A study focused on a university-school collaborative research project on language assessment in the classroom context and the benefits of preservice teacher participation. Personnel from the Pennsylvania State University (including 20 preservice teacher education students), intermediate unit (Pennsylvania's regional service centers), and four classroom teachers developed a cooperation that led to changes in assessment, especially regarding portfolio implementation. A preservice participant became an integral part of the project; she performed theoretical research and recorded meetings and conferences. However, her involvement grew to include classroom visitations allowing her to develop working relationships with classroom teachers who were, in essence, classroom researchers. Once she became a classroom teacher, she realized the experiences of the project naturally became a part of her personal instructional and researching practices. The project was a success as a collaborative effort and the collaboration enabled the participants to coordinate a sustainable approach to assessment in classrooms working in or towards a holistic approach to language instruction. (Contains 17 references.) (RS)

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A Collaborative Action Research Project on Assessment and the Implications for the Pre-Service Participant

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Abstract

This report focuses on a university-school collaborative research project on assessment and the benefits of pre-service teacher participation. We discuss our project as a collaborative effort and show how the collaboration enabled us to coordinate a sustainable approach to assessment in classrooms working in or towards a wholistic approach to language instruction. Personnel from the university, intermediate unit (PA's regional service centers), and schools developed a cooperation that led to changes in assessment, especially regarding portfolio implementation. Our pre-service participant became an integral part of our activity: she performed theoretical research and recorded meetings and conferences as most graduate research assistants would do. However, her involvement in the project grew to include classroom visitations allowing her to develop working relationships with classroom teachers who were, in essence, classroom researchers. We discuss our pre-service teacher's role in congruence with the literature on such participation. Additionally, and most significantly, she provides an account of the impact her role has had on her career. Once she became a classroom teacher, she realized the experiences of the project naturally became a part of her personal instructional and researching practices. In light of
the successes of the project on all fronts, particularly the pre-service focus, university-district partnerships may be worth considering further.
A Collaborative Action Research Project on Assessment and the Implications for the Pre-Service Participant

Teacher education, in both the pre- and in-service movements, has historically been appreciated or rejected for its usefulness, effectiveness and efficiency. Educational reforms (America 2000 as an example) seem to discount teacher education needs down to dissemination of the proper information to teachers and imposition of new requirements for pre- and in-service programs. Fortunately, in recent years there has been a considerable increase in long term sustained efforts for, with, and by in-service teachers reported in the literature (e.g. Patterson, Santa, Short and Smith, 1994; Seda, Miller and Knaub, 1991; Au, 1994). These efforts underscore such issues as involvement, time investments, internalization, learning of new theories and changes, and especially, the need to appropriately weigh efficacy versus efficiency considerations.

In this article we share some of our experiences in a three-year project focusing on assessment within the instructional classroom context. We concentrate here on
explaining the gained insights and understandings we acquired. We refrain from directly stating proposals. In accordance with the principles which guided the project, we hope that the readers can derive their own approaches to classroom research and their own proposals. Suffice it to say that we learned much about assessment. However, we learned and gained much more about teaching, the processes of learning and change, and the need to appropriately revisit and reassess our pre- and in-service teacher education programs.

**Background**

When we began studying assessment in the schools, the first step from our vantage point at the university was to contact the local intermediate unit (I.U., Pennsylvania's regional service centers). The I.U. assistant director contacted school curriculum supervisors, reading coordinators, and principals from four school districts to recruit teachers for our project. As the project got under way, all participants met for in-depth conferences (off of school time). We entered the classrooms and exchanged suggestions and results with teachers. We were all making phone calls, sending memos, sharing literature, and making
visits. The I.U. assistant director and the university-based team of an assistant professor and two graduate students approached teachers from outside the school buildings. One of the graduate students on the university-based team was a pre-service teacher; the school-based team consisted of classroom teachers K-8, and one administrator from each district; and a steering committee was formed to ease communication; it included a representative from each institution and each school district.

We set out to study and refine assessment techniques in classrooms working in or towards a wholistic approach to language instruction. We have earned a wealth of information on that very topic. But we have also studied our own methods in conducting our study - collaborative action research involving a pre-service teacher. Collaboration was inherent in our procedure and has led us to share the many positive features it has contributed to our work. Through our description of our overall project and that of four focus projects (three in brief and one in detail), we would like to show how collaboration leads to successful research and how teacher education can benefit from using
Collaborative action research involving pre-service and in-service teachers.

