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AUTHOR Clark, Linda; And Others
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ABSTRACT

Millersville University (PA) began its involvement in Project 30 in the summer of 1988. Through a variety of activities, the project team was committed to the improvement of preservice teacher education through the integration of liberal arts and professional education courses. This report describes the accomplishments of Project 30 and discusses future directions for improving teacher education and enhancing the climate for teaching excellence on campus. The report provides a compilation of several documents which together describe a variety of activities, successes and missteps of the last several years. The main body of the report describes the Pedagogy Seminar program, a 1-credit, optional seminar that supplements selected arts and sciences courses and is team taught by arts and sciences and teacher education faculty. Each seminar focuses on its accompanying arts and science course and its instructor as a "case study" in pedagogical content knowledge. With the faculty team, students analyze the teaching of a particular course and practice transforming course content for teaching. For developing a model to enhance the teaching profession and strengthening humanities foundations for teachers, the university was the recipient of the Christa McAuliffe Showcase for Excellence award and recognition from the National Endowment for the Humanities. (LL)

Project 30 and the Pedagogy Seminars:

A Report

to the Administration and Faculty

Millersville University
April, 1992

MILLERSVILLE
UNIVERSITY
MILLERSVILLE, PA 17551

To: Joseph Caputo, President
Benjamin Taggie, Provost
Katherine Gregoire, Chair, Faculty Senate

From: Project 30 Team (defunct)
Linda Clark
Christopher Dahl
Cynthia Dilgard
Sam Ha
Albert Hoffman
Barbara Stengel
Nancy Smith
Pedagogy Seminar Advisory Council
Rosario Caminero
Sam Casselberry
Pat Hill
Keith Lauderbach

Re: Project 30 Report: Accomplishments and Future Directions

Date: April 1, 1992

As you know, Millersville began its involvement in Project 30 in the summer of 1988 under the direction of the Project 30 team listed above. Committed to improving teacher education at Millersville through the integration of liberal arts and teacher education, the team planned and implemented a variety of activities. Now, three and one half years later -- after completion of the Forum Series and nearly three years of pedagogy seminars -- we offer this report to the administration and faculty. Given the breadth of our commitment, the work is in no way completed. Improving teacher education and enhancing the climate for teaching excellence on campus is an on-going challenge. We continue to assess what we have accomplished and what new initiatives are required. Still, we can report significant success.

Enclosed you will find a compilation of several documents which together describe the activities, successes and missteps of the last several years:

* The Project 30 "Summary Report", submitted to National Project 30 Directors last year. This report appears substantially intact in the Project 30 Year 2 Report published recently (1991).

* A lengthy "technical report" of sorts, describing the

pedagogy seminars and the data presently available regarding their effectiveness.

* The generic pedagogy seminar syllabus.

* A listing of seminars scheduled and faculty participants.

* A summary of faculty comments. Compiled from structured interviews of all participating faculty, this document describes faculty reaction and interaction.

* Information regarding the Christa McAuliffe Award.

* Information describing Millersville's involvement in the Association of American Colleges/National Endowment for the Humanities Consulting Project.

Millersville's involvement in Project 30 has encouraged and/or highlighted numerous corollary activities which also target the interaction of liberal arts and teacher education and which contribute to the campus climate for teaching and learning:

* Positive feedback from NCATE and PDE regarding our efforts to integrate content and method in teaching.

* A $10,000 University Special Projects grant from the SSHE Professional Development Council to support the Pedagogy Seminars.

* Two PA Academy Grants - totalling $17,000 -- to support the seminars as a vehicle for integrating liberal arts and teacher education.

* The Christa McAuliffe "Showcase for Excellence" Award.

* Faculty interaction in the development of an NEH grant proposal to develop perspectives courses for future elementary teachers, which has recently been funded, and which will lead to even more fruitful interaction.

* Faculty interaction regarding improved science and technology preparation for future elementary majors; specifically the creation of an interdisciplinary task force dedicated to "Focus on Science for Elementary Education Majors".

* The Educational Foundations department "Advance" devoted to curriculum revision integrating content and method for secondary teachers. While a SSHE Faculty Development Committee proposal to actually write this curriculum was not sent forward, Susan Arisman of the PA Academy for the Advancement of teaching has verbally indicated a willingness to fund this effort.

* Sam Casselberry's successful SSHE grant project regarding the preparation of social studies teachers.

* Barbara Stengel's Spencer Fellowship research which focused on teacher knowledge and incorporating the voices of arts and sciences faculty, education faculty and public school teachers in thinking about teacher preparation.

* Interaction between the Educational Foundations Department and various science departments to improve the science methods block.

* Involvement in the continued Project 30 Alliance.

* Development of an (unsuccessful) FIPSE grant Proposal to continue implementation, assessment and dissemination of the pedagogy seminar concept.

* Numerous inquiries and invited presentations regarding pedagogy seminars and their usefulness, including consulting work by MU faculty with SSHE sister institutions, and implementation of seminars by Renaissance Group members.

* Presentations by Drs. Stengel, Gray, Smith, Hill, Lauderbach, and Casselberry regarding MU's Project 30 involvement at at least six national and state conferences.

* Presentations by Deans Dahl, Hoffman, and Smith regarding the pedagogy seminar program at Project 30 Alliance and Renaissance Group National Meetings.

* Planned visit by a team from Michigan State's National Center for Teacher Learning to observe pedagogy seminars, interview participating faculty and study faculty representations of their own teaching and thinking about teaching.

* A potential campus newsletter on teaching, developed by the SSHE Teaching Academy alumni/ae with the support of the campus Faculty Development Committee and the endorsement of the Pedagogy Seminar Advisory Council.

* MU involvement as a resource institution in the American Association of Colleges' NEH grant project to enhance the humanities preparation of future teachers.

Several other projects (Summer Science Institute, The Governor's School for Teaching, Project Forward Leap, for example) continue to prosper on campus, both contributing to and benefiting from a campus climate that expresses university-wide responsibility for teacher education and university involvement in basic education. Several MU faculty members' participation in Renaissance Group affinity groups

(most prominently, Jack Cassidy's leadership of the "Innovations in Teacher Education" group) point to our productive involvement in these issues in the broader education community. In short, there seems to be a healthy faculty willingness to work together on a variety of projects. While MU's Project 30 involvement is not the sole factor in the existence of these attitudes, it has contributed to it by highlighting discussions of teaching and learning, and by institutionalizing those discussions through the pedagogy seminar.

We have learned many lessons from our efforts to integrate liberal arts and teacher education over the past several years. Primary among them is that attempts to "reform" anything ought to be self-renewing. That is, we must build into our plans and programs the means to continue the conversation about values, goals and new directions.

This has proved to be the unique contribution of the pedagogy seminar. As seminars support the thinking and learning of our teacher education students, they also serve participating faculty as a mechanism for self-development and on-going curricular discussion. Comments from both faculty and students included in the following pages highlight the value of seminar interaction and the quality of seminar conversation in raising consciousness, increasing reflection, appreciating complexity, and creating a sense of professional community. That these ought to be features of teacher education is echoed in virtually every reform report and educational commentary of the last decade. Better faculty teaching models and better prepared future teachers are the result.

In order to continue the momentum moving us toward a campus where effective teaching and learning is a topic of lively conversation and constant attention, we offer the following recommendations:

1) Continued university support of the pedagogy seminars with attention paid to incorporating those into the regular curriculum.

2) Continued administrative support of the Pedagogy Seminar Advisory Council in the form of students hours and a small budget for meeting/training session refreshments and materials.

3) University support for preliminary exploration of the development of a Center for Pedagogy (Goodlad, 1991) at MU. Like the pedagogy seminar model, a Center for Pedagogy would have as a primary focus the education of future teachers, yet simultaneously enable faculty to interact with each other and to reflect on their own teaching.

4) Support for continued university involvement in the Project 30 Alliance and Renaissance Group.

5) Continued encouragement of curriculum renewal at departmental, school and university levels, for example, through Writing across Curriculum workshops and perspective workshops.

6) Support for new faculty (mentors, orientation programs, material/resource funds) as needed to ensure teaching excellence.

7) Continued administrative acknowledgment of efforts on the part of individual faculty to achieve teaching excellence and clear statements that such excellence is valued.

In line with Goal #6, developed at the January 1992 Strategic Planning Conference, we urge that the university administration continue to recognize, support and reward organized efforts, originating from the faculty and divorced from the evaluation process, to enhance the quality of teaching and the climate for learning on campus.

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IMPROVING TEACHER EDUCATION THROUGH INSTITUTIONALIZED "CROSS-CULTURAL" CONVERSATION

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Lee Shulman (1987) argues that "the key to distinguishing the knowledge base of teaching lies at the intersection of content and method." For Shulman, distinguishing the knowledge base of teaching is a prerequisite for achieving teaching's proper professional status. We, at Millersville, would paraphrase Shulman with regard to the improvement of teacher education: the key to improving teacher education lies at the intersection of the Schools of Humanities and Social Sciences, Science and Mathematics, and Education. The trick appears to be to find a mechanism for institutionalizing conversations between arts and sciences and education faculty at the point of intersection, at the "border." In our Project 30 activities, we have not tried to blur the lines between those in arts and sciences and those in education, nor have we poached on the rightful domain of either. We have tried to maintain the intellectual and institutional membranes which divide these faculties, but to make those membranes permeable.

Communication between arts and sciences and education faculty constitute a kind of "cross-cultural" conversation. These faculty represent different "cultures" -- both recognizably academic, but quite different in focus and thrust. Project 30 initiatives at Millersville University

have been successful when we were careful to preserve the character and culture of those involved, while providing a focus and a vehicle for substantive conversation. The concrete legacy of Project 30 is the institutionalization of one such vehicle, the pedagogy seminar. As we shall point out at the conclusion of this report, there appear to be other, less tangible, results as well.

Millersville University

Millersville University is one of fourteen state-owned institutions of higher education that make up Pennsylvania's State System of Higher Education. Founded as a normal school in 1855, Millersville has developed into a state teacher's college in 1927, into a state college in 1959, and into a state university in 1983. The University offers approximately sixty bachelor's and associate degree programs in the arts and sciences, business, and education. Millersville also offers master's degrees in twenty-one programs in the arts and sciences and education along with selected certification programs.

As Millersville University's Mission Statement makes clear, the University is dedicated to

> fulfilling its primary mission of providing excellent instructional programs conforming to the highest standards of traditional liberal arts education. The University is steadfastly committed to the proposition that a thorough, broad-based

> foundation in the arts and sciences is a necessary condition for the development of the whole person. It resolutely embraces the conviction that its degree programs must maintain a strong liberal arts component while preparing students to engage in productive and meaningful lives.

The University "recognizes excellence in teaching and the cultivation of minds for its reason for being." Because of its status as a state-owned university, Millersville "resolves to provide a comprehensive range of meritorious baccalaureate programs to all qualified students at the lowest reasonable cost to Commonwealth residents."

In some ways, Millersville was a "natural" for Project 30 participation. Because of its roots as a state teacher's college, there were many arts and sciences faculty with experience in and about basic education. This meant that there existed on campus a "critical mass" of faculty members willing to accept and support a project dedicated to the integration of arts and sciences with teacher education. Because the University is dedicated to excellent teaching, there was no contradiction between the goals of this project and the University's primary mission. Because of the high quality of faculty/administration relations at Millersville, there existed a political context which encouraged the cooperation of faculty and administration on a project of this scope. Each of these factors served us well as we planned and

implemented Project 30 activities.

Initiatives

Project 30 activities at Millersville University fell into two basic categories. The first can be classified as groundwork. These are the kinds of actions and activities needed to establish the credibility of the project, and of those involved, and to acknowledge political realities on campus. The second category -- the constructive phase -- includes those activities which truly embodied intra-faculty conversations. While the first category of activities were clearly necessary in order to make the project effective, we discovered that our efforts were most successful when we paid attention to the process of faculty communication. This did not entail attending to process for it's own sake, but process in pursuit of a particular project or product -- what John Dewey (1916) might have referred to as an "end-in-view."

In the category of groundwork, the Project 30 team made presentations at school council meetings and at the Faculty Senate, outlining our project and its goals. We planned the program for the Spring 1989 Faculty Convocation, at which the entire faculty viewed and discussed the film "Stand and Deliver." We applied for and received a $10,000 grant from the Pennsylvania Academy For the Advancement of Teaching to support our Project 30 activities. We extended invitations to local school district faculty and to State System officials and Pennsylvania Academy officials to participate in the wide

variety of Project 30 activities.

We applied for and received a $10,000 grant from the State System of Higher Education Faculty Development Council to further support our project. We hosted the on-site visit by Frank Murray, National Project 30 Co-Director, arranging meetings between Frank and campus officials. As a team, we participated in two national Project 30 conferences. We have encouraged individual and joint scholarship regarding Project 30 activities. We have supported informal efforts to insure a high level of teaching across campus. We have acknowledged, publicly and by individual letter, all faculty who have participated in any phase of Project 30 activity. We have responded to inquiries from a host of other teacher education institutions regarding our activities, especially the pedagogy seminar program. And we have initiated and are pursuing a complete assessment of all the activities which were a part of Project 30 at Millersville.

In the second category -- the heart of our efforts -- we have used our Project 30 team, an interdisciplinary faculty-administration group, as a microcosm or pilot program for the kind of integration of arts and sciences and professional education we seek, from the process of grant writing in the Spring of 1988 through bi-weekly meetings throughout the life of the project. We developed a six-lecture Forum Series with follow up "metaphor discussions". We developed and implemented an experimental program of pedagogy seminars.

Each of these activities -- the Project 30 team interaction, the Forum Series lectures, the metaphor discussions, and the pedagogy seminars -- proved quite successful, both in fulfilling their specific intent and in teaching us a great deal about the kinds of discussion that lead to the re-thinking of teacher education.

We also attempted to create a pilot Center for Excellence in Teaching on campus as outlined in our original Project 30 proposal. This effort was largely unsuccessful, but just as educative. Each of the above activities will be discussed in turn.

Writing the Proposal

Millersville University's Project 30 team was originally made up of Dr. Nancy Smith, Dean of the School of Education, Dr. Albert Hoffman, Dean of the School of Science and Math, Dr. Cynthia Dilgard, Chairperson of the English Department, Dr. Sam Ha, Chairperson of the Faculty Senate and Chairperson of the Biology Department, and Dr. Barbara Stengel, Assistant Professor of Educational Foundations. These five were later joined by Acting Dean of Humanities and Social Sciences, Dr. Linda Clark. Dr. Christopher Dahl, newly appointed Dean of Humanities and Social Sciences, eventually replaced Dr. Clark to form the team in its second year.

The original five members of the team gathered in the Spring of 1988 to write the Project 30 proposal. That process was as interesting and informative as the proposal which

emerged from it. As we struggled to understand each other in order to work together, we came to realize the challenges we would face in enabling faculty generally to communicate across disciplinary and school lines. Some basic working propositions developed from that six meeting process of proposal writing. 1) A substantial level of interest and dedication on the part of the participants is needed up front to sustain the effort of cross-cultural conversation. 2) Conversation must proceed freely, but is more often productive when oriented toward a "text." For us, this meant that one member of the group took responsibility to put the group's thinking into written form as a draft. The group would then respond to that draft and the writer would revise until, over a period of meetings, all members of the group agreed on the proposal. 3) This exemplifies what might be called our Getting to Yes approach (Fisher and Ury, 1983). That is, we were willing to do nothing, rather than to do something that was not right, that was not agreed to by all members of the group. 4) Our discussions and our efforts were most productive when we were guided clearly by a project, by something to do. In this case a grant proposal needed to be written. Our conversations lost focus and effectiveness when we began to talk, not about what we needed to accomplish, but about what we thought about teacher education issues in general. We were better served when we were "on task."

These same features marked the group's interaction over

the next two years as we hammered out the details of the Forum Series, the metaphor discussions, and the pedagogy seminars. At every stage, we were sustained by our original commitment to the value of the integration of arts and sciences with teacher education. We consistently utilized the pattern of responding to a draft text authored by one of the group, we maintained our "getting to yes" approach, and were well served by the specific agenda created for us by the original proposal. (Interestingly, we did not have as high a level of interaction on the Center for Excellence in Teaching effort which may help to explain its lack of success.)

In shifting to implementation of our various efforts, it also became clear that it was helpful to have well-respected members of faculty and administration involved in the project so as to generate some initial credibility. It also appeared to be critical to have as project coordinator a member of the group with credibility and credentials in both "camps." Dr. Barbara Stengel, who served as Project Coordinator, holds three liberal arts degrees as well as an education doctorate and was therefore positioned to be sensitive to the concerns and interests of each faculty group.

Forum Series

The Forum Series, intended to explore the links between liberal arts and education, was a six-lecture series initiated in March of 1989 and continuing to April 1990. Topics were related to themes of teaching excellence and to the

integration of liberal arts and education. The speakers were split equally among scholars whose primary training was in education and those whose training was in liberal arts. All the Forum Series speakers were persons who have themselves, in their lives and work, integrated liberal arts knowledge and background with educational careers and activities.

Forum Series programs included: **Frank Murray**, Dean of the School of Education at the University of Delaware, and **Alan Tom**, then Professor of Education at Washington University, discussing "Educational Reform and Teacher Preparation; **Albert Shanker**, President of the American Federation of Teachers, discussing "Teaching as a Profession"; **Florence Howe**, former President of the Modern Language Association and publisher of The Feminist Press, discussing "The Role of the Teacher in Student's Lives and Learning"; **Stephen Jay Gould**, Alexander Agassiz Professor of Zoology, Harvard University, discussing "Boundaries: A Taxonomist Looks at Arts and Sciences"; **Patricia Hill Collins**, Associate Professor of Afro-American Studies at the University of Cincinnati, discussing "The Multi-Cultural Context of Teaching"; and **Lee Shulman**, Professor of Education, Stanford University, discussing "What Teachers Know/How Teachers Think".

Each lecture was set up to model the kind of cross-disciplinary conversation we seek to encourage. Each guest speaker was introduced by a member of the Millersville faculty

who was not of his or her discipline. For example, Drs. Murray and Tom were introduced by Dr. Pat Hill, a member of the Millersville University Chemistry faculty. At the end of the featured discussion, Dr. Hill responded with comments and questions from her point of view, not as an education specialist but as a scientist.

