and relationships: the star team; the hierarchical team; the specialist team; the generalist team; and the interactive team. Star teams involve a single teacher of record who invites experts to class as guests. Hierarchical teams are the typical university model born of too many students and too few professors; this model includes a senior professor as the main lecturer and either junior faculty or graduate teaching assistants who handle the smaller discussion groups. The specialist team's distinctive is the expertise of the team members who rotate their teaching but collaborate on joint purposes. The generalist team is known for the common interest of the teaching members in all the categories for study, such that teaching is not limited to one's field of speciality but is divided according to other criteria such as the affective needs of the students. The interactive team, of course, is the ultimate in team teaching. The professors are in the classroom whenever another team member is address or interacting with the students. The professors who are sitting with the students often interject questions and points of clarification, and they

frequently interact together with the class during a class period, in dialogue or debate fashion. Generally, responsibility for the course is equally shared by all team members in the specialist, generalist, and interactive models.

These five types of faculty teams, it seems, range from the most traditional and conservative--star, hierarchical, and specialist--to the least conservative and traditional--that is, the generalist and interactive teams. An arrangement of only special speakers rocks the boat of traditional teaching methods least, and the arrangement that calls for the respected senior professor performing the primary lectures and either junior faculty or graduate assistants leading discussion groups is also quite traditional today, although revolutionary several decades ago.

The specialist, generalist, and interactive teams, then, relate best to the Falk-Bowles arrangement. In that each of us brings his specialty knowledge to PQS and the other does not have this depth of knowledge, we look like a specialist team, but in that I sit in on and participate in Darrel's biology classes and labs, our team bears some of the markings of a generalist team. Only during the biology lectures, when I engage Darrel with a probing question or make an application of biology to a current event, or occasionally when Darrel comes to the writing class to engage in a special dialogue does the team appear interactional.

Before I conducted a review of the professional collaboration literature, I was somewhat apologetic of our brand

of collaboration, desiring an idealistic give-and-take of the two professors in each other's classes ninety percent of the time. I would still prefer more simultaneous interaction of the two of us with students, with Darrel in my classes as well as me in his classes (which already occurs), but parallel to marriage relationships, I've learned to give and take, realizing that I cannot have everything my way. My colleague is constrained by his own professional pressures and cannot always agree to my preferred version of collaboration. Some time ago I concluded that I would rather have the current mode of collaboration in a student intervention as good as PQS is in its current format than to have no collaborative intervention at all.

#### Professional Advantages of Team Teaching

Professional advantages offered by a team teaching arrangement are several (LaFauci & Richter, 1970). First, the synergy of the shared teaching arrangement results in self-examination and improved teaching. The added participation of the colleague places positive pressure on each teacher to be certain that what they do is an example of sound pedagogy.

Second, the professors experience new learning, either in their discipline or in another. I have learned a great deal about gene splicing, about the bioethics of euthanasia and abortion, and about details of the theory of natural selection that I had not heretofore understood. That is, my lay knowledge of biology has been enhanced by studying alongside our students.

Third, team teaching diminishes teachers' isolation from colleagues. What's more, interdisciplinary collaboration can break down walls between departments. PQS students come to think of the biology and writing teachers as a unit to the degree that they have difficulty thinking of one professor without the other.

Fourth, educational goals that cannot be met in a single discipline-specific course can be met via interdisciplinary teaming.

And I will add a fifth: The complementary personalities of the participants is also an important part of the chemistry of a team. One student wrote anonymously on her evaluation of PQS the following observations:

I will never forget Dr. Falk and his boyish smile that always put everyone at ease. Or Prof. Bowles and his great (and maybe a little strange) explanations that used body language beyond belief. I couldn't rave on about the teachers enough. They were the most compassionate, kind, and caring teachers I have ever encountered . . . .

This quotation may leave the impression that the two professors motivate students with warm fuzzies exclusively, but that is not the case. We speak frankly and assign low scores when they are merited, but we balance those doses of "tough love" reality with assurances that they are capable individuals and that we care about every one of them.