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Collaborative action research takes tools and methods of social science into the classroom to contribute to the theories and knowledge of the field of education as well as the specific classrooms (Kemmis, 1980 in Smulyan, 1989). By addressing practical problems, personnel from all levels and educational institutions (or non-educational institutions such as corporations and community services) share questions and answers. The collaborative feature suggests that all participants share all stages of the project, from planning to evaluation (Smulyan, 1989). In each of the four focus projects we will present, both the university-based participants and the school-based participants asked questions, made decisions, offered proposals, selected materials, created activities, and implemented change. Our research team consisted of all of the participants, not just the university personnel.

Traditional research and development processes consider the classroom teacher merely as a consumer of university-based research. Opposing traditional procedures,
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Our collaborative approach provides the university researcher and the classroom practitioner a significant role in conducting and consuming educational research. Collaborative research improves on traditional research with three significant outcomes. First, through collaborative efforts the true complexity of the classroom is confronted; the research is more directly related to actual instructional improvement. Second, by including the practitioners in the inquiry intended to solve their problems, there is a greater likelihood that the results will be used. Finally, collaborative research reduces the time lapse between the initiation of research and the use of its findings (Tikunoff & Ward, 1983, p. 454-5). Involving teachers as researchers can also serve as a very successful way to change teacher behavior. This kind of collaboration preserves teacher ownership of the classroom and provides incentive to change (Santa, 1988).

Another important aspect of action research is that it maintains the professionalism of teaching by employing the three features of a 'profession' (Carr & Kemmis, 1986). This means that through collaborative action research teachers
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employ the following measures: they use techniques that stem from research-based knowledge; they maintain that concern for their students comes first in their work; and they have the power to make decisions independent of "external non-professional controls and constraints" (p. 220-21).

**Pre-service Teacher Involvement**

An unfortunate pattern among American school systems is a lack of collaborative activity- even within school buildings. This leaves educators unaware or disinterested in the many facets of the school community. Collaborative research can be the vital impetus to pull teachers into the activity of policy, curriculum, discipline, and instruction (Cochran-Smith & Lytle, 1990). It can also pull together the other vital organs of the school body - the administration, community, and parents. But the most "distinctive contribution" of action research is that it provides opportunities for pre-service teachers (Corman, 1957). "Any movement which will encourage a turn toward problem-solving in teacher education needs to be nourished. This, it would appear, is the distinctive contribution which action research does make" (p. 545).
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Teachers who have a strong sense of their own potential for action and change are more likely to become involved in active movements like collaborative research (Hall and Hord, 1977; McLaughlin and Marsh, 1978 in Smulyan, 1984). Teachers with research skills will be more "successful participants in action research" than those without (Rainey, 1973 in Smulyan, 1984, p.17). University students preparing for teaching should be actively involved in research as part of their educational requirements. They should be knowledgeable in using libraries, interviewing, questioning, and most significantly, accessing numerous information bases. During the time of teacher education then, students are qualified to act as collaborative researchers. Coincidentally, pre-service months or years should be the time these students realize their potential - their abilities and opportunities to do rather than to accept. In most cases this realization may be idealism. But a very efficient way to capture the idealism is to connect it with empirical activity. For pre-service teachers, the experience of collaboration can make a pivotal contribution to teachers' careers by giving them confidence in their own abilities. Such collaboration would increase the probability that when
someone presents them with the opportunity to take part in a collaborative project, they may join. If opportunities don’t come to them, these teachers may create opportunities themselves.

Some problems with collaborative research involving school-based and university personnel have been discussed by Sirotnik and Goodlad (1988). These problems can be mediated by involvement of pre-service teachers. First, school and university officials may have trouble working with one another. Second, there are no real rewards for them to engage in research together. Both sides work from different referents: universities may feel they are offering schools a "service" (p. 56), while schools may feel they are just instruments in researchers’ larger projects. Lastly, schools have changed little overall in the ways teaching is practiced, despite university work. Involving pre-service teachers in collaborative projects helps to lessen the gaps between schools and universities because of the existence of a researcher who is between both institutions and has much to learn from each.
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Teachers in training add another perspective that rests between the theory and the practice. Teaching practices may not have changed overall because during preparation, teachers have not had exposure to theoretical knowledge in action. The connection between research and the classroom should be made concurrently with education. "The profession is impoverished because it cannot work on the most significant issues - those that grow out of teachers' practical knowledge, and are most likely to influence school practice" (Stubbs, 1989, p. 1).