The lecture series was generally well attended and successful in that it lent credibility to our efforts by the stature of the speakers, and in that it clearly demonstrated that issues related to teaching were of interest to arts and sciences scholars. It was also successful in that we attempted to coordinate Forum Series events with other activities and other departments on campus. Mr. Shanker's and Dr. Shulman's lectures were coordinated with the Anna Funk Lockey Lectureship in Education. Dr. Collins' lecture on the "Multi-Cultural Context of Teaching" was coordinated with Black History Month activities at Millersville. Florence Howe's presence on campus received Scholar-in-Residence status, sponsored jointly with the Department of English and the Commission on the Status of Women. Again, these were efforts to model appropriate interaction between education and arts and sciences faculty. However, while the Forum Series was successful in enabling virtually all faculty to "see themselves" in relation to issues to teaching, it does not seem that the lecture series actually changed the way faculty thought about teaching, nor did it overtly encourage cross-

disciplinary conversation. The follow-up metaphor discussions may have been more successful in achieving that goal.

Metaphor Discussions

During the week following each Forum Series lecture, faculty were invited to participate in small group discussions devoted to developing metaphors for the aspect of education or teacher education addressed in the lecture. These were one hour discussions and faculty were divided into groups of 8-10 for purposes of discussion. Numbers of faculty participating ranged from as few as eight after one lecture to as many as forty-five after another.

The six separate discussion assignments included developing metaphors to convey: 1) the relationship between general education, academic major, and professional studies in a teacher's education; 2) the relative roles of the public school teacher and the college or university professor; 3) the good teacher's impact on the student; 4) the relationship between a field's mode of inquiry and its methods of teaching; 5) the differences in students' background and learning; 6) the interaction of content and method in teaching.

An example of the kind of discussion that went on may help the reader to understand the value of these discussions in teasing out individual faculty members assumptions about issues related to teaching and in focusing, as well, the differences between education faculty and arts and sciences

faculty in those assumptions. At one discussion, an education faculty member suggested that the relationship between general education, academic major and professional education course work in a future teachers' education can be metaphorically described as a "hot air balloon". The basket, that in which you ride and which holds you up, is general education. The balloon itself is the academic major or subject matter. The hot air which enables the balloon to rise is pedagogy or professional education. A scientist agreed that the metaphor might have value, but sharply disagreed about which parts of the balloon represented which parts of a teacher's education. She allowed that general education might be compared to the basket, but argued that pedagogy or professional education is the balloon, and the hot air which makes the balloon rise is the discipline, the academic major. While it may seem funny that arts and sciences and education faculty are arguing over which one of them is really the "hot air," it is important to note that this is precisely the issue that Lee Shulman (1990) and Jonas Soltis (1990) address in their recent reconsideration of the "foundations" of teacher education. The value of the metaphor discussions is that they allowed faculty to engage in important theoretical discussions without worrying about the appropriate academic jargon. The issues became clear metaphorically.

In general, the metaphor discussions seemed interesting and effective for faculty who participated. The difficulty

was that not all faculty, or even as many as we might have liked, did participate.

We do have some evidence that these kinds of discussions can go on in much larger groups effectively. Dr. Barbara Stengel had an opportunity to address a Pennsylvania State System Colloquium in the Spring of 1989 on the integration of liberal arts and professional education and used that opportunity to engage an audience of approximately 100 participants in a metaphor discussion. She gave the assignment, gave participants five minutes to think, and then asked them to share their thinking with a friend or neighbor. Subsequent discussion raged. Faculty in attendance at this colloquium became so involved in the task of talking about their metaphors that they continued their discussion with Dr. Stengel and with other participants long after the session was completed.

While the metaphor discussions were cross-perspective conversations between Millersville faculty (and some invited public school participants), the pedagogy seminar was an attempt to encourage this kind of conversation both between faculty and between faculty and students.

Pedagogy Seminars

The pedagogy seminar constitutes an exploration of a single question: how does the successful teacher transform expertise in subject matter into a form that students can comprehend? This ability, which has recently been

characterized as "pedagogical content knowledge," (Shulman, 1986, 1987) is central to the educational process.

Teacher education students require opportunities to think about course content in this way, that is, to integrate content and method for teaching. The pedagogy seminar is structured to make this possible. Pedagogy seminars are one-credit seminars which accompany regular three- or four- credit arts and sciences courses. These optional seminars are team-taught by the arts and sciences faculty member who offers the primary course and a teacher education faculty member.

The purpose of the pedagogy seminar is to identify and analyze the teaching techniques employed by the primary course instructor and to encourage students to reflect on the process of their own learning, so that students will themselves be able to take course content and transform/translate it for another audience. Therefore, the focus of the seminar is the primary course content as it is taught and learned, rather than generic principles of pedagogy. In essence, the primary course to which the seminar is attached becomes a "case study" in pedagogical content knowledge, and the instructional team leads the seminar participants through the case. In the process, students not only analyze the teaching techniques employed by the primary course instructor, but also construct and create alternatives for teaching the same material to other audiences.

Pedagogy seminars are limited to 16 students so that they

can truly be conducted as seminars, relying heavily on group interaction and discussion. These seminars are open to any students but designed to attract teacher education students. Registration is strictly voluntary.

The pedagogy seminar concept was approved by the Project 30 team in the Spring of 1989 and five seminars were offered on an experimental basis in Fall 1989. The seminars accompanied courses in Transformational Grammar, the American Presidency, Introduction to Statistics, Nutrition, and Introduction to Psychology. Six additional pedagogy seminars, accompanying courses in Introduction to Philosophy, Introduction to Film Studies, Origins and Evolution of the Earth, Introduction to Chemistry, The Sociology of the Family, and The Language of Music, were offered during Spring 1990.

Both faculty participants and students were enthusiastic about their participation in the seminar and the value of the seminars in developing future teachers and allowing faculty to communicate one with the other over issues related to teaching.

Student surveys reveal that over 90% of the students feel that they will be able to use what they are learning in the pedagogy seminar in their teaching careers, and would recommend pedagogy seminars to other teacher education students. The students' required journals demonstrate, in a substantive way, what they have learned about pedagogical content knowledge in that particular discipline. Faculty are

being encouraged to use student journals and their own experiences as da in scholarly articles about the pedagogy seminars.

All of the faculty who participated have been interviewed extensively about the nature and value of their experience. Dr. Katherine Green, a psychology faculty member, summed up, without prompting, our goals for the pedagogy seminars. She was asked, "Would you characterize the seminar as successful or unsuccessful?", and replied:

> In terms of me personally, it was successful on a number of levels. It was successful in that I began to think about education, which I had never thought about before. I began to have a closer relationship with a person (involved in teacher education), which was a change.
>
> It was the first time I thought about issues in pedagogy and honestly, as much training as I have had in observation, training in self-observation and therapy, I never thought about in teaching, why I did what I did. So I found myself constantly thinking, why are you putting that on the board? There are all these other things to put on the board, why did you choose that to put that on the board? It was really quite amazing. The seminar was very satisfying on that level. . . .
>
> It was successful, I think, for Perry Love, my

mentor, in that he would sometimes take notes on psychology just because he was interested in the topic and had not been exposed to it for awhile. He learned some more psychology, which is always a blessing. I think he enjoyed working with me, we enjoyed working with each other, which was really positive.

I actually think the students got a lot out of it, because they commented on things like, "I've never had a chance to see professors in this light before", where we just sat and talked about things, and that we could come up with questions and considerations. You would prompt us, but we could come up with our own ideas, and you would take us seriously and begin to talk about it. I think that very informal way of discussing things and getting them thinking about their own careers in teaching, and seeing us as human and struggling about how to teach and communicate and how to be effective, is really important. (Emphasis added.)

In this lengthy quotation, Dr. Green targets the areas of effectiveness in the pedagogy seminar which other faculty echoed and which where our goals for the seminar program. The seminars serve to allow teacher education students to think about content from the point of view of a teacher. They provide a "cross-cultural" conversation between arts and sciences and education faculty about issues related to teaching, establishing bonds which allow faculty to work

together in teacher preparation across departmental lines. The pedagogy seminars also seem to serve as individual faculty development devices, enabling individuals to reflect on and, sometimes, to alter their own teaching practices. In general, the pedagogy seminars appear to be contributing to the generation of a university context and culture which values excellence in teaching.

Because of the apparent success and simplicity of the pedagogy seminar as a curricular reform, we have pursued its implementation as a formal part of the Millersville University curriculum. It has been approved by the appropriate curriculum committees and by the University Faculty Senate and is "on the books." We continue to seek additional external funding to run the pedagogy seminar program on an expanded, yet still experimental, basis. We wish to do so in order to determine not whether the pedagogy seminars are of value, but how, how many, in what disciplines, and with what courses, pedagogy seminars might be required for teacher education students. This involves thinking, as well, about the relationship of pedagogy seminiars to present teacher education course requirements, especially methods courses. In addition, continuing the pedagogy seminars will also extend wide-ranging cross-campus discussion about the nature and structure of the very best teacher education program which can be provided at Millersville University.

In the process of offering pedagogy seminars, we have

discovered some valuable lessons. We have acknowledged and accepted as given the various political realities and departmental issues which exist on campus. We have also found that it is very important to attend carefully to the pairing of faculty who form the teams for teaching the pedagogy seminars. While similar subject matter knowledge is neither necessary nor desirable, some complementarity in interests and talents is important. We have also learned that it is important not to bypass any procedures or protocol when seeking approval for an experimental program -- even when it is not clear that those procedures apply in a particular instance. It is more effective to assume that others do not understand and need to be kept informed, than it is to take any shortcuts with a program of this nature.

All of these lessons have been incorporated into the development of a pedagogy seminar advisory committee to be created by the Faculty Senate. The advisory committee will consist of one member from each academic division and will serve in an advisory capacity to the pedagogy seminar coordinator, who has responsibility for presenting the proposed pedagogy seminar offerings to the Educational Foundations Department for approval. Broad-based participation in the determination of those who will participate in the pedagogy seminar program is one more example of cross-cultural conversation.

Center for Excellence in Teaching

It is noteworthy that the one unsuccessful piece of our Project 30 efforts actually confirmed for us the lessons which we learned through our successful activities. Because we tried to take some short cuts and did not fully attend to intra-faculty conversation, we were unable to implement one kind of informal, yet institutionalized support for teaching excellence which we had envisioned.

Our original Project 30 proposal called for the creation of a Center for Teaching Excellence as an umbrella for the Forum Series, the pedagogy seminars, and other similar initiatives which might emerge over time. In November 1988, Project 30 team members had barely begun discussions about the mission, nature, and status of a Center for Teaching Excellence, though some points of agreement had emerged. The team agreed that a Center should be staffed in a way that enabled faculty to assist one another in the pursuit of excellent teaching, that faculty involvement be voluntary, non-threatening and confidential, and that support for teaching provided should be linked to particular faculty member's disciplinary expertise and actual teaching assignments. These principles suggested a Center structure which was informal and diffused, which provided faculty with released time and other rewards to work together on the enhancement of teaching, which was totally divorced from the faculty evaluation process, and which was linked to curriculum

development and enhancement.

When the State System of Higher Education Faculty Professional Development Council called for proposals for grants for University Special Projects, the Project 30 team, under an application deadline, sent forward a proposal which had not been as thoroughly discussed as our other efforts and which had not been widely-discussed outside the group, as had our other projects. In doing so, we violated our own working guidelines outlined earlier.

In addition, this was a particularly sensitive proposal, as is any practice or policy which comes to be associated with evaluation of faculty teaching. Although our intention was to divorce Center functions entirely from the university faculty evaluation procedure and to enable faculty in similar disciplines to support each other, this was not clear enough in the proposal submitted.

When the proposal received its first screening at the campus level, it generated substantial faculty resistance. The Project 30 team withdrew the proposal, acknowledging our own failure to persist in the conversations needed until some level of consensus emerged about 1) whether a "Center" is needed, 2) such a Center's mission and function, and 3) the relative roles of faculty and administration in this effort.

Subsequent discussions within the team and with other faculty over the past year and a half have generated some

support for our original ideas and some constructive alterations of those ideas. It may be that something will eventually come of these continued conversations. And that is what this particular effort has confirmed: that we must find ways to sustain faculty and administration conversation around these ideas until some plan for institutionalized support for teaching excellence gathers enough strength and support to stand on its own.

And Now...

While there have been a variety of hurdles and misunderstandings involved in the Project 30 process, there have been relatively few failures. This is, in large part, because we have persisted with the kind of planning and implementation process exemplified in our original Project 30 proposal writing exercise. We have been determined to operate in a way that created consensus as we moved forward. It was only when we diverged from that mode of operation that we experienced failure.

As we assess the changes resulting from Millersville University's participation in Project 30, it is fair to say both that very little has changed at Millersville University, and that a great deal has changed. As mentioned earlier, the concrete legacy of Project 30 is the pedagogy seminar. Still, there seem to be other changes as well.

Perhaps we can focus on these by returning to the expectations which we outlined in our original Project 30

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Perhaps we can focus on these by returning to the expectations which we outlined in our original Project 30

proposal. As a result of the Forum Series and follow-up metaphor discussions we expected university-wide sensitivity to good teaching and teacher preparation, concrete suggestions regarding the structure of the teacher education program, such as joint advising and sequencing of courses, and awareness that many components of a cohesive program of teacher preparation exist at Millersville, but need better articulation and coordination. As a result of the pedagogy courses (later redesigned to become pedagogy seminars), we expected that faculty might alter methods or organization of content in ways that focus on the kind of thinking necessary for good teaching.

In a variety of ways, each of these expectations has been fulfilled. The pedagogy seminar and its effects on the teaching of individual faculty members has been discussed briefly above, and remains as substantive evidence of our participation in Project 30.

The other three expectations have been achieved to a large extent as well, but are not so concretely documented. Still, evidence exists. The annual Faculty Spring Convocation has, for the last two years, been devoted to issues related to good teaching, and will likely have a similar focus next spring. Interdepartmental committees are springing up with some regularity to resolve issues related to teacher preparation, involving faculty from arts and sciences departments with education departments. As an example, joint

advising, using arts and sciences faculty and education faculty for secondary education majors, is fast becoming a reality.

The School of Education recently completed NCATE and State Department of Education reviews marked by an extraordinary level of cooperation, coordination, and communication among School of Education faculty and their arts and sciences colleagues. President Joseph Caputo has wholeheartedly supported Millersville University's involvement in The Renaissance Group, indicating university-wide commitment to the importance of teacher preparation. The Project 30 team is recommending to the Provost the creation of a Pedagogy Council to provide continued impetus for the goals of integrating liberal arts and teacher education, achieving university-wide responsibility for teacher education, and supporting a high standard of teaching performance across campus. Faculty who have participated in pedagogy seminars have become advertisements for the value of that experience and are recommending to their colleagues that they participate as well.

Dr. Cynthia Dilgard, a member of the Project 30 team, described her hope that our Project 30 involvement would "clone itself many times." By this she meant that small groups of faculty and administrators would gather together to cross disciplinary and departmental lines to discuss issues related to teacher preparation, and to design, as well as is

possible at that moment in time, effective plans for teacher preparation. There is evidence that this, too, is taking place. A dozen members of the faculty and administration, representing a variety of fields in the arts and sciences and education have begun work on a new grant proposal oriented specifically to the humanities preparation of elementary teachers. Some of the features of the Project 30 efforts appear to mark this one as well: the involvement of respected faculty and administrators, a dedication to the best possible liberal arts preparation of elementary teachers, an attention to the process of communication and development in the service of a particular project or product, and a willingness to continue deliberations until all involved can acquiesce to the outlines of the final product. At Millersville University, very little has changed and a great deal has changed. The state of our teacher education program and the prospects for its continued evolution and improvement are better than ever.

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The Pedagogy Seminar:

Thinking about Content from a Pedagogical Perspective

The Pedagogy Seminar[1]: Thinking about Content from a Pedagogical Perspective

Barbara Senkowski Stengel
Millersville University

(Presented at the Annual Meeting of the American Educational Research Association, April, 1991)

Those who would be teachers have already spent a long apprenticeship as students in public schools. They have developed preconceptions about what teaching is and can be before they ever enter teacher preparation programs. When they do enter the university, they all too often continue their apprenticeship as students without making the transition to apprenticeship as teachers. Their conceptions of teaching are as greatly influenced by the arts and sciences professors they encounter, as by instruction in or experience with various methods and models of teaching. More often than not, their preparation in subject matter occurs in different departments, in different buildings, and with different faculty than does their preparation in pedagogy. Further, the faculty in arts and sciences and teacher education may not communicate with each other.

How do we cross the "great-divide" which separates the arts and sciences faculty and the teacher education faculty? How do we insure that all of the teachers at the university, both arts and sciences faculty and teacher education faculty,

are excellent teachers, providing useful role models for future teachers? How do we enable future teachers to make the transition from an apprenticeship as student to an apprenticeship as teacher as early as possible in their university careers? How do we bring content and method together in the preparation of future teachers? Pedagogy seminars may be an answer.[2]

In this paper, I describe the seminar concept and offer an analysis of its promise after two semesters of experimentation. I would like to indicate at the outset that this paper does not pretend to be a report of a tightly-designed study of the effects of a particular curriculum innovation. The pedagogy seminar was initiated as a result of a teacher education reform project (Project 30) with the stated intention of integrating the arts and sciences and professional education in teacher preparation. While integrating content and method in the preparation of better teachers is the rhetorical goal, operationalizing that goal and recognizing it once achieved is itself a project for thought and research. My paper is as much about conceptualizing and operationalizing the notion of content/method integration as it is a preliminary outline of the usefulness of the pedagogy seminar for teacher education.

My personal assessment of the unique value of the pedagogy seminar concept is that, if it is "wrong" in detail, it is quite "usefully wrong." That is, the very process of

implementing and conducting pedagogy seminars requires the kinds of conversations among faculty and students which will give rise to a clearer understanding of the complexities of teaching and the challenges of subject-specific teacher education.

The Pedagogy Seminar

The pedagogy seminar constitutes an exploration of the question raised by Lee Shulman and others: How does the successful teacher transform expertise in subject matter into a form that students can value, comprehend, and use? Accepted wisdom seems to be that students first learn content in an achieved, holistic fashion and later learn to manipulate that content for teaching with certain purposes and students in mind. This seems to be reflected in Shulman's understanding of "pedagogical content knowledge" and "pedagogical reasoning." (1986, 1987) An alternative view rests on the notion that students first learn (and store) content with uses in mind (that is, already transformed for teaching, applying, researching, communicating, etc.) and only later achieve some logical and comprehensive formulation of all that they know. This view is perhaps closer to a full-blown Deweyan version of the logical-psychological distinction regarding subject matter for teaching. (Dewey, 1899, 1938; Stengel, 1990)

However one interprets the above question or attempts to answer it, it remains true that teacher education students require opportunities to think about course content from a

teacher's perspective. That is, future teachers need practice in integrating content and method for teaching. The student teaching semester is designed to do just that, but traditionally it occurs at the culmination of the future teacher's academic preparation. The pedagogy seminar enables this thinking about the integration of content and method to happen much earlier, indeed, from the students' earliest college experiences.