### Disadvantages and Difficulties in Faculty Teaming

Some of the disadvantages or pitfalls in faculty teaming are these (Austin & Baldwin, 1991, pp. 44-45). First, teaming takes extra time. As the type of teaming moves away from the star model toward the interactional, the amount of time required for coordination and brainstorming increases. In the case of PQS, Darrel and I could not accomplish the necessary synergy without a teamed effort.

Second, teaming creates a loss of autonomy. Few decisions in the teamed context are made unilaterally. Through consultation with colleagues, better decisions are gleaned. Darrel and I often talk possibilities in the daytime, only to call each other in the evening with reservations about our tentative decisions. Then, over time, a better product is hammered out than either of us would have come up with alone.

Third, if faculty do not devote themselves to the integration of their disciplines, "the quality of class sessions can be disjointed, unorganized, repetitive, and uneven" (Heath, Carlson, and Jurtz, 1987; Rinn and Weir, 1984; cited in Austin & Baldwin, p. 45).

Fourth, cross-disciplinary teaming pulls faculty members away from their specialty and from their home departments. Long-term commitment to such efforts may change the direction of their very careers, redirecting their scholarly research, alienating them from their department colleagues.

Any relationship sooner or later generates some conflict, some evidence of cross purposes. Even good marriages produce tension; either this tension is dealt with overtly or it is allowed to seethe internally, creating stomach ulcers or a dissolution of the relationship. Occasional conflict is heightened between strong-willed individuals who set their sights on goals and are willing to make sacrifices to achieve those goals. The more thoughtful and probing an individual, the more questioning of the status quo and the more likely it is that that person will be unmaleable in certain areas that do not appear to be negotiable. Academics are not known for their willingness to accept others' thinking and act on it. If others' thinking goes crossgrain with the professor's theoretical position--arrived at sometimes painfully, having upset his own status quo--he is inclined to stand his ground and fight for his conclusions, now applied to a practical problem.

Although Darrel and I agree on most of the decisions that are required in the processes of jointly administering, teaching, and counseling in PQS, we continue to grapple with a single philosophical difference that has been manifested in several disagreements and frustrations. That difference has two faces, according to which of us is doing the talking:

1. My desire to fully integrate the two courses, with both professors in the classroom most of the time--essentially the interactional model of team teaching; and

2. Darrel's insistence that PQS not replace his responsibilities to his discipline and to his department--and that he cannot spend time in my composition classroom as I do in his biology classroom and maintain his summertime responsibilities to research and his departmental chairmanship.

In my weaker moments, I interpret Darrel's decision to mean that he does not value what I offer in my course as much as I value what he offers in his course or that he doesn't really want to change the way he teaches his course to accommodate my course to the degree that I have changed my course to accommodate his. Therefore, my writing course becomes a writing-across-the-curriculum offering, to a great extent in service of the students' learning biology and bioethics.

Looking back, I now conclude that, unfortunately, I was out to change Darrel's approach to teaching biology by testing new classroom activities during my course time that centered on difficult biology subject matter. And I still think that that would not have been such a bad development. But those changes, should they ever come, would have to evolve naturally. The point today is that Darrel has not changed in the ways I expected. He is still in some ways a traditional lecturer in class. But he is also quite unlike the traditional lecturer in other respects. He is willing, for example, to spend class time early-on talking about successful study techniques in biology, and after the first test, he offers helpful follow-up analysis of adequate versus

inadequate test answers. Therefore it is accurate to conclude that he is concerned about student metacognition.

#### Professional Status as a Factor in Teaming

Professional status is always a factor in a collaboration of faculty members. Eaton says that rarely do professors enter a relationship with the same status, especially when they come from different disciplines (1951, p. 710). Eaton's specific reference is to professors in joint research work. It is my conclusion that to a lesser degree what is said of research would also be true of status in a teaching relationship.