Project Description

The project description that follows details our goals, participants, procedures, difficulties, and outcomes. We believe that the collaboration in our study provided the motivation for our productivity. Bringing researchers together with teachers maintained organization and cohesiveness. Bringing teachers together with teachers fostered successful staff development. Our collaboration enhanced teachers' growth in and out of the classroom and enhanced cooperation and understanding among staff.
members (Mergendoller, 1981). Directing "the attention of an entire faculty toward their own instructional problem solving and growth" (p.10) is inherent in collaborative action research. Involving the pre-service researcher brought closure to the gap between university and classroom researchers. Expanding teachers’ awareness and attention and their motivation to cooperate brings us as close as we can get to the "researching profession" (Cameron-Jones, 1983) we believe teaching should be.

**The General Goal: To Develop a System to Evaluate an Integrated Approach in Teaching Reading, Writing, Speaking, and Listening**

The evaluation of educational outcomes is presently under scrutiny, particularly in language arts instruction. In 1988 the International Reading Association (IRA), the largest organization in the field, passed a resolution opposing two types of tests: those which portray the reading process as a series of segmented subskills and those that serve to make decisions about individuals. Many states, including Pennsylvania, are trying to contend with the needs for accountability in education: the need to match instruction
to current theories of language processes such as reading and writing, and the need to evaluate learning outcomes in ways that are compatible with the theories (e.g. Botel and Lytle, 1988; Johnston, 1983; Valencia and Pearson, 1987; Valencia, Heibert & Afflerbach, 1994). In Pennsylvania the move to implement The Pennsylvania Framework for Reading, Writing and Speaking Across the Curriculum ("The Framework") responds mainly to this need to couple instruction with current theory. Presently, teachers in Pennsylvania are the center of a major force in language arts instruction. Teachers seem to be sympathetic to the ideas promoted by The Framework but fear that by changing their instruction their students may not fare well on state or other standardized tests. Our project addressed evaluation needs, set forth in The Framework by Botel and Lytle, of teachers trying to implement new instruction in their classrooms.

Our study involved twenty teachers enrolled in an in-service education program, a teacher education faculty, and graduate students in the College of Education at Penn State University, University Park, PA. The graduate students were
working on degrees in reading and language arts and were using assessment instruments developed by this project. One of the project coordinators (who was also an assistant professor) taught two different courses on assessment issues. One of them was on classroom applications for kindergarten to twelfth-grade teachers and the other was a doctoral seminar on current issues on assessment. In addition, she was in charge of the basic reading methods course for undergraduates.

The design for the project was a focus on collaboration across grade levels, institutions, and special interests. All participants learned through interacting with others. They met in pairs, triads, and various other groupings. Project coordinators observed single classrooms. They also met with teachers within districts, with aggregate groups across several districts and with the group as an entity. The in-service teachers attended seminars and workshops on approaches to assessment of language processes and gained insight into the complexities of these approaches. These valuable seminar experiences were shared with others in
their schools who were employing The Framework in their classrooms.

The progress of the project was monitored primarily by formative feedback from project teachers and the steering committee. In each district, the steering committee representative met regularly with project teachers. Feedback from these sessions, together with observations by university staff and graduate students were reviewed so that adjustments could be made. One of the significant adjustments was the incorporation of seminars in each of the participating districts. Topics for the seminars came directly from the expressed needs of teachers. The topics were mostly about some alternative assessment issue and the small group setting provided ample opportunity for interaction among the teachers and project staff. When both small groups and the total group gathered, a significant portion of time was set aside for sharing ideas and perceptions.

Revelations from the project were numerous. While all of the teachers believed in a wholistic approach to teaching language processes, the normal reluctance to test unknown
waters was evident. Building support for this effort within districts as well as within the project as a whole took more time than we had originally planned. Our objectives and timelines were revised to achieve the necessary trust and support.

We developed case studies, in the form of focus projects, with one teacher from each district. Two focused on writing, one on reading, and one on small group processes. We addressed questions that the classroom teachers identified regarding their implementation of The Framework. Considerable time was spent establishing and then maintaining trusting relationships; since we had approached the teachers, about one-third of project time was spent convincing the teachers that we were there to work collaboratively with them based on their assessment needs - needs which they acknowledged as valid.