Pedagogy seminars are one-credit seminars which accompany regular three- or four- credit arts and sciences courses (referred to here as "primary course"). These optional seminars are team-taught by the arts and sciences faculty member who offers the primary course and a teacher education faculty member.

The stated objective of the pedagogy seminar is to identify and analyze the objectives, curriculum decisions, teaching techniques, and representational repertoire employed by the primary course instructor and to encourage students to reflect on the process of their own learning. This is intended to insure that students will ultimately be able to use what they know in ways which will effect learning and thinking for another "audience." Therefore, the focus of the seminar is the primary course content as it is taught and learned, that is, in its pedagogical form. Neither generic principles of pedagogy nor course content per se is enough.

In essence, the primary course to which the seminar is

attached becomes a case study in pedagogical content knowledge[3] and the instructional team leads the seminar participants through the case. In the process, students not only analyze the thinking and decision-making of the primary course instructor, but also construct and create alternatives for achieving similar objectives with other audiences. In that way, students come to know subject matter from a teacher's perspective. By participation in pedagogy seminars, they begin apprenticeships as teachers.

Pedagogy seminars are limited to 16 students so that they can truly be conducted as seminars, relying heavily on group interaction and discussion. The structure of the seminar is quite simple. The arts and sciences instructor conducts the primary course as usual. The team member from the School of Education observes at least one class session each week. Then, for one hour each week, the instructors gather with the small group of students who have chosen to participate in the pedagogy seminar.

Pedagogy seminars are offered on a "pass/fail" basis only. Because of the nature of the seminar, student attendance at and active participation in seminar sessions weigh heavily in evaluation of student performance. Students are required to keep teaching/learning journals and journal entries constitute the basis for much seminar analysis.

The pedagogy seminar is an elegant and powerful curricular experiment in that it 1) enables future teachers

to focus on content from the perspective of a teacher; 2) overcomes institutional barriers by enabling arts and sciences and education faculty to become colleagues in teaching; and 3) provides both members of the faculty team an opportunity to think about, discuss, and develop their own teaching.

Initial Experience and Assessment

During the 1989-1990 academic year, eleven pedagogy seminars were offered, accompanying courses in various disciplines. Each took on a different character and flavor, dictated by the course content and by the characteristics of the faculty team teaching it. The seminars had an average enrollment of 10 students. Approximately 110 students and 22 faculty participated in the pilot program.

The richness and multi-dimensional character of the pedagogy seminar concept presented obvious assessment challenges. The project team[4] hypothesized a variety of outcomes related to 1) students (Would students come to think about content as teachers rather than as learners? Would their understanding of course content be deeper, richer, more flexible?); 2) institutional climate (Would there be changes in faculty understanding of roles in and responsibility for teacher education?); and 3) faculty development (Would there be changes in teaching attitudes and behaviors among faculty participants?) How were we to focus our assessment efforts? What measures could tell us about students' "thinking like a teacher"? About faculty attitudes and interactions as well

as actual teaching performance? How would we structure the implementation to encourage faculty participation and make available needed sources of data? Would there be unpredicted outcomes for either students or faculty?

We made a conscious decision to proceed unobtrusively, to allow the faculty participants to shape the development of the seminar concept and its evaluation. Our assessment plan reflects that and can best be described as a "net" cast out to capture and help operationalize the most fruitful areas for controlled evaluation. This net included demographic data (majors, class status, gender, prior QPA), student questionnaires, primary course grades, required student journals and structured faculty interviews.

At the end of the seminar experience, all seminar participants completed a 19-item questionnaire designed to rate their attitudes toward the seminar and self-evaluation of their own pedagogical thinking. All the students enrolled in the primary course (including seminar students) completed a 9-item questionnaire oriented toward their self-confidence in explaining the content of the primary course to others and their interest in learning about that subject area. Demographic data was examined to identify a preliminary picture of the student who chooses to enroll in a pedagogy seminar. Primary course grades for seminar students and non-seminar students, as well as pre-seminar QPAs, were recorded and compared. One pair of students from each of the eleven

seminars has been matched by class status, prior QPA, and major; pairs are being monitored and compared over time regarding persistence in teacher education, NTE test scores and student teaching performance. (This data is not yet available). In addition, all faculty participants were interviewed in-depth regarding their own experience and the seminars' effects on students' understanding.

In the short run, the data I share here have helped to promote the pedagogy seminar from "experiment" to "viable option" on my campus. A more carefully-controlled study is needed to demonstrate the lasting value of the seminar concept. Findings from our assessment "net" will help shape such studies.

I will first review the findings from demographic information, student surveys and grade comparisons, before turning attention to two particular seminars and the student journal data and faculty interview data available from them.

Seminar Students

Few clear trends emerge regarding the make-up of the self-selected seminar student population. More females than males elect to take seminars, but these numbers generally reflect the class proportions. Numbers of freshman, sophomores, juniors and seniors are fairly evenly distributed and reflect percentages enrolled in the primary course. Though we did not investigate this point specifically, anecdotal data from seminar instructors suggest a

proportionately large percentage of non-traditional students enrolled.

Approximately 55% of the seminar students are teacher education majors, while 45% are not. Of those who are not, 5% indicate an interest in public school teaching, and 14% indicate an interest in college level teaching. A small percentage indicate that they hope to improve their performance in the primary course.

An interesting pattern emerges with regard to seminar students' pre-seminar QPAs. In seven of eleven courses, seminar students have higher QPAs than the general student population (as compared to non-seminar students enrolled in the primary course), while in the other four, seminar students have lower pre-seminar QPAs. (See Table III). Some additional information regarding the nature of the various courses raises some questions. The courses in which seminar students have higher prior QPAs are all general education courses. The attached seminars attracted proportionately higher numbers of elementary education majors who 1) come into the university with the highest SAT and class rank requirements, and 2) typically earn higher QPAs than the general student population. The courses in which seminar students have lower prior QPAs are all courses taken predominantly by secondary education and liberal arts majors in that field. It is not yet determined whether the lower QPAs for secondary majors reflect something about the teacher education students who

choose pedagogy seminars or something about the QPAs of teacher ed students relative to their disciplinary peers with a liberal arts focus.

Who are the students who choose to take pedagogy seminars? Are they already better students? more reflective? more motivated? more intent on teaching? What are the differences in seminar experience (and learning) based on class status and the type of primary course to which the seminar is attached? These questions require answers in order to validate other findings.

Survey Findings

Survey data regarding the pedagogy seminar program indicate that students value their seminar experience highly. In response to the statement, "I would recommend the pedagogy seminar to other education students", 65% of students participating in the seminars responded that they "agreed strongly," 30% "agreed," and 4% were "neutral."

The vast majority either strongly agreed (44%) or agreed (50%) that they better understood the challenges in teaching as a result of their seminar experience. Ninety-six percent indicated that they pay more attention to the teaching techniques employed by all their instructors as a result of seminar participation. And 94% agreed that they will be able to use what they have learned in the seminar in their practice as teachers.

When asked to describe the difference between good

teachers and poor teachers, 81% of the students said that "Good teachers transform subject matter into teachable form better than poor teachers do", while 19% said "Good teachers use better teaching methods" and no students responded that "Good teachers know more about subject matter." These responses suggest a complex rather than simplistic view of the teaching task on the part of seminar students.

Two interesting findings emerged from a survey comparing seminar students with those enrolled in the primary course who did not take the seminar. When asked whether they would be interested in taking additional courses in the primary course discipline, seminar students indicated significantly greater interest than non-seminar students. When asked how confident they felt about explaining course concepts to others, a substantially higher percentage of seminar students (68%) described themselves as "very confident" than did non-seminar students (37%). Though tentative, these two data do suggest the pedagogy seminar's efficacy in developing both interest in subject matter and confidence in one's ability to share what one knows.

TABLE I

How would you describe your interest in taking another course in this discipline?

	SS	NSS
Very interested	56%	25%
Somewhat interested	31%	43%
Not very interested	13%	29%

$X = 20.871$
$p < .002$

TABLE II

How confident do you feel about explaining what you have learned in this course to others who have not taken this course?

	SS	NSS
Very confident	57%	34%
Somewhat confident	43%	56%
Not very confident	0	10%

$X = 12.969$
$p < .01$

All of the survey data share two basic flaws: 1) they do not control for self-selection factors among seminar students (Since the pedagogy seminar is an optional course selection, a careful comparison of the seminar student population versus other students and versus other teacher education students is needed.); and 2) they are post-seminar

data only with no comparison to pre-seminar attitudes possible. These flaws are addressed in the assessment plan explained at the end of the paper.

Course Grades and Prior QPA

In the student survey, 66% of the seminar students agreed or strongly agreed that their understanding of the concepts and material of the regular course was greater as a result of the seminar participation. Student perceptions are borne out by available data regarding students' grades in the primary course:

TABLE III

	Course grade difference (4.0 scale) SS - NSS	Prior QPA difference (4.0 scale) SS - NSS	Seminar student performance (course grade - prior QPA)
MATH 272	-.7	-.4	-.3
ENGL 321	.23	-.25	+.48
ENGL 240	.1	-.68	+.78
HIST 271	.3	-.01	+.31
MATH 130	.24	.13	+.11
BIOL 256	.7	.35	+.35
SOCI 210	.06	.2	-.14
ESCI 103	.95	.47	+.48
MUSI 103	.4	.31	+.09
CHEM 102	.4	.31	+.09
PHIL 100	.36	.25	+.11

In 9 of 11 cases, the seminar students performed better than their pre-seminar QPAs would predict. In five of eleven cases, the seminar students scored more that .3 of a quality point better than might be predicted by pre-course QPAs (.48, .31, .35, .78 and .42).

This may not be surprising in that one would expect an additional hour getting into the instructor's head to be helpful when test-time comes. These data appear to confirm that. Surprising or not, they suggest that pedagogy seminars deepen future teachers' understanding of arts and sciences content. At the very least, we can lay to rest the possible objection that pedagogy seminar participation (and the requisite observations of the teaching and learning process) detracts from content learning. Students can learn content and method together.

Specific Sample Seminars

I have chosen to focus on student journal data and faculty interview data from two specific seminars, those accompanying English 321, Transformational Grammar, and Earth Science 103, Origins and Evolution of the Earth. I select these two seminars not because they were extraordinarily successful, but because they represent different disciplines and the different types of courses toward which pedagogy seminars are targeted. Transformational Grammar is an upper-

level course taken by secondary education/English majors just prior to student teaching. Primary course enrollment is a maximum of 30 students, allowing a reasonably high level of instructor-student interaction. All sixteen students in the seminar were upperclass English majors. Dr. Mary Ann Gray of the elementary and early childhood education department, taught the seminar with English professor Dr. Ken Shields.

Earth Science 103 is a general education science option, selected by non-science majors. It is a large (120) lecture course which limits the kinds of methods and instructor-student interactions available. The dozen or so students in the seminar included social studies education, elementary education, math education, special education and undeclared majors. Earth science professor Paul Nichols teamed with health and physical education faculty member Sandy Peters to lead the seminar.

By sharing excerpts from student journals and faculty interviews, I allow the participating students and faculty to tell their own story of the seminars' effectiveness, and to point the direction to further assessment. Both student journals and faculty interviews highlight the value of attaching pedagogy seminars to different types of courses at different levels, and suggest a variety of outcomes to be expected and evaluated.

Student Journals

All seminar students were required to keep a teaching/learning journal focusing on their observations of the primary course instructor. Students in the transformational grammar seminar kept a daily journal in which they specifically noted what they understood to be Dr. Shields' objective for the day, what he did to achieve that objective, and how that strategy helped or did not help them to learn the course content. Students in the earth science seminar were given no specific structure for their journals and could comment freely on any aspect of course content, organization or teaching.

In attempting to demonstrate students' growing ability to think about content from a teacher's point of view, I have selected journal excerpts which follow the charge to the seminar instructors. Instructors were cautioned to focus their pedagogy seminar planning on "what happens to content in the teaching of it?" How does that content change shape, come alive, interact with what the students already know? Shulman's (1986) four aspects of pedagogical content knowledge (building bridges, anticipating misconceptions, representing ideas and concepts, and organizing content) served as a partial framework for seminar discussion, against a background of traditional pedagogical topics related to the goals and objectives, evaluation, and individual student needs. (We chose to focus on Shulman's conceptualization because of the

appeal which it has for arts and sciences faculty who attend primarily to content.) The four aspects of pedagogical content knowledge form the outline for this report here of student learning.

Building Bridges in Transformational Grammar

Students, in responding to any new piece of information, first try to access the understandings that they already have about the subject matter at hand. Teachers -- good teachers -- build bridges from students' prior understandings to the new knowledge, from the known to the unknown.

This first aspect of pedagogical content knowledge can be heard in Michelle's entry:[5]

> Dr. Shields' built on the rules we learned in the previous class in order to form the passive. He gave us the rules and then followed them through every step of the conjugation. This made it very easy to follow and helped me to figure things out on my own.

Wendy echoed Michelle's recognition of Dr. Shield's decision to begin with the known and move toward the new. She wrote:

> Today we worked almost exclusively on tree diagrams and constituent analysis identifying the function of all individual words as well as the phrases. Dr. Shields used the sentence "A dog is an animal" as his first example for tree diagramming. As we moved on to bigger and more complex sentences, if we got confused we could always refer back to that first sentence to re-orient

ourselves if we need to. This made me think of my first French class when we learned how to conjugate the verb parler = to speak or to talk. This verb formed the model for all other -er verbs. No matter how long the verb or how complicated the spelling, if it ended in -er, I could conjugate it by remembering how to conjugate parler.

Dr. Shields had given Wendy a "hook" on which to hang all future learning. He had made the critical connection between what Wendy knew and could do and what she was struggling to learn. More important, Wendy realized this.

Building bridges and anticipating misconceptions, the second aspect of pedagogical content knowledge, can go hand in hand, as this entry of Wendy's illustrates:

Before doing any conjugating, we first labeled the four principal parts of the verb, and he wrote them on the board so we could refer to them at all times. Next we saw the simple tenses, the perfect tenses, progressive, and perfect progressive all conjugated in third person singular, active voice, present, past, future. We made up a model of rules governing conjugation which were very helpful when things got sticky. I must confess I got a little confused for a minute or two, but when I went back to those rules on the board it was like a formula I could use to make a verb tense used in connection with the four principal parts. We made the rules as we came to them for each tense so everyone could see where they

came from . . . Had it not been for the careful organization and planning involved, the whole class would probably have been lost by the time we got to the progressive and perfect progressive tenses.

Anticipating Misconceptions in Transformational Grammar

Good teachers, in knowing their topic as thoroughly as they know their audience, are sensitive to and anticipate the content misconceptions of their students. Dr. Shields occasionally allows for some conceptual disequilibrium to stimulate interest and thought, but controls it carefully to avoid lasting confusion. The next journal entry shows that Sheila recognized this:

> The sentences that we are parsing have been prepared in a manner that they build on one another. Each sentence has a new component or "zinger" to deal with. Using this method to introduce new material seems to work well. By presenting a problem to the students, curiosity is aroused, or at least the student realizes that there must be something else --another grammatical category or method to deal with the sentence. The info that Dr. S. presents could fall into a danger of being too abstract -- but the students have already seen the practical applications by the time Dr. S. writes the info on the board.

Wendy recognized that Dr. Shields had anticipated students' questions. She wrote:

But it seemed to me that throughout the period, Dr. Shields had strategically written things on the board that he knew the students would ask.

Wendy also realized that he had a clear objective in mind in his decision to organize the board material in a particular way:

Having them numbered on the board really helped, and when we were done and Dr. Shields went back, it helped to see structural grammar in a holistic kind of light.

Once again, aspects of pedagogical content knowledge go hand in hand. The final journal entry in this section illustrates Sheila's realization that a teacher's recognition of possible students' misconceptions can be handled with a decision to represent the potentially confusing subject matter in a visual, more accessible manner.

When filling out the function/parts of speech chart, Dr. S. explained the importance of keeping the terminology for the two separate. It helps avoid confusion. It's important to keep things clear for students. The chart that was set up in class is especially helpful in keeping the distinction clear and the chart can also be extended to phrases.

Representing Ideas and Concepts in Transformational Grammar

"It's like . . . " or "Think about it in this way . . ." An instructor's repertoire of examples, metaphors, analogies and charts provide a frame of reference for teachers

to link what students know to what they will learn.

Wendy acknowledged the power of the metaphor in learning the psychology of grammar when she observed:

> Again today, Dr. Shields gave us something concrete to look at on the board with the iceberg. I always knew that visual images are very powerful tools, but now I'm realizing it even more. Dr. Shields tries to incorporate visual images into almost every lesson, if at all possible, and I just realized that today with the iceberg.

Dr. Shields used the "iceberg" in question to illustrate the concept of internal grammar, that is, to enable students to understand that one's performance of grammatical rules is just the tip of iceberg, resting upon "submerged" intuitional foundations.

Organizing material within a framework, such as a chart or a visual display, demonstrates for students the relationships that exist among concepts and can serve as a model that can be applied to new situations of learning. Michelle noted the usefulness of such a chart in classifying and clarifying the rules and structure of grammar:

> Dr. Shields used a chart to identify the characteristics of the form classes -- noun, verb, adjective, and adverb. Using a chart made it very easy to "map out" each class and see how each differs from the next. It was very effective for me; the visualization of the

characteristics helped me a great deal. Charts are an excellent way of showing students complicated classifications and relationships.

The way in which a well-chosen example enables students to make connections was aptly illustrated by Wendy in this entry prompted by learning the history of grammar:

> During the history part, we finished looking at the ditto and all the research that has been done on "acceptable" and "unacceptable" grammar. After discussing the fact that the publisher still can arbitrarily decide many disputed sentences, Dr. Shields exclaimed, "Notice, we haven't come too far from Dionysius Thrax." For one fleeting moment, the entire history of grammar flashed before me, from beginning to end, and somehow this one statement seemed to pull everything together, and I felt that we had said everything that needed to be said, and there were no "loose ends" that didn't seem quite finished.

Each facet of transformational grammar -- the psychology, the structure, and the history -- requires various modes of representation in teaching, and these future teachers have begun to realize this.

Organizing Content in Transformational Grammar

How a teacher organizes content is the final aspect of pedagogical content knowledge to be illustrated. Does the teacher present the material in a linear manner, beginning at

A and arriving at Z? Is it organized chronologically or thematically? What is included? What is omitted? Why? Does the teacher "feed the material" to the students, engage them in active discourse, employ inductive learning? Do classroom activities follow, complement, or diverge from the text? The good teacher uses any or all of these organizational and instructional schemes depending on the ccurse objectives, specific course content, and the student for which it is taught.