Status is determined by several factors, among them the following: especially for younger members, the place where a terminal degree or post-doctoral research was completed; professorial rank; prior positions held; funding received; one's publication record; internal and external department hierarchy; as well as personal regard by colleagues.

". . . [A] mutual adjustment to each other's status becomes essential" to the existence and productivity of the group. It is difficult to measure creative contributions to the group, as well as to balance routine tasks with creative work. "In the long run, different individuals can work together only if they feel properly recognized and rewarded for the contributions they make." If a more-highly-recognized member of the group emphasizes status over outright working contributions, that member will threaten the group's solidarity (Eaton, 1951, p. 710).

In the case of Darrel and me, Darrel has held a doctoral degree for over twenty years whereas I am only now in the last stages of a Ph. D. program. Darrel has also worked as a senior professor and successful genetic researcher at a prominent university. The highest professional status in his discipline has been attained. In recent years, however, he has turned his attention from graduate students to undergraduates, even in part to novices with special problems. Despite his continuing zeal to remain current in the laboratory and helpful to his pre-med students, among others, he now assumes the flexibility to divide his professional schedule between strictly departmental and more campus-wide concerns.

One might wonder that Darrel would be willing to align himself with a colleague from the other side of the campus, who had not attained a terminal degree. But Darrel had been a member of the faculty three years when I had accumulated eight years of service. My experience on the PLNC campus and elsewhere apparently did count for something. Furthermore, Darrel says that he respects my expertise in the teaching of writing and is interested in learning from me.

Eaton observes that "real teamwork is impossible in the absence of the following status-related conditions: (1) the researchers must have "strong common values"; (2) they must have confidence in each member's ability; and (3) they must believe that the other group members want to "contribute to the common . . . goal" (Eaton, 1951, p. 711).

Our collaborative work has been marked by the following themes, which have drawn us together:

1. a common concern for nurturing individual at-risk freshman students in a culture of learning; and
2. the use of writing assignments both as an end in themselves--to teach students to produce academically-acceptable text--and as a tool that helps develop conceptualization in biology and bioethics.

The fact that we are still collaborating is a testament to our confidence in each other.

A large part of the cross purposes at work in our relationship seem to rest in some of the separate assumptions of the two professors. Darrel, on the one hand, approaches the students with the assumption that the students need to change themselves. Agreeing in large measure, I respond, "Yes, but we also must do all we can to so organize and direct students' experience--even their experience in the classroom so that they may have a full opportunity to do what they need to do to be successful."

Darrel's explanation for this difference in our points of view is captured in his journal entry of July 30, 1994:

This tension between Phil and [me] is interesting. It is not a personal one. In fact I am sure that if it wasn't for our personal abilities of being able to deal with tensions constructively we would have long since given up on the project. The tension is between that

of an education theorist, whose entire scholarship effort is devoted to theory of instruction, and someone whose scholarship effort is directed towards a discipline other than educational theory. The educational theorist wants to develop a model program which requires a total time commitment on the part of both individuals. The non-educational theorist remains above all committed to his own discipline. If interdisciplinary programs like this are going to succeed at a college or university in my opinion, they must not require more than forty hours a week of each individual. This gives the discipline-oriented scholar another twenty-five to thirty hours per week for his/her other scholarly activities. I estimate that I currently devote very close to forty hours per week to the program. If I had to choose between adding ten more hours per week and not being involved, the choice would be a simple one.

And I concluded that I'd rather have PQS and the team relationship with Darrel intact despite the unsatisfied desire for an interactional classroom. The alternative is to have neither the program nor our current collaboration. In short, Darrel and I have accomplished a great deal together. I cannot now enjoy the most ideal team-teaching arrangement, and he cannot enjoy a schedule in which his research and scholarly efforts are free of competition. But we nevertheless have a good program

that is making a positive impact on students, and we are being remade by our collaboration as the program evolves.

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