**Classroom #1**

Teacher’s Question: How can we motivate students to actively participate in the writing process? (This project involved the classroom teacher and the in-class Chapter 1 teacher.)
We began this project by bringing to the classroom 25 books written by students from Centre County, PA. These books, winners of The Schlow Library (State College, PA) Write Your Own Book Contest, successfully motivated the students to want to write and showed them the variety of different types of books they could write. Students experienced the writing process (pre-write, write, revise, edit, publish) and had several opportunities to conference with each other, the teachers, and project coordinators who visited the classroom (including both graduate students), and a student teacher. The final drafts were published and read to parents at an "Author's Tea." The books were evaluated by the teachers and the students completed a self-evaluation. In addition, the students wrote paragraphs explaining what they know about writing.

**Classroom #2**

Teacher's Question: Will increased adult interaction and a lower student/teacher ratio improve the writing of low ability (Chapter 1) readers?

This project involved taking ten Chapter 1 students through the writing process. The children worked in groups
of five, one group with the university professor or a graduate student, the other with the class Chapter 1 teacher. The smaller sized groups allowed for increased adult interaction during the pre-writing, revising, and editing stages. Students conferenced with a teacher and peer, enabling the teacher to model comments and questioning used when responding to peer writing. The children's stories were published.

Classroom #3

Teacher's Question: Can I develop an easy way to use a story map that will enable me to assess students' comprehension?

Students in this class were involved in an independent, paired reading program (referred to by the teacher and students as the reading workshop). Classmates worked together to choose books that they would read; books were chosen from a list provided by the librarian. After finishing the books, the students would complete a story map as a comprehension check. A variety of maps was tried and adapted until one was created that showed the students' knowledge of the story. (The researcher-teacher-librarian collaboration was described in Seda, Miller & Knaub, 1991).
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Classroom #4 - In-Depth Study (Incorporated into this focus project was heavy involvement by the graduate students, one being a pre-service teacher. Each student visited the classroom every other week with the assistant professor. They made observations as well as suggestions through conferences and classroom activities.)

The collaboration experience between our university team and classroom practitioner Robin Shaw serves as an example of a teacher's natural expectations when a researcher enters her classroom. Robin was asked by the district's language arts coordinator to participate in this project but was hesitant to join. What can a university and county-wide research team gain in her classroom? And what modifications, above all, does the teacher make for such a project? Robin's hesitance was well-founded in her personal sense of security behind the closed door of her own fifth-grade classroom. It was also a product of little or no intra-district collaboration among classrooms or elementary schools. With almost no known support outside her
classroom walls. Robin’s reluctance to collaborate is easily understood.

What seemed to bring Robin into our assessment project was the expectation that we would come to her with a focus area for study and all instruments necessary to carry out the research. We did go to Robin, not in a meeting room or a conference room, but in her classroom. Addressing Robin’s specific classroom questions was our goal, so walking beyond the classroom door was imperative. So we asked her what area of inquiry, related to The Framework implementation, she wanted to approach. Finally, we asked Robin how we could be of best use in addressing her concerns.

We believed there was no pragmatic way to approach Robin’s concerns other than being in her classroom whenever we could arrange visits. So each week for three months the assistant professor and graduate students spent a few hours visiting the class and conferring with Robin. In the beginning, we presented Robin with the question, "What concern do you have about your classroom implementation of The Framework?" Her reply came after three weeks of a personal analysis of her current classroom and her
intentions for the future. Her concerns: "How do I assess group processes? Will working in cooperative groups on a regular basis improve students' abilities to contribute to the group process? Can students accurately self-evaluate their participation in the group process?"

In one of our early conversations with Robin, we sensed that she wasn't content with the idea of researchers actively changing her classroom. As the teacher, she felt responsible for having something worthwhile for the researchers to study. She felt she couldn't really do anything for us in that respect. As researchers, we had to consider how we could be of most help to her. Instead of jumping into suggestions for reforms on Robin's classroom, both parties practiced patience by listening. Robin needed to know if students were performing as group members and if so, to what extent. We were concerned with how students can evaluate themselves and each other in group processes and what instrument can be used to do these evaluations. By voicing these and other areas of inquiry, we found that we shared concerns and that working together would at least address, if not solve, all of our questions.
In the beginning stages, we found that all of the teachers with whom we worked were at differing stages of transition. Their implementation of The Framework needed structure and guidance; we tried to provide that with additional personnel on weekly visits. The most significant contribution we tried to make in the beginning was disseminating the knowledge that no one has all the answers. We were learning together by taking ideas across classroom boundaries. This provided us with the challenge of focusing each classroom into a project with which the teacher was familiar.