Sheila recognized Dr. Shields' decision to emphasize alternative conceptions of voice and mood and to downplay traditional notions, a pedagogical content decision affecting course organization. She even realized why he made that decision:

> Dr. S., after reviewing the rules for forming tenses and the definitions of voice and mood, went over the difficulties and discrepancies in the traditional method, especially the distinction between tense form and time relations. He asked the students to define tense -- and then he showed how the definitions didn't always work. He then offered an alternative -- especially related to techniques or strategies for teaching this material in a classroom. He applied the same techniques or strategies to teaching mood. By using form -- which is more consistent than the more traditional definitions -- there is less confusion.

Choices about what material to include when shape and are shaped by choices about how to teach that material. Sheila's entry demonstrates awareness that the instructor's choice of organization (specific sentences to general rules) and method (group inquiry) interacted to enhance her own learning:

> We reviewed the finite state model and started the phrase structure. We analyzed sentences and as a group tried to write phrase structure rules -- this was particularly effective for me because it helped clarify what the book was trying to do and it really helped me understand how the system really works -- what you need to think about and understand as you go through the phrase structure rules. There were a lot of ideas and concepts to think about, but by working through as a group, I think we were able to understand the model much better. Also, it was more interesting to think out loud and to listen to what others were thinking (and how).

Interestingly, another of Sheila's journal entries brings us back full circle to the first aspect of pedagogical content knowledge discussed, that of building bridges. She wrote:

> Dr. S., rather than presenting material to be memorized, guided the students through a process of developing "logical" rules that could be systematically and uniformly applied. The direct student involvement and the building process of the rules, which necessitated review of previous rules, seemed to be a great technique

for dealing with material that everyone has seen before. But this time the approach was very different. I think it made the whole topic much more accessible for students.

From Transformational Grammar to Earth Science

Obviously, the four aspects of the pedagogical content knowledge framework interact and overlap; clear distinctions among them are difficult, if not impossible. Nor could seminar instructors focus solely on these four points. As journal entries from the students' document, seminar discussions ranged freely from purposes to course organization to content representation to evaluation and back again. This is neither distressing nor undesirable. The point here is not some specified "pedagogical content knowledge." It is that future teachers encounter what they are learning about transformational grammar from the teacher's point of view, rather than from the typical student's point of view.

Sheila, Michelle, and Wendy are beginning to think pedagogically about the grammar that they will eventually teach to high school students. Their journal entries evidence growing awareness of the need to build bridges between the known and the new, to anticipate student misconceptions, to represent ideas and concepts in a variety of ways, and to organize course content selectively and with purpose. Moreover, they are beginning to think about how this can be done with regard to transformational grammar. With the

guidance of two faculty members, they are practicing the kind of thinking about content that enables good teachers to teach well.

Journal entries from earth science students suggested similar patterns with a slightly different twist -- perhaps related to the general education nature of the primary course. A consistent theme in all earth science journals was the instructor's use of a rich representational repertoire to "reach" all students. While focusing on the metaphors, analogies and examples used, students recognized the complexities of teaching and the interaction of content and method.

Lori speaks for her peers:

> I noticed that it is difficult to distinguish between subject content and teaching style. At first, I thought we had gotten sidetracked, but there is so little separating the two. For every subject, there is a method of teaching which relays it appropriately to the student.

In an observation that echoes Shulman's description of pedagogical content knowledge, Mary articulates the teacher's responsibility:

> Teachers have to know their students' abilities, their subject material, they have to be able to organize their class and be able to get across their ideas.

Building Bridges in Earth Science

Mary's classmates were more specific in their comments.

Several students noted Dr. Nichols' ability to relate his subject to other disciplines. Wendy wrote:

> The second session was especially meaningful to me because we discussed the "history" of science. . . . It felt good to hear someone stress the importance of history, because the general attitude toward it is, "Who cares about history?" It was great to see a professor stress the importance in a subject other than history. Furthermore, there was suddenly a close connection between subjects, one which I had not realized so strongly. After this session, I not only felt glad to want to teach, but I felt as though my discipline (history) would be an area of great importance.

Debbie echoed:

> I enjoyed today's lesson -- history is always a topic that catches and keeps my attention. It is so important to link the present with the past. History can be the solid foundations upon which "castles" of knowledge and understanding can be built. It makes me happy to see that experts in fields other than history can appreciate this too.

And, on another occasion, Debbie noted: "Today you accomplished a great task. you 'linked majors!' You got the business majors more in tune by applying the exponential growth curve to them. Could you have said it applied to <u>all</u>?"

Dr. Nichols is constantly searching for bridges to build and the students noticed. Mary focused on links with the flow of course content: "If you tell your students what is going to happen in the class for the day and what it will lead to in the future, it helps get their attention. It gives the student a reason to learn the material."

Doug focused on bridges to daily events:

> A student will retain information much longer if the instructor establishes the relevance of the material to daily events. Nichols will "bait the hook" by taking a topic out of current events and intertwining it with the subject. An example of this is the recent capture of "nuclear bomb triggers" destined for Iraq. Nichols then explained the differences between diverging, steady, and converging neutron flux and critical mass.

On another occasion, Mary talked about stimulating student thinking by tapping student interest:

> When dealing with a hard topic, like the idea that time is not a constant, using something that people can easily see in their mind really helps it make sense. When talking about time, using the example of flying around the world with the time being relative to the earth was helpful. I understood it and wonder, if you had a fast enough plane, would you be able to go back into time? . . . This idea grabbed my attention and I paid closer attention in class because this is an interesting topic.

Anticipating Misconceptions in Earth Science

I searched journals in vain for concrete examples of students' conscious awareness that Dr. Nichols' was anticipating possible misconceptions. Most students did not seem aware that his use of a vast toolbox of demonstrations and examples was shaped by his past experience and targeted to defuse potential misunderstanding. Still, they were clearly aware that he was aware of them as uncertain and individual learners. Doug noted that "Nichols challenges the brightest yet builds in a safety net for the slower students." Lori combined her prior knowledge of schema theory with an awareness of how that applied in this specific situation.

> Once again, schema became a major factor in bring the message or lesson across to the students. There is a need to reach a happy medium between all types of backgrounds. Attention must be given to reach all types of schema backgrounds. Dr. Nichols seems to possess the art to tell when students are confused or are drifting away by observing their outward expression. His teaching style continuously stresses the use of a variety of examples for a specific idea. When faces show blank stares or confusion, he notices and looks at explaining from a different avenue. . . . The ability to try various methods and to transpose this information in comprehensible forms is all part of a relationship between teacher and student . . .

Brian echoed Lori's observation in brief when he wrote, "Another important asset to a teacher is the ability to read a student so the teacher can give help and further explanation when it is necessary."

Representing Ideas and Concepts in Earth Science

The earth science student journals were replete with references to Dr. Nichols' considerable representational repertoire. Doug described the phenomenon often:

> I think [Dr. Nichols] would rather teach than do anything else. [He] uses illustrative word pictures to deliver ideas and engage students' imagination. . . . Today Nichols very effectively rolled an imaginary bowling ball across the platform, which then quite unexpectedly executed a ninety degree turn and rolled off the platform onto the floor. This in an effort to explain Newton's three laws of motion. . . . Today Nichols used the invisible man to explain the black body concept. I was thinking of the Klingon cloaking device myself. . . . The tuning fork analogy is a very good one for getting across the dominate wavelength in the black body curve. That is easily understood. Another great analogy is the band playing on the moving railroad car to explain the doppler effect. I could just see those guys playing away while the car rolled by. Ha! Makes me laugh! . . . . The string analogy going around the nail is a good one to explain the space-time relationship. Finally I can make

some sense of time dilation and space contraction. Before that, I just couldn't keep the relationship straight.

Debbie was similarly diligent in observing examples and analogies (and in pondering how a good teacher develops this skill):

I never realized what precise calculating it takes to get something like Voyager I to its goal. Skeet shooting is an excellent way to describe it -- it gives me a clear picture in my mind. . . .Again, the examples that you went through in class today made things so much clearer (especially the balloon examples.) I can't emphasize enough how much your examples help me. Examples can be overdone (something is explained in so many different ways that one just gets confused), but you seem to be able to tell when enough is enough. I wonder if that just comes with time, or is it a part of teaching style? . . .The concept of an electron being "everywhere" in its orbit came through loud and clear when you proposed that it was just like spinning a sparkler. . . . I think the best example you've given all semester was in today's class. I could really visualize the deflated balloon with "dots" expanding. That was an excellent way of describing us <u>not</u> being at the center of the universe. I don't think I could have understood your point half as well without it.

Jen described only one metaphor used by Dr. Nichols but apparently it was a memorable one: "The use of the 'crazy hotel' helped me to understand the transfer of electrons very easily. I could easily remember what I did in eleventh grade chemistry by the use of the 'crazy hotel'."

Organizing Content in Earth Science

Students' perception of how Dr. Nichols had organized course content had a clear focus on the interesting and the pragmatic. This is not surprising in a general education course which constitutes one important source of whatever scientific literacy the non-science major acquires. Lori noted:

> I feel very fortunate to have the opportunity to look closely at Dr. Nichols' ability to captivate students' attention and most importantly their curiosity. The lectures this past week seemed to follow the format probe, prove, probe, prove, and closing probe. Much like a television cliff hanger, the student stays in tune to find out the conclusion.

Even in the choice of the textbook (written by Dr. Nichols), the focus on the "hook" to student interest was clear to Jen who wrote: "(W)e talked about how the book was set-up. I think it is interesting how Dr. Nichols caught our attention in the beginning of the book, then proceeded into the history of earth science."

Doug second-guessed Dr. Nichols' primary objective when

he noted late in the semester that "(E)vidently the main mission here is to insure tomorrow's voters will have at least enough science background to enable them to make their decisions based on some knowledge."

Comment

Earth science students offered, in their journals, evidence of their shift to the teachers' perspective and of their awareness of the seminar experience's unique value. Debbie noted: "I appreciated your comment on a teacher being an 'agent of change.' That is something I always want to keep in mind because the change can sometimes be detrimental. I don't want to be the cause of that kind of change." David added "(I)t's a class like today's which makes me begin to realize how much there is involved in teaching." Suggested Mary:

> I like this seminar. I think it helped me understand more things about teaching. In a way, it was better than my education classes because it was more like a lab. Talking about the class with the professor while taking the class.

And Brian, apparently wise to academic politics and curriculum change, wrote, "I hope they continue to have these Pedagogy Seminars because only through honest communication can the system be overhauled."

While student journals represent a rich source of data, documenting seminar student growth and change over the

semester, a number of changes would make assessment more systematic and conclusive. Specifically, the journals can be similarly structured to require specific common tasks (e.g. identification and generation of content representations) and to allow the use of interpretive scales or coding frameworks.

Faculty Interviews

The comments of Brian and the other students would be reiterated in various ways by all the faculty involved. Participants offered comments which highlighted their own development as teachers, their sense of forging new links with colleagues in other areas, and their perceptions regarding substantial student learning.

An examination of all the faculty interview transcripts would demonstrate that the interviews excerpted below are NOT extraordinary interviews. What is extraordinary is the level of agreement across interviews. To realize fully just how impressive some of these comments are, I suggest that you imagine, while reading, your colleagues across campus making the same kinds of comments about teacher education and each other.

When asked how the seminar students benefitted, English professor Ken Shields highlighted a shift in view from "teacher as technician" to "teacher as thoughtful translator":

> They seemed to get a sense of what was going on. Working with teacher ed students in the English department, especially getting them a semester before they go off and

teach, I find a certain amount of resentment in their minds that they have not been prepared to teach. What that resentment really boils down to is "Where are my lesson plans? You should have provided me with a set of lesson plans so that I can go out there and read this stuff to these kids and I don't have to do anything." Once they student teach and they come back, they say, "How silly that I said those things." . . . What they don't realize earlier is that every class is different and everything has to be adapted. One of these responsibilities as a teacher is to translate the knowledge you have acquired into something which is teachable. I think, for many of them, they began to see how impossible it really was for anybody to give them a set of lesson plans. Some of the seminar students would role play [as a seminar project] with a group of average seventh graders and some of them would role play with a group of advanced eleventh graders. They would see that although both of the teachers had the same academic preparation and that they were teaching the same material, they adapted [content] for that seventh grade average group differently than for the eleventh grade advance group. Apparently, it never dawned on them that they were going to have to make these kinds of adjustments . . . That is what we would talk about after

they had presented the role playing session. Was it successful? What made it successful? Was it really appropriate for the group that you had decided to teach for? Were there vocabulary items that you used that you should not have used? Were there things that you assumed that you shouldn't have. I think that was the really great experience that they had -- this whole idea of translating a body of material into something that is teachable. I think it was very successful in that regard.

Dr. Gray reflected her agreement with Ken's analysis, stressing caution against students adopting any one instructor as a sole role model.

One thing that became apparent as we talked more and more in the pedagogy seminar was that students were looking toward Ken as a methods model, an example of the "right way to teach" the content. I realized this one day when we were discussing why [the students] felt Ken had taught them the transitive verb they way he did. It became apparent that, as students became more accustomed to paying attention to the professor's teaching style, some of them were accepting this as the ONLY way to teach that piece of content. We discussed this in class and how important it was to pay attention to one's audience . . . that they could not expect to use with their future students the same examples, the same format, the same

organization that Dr. Shields had used on them. They would need to transform what he did and taught for other unique audiences.

She also praised the seminar concept for allowing students to witness collegiality among teaching colleagues:

> The pedagogy seminar offered students a unique opportunity to observe two professors discussing their views on teaching. Students don't often see this collegial relationship, and to see it centered around the topic of teaching and learning is rare indeed. Teaching has the potential to be a very lonely profession unless one becomes comfortable with talking about the process and what goes on in classrooms. The pedagogy seminar legitimized this kind of talk.

Because Dr. Shields has worked closely with secondary education/English majors in the past, his personal view of his own role in teacher education did not change. Still he seems to suggest that the seminar structure could indeed serve as a powerful vehicle for faculty interaction.

> I have always argued that there should be an integration of content and teaching. I am not sure [the seminar] changed any of my attitudes; it simply confirmed how important it is for us to work together. I think the seminar could be very useful for those people who feel that if you provide students only with content, they are going to be just fine. The mystique, the whole idea of

translating what you know into something which is understandable, is very important. I am not sure that a lot of people who are specialists in various field are very good at that or that they think much about it. That is really what makes for good teachers.

When asked directly by the interviewer whether the seminar would be a good mechanism for fostering faculty collaboration, Ken replied, "Exactly. Because what it really shows is that you can't have content without method. I think the dichotomy between those two has been too sharply drawn."

Mary Ann Gray described the interaction between the two of them as a model for faculty collaboration.

> Obviously, because Ken was the primary teacher of the content, he tended to take the lead in the pedagogy discussions. Along with the students, I often found myself commenting on what I had learned (since I was also a neophyte in transformational grammar) and discussing why I felt he did what he did. But in addition to that, students would often turn to me with questions concerning pedagogy and/or developmental needs and levels of youngsters. Thus, the two of us worked well in bringing a balanced perspective to the seminars: methods and content, techniques and knowledge.

The two professors' assessment of how the seminar experience altered their own thinking about teaching reflected the roles which each played. Dr. Gray cited her learning

transformational grammar, a field which she had not previously studied and which is relevant to her expertise as a reading professor.

> Transformational grammar was a whole new area of learning for me. And sitting in the back of Ken's class allowed me to experience learning from a student's perspective. How often do adults really get to do that? . . . To think back and remember what it was like to learn something for the first time? although half of my attention was focused on Ken's pedagogical content knowledge, the other half was zeroed in on what he was saying. I found myself using some of what I learned in his class as I was teaching my own reading education classes. His examples popped up on my board; his references were restated for my students. It brought a unique and new dimension to my own teaching.

Her comments were echoed by virtually all the education faculty members who participated. The sheer joy of learning content complementary to one's area of expertise was a clear by-product of observing a colleague's teaching.

Like most arts and sciences professors who participated, Dr. Shields comments highlighted the notion of the "reflective practitioner," an emphasis which enjoys substantial interest in pedagogical literature currently. (Schon, 1983)

> I think [the seminar] is a good experience for everyone. For me, what it did was to get me thinking about the

techniques that I use. I began to analyze and figure out why I would be doing certain things. It is always my argument, especially when I teach grammar, that the reason we teach grammar is not that we teach anybody anything new, but we give them conscious control over what they already have. Unless you get to that level where you are consciously aware of what you are doing, you cannot fully reap the benefits of what it is that you do. I think what this type of course forces the professor to do is to become consciously aware of the techniques that are maybe second nature by this time. And becoming consciously aware, you manipulate them more and use them more fully. I think it is a wonderful opportunity.

Paul Nichols and his partner, Sandy Peters, saw growth in their students in at least three directions: 1) deeper understanding of course content, 2) enhanced interest in and commitment to teaching, and 3) an awareness of connections across disciplines. The differences between their observations and those of Drs. Shields and Gray cited above may reflect the difference between an upper level majors' course and a general education course, between a seminar made up largely of secondary education/English majors nearing student teaching and a seminar composed of younger and less committed future teachers. Said Dr. Nichols about the seminar students:

I think it was a very successful experience. From the students' perspective, based on their actual response, these journals, they kept faithful records of each of their sensibility as they walked through these various experiences with me. It has been very successful from the students' point of view. We even saw that for those that are not going into any technical field as a teacher. The social scientists for example, . . . saw this as a useful thing. They saw many things that they could translate into their area which is a totally different subject theme. . . .

The pedagogy seminar students' class average was a full ten points higher than the regular glass which is really quite unusual. I think they got more out of the course because of the seminar experience, but the nice thing that happened was that several of them came to me who were undeclared majors and who had committed themselves to teaching careers. I think that is the icing on the cake.

Ms. Peters added:

The comments that we had were that they suddenly realized that some of the general education requirements really did have a place in the major program. I think that was probably a real shock to them -- that they could take some of this content material that they were learning in what they termed "general education" and seeing that it

had a place in their career as a teacher through using the material from gen ed courses and putting it into teaching concepts. I think that was a real eye-opener for them.

Some students say, "Why are we taking these general education courses?" Then I think [seminar students] would say to them that this material is relevant to all students in the class. . . I think that what they saw was that the material that was being presented, not only helped them grow, but they could certainly use it in a teaching situation.