Robin was familiar with large group activities and felt their work would yield quick results. From other classroom observations we had made, we suggested smaller groups, such as those with three members; clearly defined roles and responsibilities allowed more interaction and greater productivity. We compromised on the group size at four and decided to give the group members different types of tasks. We brainstormed on group projects and chose one that Robin had already put together and had started using the
previous year. We waited three weeks in order to get organized and then centered on the question of group assessment.

Robin arranged the classroom seating in cooperative learning groups of four members each and then we were ready to begin the Create-A-Country long-term project. This project provided each of the six groups with a packet and a corresponding notebook. The folder of worksheets contained steps for creating their own country complete with vocabulary, questions, and illustrations. Each group member had a specific job as either recorder, observer, checker, or reader. An adult observed the students at all times while they worked on the project activities project, Robin had a student teacher and two pre-student teachers, and we brought a research assistant and a project coordinator to the classroom as well.

Our pre-service teacher took notes on each classroom session. In addition to documenting the students' progress, we documented our own. We are convinced that proper assessment of a project cannot be accomplished if the researcher is not there with the practitioner when questions
arise. Collaboration is a constant negotiation. Those involved benefit from being able to ask each other questions and to make changes immediately. There is no question that in our specific case, students benefitted also.

Robin's original belief that she alone had to provide something worthwhile for the researchers to study subsided after about three months. We told her that all of the teachers participating in our study were at different points in their transitions of implementing new programs. Once we shared concerns with Robin and she was able to form a focus question, she was much less apprehensive about her participation. On each of our visits, we had brought with us the knowledge that other teachers were experiencing apprehensions similar to Robin's. After that point of achieving focus, mutual respect became obvious. All of us recognized the difficulty of incorporating any type of collaborative research with one teacher in a small, rural district.

In one of our most productive visits to Robin's class, we identified instructional areas that crossed content boundaries. The specific content the students covered in
their group projects could be covered in more detail in their other subjects. So we discussed ways of taking parts of the Create-A-Country project and expanding on them in other subject areas. We realized that we were looking more broadly and Robin wanted to know specifics. We as researchers identified items that the teacher may apply in detail. These two responsibilities complemented each other and clearly helped maintain the healthy relationship among all of us.

Robin had little trouble coming up with the group project. She did need help implementing and assessing the project. We found ourselves most practically employed in evaluating each day's activities and each of the assessment tools used. Robin agreed that our roles as co-facilitators were most appropriate for her.

About nine months after Robin began collaborating the Create-A-Country project with the university staff, she wrote to one project coordinator. After teaching her first session of The Framework to four of her district's teachers, she reported, "They remind me of myself just two years ago [when the entire assessment project began]. It was
encouraging to see how far one can progress. I also felt good about being able to lead them and answer a lot of their questions."

Impact of the Project

This study has fostered changes in teacher dispositions toward both instruction and assessment. Comments by the teachers on an end-of-year questionnaire included statements such as, "I have completely changed my thinking about assessment in particular. I hardly ever use a 'book test' anymore, but have designed my own instead. I've tried to give the children an opportunity to freely express themselves as an evaluation rather than true/false or multiple choice." On instruction, we found comments such as, "I have tried to tie subject matter together, so that the children (hopefully) will see that all the subjects go hand in hand. For example, I've tried to choose some literature to enhance the study of social studies and science." Other reactions included, "I know that whole language definitely is the way to go in teaching language arts. The children are much more interested in what they are reading and enjoy it a lot more. Assessment is difficult. I struggled with that
aspect from the beginning. I'm still in the trial and error stage." Another teacher stated, "Finally, I am beginning to realize that one's understanding of learning, instruction, and assessment needs to be on-going and ever-evolving."

These statements reflect the activities, decision-making processes, and changes in thinking that teachers were going through as they engaged in this project. In this endeavor, we set out to collaborate with teachers on ways to assess instruction in a whole language philosophy and to help develop the idea of teacher as researcher in these schools. We have made a solid start; teachers have become more reflective and sensitive to assessment issues and have made changes in their instruction.

Throughout the duration of the project, each of the teachers has been at a different point of transition. Each teacher has taken each step of the transition and has adapted it to his/her individual needs, and individual styles and has adapted it to the needs and styles of the students. This was certainly expected and desired. By working through each step uniquely, each teacher had ownership of his/her
research and of the project. What we feel we achieved was certainly not homogeneity but diversity of styles and approaches to common problems. The important characteristic for the whole project is that each teacher reflected upon and took significant steps in incorporating assessments as an integral part of his/her instructional and curricular activities. Teachers have become more comfortable with ambiguity and with having many answers or only tentative answers to common problems. We think this is an important ingredient for reflective practitioners and problem-solvers. As the teachers themselves have repeatedly expressed, teaching now is more interesting and motivating than it was before. By the same token, they express that their students are more interested in reading and writing than before this study.