When asked if he would recommend teaching a pedagogy seminar to his colleagues, Paul Nichols demonstrated the use of metaphors and analogies documented by his students:

There is so much value in it. I think of the problems we have today in the secondary and elementary area as this "Wall of China". I don't know who built this thing which divides the content people from the methods people. You can't do that. That wall cannot exist if you really want effective teaching. The more that you can do to tear that thing down without worrying about turf . . . that is another thing -- "turfitis" is unbelievable! It is an academic disease. People are very sensitive about what they perceive to be the area over which they have control and command. Anybody who would dare to venture on the turf must do battle with the dragon.

Asked directly if the seminar was an effective way to achieve faculty collaboration in teacher education, Paul maintained that

> it is a marvelous opportunity. I think this is something that has never really been done before -- I have been here for almost a quarter of a century , and it's never been heard of, there is always "the Wall." I think it is so silly, it has to hurt education.

Has the seminar altered Dr. Nichols' thinking about teacher education?

> Absolutely, let's say, focused a lot of what might have been disjointed notions I might have had until -- I now sense the real need --- working together with a real zeal, a common goal . . . quality education delivered by quality educators.

Sandy Peters focused on the quality of the interaction between she and Paul, describing

> very positive interaction. I think we both enjoyed one another. I think we had a good rapport and I think it was a rapport that the student were able to see. I think that made it a little more interesting for them. We didn't always agree with everything, we played off one another . .

She went on to talk about the excitement inherent in collaboration:

> I was excited that we were trying something new, that we

were trying to be innovative and trying to include liberal arts faculty and show them that we were attempting to intertwine the departments outside of education . . . [I have always been interested in collaboration], I think this is a wonderful [vehicle for promoting this kind of collaboration between education and arts and sciences], I suspect that very few people who have [taught pedagogy seminars] have not been positive. I see it as a real method of intertwining the whole university.

Asked about teaching attitudes and behaviors, Dr. Nichols talked frankly about the risks and the benefits involved in exposing your teaching to the scrutiny of students and colleague.

I have never been in a position where [my teaching was being examined]. It is a little bit unnerving to think of yourself being examined analytically like a cadaver on the table, where people have opened up your skull and are going to look at the brain and see how it works. Having Sandy there, who is well-steeped in the language of pedagogy, made me feel more comfortable, less at risk. I don't think I would need her there were I to do this again[6] because she has instilled in me enough confidence that I don't fear this process of looking into my head.

My style of teaching is really a distillation of a lifetime of teaching at various levels. I never really

think about the process consciously. All I know is that I have this idea that I want to communicate to this group of people and I want to do it as effectively as I can, never thinking about the process that I am involved in at the time.

When asked if one of the results of seminar participation for him was more reflective thinking about his own teaching, Dr. Nichols sounds much like Dr. Shields.

Yes. The things that I was doing right that I suspected I was doing right were reinforced by student reaction. In those areas, where I was not sure of myself, I'd say, "I could have done this better." That too was reinforced so it has been a very positive thing for me as the teacher.

Ms. Peters suggests an increase in both thoughtfulness about teaching and awareness of the impact of her interaction with students. She said,

Probably after twenty-five years in the profession, it made me re-think myself what teaching was. It made me more interested once again in content, in thinking. . . . [working with Paul] led me to reevaluate the teaching process and see him extending himself to students. You can kind of get yourself into a non-thinking mode and you become rote [in your interactions with students]. I think that what I did was to re-evaluate my own humanity in terms of teaching.

While promising, the faculty comments represent self-conscious thinking in the present without attention to changes in behavior (both teaching and faculty interaction) over time. Adequate assessment demands that attention be paid to documenting changes in faculty teaching and changes in frequency and quality of faculty interaction regarding issues of teacher education.

Assessment Challenges

Assessment of the pedagogy seminar poses special challenges in that the pedagogy seminar is a very simple intervention with seemingly far-reaching effects. We are convinced that the pedagogy seminar concept is of value in reforming teacher education. We are less clear about the specific effects of seminar participation for both faculty and students. Some of our initial hypotheses (that students do adopt a pedagogical point of view and comprehend the complexities of teaching, that faculty interaction and teaching might be enhanced) have gained preliminary support from the journal and interview "net" we cast out at the outset of this project. Other unanticipated effects (that pedagogy seminars may serve as a recruitment tool for future teachers) are suggested by the data.

Without question, the pedagogy seminar concept requires further assessment if we are to make reasonable decisions about how it "fits" in an overall program of teacher education? Should the seminars be required or optional? If

required, how many should be taken? When? Attached to what/what kinds of courses? Can such seminars replace methods courses as they are currently structured? Or are they better seen as a separate complementary piece of the teacher education program?

What about the systematic use of pedagogy seminars as a faculty development experience? Should faculty be encouraged or required to participate? How does an institution allocate the costs of this kind of course offering, one taught by faculty from different departments and schools and with both curricular and faculty development ramifications? These questions remain the subject of conjecture and testing.

Conclusion

The offering of pedagogy seminars is a small piece in an effort to develop a model for effective teacher preparation based on the integration of liberal arts and sciences and teacher education. It would appear that individual seminars have been quite successful and that the program, taken as a whole, has contributed substantially to the atmosphere for teaching and learning at Millersville.

While seemingly a simple intervention, the pedagogy seminar has potential for far-reaching results, for both faculty and students. It is relatively inexpensive to implement, especially in light of the faculty development and institutional politics benefits. Perhaps most intriguing about the program is the fact that the processes of

integration of liberal arts and professional education and faculty development are both supported and furthered by the very structure of the seminars. It is a program that not only has results for the teacher education students involved, but which also supports faculty efforts in the development of good teaching. If pedagogy seminars are not the right response to the reform of teacher education, they are at least "usefully wrong".

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I gratefully acknowledge the support of the Spencer Foundation in my preparation of this paper. While not a direct part of the project for which I was awarded a Spencer Fellowship, it bears a clear relation to my broader interest in the reconceptualization and redesign of teacher education.

I would like to acknowledge the assistance of Mary Ann Gray who contributed substantially to the review of transformational grammar student journals and to Ken Shields, Sandy Peters and Paul Nichols, as well as Mary Ann Gray for their reading of the faculty interviews section.

2. That fact has been noted by those outside the university. The pedagogy seminar program was a winner of one of AASCU's 1990 Christa MacAuliffe Showcase for Excellence Awards.

3. Shulman's view of pedagogical content knowledge (1986) seems to have taken hold of the imagination of educators and researchers as identifying yet another category of the knowledge of teachers. Clearly, the epistemic status of pedagogical content knowledge requires some exploration if it is to provide a conceptual base for research and teacher education. Still, I find the notion useful as a "conceptual placeholder" for the intersection of content and method in teaching. This is, I suspect, not far off from Shulman's original intention in introducing the concept.

4. An inter-disciplinary faculty/administrative team developed the pedagogy seminar concept and guided its initial implementation as one phase of Millersville University's Project 30 activities. This team included Cynthia Dilgard (Professor of English), Linda Clark (Acting Dean of Humanities and Social Sciences), Christopher Dahl (Dean of Humanities and Social Sciences), Sam Ha (Professor of Biology), Albert Hoffman (Dean of Science and Mathematics), Nancy Smith (Dean of Education), and Barbara Stengel (Assistant Professor of Educational Foundations).

5. I quote students here directly from hand-written journals. Minor punctuation changes have been made to clarify meaning.

6. Dr. Nichols comments raise interesting questions about whether pedagogy seminars could be taught by individual instructors rather than by faculty teams. While it is certainly conceivable that an individual instructor could do this, and it is also conceivable that some good instructors already incorporate this kind of perspective in the regular course teaching, and it might be considered ideal when <u>every</u> instructor in the university constantly and consistently shared with students his or her pedagogical metacognition, nonetheless, it seems that something might be lost from the pedagogy seminar effectiveness. Whether the loss would be for student or faculty is not clear.

Pedagogy Seminar Syllabus

Undergraduate Course Proposal

Educational Foundations Department

EDUC 301
Pedagogy Seminar
1 credit hour

Catalog Description

Pedagogy seminars accompany selected arts and sciences courses and examine the process of teaching and learning that course content. Students enrolled in the designated three or four credit courses may elect to participate in the accompanying one credit seminar.

Corequisite: A student may not register for any pedagogy seminar unless that student also registers for the primary course with which the seminar is associated.

Rationale

The pedagogy seminar constitutes an exploration of a single question: how does the successful teacher transform expertise in subject matter into a form that students can comprehend? This ability, which has recently been characterized as "pedagogical content knowledge," is central to the educational process, for a teacher's competence in subject matter is useless if that teacher cannot:

1) assess student interest and understanding ("build bridges" between what the teacher is teaching and what the students already know and care about);
2) anticipate student difficulties and/or misconceptions;
3) construct coherent explanations (use examples, analogies, and metaphors to illustrate ideas and concepts); and
4) organize course content clearly and from multiple perspectives.

Teacher education students require opportunities to think about course content from a teacher's perspective, that is, to integrate content and method for teaching. The pedagogy seminar is structured to make this possible. Pedagogy seminars are one-credit seminars which accompany regular three- or four- credit arts and sciences courses (referred to here as "primary course"). These optional seminars are team-taught by the arts and sciences faculty member who offers the primary course and a teacher education faculty member.

The purpose of the pedagogy seminar is to identify and analyze the teaching techniques employed by the primary course instructor and to encourage students to reflect on

the process of their own learning, so that students will themselves be able to take course content and transform/translate it for another audience. Therefore, the focus of the seminar is the primary course content as it is taught and learned, rather than generic principles of pedagogy. In essence, the primary course to which the seminar is attached becomes a "case study" in pedagogical content knowledge, and the instructional team leads the seminar participants through the case. In the process, students not only analyze the teaching techniques employed by the primary course instructor, but also construct and create alternatives for teaching the same material to other audiences.

Pedagogy seminars will be limited to 16 students so that they can truly be conducted as seminars, relying heavily on group interaction and discussion. Seminar participants will be asked to analyze content and method in the teaching of the primary course and to apply what they have learned to other audiences and contexts. The case study method of teaching has been used effectively in both professional school settings and liberal arts settings to integrate theory and practice. (See, for example, C. Roland Christensen, Teaching and the Case Study Method (Boston: Harvard Business School, 1987). It is an especially good methodology for integrating content and method in teaching as well.

Pedagogy seminars will be open to any students but designed to attract teacher education students. Registration is strictly voluntary as these seminars will function as a supplement to the present teacher education curriculum. It is possible that, as these seminars are offered and evaluated, they may be integrated into the "methods of teaching" component of the various teacher education programs. For these reasons, pedagogy seminars should be numbered at the low 300 level using an EDUC designation.

It is expected that second-semester freshman, sophomore, junior and senior students will register for pedagogy seminars. Students will be at varying stages in their professional education studies.

Course Objectives

At the end of the seminar, students should be able to:

1. discuss the selection and planning of curriculum using the primary course content as an example;

2. understand the concept of "audience" for teaching and apply that concept in choosing, evaluating, and designing materials for teaching;

3. identify teaching methods used by the primary course instructor, analyze their effectiveness for the particular college audience as well as for other audiences, and suggest alternative methods;

4. identify and generate examples, metaphors, and analogies useful in teaching this course content to a variety of audiences;

5. discuss individual learning styles and how the learning of primary course content is affected by learning styles;

6. describe how primary course content would interact with the developmental levels of various student audiences to affect learning and influence choice of content and method, and apply that knowledge;

7. identify current trends in the teaching of this particular subject area;

8. think about and describe the influence of their own process of learning on their ideas about teaching.

Course Outline

The progress and content of the primary course will serve as the "text" for the pedagogy seminar. As a result, the seminar outline may change somewhat based on the organization of the primary course.

Recommended topics for the pedagogy seminar:

1. Pedagogical Content Knowledge: Thinking like a teacher

2. Setting objectives

3. Content selection and organization

4. Resources/materials/text selection

5. "Audience" in teaching
   Age and developmental levels, cultural differences, learning styles

6. Role of teacher/student participation in learning

7. Choosing appropriate teaching methods

8. Creating frameworks for understanding: approaches to content (factual/conceptual, detail/"big picture")

9. Building a "representational repertoire": use of examples, analogies, and metaphors to enable students to comprehend course content

10. Assessing student misconceptions and sources of confusion, understanding and responding to student questions, differentiating material which is easy to learn from that which is more difficult

11. Motivating students to learn

12. Assessment of learning accomplished

13. Trends in teaching this subject area

Each of these topics will be addressed in relation to the primary course content rather than as a general topic in pedagogy.

Evaluation

Pedagogy seminars will be offered on a "Pass/Fail" basis only. Because of the nature of the seminar, student attendance at, and active participation in, seminar sessions will weigh heavily in evaluation of student performance.

Attendance

Attendance is expected. Only official university excuses will be accepted for absences.

Class participation

Class participation is expected. Class participation is defined as asking intelligent and pertinent questions, commenting on, clarifying and bringing into focus points of interest related to course content and readings, and generating novel concepts, examples, and techniques for teaching the primary course material. Instructors will encourage class participation by utilizing students' journal observations as one basis for class discussion. (See below.)

Journal

Students must keep a journal of their own thinking about the teaching and learning of the primary course. Journal

comments should focus on insights related to the topics listed in the course outline. The structure of the journal will depend on the nature of the primary course but could take the form of a separate journal of commentary, "two-column" note-taking with primary course notes in one column and teaching/learning notes in the other, or some other structure as designated by the seminar instructors.

Additional assignment

Students in every pedagogy seminar will be required to complete at least one additional assignment which may be written, oral or some combination. The specific assignment will be determined by the seminar instructors in light of the nature of the primary course. Below are listed two examples of possible additional assignments.

> Reaction paper: a critical analysis of one lesson/lecture in which the student a) identifies the behavioral objective of that lesson; b) states what was accomplished in the lesson; c) states the effective teaching methods or techniques used in that lesson; d) identifies the examples and analogies used by the instructor in teaching the lesson; e) identifies additional teaching techniques/methods which could have been effectively used; and f) evaluates the degree to which the objective for that lesson was met.
>
> Brief lesson presentation of some aspect of course material "transformed" for a designated audience, combined with a "rationale and assessment" paper discussing the planning and the outcome of the lesson presentation.

Required Text

There is no text required for the seminar since the primary course functions as a "text". However, there will be short, assigned readings throughout the course. Other media resources may also be used. These will be chosen by the seminar instructors and, when possible, will be subject-specific. The following is a list of potential materials:

Lee Shulman, "Toward a Pedagogy of Substance," AAHE Bulletin, June, 1989, pp. 8-13.

Lee Shulman, "Knowledge and Teaching: Foundations of the New Reform," Harvard Education Review, Vol. 57, No. 1, February, 1987.

Lee Shulman, "Those Who Understand: Knowledge Growth in Teaching," Educational Researcher, Vol. , No. 2, February, 1986, pp. 4-14.

Using What We Know About Teaching, Arlington,VA: The Association for Supervision and Curriculum Development, 1984.

Improving Teaching, Arlington, VA: The Association for Supervision and Curriculum Development, 1986.

Phi Delta Kappan and Educational Leadership regularly publish articles of interest on these topics.

Contemporary films such as "Stand and Deliver", "Dead Poet's Society, and "The Marva Collins Story," or documentaries such as "To Be a Teacher" may be used to advantage in these seminars.

Rita Dunn, "Learning: A Matter of Style" (Video presentation, manual and assessment techniques related to learning styles), published by ASCD.

ISC, "Essential Teaching Skills," (Interactive video program currently in operation in IBM Computer Lab, Stayer Research Center).

Gaia Leinhardt and David Smith, ""Expertise in Mathematics Instruction: Subject Matter Knowledge," Journal of Educational Psychology, Volume 77, No. 3, 1985, pp. 247-271.

Pam Tyson, "Mathematical Knowledge: A Necessary but not Sufficient Condition for Teaching Mathematics," Paper presented at AERA Annual Meeting, 1989.

Lynn Steen, Calculus for a New Century: A Pump, Not a Filter, The Mathematical Association of America, 1988.

National Research Council, Everybody Counts: A Report to the Nation on the Future of Mathematics, Washington, DC: National Academy Press.

John Dossey, "Transforming Mathematics Education," Educational Leadership, November, 1989, pp. 22-24.

Patricia L. Hauslein, Ronald G. Good and Catherine Cummins, "The Effect of Teaching upon Biology Cognitive Structure of Teachers," Paper presented at AERA Annual Meeting, 1989.

Project 2061, Science for All Americans: Project 2061 Report on Literacy Goals in Science, Mathematics and Technology, Washington, DC: American Association for the Advancement of Science, 1989.

Lewis Thomas, "The Art of Teaching Science, The New York Times, March 14, 1982.

Pamela L. Grossman, "A Study in Contrast: Sources of Pedagogical Content Knowledge for Secondary English," Journal of Teacher Education, forthcoming.

Arthur Applebee, Judith Langer, and Ina Mullis, The Writing Report Card: Writing Achievement in America, Princeton, NJ: (National Assessment of Educational Progress) Educational Testing Service, 1986.

Irwin Kirsch and Ann Jungeblut. Literacy: Profiles of America's Young Adults, Princeton, NJ: (National Assessment of Educational Progress) Educational Testing Service, 1986.

Project 2061: Social and Behavioral Sciences, American Association for the Advancement of Science.

Diane Ravitch and Chester Finn, Jr., What Do Our 17 Year Olds Know? A Report on the First National Assessment of History and Literature, New York: Harper and Row Publishers, 1987.

General Education Credit

No general education credit will be awarded for completion of pedagogy seminars.

Resources

Faculty presently at the university have the qualifications and capability of teaching pedagogy seminars.

Funding is currently being sought from sources outside the university to support offering team-taught pedagogy seminars for a period of three years so that judgments can be made about if and how to incorporate these seminars into teacher education requirements. The offering of pedagogy seminars is likely to be contingent upon the receipt of external funding.

No extraordinary library and/or equipment resources are needed to offer pedagogy seminars.