Discussion

As we set out in this project to collaboratively address a common problem, assessment, we soon realized that there were components of collaboration, participants' knowledge bases, and belief systems that we needed to address. First,
and of utmost importance in the beginning, was the element of trust. The project had been initiated by a university faculty member and an administrator of the intermediate unit, neither of whom had direct ties to the school districts involved. Although the teachers were volunteers from their respective districts, an unequal power balance existed from the outset. As mentioned earlier, Sirotnik and Goodlad (1988) acknowledge that school district participants may feel they are just instruments in researchers' larger projects. Here mediation is achieved almost immediately by the presence and participation of pre-service teachers. They have no specified program and vacillate with any of the project's various inclinations. It took considerable time and effort, particularly on the part of the initiators of the project, to establish that there was no pre-determined agenda besides the focus on assessment. The intermediate unit administrator was well-known by district administrators and some teachers. By association, the sense among them was that the university faculty must at least be "okay" and have something to offer. The constant appearance of the pre-service teacher offered reassurance as well, as she listened to and recorded everyone, not just the administrators.
Up to the time of the third large group meeting, we often heard the question, "What do you want us to do?"
Gradually, the teachers realized that we really did not have a pre-specified plan for them to implement. That came as a surprise for some. During one-on-one interviews conducted after the first year, some teachers admitted that they joined the project because they thought we were going to hand them assessment tools which they were going to use in their classrooms. After one year, however, most of these teachers realized that we couldn't just hand them tools to use if assessment were to be integral to their practice.

The second component of collaboration we needed to address was the need to incorporate elements of staff development in the project. Gradually and necessarily, the project became one of long-term staff development.

Although all of the teachers involved had participated in various in-service education programs addressing a wholistic approach to language, the Pennsylvania Framework, and cooperative learning, assessment was a new topic. Further, the education programs in which they had participated had been short term courses, rather than
sustained studies of topics. As they raised questions and issues which they felt needed to be addressed by all, we organized workshops and increased the frequency of sharing sessions, cross-classroom visitations, and classroom visitations by the intermediate unit administrator and the university personnel. These latter visitations allowed those of us who had the flexibility to do so to visit all the classrooms to determine common grounds and needs of the participating teachers. It also helped to share information across classrooms and to exchange ideas. From those visitations, we were able to tap into the specific expertise of individuals in the group and to facilitate communication for those with common interests and experiences. During our visitations, we shared our own ideas as well as those we had learned from other classrooms. All of those activities contributed to each teacher's learning and implementation process.

Third, the staff development component of the project was useful in furthering the entire group's knowledge base. Very quickly, we all became aware of the wealth of knowledge that the group as a whole possessed and of the fact that we
needed to share that knowledge base. No one became the sole expert on anything, but rather we gradually developed a collective of experts. Although the power imbalance, caused by expertise and knowledge, did not completely disappear (see Miller & Martens, 1990), it was diminished. We all became more comfortable with what each of us had to contribute to the project. Additionally, due to the long-term nature of the teacher certification program, the pre-service teacher received 18 months of staff development even before student teaching. Her advantage here was two-fold: she came to better understand the frustration in achieving cohesion among staff members, and she was able to prepare herself to be smoothly integrated into future development processes.

Fourth, and perhaps the most pervasive and yet elusive is the belief system each of us brings to the collaboration. Through collaboration we observed and witnessed much change. Those changes were evident in the activities the teachers were organizing for their classrooms and the performances of their students. Similarly, the university faculty member used her experiences in the project
to improve her university courses both in content and in process. However, the natural course of our own belief systems persisted. As we questioned our own assumptions, we also vacillated, took our steps warily, and at times even found ourselves performing in ways which were contradictory. Similarly, whenever we encountered a new beginning (teaching a new course or a new grade level), we often found ourselves resorting to well-known strategies, even though we knew that was not where we wanted to be. This should not be considered a regression but a strategy to learn new situations well before embarking in new strategies or philosophies.