Seminars scheduled/
Faculty participants

PEDAGOGY SEMINARS (by semester offered)

SEMESTER	PRIMARY COURSE	INSTRUCTORS	ENROLLMENT
Fall, 1989	Intro to Statistics	Joseph Meier Bud Smart	7
	Intro to Psychology	Kate Green Perry Love	3
	Nutrition	Bill Yurkiewicz Rich Will	6
	The American Presidency	G. Terry Madonna Dennis Denenberg	10
	Transformational Grammar	Ken Shields Mary Ann Gray	10
Spring, 1990	Intro to Chemistry	Patricia Hill Phil Wynn	8
	Intro to Film	Dave Chamberlin Joe McCade	5
	Origin & Evolution of the Earth	Paul Nichols Sandy Peters	13
	The Language of Music	Jean Romig Rosemary Winkeljohann	8
	Intro to Philosophy	Leon Miller Barbara Stengel	11
	Sociology of the Family	Henry Fischer Yvonne King	12
Fall, 1990	Modern Geometry	Dottie Blum Keith Lauderbach	10
Spring, 1991	Biology of Plants	James Parks Troy Isaak	8
	Physical Geology	William Jordan Roger Wilson	6
	Anglo-American Geography	Arthur Lord Fritz Erickson	10
	Comp/Oral Exp II	Ana Borger-Reese Gloria Guzman	3
	Principles/Econ II	S. Leela Ed Plank	7
	General Psychology	Fred Foster-Clark Mary Klinedinst	10
	Dev. of Child & Adoles.	R. Smith Wade-El Cheryl Desmond	6

Fall, 1991	Ecological Biology	Ken Miller Barry David	6
	Intro to Language Study	Ken Shields Anne Mallery	13
	Modern Middle East Hist.	John Thornton Perry Love	9
	Energy, Power, & Trans.	Len Litowitz Sandy Yeager	9
Spring, 1992	Early English Lit.	Steven Miller Karen Sanchez	5
	Calculus II	Bob Smith Verne Hauck	11
	The Language of Music	Carol Myers Jane Matanzo	18
	Cultural Anthropology	Carol Counihan Audrey Kirchner	11

PARTICIPANTS OF PEDAGOGY SEMINAR
(Alphabetical)

Borger-Reese, Ana
Chamberlin, Dave
Counihan, Carole
David, Barry
Denenberg, Dennis
Desmond, Cheryl
Erickson, Fritz
Fischer, Henry
Foster-Clark, Fred
Gray, Mary Ann
Green, Kate
Guzman, Gloria
Hauck, Verne
Hill, Patricia
Isaak, Troy
Jordan, William
King, Yvonne
Klinedinst, Mary
Kirchner, Audrey
Lauderbach, Keith
Leela, Secunderabad
Litowitz, Len
Lord, Arthur
Love, Perry
Love, Perry
Madonna, G. Terry
Mallery, Anne
Matanzo, Jane
McCade, Joe
Meier, Joseph
Miller, Ken
Miller, Leon
Miller, Steven
Myers, Carol
Nichols, Paul
Parks, James
Peters, Sandy
Plank, Ed
Romig, Jean
Sanchez, Karen
Shields, Ken
Shields, Ken
Smart, Bud
Smith, Bob
Smith Wade-El, Rita
Stengel, Barbara
Thornton, John
Will, Rich
Wilson, Roger
Winkeljohann, Rosemary
Wynn, Phil
Yeager, Sandy
Yurkiewicz, Bill

PEDAGOGY SEMINAR PARTICIPANTS BY DEPARTMENT

BIOLOGY			
Fall, 1989	Nutrition	Bill Yurkiewicz	6
Spring, 1991	Biology of Plants	James Parks	8
Fall, 1991	Ecological Biology	Ken Miller	6
CHEMISTRY			
Spring, 1990	Intro to Chemistry	Patricia Hill	8
Fall, 1991	Energy, Power, & Trans	Sandy Yeager	
ELEMENTARY EDUCATION			
Fall, 1989	Transformational Grammar	Mary Ann Gray	
Fall, 1991	Intro to Language Study	Anne Mallery	
Spring, 1990	The Language of Music	Rosemary Winkeljohann	
Spring, 1990	Sociology of the Family	Yvonne King	
Spring, 1991	Physical Geology	Roger Wilson	
Spring, 1991	Principles/Econ II	Ed Plank	
Spring, 1992	The Language of Music	Jane Matanzo	
Spring, 1992	Cultural Anthropology	Audrey Kirchner	
EARTH SCIENCE			
Spring, 1990	Origin & Evolution of the Earth	Paul Nichols	13
Spring, 1991	Physical Geology	William Jordan	6
ECONOMICS			
Spring, 1991	Principles/Econ II	S. Leela	7
EDUCATIONAL FOUNDATIONS			
Fall, 1989	Intro to Psychology	Perry Love	
Fall, 1989	Nutrition	Rich Will	
Fall, 1989	The American Presidency	Dennis Denenberg	
Spring, 1990	Intro to Philosophy	Barbara Stengel	
Spring, 1991	Biology of Plants	Troy Isaak	
Spring, 1991	Anglo-American Geography	Fritz Erickson	
Spring, 1991	Comp/Oral Exp II	Gloria Guzman	
Spring, 1991	General Psychology	Mary Klinedinst	
Spring, 1991	Dev. of Child & Adol	Cheryl Desmond	
Fall, 1991	Modern Middle East Hist	Perry Love	
Spring, 1992	Early English Lit	Karen Sanchez	
ENGLISH			
Fall, 1989	Transformational Grammar	Ken Shields	10
Spring, 1990	Intro to Film	Dave Chamberlin	5
Fall, 1991	Intro to Language Study	Ken Shields	13
Spring, 1992	Early English Lit	Steven Miller	5
GEOGRAPHY			
Spring, 1991	Anglo-American Geography	Arthur Lord	10
HISTORY			
Fall, 1989	The American Presidency	G. Terry Madonna	10
Fall, 1991	Modern Middle East Hist	John Thornton	9

LANGUAGE			
Spring, 1991	Comp/Oral Exp II	Ana Borger-Reese	3
MATH			
Fall, 1989	Intro to Statistics	Joseph Meier	7
Fall, 1990	Modern Geometry	Dottie Blum	10
Spring, 1992	Calculus II	Bob Smith	11
MUSIC			
Spring, 1990	The Language of Music	Jean Romig	8
Spring, 1992	The Language of Music	Carol Myers	18
PHILOSOPHY			
Spring, 1990	Intro to Philosophy	Leon Miller	11
PHYSICAL EDUCATION			
Spring, 1990	Origin & Evolution of the Earth	Sandy Peters	
PSYCHOLOGY			
Fall, 1989	Intro to Psychology	Kate Green	3
Spring, 1991	General Psychology	Fred Foster-Clark	10
Spring, 1991	Dev of Child & Adoles	R. Smith Wade-El	6
SOCIOLOGY			
Spring, 1990	Sociology of the Family	Henry Fischer	12
Spring, 1992	Cultural Anthropology	Carol Counihan	11
TECHNOLOGY			
Fall, 1989	Intro to Statistics	Bud Smart	
Fall, 1991	Energy, Power, & Trans	Len Litowitz	9
Spring, 1990	Intro to Film	Joe McCade	
Spring, 1990	Intro to Chemistry	Phil Wynn	
Fall, 1990	Modern Geometry	Keith Lauderbach	
Fall, 1991	Ecological Biology	Barry David	
Spring, 1992	Calculus II	Verne Hauck	

* The number after the faculty name indicates enrollment. If no number appears, that faculty member served as consultant/observer.

Pedagogy Seminars
Class Schedule Printing Information
Fall 1992

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

COMM 100.19 .21	3.0	Fundamentals of Speech				Drake
EDFN 301.01	1.0	Speech Pedagogy Seminar	W	3:00-3:50	Myers 11	Drake Stengel

* Save 8 seats each section for seminar participant

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

SPAN 470.01	3.0	Spanish Linguistics				Caminero
EDFN 301.02	1.0	Spanish Pedagogy Seminar	W	2:00-2:50	Byerly 229	Caminero Morales

* Save 12 seats for seminar participants

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

PHYS 103.01	3.0	Introduction to Physics				Nolan
EDFN 301.03	1.0	Physics Pedagogy Seminar	Th	2:00-2:50	Roddy 235	Nolan Klinedinst

* Save 16 seats for seminar participants

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

BIOL 100.16 .17 .18 .19 .20	3.0	General Biology				Reinking
EDFN 301.04	1.0	Biology Pedagogy Seminar	W	3:00-3:50	Roddy 248	Reinking Gray

* Save 8 seats sections .16 and .17 only for seminar participants although students from other sections may enroll for seminar

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

PHIL 100.03 .07	3.0	Intro to Philosophy				Stameshkin
EDFN 301.05	1.0	Philosophy Pedagogy Seminar	M	11:00-11:50	McComsey 111	Stameshkin Ottinger

* Save 8 seats for each section for seminar participants

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

ENGL 321.01	3.0	Transformational Grammar				Shields
EDFN 301.06	1.0	English Pedagogy Seminar	Th	9:30-10:20	Byerly 229	Shields Staff

* Save 16 seats for seminar participants

Pedagogy Seminars
Class Schedule Printing Information
Spring 1993

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

CHEM 105.01	3.0	Chemistry and Art	TBA	TBA	TBA	Hill
EDFN 301.01	1.0	Chemistry Pedagogy Seminar	TBA	TBA	TBA	Hill Lauderbach

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

PHYS 205.01	3.0	Musical Acoustics	TBA	TBA	TBA	Cooney
EDFN 301.02	1.0	Physics Pedagogy Seminar	TBA	TBA	TBA	Cooney Brandon

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

ART 201. 01	3.0	History & Aesthetics of Photography	TBA	TBA	TBA	Lowing
EDFN 301.03	1.0	Art Pedagogy Seminar	TBA	TBA	TBA	Lowing Staff

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

BIOL 256.01 .02 .03	3.0	Nutrition	TBA	TBA	TBA	Yurkiewicz
EDFN 301.04	1.0	Biology Pedagogy Seminar	TBA	TBA	TBA	Yurkiewicz Staff

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

PSYC 228.03 .04	3.0	Life Span Human Development	TBA	TBA	TBA	Hill
EDFN 301.05	1.0	Psychology Pedagogy Seminar	TBA	TBA	TBA	Hill Staff

OPTIONAL PEDAGOGY SEMINAR
Students with an interest in teaching may register for the one-credit optional seminar, but are not required to do so.

HIST 360.01 .02	3.0	United States Social History	TBA	TBA	TBA	Downey
EDFN 301.06	1.0	History Pedagogy Seminar	TBA	TBA	TBA	Downey Desmond

Faculty Comments

MILLERSVILLE UNIVERSITY FACULTY COMMENTS
PEDAGOGY SEMINAR PROGRAM

The following comments have been excerpted from interview transcripts with the approval of the named faculty member.

IQ = Interview or Question
(X) = Interviewee's Response

Biology 256
Nutrition
Bill Yurkiewicz and Rich Will

Bill Yurkiewicz (Biology)

IQ: Has the seminar impacted your view of teacher ed in any way?

Y: Yes. I really wasn't that involved with teacher ed. I didn't know that much about it I guess. I learned more by interacting with these people in the group meeting that we had. I especially learned from Rich Will because we would have meetings other than the seminar when he came to class. In fact, we talked on the phone a lot. "Well, we had the seminar, what did you think about what so and so said?" I think I learned a lot about the teacher ed program. In fact, I am impressed with it. I think they are doing quite a good job. The people certainly seem to be dedicated and interested in what they are doing. They seem to want to do the best job they possibly can. That has been very positive.

IQ: So it has been a way to meet people in other programs?

Y: Absolutely. And to see what they are doing. Normally we are down here in this building with other scientists and I never see those other people.

IQ: So do you think then that the seminar is one possible way or mechanism of enhancing that kind of cooperation?

Y: Without a doubt. If we had 3-4 or half dozen of these seminars going on in this building, in different departments -- chemistry, earth science and so on, it couldn't help but be beneficial because those people would be coming down to sit in on our courses. We would be interacting with them. I think it would be extremely positive, extraordinarily positive!! In fact, it probably should go the other way. I think in some cases, we should be sitting in on some of their courses to see what they are doing. For example, Rich Will came to my class time after time, but I never went to his class. I think it

would have been interesting for me to see what he was doing in his class. I think it should be both ways.

IQ: What are your thoughts about the seminars being required as part of the teacher ed program?

Y: I could see that they would be extremely beneficial. I don't know if they should be required or they should be optional, and suggest that they take if it at all possible. I suppose that if I were in charge, I think it would be required. It is really beneficial. I think it is a way to look at teaching and discuss teaching with someone kind of equal level. Very different from anything else that they have in their programs. I would be very encouraged if they could make it a requirement.

IQ: Is there anything else you could add about your seminar experience?

. . . [Rich and I] tried to indicate to the students that we wanted to become better teachers because of what is going on. I think they believed us and they participated. The students were almost like colleagues in discussing this. They were mature enough that it could come off that way, rather than faculty and students, teacher and pupils and so on. I think maybe I go more out of this more than they did. I thought about my teaching continually. Is this the best way to do this; is there a better way, is this clear, is this an example of good teaching, is it an example of poor teaching? I found myself, I think, preparing myself more for class than I normally would have. Looking for better examples, clearer examples, I think asking the students for feedback more than I did in the past to make sure they understood they knew what was going on.

Rich Will (Educational Foundations)

(The following is excerpted from a written statement which Rich submitted in lieu of an interview.)

Both Bill and I felt an excellent result of our venture was the renewed appreciation we each had of the other's tasks here at Millersville. The cooperation between Education and the various schools can be nothing but useful as this university strives to become ever a better place to learn.

Music 103
The Language of Music
Jean Romig and Rosemary Winkeljohann

Jean Romig (Music)

IQ: What sorts of things did you learn from the seminar? Either from the students, from your partner?

R: I think more than anything else, I became aware of how I function as a teacher. Because much of what I teach is skills - oriented, I have to do a lot of planning. I must move logically from step 1 to step 2 because if I skip steps, students can't learn.

IQ: From your point of view then, you are saying that you became more reflective about what you as a teacher were doing.

R: Yes.

IQ: If someone asked you, if they had been asked to participate in this seminar experience, how would you respond to them? Would you recommend it?

R: Definitely! I would recommend it to anyone. I am very positive about it!!

Rosemary Winkeljohann (Early Childhood Education)

IQ: How would you rate the success of the seminar?

W: I feel it was a tremendous success. One young lady told me that because of the seminar she was beginning to think like a teacher. Sitting in college classes gave her a great deal of information but it did not deal with the art of teaching. The seminar gave her a very different prospective. I feel that if we can get just one person to be a better teacher, the seminar is a success. From discussions with other faculty I feel we were all very positive about the experience because we were asking different questions of ourselves.

I loved going to the seminars. When we were looking at the state curriculum for music, the students were so great in their reactions. The didn't just except this curriculum guide as that which they had to do in music with elementary school children but asked questions like: "Why do you think this should be done? I think it would be better to do it this way." The students became critical and constructive in their evaluation of what should happen in elementary classrooms.

IQ: What are your thoughts of the seminar being required in the teacher education program?

W: I'd love it. But I would want it to be small groups again.

The students were so uninhibited, we had seven young ladies and two professors. We really were able to know each other better and to share our thoughts. I personally was able to see education through the eyes of another professor and the students saw us in another light. Of the seven, I have had two in class and I have seen such a big difference in them in the classes from the other students. They seem to be much more attuned to that process of education not just the content.

IQ: What kind of an effect did the seminar have on your own teaching or your thinking about teaching?

W: I have become much more critical of my own teaching and do not feel that content is so important as the process. If the students have good models, they have a better chance of being a good teacher. My questions in class differ from before. I deal with metacognitive types of questions rather than recall questions. I feel that I am much more strategy oriented in my preparations.

Psychology 100
Introduction to Psychology
Kate Green and Perry Love

Kate Green (Psychology)

IQ: What are your feelings, in general, about your participation in this pedagogy seminar?

G: I really enjoyed it. I got a lot out of it. I wasn't at all sure what would happen because I didn't know what pedagogy was. I had some idea but I never took a class in methods or how to communicate information. I had never taken a class in teaching so it was really something quite new. I was a little bit hesitant because I knew I would have a mentor from the department of education and never having worked with anyone who would be in and out of my classes, where we would also team teach the seminar class, was really new so I wasn't sure want to expect. But in general I would say that I had a really great time because it made me think about things in a different way.

IQ: Would you characterize the seminar as successful or unsuccessful?

G: It is hard to say. In terms of me personally, it was successful on a number of levels. It was successful in that I began to think about education, which I had never thought about before. I began to have a closer relationship with a person in [teacher education] which was a change. It was the

first time I thought about issues in pedagogy and honestly, as much training as I have had in observation, self-observation, and therapy, I never thought about it in teaching -- why it was I did what I did which was strange because in therapy and working with clients that is all you think about. But I never thought about it in teaching. So I found myself constantly thinking, why are you putting that on the board? There are all these other things to put on the board, why did you choose that to put on the board? It was really quite amazing. It was very satisfying on that level.

I think if we had more students in the seminar, (we only had three) there would have been a great deal more discussion and it would have been more helpful. That is something I would have to say was a weakness. It was successful, I think, for Perry Love, my mentor, in that he would sometimes take notes on psychology just because he was interested in the topic and had not been exposed to it for awhile. He learned some more psychology which is always a blessing. I think he enjoyed working with me. We enjoyed working with each other which was really positive.

I actually think those three students got a lot out of it, because they commented on things like, " I've never had a chance to see professors in this light before, where we just sat and talked about things and where we could come up with questions and considerations. You would prompt us, but we could come up with our own ideas, and you would take us seriously and begin to talk about it". I think that very informal way of discussing things, getting them thinking about their own careers in teaching, seeing us as human, and struggling about how to teach and communicate and how to be effective is really important.

Perry Love (Educational Foundations)

IQ: How is the seminar of value for future teachers?

L: I think for an education major it would be very beneficial, because it gives them a chance to look at a typical college level class that they would not think of in a pedagogical sense. That they can look at a model and say, regardless of the class, regardless of the content, regardless of the instructor, regardless of any other factor, there are certain teaching strategies that are going on here, there are certain choices that the instructor has made.

IQ: Shift gears a minute. Do you think participating in the seminar had any effect on your teaching or your own thinking about teaching?

L: Yes, because I think it forces you to look at the choices you made, because I know there were things at the time -- I

had a graduate level supervision class, and I made changes in things that I did, that I focused on, doing things that I had tacitly planned to do, that I basically said, "Yes, now I know to do it that way." It also gave me an opportunity to be more structured as far as outlines in a lecture-type presentation.

English 240
Introduction to Film
Dave Chamberlin and Joe McCade

Dave Chamberlin (English)

IQ: How would you characterize your interactions with your partner?

C: He and I got along very well. In fact, I think we both would like to work together again. Aside from the fact that we both liked the [seminar] concept and liked to do it, we would specifically like to work together as a team. I thought we got along very well and learned from each other. I think one of the chief benefits of the course was for us. He's in IA and I had virtually no contact with that department at all. He similarly had no contact with the English department. I think he learned a lot about what goes on in English and film. I think he got rid of a lot of misconceptions and prejudices that he had about English. I got over some prejudices involving IA, which is that they just sit around and hammer nails and so forth. He volunteered for the course because he really is interested in teaching. He thinks about teaching a lot and the methodology involved. I realized that a lot of what goes on in IA is not just skills, but learning how to teach.

IQ: So the seminar was a way first of all for you from different faculties to collaborate and really learn about each other's programs?

C: I think people in liberal arts including the humanities and the social sciences, if they don't have a background in education, usually are full of negative prejudices. I have been all my life. I would say that the seminar helped me overcome a lot of prejudices and simplistic notions that I had about what goes on in education. I have a lot more respect for the methods courses than I did before.

IQ: Do you think the seminar should be required in the teacher education program?

C: I am tempted to say yes. I don't know what all goes on in the rest of the education program. I like the concept so much. Having a small group is highly desirable. I think the concept of the pedagogy seminar, that is, joining the teaching to a content area, to me that is such a good concept that I would be tempted to require it, but I have a strong bias against requiring anything.

In a way, a PG course is like an extended intensive student evaluation of the course. Unlike the one shot evaluation at the end, of course -- tenured people only get that every five years. I've been around so long that I am evaluated one semester out of every ten. All of a sudden, here I was getting an in-depth evaluation from five people. In a sense, the whole semester is an extended in-depth evaluation. That was sometimes disconcerting to me. I got an idea what was going on in their minds and probably most of my other students too. Sometimes my students in the seminar suggested alternate techniques in the class and I would try them the next week.

IQ: So there was a lot of impact on your teaching or thinking about teaching?

C: Yes. They actually suggested alternate methods which I would deliberately try without even mentioning it. Sometimes I would notice the particular student in the pedagogy seminar who had suggested that, realizing that I was in fact trying what she had suggested. That was one of the really .... The students can really feel that what they say matters. When you have a course that calls for you to react to what is going on in a class and the next class period the teacher does it, that is really interesting. Then maybe it works and maybe it doesn't, and they see that too.

Joe McCade (Industry & Technology)

IQ: How were the students affected?

Mc: I had the feeling that most of them did not have a lot of one to one feedback in relationship to their performance in teaching.I think that this experience was beneficial to them because it provided additional feedback specific to their own performance. One young lady, a freshman, really got a good chance to find out some things about teaching and how successful she might be as a teacher, because of the presentation she did during the seminar. Since we had only five people in the group, the almost one-one relationship between students and instructors became most beneficial for students. Had there been fifteen people, I don't know what might have happened. It could have been quite different. The small size of the group gave us a chance to let each

person make a long presentation. We also had some reactions to their presentations that we gave them on an individual basis. That seemed to work well. Most of them enjoyed getting some feedback from their presentations.

IQ: How would you describe your experience?

Mc: I had a good experience, I enjoyed it and I would do it again. I think the students benefited from the seminar, so all in all I think it was worthwhile. I think we could do a much better job the second time around.

History 271
The American Presidency
Terry Madonna and Dennis Denenberg

Terry Madonna (History)

IQ: What would you, how would you characterize the success or "unsuccess" of the seminars?

M: I think the evaluations pointed out the results clearly. It was very successful. The students gained a great deal from the seminar particularly in the sense that they learned about teaching from the inside [The seminar] did not focus on outcomes as much as it focused on what went into the preparation of materials for use in the class.

IQ: The process?

M: Yes. The decisions instructors make in terms of what to teach. The conscious decisions that they made. I think that is really a strong feature throughout the seminar. It did force me to consciously think about what I was teaching and why I was using certain material for class instruction.

IQ: So it is making you more reflective about your practices. Was there anything else you felt that you gained from your experiences from the seminar?

M: Yes. I probably gained a little better knowledge from students as a result of the learning process that students went through as part of the seminar, because I could observe what they were learning or not learning other than what I had learned from the usual testing methods.

It was a more immediate response than an after the fact evaluation. It was beneficial because it would help them become more effective.

Dennis Denenberg (Educational Foundations)

IQ: In your opinion, what effect did the seminar have on the teacher ed students in the class?

D: From reading the evaluations and from talking to them, I think it had a very definite effect on how they viewed material.

IQ: The content itself?

D: The content itself. I think they had no sense of what a teacher goes through in making those kinds of decisions. I think they thought that it is there and you teach it.

IQ: Are you saying the selection of what to teach?

D: Right. One of the things that illustrated the point, was he had them take a portion of the material that he was not going to cover in detail. Then [we asked] what would they select if they were teaching class on those chapters. They found it excruciatingly difficult to do. That whole aspect of decision-making over what is it that X amount of time in class should I spend -- where should I put the priority? How do I decide this material is more important to have them interact with it. I thought that was one of the most graphic effects on teacher education.

The other definite effect that I thought was so dramatic was giving them a chance to talk about methods and how a teacher decides to approach this problem.

Chemistry 102
The Science of Chemistry
Pat Hill and Phil Wynn

Pat Hill (Chemistry)

IQ: What effect did the seminar have on the teacher ed students?

H: All the students were very interested in examining how one teaches and motivates students. One student actually had been a physical education teacher. She was coming back to school for a career change but she was able to add another "teacher perspective" to our discussions. Several others were in education programs while the rest were contemplating the possibility of becoming a teacher.

EAch week I would ask them to write briefly about why they thought I did certain things in class or in lab. Then we would discuss their responses and I would include my own views on what I was trying to accomplish through my class lectures

and activities. We talked a lot about the diversity of styles that are necessary to teach since there is such a diversity of learners in the classroom. By the end of the course, I believe the students had gained a whole different perspective on teaching. In a sense they were able to see it through my eyes and they realized that teaching involves more complexity than they had probably thought about before.

Phil Wynn (Industry & Technology)

IQ: What, in your opinion, did the effects of the seminar have on the students in the seminar who were teacher ed students?

W: That's an easy one. I think they saw that the teacher's role is a humanistic one. That perhaps not all teachers, but at least this teacher, Dr. Hill, was seriously concerned about being a good teacher and what she needed to do to involve them and to ... the bottom line is learning, and what she needed to do to stimulate, encourage, have them see themselves in a positive role and ultimately learn something about basic chemistry which was the course. I think those education majors in the seminar, most of them were, came away realizing that it is not automatic. A teacher does not walk into a classroom and somehow go on full automatic and things happen. The teachers are concerned, they saw that this teacher was concerned from a much more human point of view.

IQ: Would the effects be the same for the non-teacher ed students?

W: They were looking at it from a little different perspective perhaps. The teacher ed majors were saying "I'm going to be on the other side of the desk in a few years, what can I do to improve my teaching". I think the non-teaching majors were looking at it more in terms of "How do I get to know my prof better, where is my prof coming from, what has gone through her mind in planning this course". Comments from students in the course that I can recall, this has been a few months ago, were that "I didn't realize that professors gave so much thought about how they come across to students, in what order should things be covered in something as structured as a hard science like chemistry".

IQ: You sort of touched on this a little bit, what would your reactions be in terms of whether the seminar was a success or not a success?

W: I think it was a success. I don't think there is any question about that. In many different ways. To start with us, Pat and I. I don't think there is any question that we benefitted from it because it caused us to work as a team and to

communicate between each other.

Sociology 210
Sociology of the Family
Hank Fischer and Yvonne King

Hank Fischer (Sociology & Anthropology)

IQ: How were the students affected?

F: Their informal comments gave us the impression that they had a good experience and felt very positive about it. I think we felt that way too. I remember some of the kids saying, "Wow, I have a better appreciation for what is involved in the teaching process".

IQ: What effects did the seminar have on teacher ed. or non-teacher ed. students?

F: The voice I think that I heard pretty uniformly from that side of the audience was they felt they had a better picture of what went on backstage, behind the scenes, rather than only what they observed in class. They saw the product and some of them made certain assumptions about how easy it is [to teach], as if this whole thing comes from the tops of our heads. Because of the fact that we took them backstage and talked about how we do this and that, prepare and so forth, they came to see the complexities of teaching.

IQ: What about the effects of the seminar on your own teaching or your thinking about teaching?

F: A couple of things happened there. It is always gratifying when you get positive feedback, because all of us as human beings need that! So this was another avenue for that to happen. After I give the first exam in the course, I have a teacher evaluation form I give them, so I am usually tapping into what is going on and frequently get some positive feedback as well. In that sense, whatever they were saying to me didn't come as a shock or a surprise. But it was a welcome additional avenue for assessing things, especially since we were more able to have a two-way conversation.

Since the seminar students were sitting in a course with me, and we are using that as a vehicle for looking at teaching, they had suggestions for how to do certain things based on what they were having trouble with. Then we could immediately turn around and try it. That was very positive.

IQ: If a colleague approached you and said they had been asked to participate in this seminar and they were sort of debating

whether to do it or not, how would you respond?

F: I'd do it, it was fun. You learn a lot of things about yourself as well as the students. It is neat to be able to be talking backstage about teaching and learning. It is a good experience for all people involved. Probably the biggest reason people hesitate is that they feel uncomfortable giving up the stage, exposing themselves to a colleague and so on. That's too bad. It is worth the risk. It's no big risk anyway.

Yvonne King (Early Childhood Education)

IQ: What would you have to say about the success of the seminar or the lack of success?

K: I feel that the seminars were quite successful. It was evident that the students developed a real insight as to what qualities were most important for an effective teacher. The students tended to became more willing to express their opinions and more analytical. I make this comment because towards the end of the seminar sessions, they asked question which they might not have thought to ask during the first few weeks.
An additional change that I noticed was how they began to form different kinds of attitudes. Initially their comments were totally positive, but eventually they began to offer some very logical and thought provoking suggestions about the teaching situations that they had just experienced.

IQ: What about the effects the seminar had on your own teaching or your thinking about your teaching?

K: As I observed Dr. Fischer, I gained some concrete teaching strategies, which I implemented immediately in my own classes. This is one of the greatest strengths of the pedagogy seminars - they offer a valid opportunity for peer sharing.
Also as a result of this experience I have become even more reflective about my own planning and my actual teaching performance.

IQ: What about your feelings on these seminars as a way to start collaboration or cooperation between faculty from arts & sciences and education? Does it seem to be a viable mechanism?

K: I think this type collaboration is an excellent way to bridge the gap between faculty from the arts and science and the education departments. The fact that we have started off gradually enabled faculty members to develop a clear understanding of the purpose of the pedagogy seminars and to

become more receptive to the idea of becoming an active participant.

The introductory sessions afforded faculty the opportunity to openly discuss teaching ideas and concerns. I found that gradually a mutual understanding began to develop as faculty in the arts and sciences and faculty in education continued to reflect upon their personal experiences as educators of college students.

Finally, I firmly believe that these seminars are a clear example of how "success breeds success" Those people who have participated thus far have been provided with such an effective model for higher level interacting and communication among themselves, that collaboration between them has become a natural and meaning ful part of their professional roles.

Math 353
Modern Geometry
Dottie Blum and Keith Lauderbach

Dottie Blum (Mathematics)

IQ: How would you characterize your interaction with your partner?

DB: Very good. We got along very well. We complimented each other in a lot of aspects and I have all the respect in the world for him. I really appreciated the things he brought into the seminar especially when we did the day on learning styles. I had never really done that before and that was a lot of fun. We analyzed ourselves along with the students in the class. I thought he was an extremely fair person and had a lot of good comments to say. I was very pleased with the match up.

IQ: It does sound like it had some effect on your own teaching.

DB: Yes, it did have some effect on my teaching. Especially since the way I was presenting the course was so different from a typical math course. There was room to be flexible.

IQ: What about your views on having these seminars being one vehicle for enhancing or fostering collaboration/ cooperation between education and arts and science?

DB: I think there is definitely a need for that collaboration. I don't know how much this one seminar is going to do. It seems like right now that's it, there is not going to be anything later on between me and Stayer. I don't know if it will have -- I can't really evaluate that. I don't know if it will be long-lasting. It seems like there should be but I don't know if there will be.

Keith Lauderbach (Industry & Technology)

IQ: How would you characterize the interaction with your partner?

L: Great. And the students. It was incredible. This was the first time that I had ever been with students during a class that they were very frank about how the teacher was presenting information in the class. How they would have liked to have that presented differently. They were real frank with her and it was nice because she did not get upset, didn't get offended. They were very open. She tried some things as a result of some of these comments and some of the stuff worked. Our interactions were not always similar. Some of our views were quite different. So we discussed those things in front of the students and they were amazed as well that here are two professors in two different areas talking about the same things, but having different points of view and they liked that. They shared that with us in their journals. They said openly that they really liked our interaction as teachers. It wasn't just talking between us, it was talking about an issue and it was great. The interaction was really beneficial both for me, learning and understanding about why it was she taught this particular subject matter, non-euclidian geometry in the way it was presented.

IQ: It sounds like both of you ended up learning things.

L: I had student teacher responsibilities as well and it was just difficult for me to attend every class. I attended at least one a week and that is all that is required in this situation. It does take up a lot of time but I wanted to be in the class, I hated to miss her class. I was learning mathematics. It was math that I haven't dealt with for a dozen years or more. It was really interesting. I would like to do more of them in different content areas so I could go to class and learn.

IQ: What are your views on the seminars being required as part of the teacher ed program?

L: If you can do it, go ahead. No problem. I really think that the more exposure students get the more time that they have to think and take a look at how they learn and how different people learn and how teachers go about teaching. They will be so far ahead of those students who don't get that encounter until they are out student teaching or even have gone out and have taught for several years. That is when the actual reflection takes place.

IQ: Did your participation in the seminar have any effects on your view of teacher education or other programs within the university?

L: Yeah, it did. I think we need to deal more with how to teach. What is a good teacher, how do teachers teach and how do students learn. What that correlation is. We deal with it in a couple of our professional courses, everybody in the college of ed does. But the students don't really get a hands-on kind of exposure to it. And even time to reflect on it and to talk about it, they can view it and then make some decisions about it. I think that seminar provides that.

IQ: What are your views on how effective the seminar is in terms of promoting cooperation/collaboration between education and arts/sciences faculty?

L: I think it is a real positive step. I know there is a lot of faculty outside the school that are somewhat hesitant about that, but I think the more seminars that are conducted and the more they talk to their colleagues that fear will dissipate. I think they're interested in really knowing, if they haven't had a methodology course, how to make their teaching better. I seriously believe that, particularly from the person with whom I worked. She really wanted to know how to become a better teacher. She remained sensitive to teaching excellence in the classroom. From my point of view, I would like to learn more about their discipline. We can learn things about each other in a way that is really not threatening and is very supportive. That really promotes overall better delivery of the content that we are trying to teach both non-educationally as well as educationally.

English 312
Transformational Grammar
Ken Shields and Mary Ann Gray

Ken Shields (English)

IQ: What else could you say about the effect of the seminar on those teacher ed. students?

S: They seemed to get a sense of what was going on. Working with teacher ed. students in the English dept., especially getting them a semester before they go off and teach, [brought] a certain amount of resentment to their minds that they have not been prepared to teach. What that resentment really boils down to is "where are my lesson plans?" At some point you should have provided me with a set of lesson plans so that I can go out there and read this stuff to these kids and I don't

have to do anything. Once they student teach and they come back, they say, "how silly that was that I said those things". Over the years I have had very good student teachers who have been livid when they have begun to student teach because they don't have this set of lesson plans. What they don't realize is that every class is different and everything has to be adapted. One of their responsibilities as a teacher is to translate the knowledge they have acquired into something which is teachable. I think for many of them they began to see how impossible it really was for anybody to give them a set of lesson plans. Some of them would role play with a group of average seventh graders and some of them would role play with a group of advanced eleventh graders. They would see that although both of the teachers had the same academic preparation and they were teaching the same material, how they adapt that seventh grade average group to the eleventh grade advanced group [is totally different]. Apparently, it never dawned on them that they were going to have to make these kinds of adjustments and exactly what they were going to have to do. That is what we would talk about after they had presented the role playing session. Was it successful, what made it successful, and was it really appropriate for the group that you had decided to teach for. Were there vocabulary items that you used that you should not have used, were there things that you assumed that you shouldn't have. I think that was really the great experience that they had. This whole idea of translating a body of material into something that is teachable. I think it was very successful in that regard.

IQ: If a colleague had said that he/she had been approached about participating in a seminar like this and was sort of undecided, and asked your opinion, how would you respond?

S: I was very positive about it. I think it is a good experience for everyone. For me what it did was to get me thinking about the techniques that I use. I began to analyze and figure out why I would be doing certain things. It is always my argument especially when I teach grammar, that the reasons we teach grammar is not that we teach anybody anything new, but we give them conscious control over what they already have. Unless you get to that level where you are consciously aware of what you are doing, you cannot fully reap the benefits of what it is that you do. I think what this type of course forces the professor to do is to become consciously aware of the techniques that are maybe second nature by this time. A n d becoming consciously aware that you manipulate them more and use them more fully. I think it is a wonderful opportunity.

IQ: So the seminar would be a good mechanism for fostering that kind of collaboration.

S: Exactly. Because what it really shows is that you can't have content without method. I think the dichotomy between those two has been too sharply drawn.

Mary Ann Gray (Early Childhood Education)

(Dr. Gray's interview could not be transcribed due to tape problems. Several quotes from Dr. Gray obtained later are included in the attached paper.)

1. One thing that became apparent as we talked more and more in the pedagogy seminar was that students were looking toward Ken as a methods model, an example of "the right way to teach" the content. I realized this one day when we were discussing why they (the students) felt Ken had taught them the transitive verb the way he did. It became apparent that, as students became more accustomed to paying attention to the professor's teaching style, some of them were accepting this as the ONLY way to teach that piece of content. We discussed this in class and how important it was to pay attention to one's audience...that they could not expect to use with their future students the same examples, the same format, the same organization that Dr. Shields had used on them. They would need to transform what he did and taught for other unique audiences.
   The pedagogy seminar offered students a unique opportunity to observe two professors discussing their views on teaching. Students don't often see this collegial relationship, and to see it centered around the topic of teaching and learning is rare indeed. Teaching has the potential to be a very lonely profession unless one becomes comfortable with talking about the process and what goes on in classrooms. The pedagogy seminar legitimized this kind of talk.

2. Obviously, because Ken was the primary teacher of the content, he tended to take the lead in the pedagogy discussions. Along with the students, I often found myself commenting on what I had learned (since I was also a neophyte in transformational grammar) and discussing why I felt he did what he did. But in addition to that, students often would turn to me with questions concerning pedagogy and/or developmental needs and levels of youngsters. Thus, the tow of us worked well in bringing a balanced perspective to the seminars: methods and content; techniques and knowledge.