Implications for the Pre-Service Participant

The role of the pre-service graduate student in this project was to gather and to report on library materials on assessment and collaboration and to keep notes of all meetings involving researchers and teachers. She also visited classrooms (she was particularly instrumental in classrooms #2 and #4) on a regular basis to observe the implementation of assessment instruments as well as the
collaborative efforts of project participants. However, the most critical and valuable role of this single participant really began two and one half years after her initial job description was conceived. This position is that of a classroom teacher implementing the infinite lessons of this study and its members. Lisa discusses the impact of the project on her teaching career:

The most remarkable result of my part in the assessment project has been a triumph over the discrepancies between theory and practice. When I walked into a teaching position in late November (as a long-term sub until June), I was swamped with responsibilities. In the ensuing months I felt much like I was "building a plane while flying." But what occurred to me in a rare few moments of reflection on my teaching was that I had internalized many new methods. After my first three months, I sat down to review some professional journals and scattered articles I'd received from the I.U. and other project members.
Happily, I discovered that what I had put together very rapidly showed a reflection of my time spent working with practicing professionals. Much of the whole language methodology in all of the material I had abstracted and all of the meetings I had recorded had become a part of my daily and long range planning. Among other things, I had already established working portfolios, related music and writing, encouraged writing with student-chosen topics, and graded writing assignments holistically. I was heading into my third marking period with plans for cooperative learning groups and an editing workshop.

These and future activities came quite naturally to me (and happily, to most of my ninth graders) that I found I had incorporated many assessment team experiences. Because they had accepted me into their classrooms even before I’d done student teaching, I had exposure to the practical dilemmas teachers face on a daily basis, and they had enriched those listed as case studies in my curriculum and instruction texts.
Through my work with these classroom researchers, I had learned that I would encounter ambiguity on a routine basis. Dialogue about ambiguities and possible solutions helped me achieve a level of competence, convincing me I could and should collaborate with colleagues, regardless of their discipline or experience. From my English department peers, I was asked for information on portfolio assessment, included in the composition of the summer reading lists and writing assignments, and asked to select new textbooks. From some colleagues I had a tremendous amount to gain. To others I had insight to lend. For example, I was asked by the sophomore English teacher for some ideas on assessing cooperative learning groups. I had access to evaluation instruments our group members had issued to me and she had access to trusted and effective methods she had used. By sharing these instruments, we combined student-to-student evaluations, student self-observations, and teacher evaluations on content, organization, style, and delivery. This collaboration gave us more comprehensive manners in which to assess
projects; for her the assessment was on term papers and for me it was on presentations on classical mythology (a project I created to be assessed similarly to Robin's Create-A-Country project).

Clearly, the hours of observation and interaction in learning environments like those discussed in Classrooms #1 and #4 enticed me to develop progressively my own classroom. Cochran-Smith and Lytle (1990) note that interpretive researchers "demonstrate that understanding one classroom helps us better to understand all classrooms" (p. 6). The liberty to enter and then to leave Robin's and other classrooms with shared concerns provided a reflection that proved indispensable by the time I, in an individual capacity, encountered the often enigmatic nature of instruction.

The relationships I developed with my new colleagues were based on my previous associations with project members. But I carried with me another type of relationship - that of the teacher to his/her professional literature. I had observed teachers, I.U. personnel, and
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university researchers regularly referring to work in journals, books, and manuscripts. I assumed the habit of looking for possible solutions, shared experiences, and of course, the greatly desired answers in my own resources: Nancie Atwell's *In the Middle - Writing, Reading, and Learning with Adolescents*, Stephen Tchudi and Diana Mitchell's *Explorations in the Teaching of English*, Mary Dupuis et al. *Teaching Reading and Writing in the Content Areas*, Louise Rosenblatt's *Literature as Exploration*, and the *English Journal* were on my desk all year with tabs marking the numerous times I had reached out for help. Among my other resources were the various books on poetry and Shakespeare that other teachers had lent to me, *The Framework*, and my own notebooks and projects I'd completed as course work. In addition to helping me generate the essence of my classroom, my own research on current adolescent literature supplemented the listings and catalogs our department used to create
summer reading lists. I have come to rely on these resources as an unwavering support group that is available to me when personal conferences are not.

I found myself in a different school district for my second year in the classroom. Yet as early as my very first in-service, I was relating my assessment project participation to my new position. My contact with classroom teacher-researchers, university researchers, and intermediate unit personnel put me at the forefront of our district's portfolio system development. In our first semester, I phoned and visited assessment team participants. They offered advice, many new contacts across the state, and reports of their work with portfolios. A presentation to my department of my collaborations provided a foundation on which we could build three phases of portfolio integration.

As I had come to expect, my affiliation did not warrant answers, but shared perplexities and possibilities. Having become tolerant of ambiguity, I could focus my energies on starting to
produce solutions for our special needs. My tolerance and subsequent decisiveness only developed from the modeling of the many mentors I had in the assessment project. Naturally, in these teacher-researchers, I observed each critical phase of development. We have noted the transitional stages the teachers found themselves in to be different for each person at each interval. By attending and recording meetings, collecting and translating data, and interacting with students, I came to expect steps toward change and not miraculous transformations. As opposed to solely reading textbook accounts, I watched and then recounted decision-making processes and the struggles to achieve thought and behavior modification. I did not have to wait until mid-career to realize the "importance of practical knowledge" (Stubbs, 1989, p.5) and could look for and use it immediately so as to build on it.

Throughout my first two years teaching, I frequently thought about the people so integral to my
teacher training. Without question, the assessment team participants rank primarily among them. Whenever I encountered problems where I was caught off guard and for which I was unprepared, I realized that it was up to me to decide how best to use the methods they had given to me in the situations my career presented. In two formal years with the project, I saw parts of our initial research expire with the most recent conferences and books. I became aware of the expedience of information and of our need to contain it and subsequently build upon it.

The awareness of all of these factors surrounding one's career cannot help but mold a strong manner of respect for all who research for the betterment of their chosen fields. As Cochran-Smith and Lytle (1990) maintained, "There is little disagreement that teachers who engage in self-directed inquiry about their own work in classrooms find the process intellectually satisfying, they testify to the power of their own research to help them...transform their teaching practices" (p. 6).
Conclusions

Bringing together pre- and in-service teachers, administrators, and university researchers into one project, although somewhat awkward in the beginning, turned out to be most propitious for everyone. Each person, from a unique perspective, both contributed and derived much from his/her participation. Lisa’s account of her gains has been uniquely echoed by all involved, to a greater or lesser extent. Clearly, the pre-service participant’s gains are commensurate with those of her collaborators. As the classroom researchers provided her with integral language, experience, and practical knowledge, she raised important questions which stemmed from her coursework, classroom participation and foresight as a classroom teacher.

In-service teachers have continued learning with and from the students and peer teachers. Some of the activities initiated through the project have been expanded within individual districts and, in two cases, including the pre-service participant’s district, generation of portfolio assessment systems. It has been through those expansions
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where the role and support of administrators has been invaluable. For one, teachers and researchers were encouraged to experiment with ideas that were both useful and sensible. Further, by providing expertise, administrators were able to provide appropriate guidance as needed.

As expected, the project was not without difficulties. However, those are less memorable and weigh considerably less than the satisfactions. Among the factors that may be viewed as difficulties were teachers' and administrators' varying levels of expertise and involvement, funding continuation and progress reports, everyone's availability and willingness to participate in long-term projects, and unfamiliarity with conducting a long-term project "quite loosely." If we are to identify a key contribution made by each person, it was the agreement, after the initial uncertainty and subsequent conviction based on integral evidence, that we needed to adjust and "meet everyone where they are" if we were to have any significant impact.

The implications of university-school collaborative projects for pre-service teachers and the possibilities for teacher education programs may be worth considerable
attention. If pre-service teachers could engage in even smaller-scale sustained school-based activities which contribute to the schools' functions and teachers' growth, perhaps university-district partnerships would be more common. Similarly, in-service teacher education programs should consider long-term projects with focus on in-depth yet comprehensive processes through which teachers gain continuing education credits. Therefore, courses could be oriented toward specific needs of long-term projects. This vision may also be feasible for university-district partnerships and worth considering further.

From several vantages, the profits of the assessment project have been innumerable and by the increase in networking, the strength of the collaboration has remained evident. Our efforts have been driven by a feeling of accomplishment we share not only within our own team but also within the professional circuit we reach through books and journals. Thus, long-term sustained enterprises may be worth the efforts when the gains in effectiveness surpass the gains in efficiency. After all, although we seem to often forget, education is more about being effective than about being efficient.
Acknowledgements:

This work was conducted while Ileana Seda was an assistant professor of the College of Education of the Pennsylvania State University, University Park and Lisa Mamana was her research assistant and a graduate student in English Education. The project was partly funded by a Spencer Fellowship granted by the National Academy of Education to I. Seda, by a grant (J. R. Coldiron and I. Seda) from the Pennsylvania Academy for the Profession of Teaching and Pennsylvania's Central Intermediate Unit (IU #10).

Our acknowledgements to Dr. J. Robert Coldiron, Ms. Judi Kur, the twenty teachers and the four district administrators that participated in the project, plus all the other district and building administrators who allowed us into their schools.
References


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