3. Transformational grammar was a whole new area of learning for me. And sitting in the back of Ken's class allowed me to experience learning from a student's perspective. How often do adults really get to do that...To think back and remember what it was like to learn something for the first time? Although half of my attention was focused on Ken's pedagogical

content knowledge, the other half was zeroed in on what he was saying. I found myself using some of what I learned in his class as I was teaching my own reading education classes. His examples popped up on my board; his references were restated for my students. It brought a unique and new dimension to my own teaching.

Philosophy 100
Introduction to Philosophy
Leon Miller and Barbara Stengel

Leon Miller (Philosophy)

IQ: In your opinion, what were the effects on the teacher ed students?

M: I think it was good to see the interaction. Inevitably there was a more human dimension because it was more informal and we encouraged as much frankness as possible. That was another thing that made it nice working with Barbara, because she also likes direct kinds of observations and so on. The students, we tried to make clear very early, they were not to be punished for what they said. They should just say what they think. So at that level, I thought it was quite good because the students got to make observations they ordinarily would not have been able to make.

IQ: What is your view on the seminars being required in the teacher ed program here at Millersville?

M: I don't know. I am not a big supporter of required courses. I think students often times don't do well if they are forced into an environment they don't want to be in. I think they should be strongly encouraged... word of mouth is the best always. If you have fun, the chances are you won't mind doing it. I think most of the students did have fun that were in the seminar.

IQ: If a colleague tells you that he/she has been asked to participate in one of these seminars, what would you say?

M: I have been encouraging all my friends. I think it is very interesting. I have a very good friend in physics, Mike Nolan and this is not done often as a scientist, but the more I would tell Mike about what we were doing, the more and more he got interested. He would actually like to do one. I think there are probably some people that it wouldn't work too well with. I think the people that I know of who are not defensive at all...

IQ: You seem to have a favorable attitude towards collaboration between art & sciences and ed faculty?

M: I think that has been a bonus. From my point of view, more and more faculty have gotten to know people in the education department by working with them. That is going to change attitudes. One of the things that I became very aware of and hadn't even thought about until participating in this is that we rarely have contact with high school teachers. For one reason or another, the people who have the most contact with high school teachers are the people in education. We are more or less buffered. We rarely have any direct contact.

Barbara Stengel (Educational Foundations)

(Dr. Stengel was not interviewed because of her direct involvement in the project.)

Earth Science 102
Origin and Evolution of the Earth
Paul Nichols and Sandy Peters

Paul Nichols (Earth Science)
(Comments by Dr. Nichols may be found in the attached technical report, p.66-72)

Sandy Peters (Health & Physical Education)

IQ: What would you say would be the effects of the seminar on the students in the class who were teacher ed folks?

P: The comments that we had were that they suddenly realized that some of the general education requirements really did have a place in the major program. I think that was probably a real shock to them. That they could take some of this content material they were learning in "general education" and see that it had a place in their career as a teacher. I think that was a real eye-opener for them. Some students say, "why are we taking these general education courses?" Then I think, well this student would say to them, that this material is relevant to students in your class.

IQ: So it certainly had an impact on some teacher ed students. What is your view on the seminars being required as part of the teacher ed program here?

P: Sometimes I think that we have to require things before students select them on their own. I think from just

having the students understand that general education requirements can impact upon career decisions, it would be helpful not only to them as education majors but to liberal arts faculty members also to see that there is a connection between the two. I think it should be ... I hate "required's" but I think it has to be. You have to start someplace.

IQ: What effect did the seminar have on your own teaching or your own thinking about teaching?

P: Actually, probably after twenty-five years in the profession, it made me re-think what teaching was. It made me more interested once again in content, thinking.

IQ: Did your participation in the seminar have any effects on your view of the teacher education program?

P: You mean Millersville's teacher ed program?

IQ: Yes.

P: I was excited that we were trying something new. That we were trying to be innovative and trying to include liberal arts faculty, and show them that we were attempting to intertwine the departments outside of education.

IQ: What do you think of seminars as a vehicle for promoting this kind of collaboration between education and arts and sciences?

P: I think it is wonderful. It is a wonderful opportunity. I think that ... I suspect that you have talked to very few people that haven't been positive. I think that we who were involved need to be more verbal, more encouraging to other people. I see it as a real method of intertwining the whole university.

Math 130
Introduction to Statistics
Bud Smart and Joe Meier

(Joe Meier and Bud Smart worked together in **Math 130**. Joe Meier's transcripts are unavailable due to technical difficulties.)

Bud Smart (Industry & Technology)

IQ: What are your perceptions or your thoughts about the success of the seminar?

S: If I were to look at the success of the group, I'd say at the end when we asked them to comment, and we kind of sensed this

was happening with one student, one student came out with a bold hand and said because of this seminar I have changed my major and he's committed now to math education. He has gone from liberal arts to math education. And if that's one in five or one in six, dynamite. We have redirected a student's life. And this student was excited, enthusiastic, bold during the seminar. So I'm going to say on both scores in terms of faculty and in terms of student participation, right on target, going in the right direction.

IQ: How about the effect of the seminar on your own teaching or your thinking about teaching, what effects did the seminar have?

S: The single most powerful thing was that I had to share my thoughts about teaching at a different level than I do in my undergraduate and graduate methods courses, because I had to share them with a peer at the college level. So in that sense, it was enjoyable. It was challenging, and in that sense, I reorganized my thoughts about what is important and probably thought more about the career aspects of what is important than I normally do because I'm working with people who are committed to education already. I'd say in terms of the work that we do with learning styles, it was important. It took me beyond where I was. Yes, in that sense, I'd say very positive.

IQ: And what are your thoughts on this seminar? It seems that you are saying that this seminar is a real good mechanism for fostering that sort of collaboration across departments.

S: Absolutely. And it reached beyond just the two of us when we had other people in the faculty in the math department involved and when we had people from the local school districts involved.

Psychology 100
General Psychology
Fred Foster-Clark and Mary Klinedinst

Fred Foster-Clark (Psychology)

IQ: Thinking about what went on, do you think that pg seminars should be required in a teacher ed program? Something like that?

F: Yes, I would think they would be a good experience, fairly early in the student's academic preparation, sophomore or junior year, before they're actually going in to do their own

field experience and their own practice teaching. Why? Because I think it just gets down to thinking about teaching and learning in a different way than you think about them when you're taking classroom education courses. It seems like this kind of experience would be particularly valuable for secondary ed students, because there's nobody watching over them from the teaching perspective.

IQ: Let's talk a little bit about faculty development. How about, did the seminar have any affect on your own personal teaching or you own thinking about your teaching?

F: Yes, yes, most definitely. One affect it had was it made the whole teaching enterprise much more conscious. You had to be thinking about how other people were thinking about your teaching and then be prepared to talk about it and answer their questions and respond to their ideas. For a new faculty member, and being my second year, I have remaining insecurities--some of them learned insecurities, some of them just the nature of being a fairly new faculty member--it was a useful experience for me. Plus, it's interaction and a source of feedback. So that's kind of useful to get. You know, get the reactions of students. I used them as the sounding board. Some of it, you know, just what they come up with, but some of it I would ask them specifically. "How did this work?" And they gave useful information. Mary was very positive about the whole experience. From the faculty development standpoint, having a teaching colleague present in your classroom and working as a team in the seminar is an enriching experience.

IQ: If somebody asked you who was contemplating doing a pg seminar and they said, "Fred, would you recommend doing this?", what would you say?

F: Most definitely. If you're serious enough to think about doing it, it means that you're serious enough to reflect on your thinking about teaching and the teaching itself and think about how it's coming across. To make yourself more conscious of the teaching-learning process. And if you're at that point, it's going to be wonderful. I can't imagine it not being a wonderful experience based on those I've talked to and my experience with it. I'm the type of person who just thrives on feedback. Some people may not want that. Then this is not the experience they should seek out. I would think that those people probably need to get more feedback, so it may be uncomfortable, but it probably would be a good experience. At this point I guess we can't force people to do it.

IQ: Do you have any other comments that you want to make? This is your last chance.

F: My last chance. No, I guess not. I mean, I can't say enough about the experience and I think...Oh, I know. There is one other thing. When we talked about other faculty members. One of the things that I think would be very beneficial as part of the evaluation process for new faculty is to have new people involved in the pg seminars. I think rather than the one time observations they get from several different faculty members, having another faculty member there, involved in examining and thinking along with the lead instructor puts them in a position where they can write a wonderful and very valid evaluation of this person's approach to teaching and their competence in the classroom. This would add both depth and validity to the faculty evaluation process, while providing a growth experience for the new faculty members.

Mary Klinedinst (Educational Foundations)

IQ: What effect do you think the seminar had on the education students?

K: We feel it was successful for the students in that as the semester went on, they were able to verbalize more than at the beginning what certain teachers decisions were important and what things Fred did in class were effective. They got more used to using educational terminology and understanding, I think, the learning process.

K: Another success I think of the seminar for students, and I think for us, was to be able to identify a couple of these ten students who probably wouldn't be able to make it as teachers. This is a real early indication and maybe they can be given help to succeed or counseled out of teaching.

IQ: Do you think the seminar should be required of all teacher education majors?

K: I'd love to see that happen, I don't see how it can, but I think it would benefit every single one of them. Or to have this format take place in some present class. But definitely to have discussion about pedagogy.

IQ: Has the seminar had any effect on the way you think about teaching or your teaching or has it had an effect on Fred's teaching or the way he thinks about or does teaching now?

K: Well, I'll take the first part first. It's had an effect on me. I was used to talking about pedagogy because of the Governors School and because we're doing a lot of this. I learned a lot from Fred, from watching Fred teach and from his knowledge about psychology that (I'm sure the committee or Barb had some thoughts with matching the two of us up, because

I'm teaching educational psychology and that was great to strengthen my content; also there are some creative methods that he uses that I'm going to steal and use the next time I teach ed. Psych.) It reinforced for me, the importance of observing other teachers. Back when I taught high school, I always did this on my own and I think it's one of the most valuable things we can do no matter how long we've taught. The importance of observing and talking to a teacher in a different discipline or in the same discipline about pedagogy was reinforced. I think for Fred, now this is my perception, it reinforced for him that he is doing many things well. That maybe in some past times he's questioned some of his methods or what he does in the classroom. I think from the students' and my input with him, I think it perhaps returned some confidence to him for some of the things that he is doing. I don't know whether it loosened him up in some respects. Some times he can be very serious, but he's not, so I think it allowed his real wit and personality and humor to come out and know that it's okay. Again, that's my perception.

IQ: Did the students share with you, I know they did an evaluation, things that were valuable to them that they learned that they really were appreciative of learning during the seminar?

K: They really enjoyed seeing the give and take between Fred and myself. Several of them commented on that over and over again - that one of us wasn't completely in charge and one of us would ask the other one what we thought of this. They hadn't seen this before, the give and take between two professors. They commented on that. They commented on the effective methods that Fred used in his class that were helpful to them. He does a lot of group work; he gives examples and helps <u>make connections</u>, something that we've talked about the importance of their learning to do...I think they commented on the realization, after discussions in the seminar, of what a difficult job teaching is or can be. They hadn't brought that to a conscious level before.

IQ: So, you had a good time?

K: Yes. We really did.

IQ: It's too bad we can't do this all the time.

K: I know.

SPANISH
Ana Borger-Reese and Gloria Guzman

<u>Ana Borger-Reese (Foreign Languages)</u>

IQ: Do you think the seminar should be required in teacher education programs? How should this be done?

B: I think it is a very good idea to have them. I think, well the requirement, I don't know. I think if people want to teach, it is a chance to see teaching and to think about it from a different perspective. I don't think that some of things that are done that they will necessarily be able to apply when they teach high school. But, again if we, if our purpose for the course is that they think about teaching and how teachers go about teaching and go about planning for teaching, I think that they can always use it; and I think that is a good idea.

IQ: Did you learn something particular from this seminar, from your partner, from your students?

B: Well, my partner brought me back a little bit. I have taught now almost twenty-two years which is a pretty long time. It brought me back to realizing how little day to day preparation there is for me which beginning teachers have to do. Little preparation in the sense of obvious preparation, how much already has become second nature. When I talked again with the students about how to look at a text book and see what you want in it, it was good for me to explain that kind of thing again. You know, too, when you look at the new texts, you know right away whether you are going to want to do something with it or not. From my partner, it was interesting because I hadn't really seen it in the terms of school of education kind of things, how you talk about planning a class. That was a long, long, time ago that I worked with any of that.

IQ: Would you recommend this experience to a colleague?

B: Yes, Yes, I think.

IQ: Would you recommend it to me?

B: Yes, I would certainly recommend it to you. I liked thinking about explaining, again, what I was actually doing in the class. I liked seeing the students, I guess sort of realizing that one doesn't just walk in and it all comes natural, it does, but they realize now what is behind it. I think I like that. Also, I would recommend it because I think it is interesting for us to look at the course with someone who really does look at all of these things pedagogically. Which some of us I think have gotten away from and some of us have probably never done. I do it a little bit because I did teach in the graduate school of education, but I know other colleagues who never ever have. I think it could be real interesting.

IQ: That is exactly the next point. It says the effect on arts and sciences and education faculty collaboration/cooperation.

B: That I think is very good. I also was at a meeting the other day where people sort of complained that people in the school of education give much higher grades and blah, blah, blah. I think there are some misperceptions about people in the school of education though, I think that a lot of us don't know how to teach. I think that some of those misperceptions will go away more easily as more of us get to know each other in that context.

Gloria Guzman (Educational Foundations)

IQ: Do you see the seminar as a success?

G: Yes, I think it was a success because the students were more aware of what it really takes to teach. The students do not see the courses from the perspective of the professor. They see it from the perspective of the students. Now, when they realize how much it takes, the many different aspects that you have to bear in mind for preparing or teaching a course, they say, oh my gosh. They never thought that teaching a course would take so much effort. They realized that teachers have to make a lot of decisions. So, for them, it was great to realize that teaching is not just being in front of the group and saying something. One of the students said the experience was like "opening a window in a dark room."

IQ: What was the effect on your teaching or on your thinking of teaching? Did it have any effect on you, the interaction you had with Anna in the seminar?

G: I benefited in many, many ways because my major is not the teaching of Spanish as a subject. My major Spanish as a second language is the teaching of languages as a second language. I got an insight on how teachers trained for the teaching of Spanish as a second language. Since I have been a teacher of Spanish as a second language. I can make analogies. What is the training they get, how does the Anglo-American teacher, learning a second language. If I ever supervise a student teacher teaching Spanish, I will have a better understanding of their performance, because I now know how they learn the language, through a grammar approach rather that an audio/lingual.

IQ: Would you recommend this experience to any other colleagues?

G: Yes I do. I think it is a worthwhile experience.

IQ: So what would be your conclusion? What will you tell me at the end of this?

G: Well, My conclusion is that I enjoyed the whole thing

Psychology 227
Development of the Child and Adolescent
Rita Smith-Wade-El and Cheryl Desmond

Rita Smith-Wade-El (Psychology)

[IQ: How successful do you think the seminar was?]

W: I think the seminar was very, very successful. The students said that they got a great deal out of it and they were very glad that they did it because many of them were thinking of going into teaching, if not at the public school level, at the university level. They were concerned about the fact that, up to this point, they had not gotten a lot of education or training on how to teach. For the teacher education students, I think it was an excellent experience.

[IQ: Do you think the seminar should be required in teacher education programs? How should this be done?]

W: I think this should be part of the teacher education program. More then that, I think it probably should be part of university education. I am a firm believer that in, regardless of the field you persue, but certainly if you are going to get a Ph. D. you are going to end up teaching at a university, but even if you stop at a bachelor's you will teach. Salespeople have to do presentations, social workers have to do presentations. I think that almost everyone, no matter what their career, is put in a position where they will have to do some training or teaching, so I probably think this should be required for all students. At least one of their courses should be one with a pedagogical seminar.

[IQ: What was the effect on your teaching or on your thinking of teaching?]

W: It gave me a really good chance to find out what the students were thinking about all aspects of my teaching, my testing, my assignments, my work. I have always thought of myself as a fairly interesting lecturer and good in that area, and good with examples. You never are sure of it, and this kind of reinforced that. Probably as a teacher, my biggest area of weakness is evaluation of students. I think the students feel that my testing is difficult and that I give a great deal of work (I received a great deal of feedback on how to approach that).

W: In terms of how it affected my views on teaching education, it just increased a respect I already had in terms of how important it is to be a teacher. I have always felt that one of the things that was wrong with education and liberal arts, especially for people who are going to be university professors, is that no one ever teaches us how to teach. We learn to be experts in our field.

Cheryl Desmond (Educational Foundations)

IQ: How successful do you think the seminar was?

D: I really felt it was successful in many, many different ways. Certainly, the strongest success and I think the students would agree with this from what we discussed and from Rita's perspective, was their opportunity to interact with two faculty members in a very intimate way.

D: We did look quite a bit at pedagogical content knowledge, that would be the second strength. The third strength, I think for the students was directly their opportunity to get some inside information on the course that they were taking.

IQ: What about, what effects do you see with a seminar like this on faculty development? Do you think particularly in relationship to how faculty think about teaching?

D: I would think it would be extremely successful. Now I, coming from teacher education, constantly think that way so it is really hard to say that I went through any tremendous change in my own development through the seminar. I enjoyed getting to know Rita and having an opportunity to hear her psychology again. But, I think it forces you to think about how you are presenting information. You are thinking about the process and how one represents it and how one can in their own manner translate information into pedagogical content knowledge.

IQ: What would you need somebody to ask you to recommend it? Have you already recommended it to someone else?

D: Yes, I have already said to many others that I thought it was a great experience.

Biology 221
Biology of Plants
Troy Isaak and Jim Parks

Troy Isaak (Educational Foundations)

T: I think we, the education faculty, should be more involved in what is going on in the content areas and be discussing and sharing ideas or getting together with the science and the physics people and the English people instead of doing things in isolation which seems to be happening.

IQ: I guess there are a couple of other questions that go along with that, but do you have a suggestion of how that cooperation/coordination could happen?

T: Well, I don't think it will happen informally. There has to be some kind of vehicle like the pedagogy seminar or some formal, in place kind of thing where you do meet. I don't think it will happen naturally. We are sort of isolated up here and don't physically get down to campus to see what is going on or go to other departments. You see people through committee work but the purpose is not to discuss future deviations.

IQ: Last thing I would like to ask you, what was the most beneficial part of this whole experience this semester for you?

T: For me?

IQ: Yea.

T: Going over to Roddy, the change, and learning some new things from a personal point of view. I Thought that it was very rewarding and satisfying. We are looking at possibly doing a project later on. Jim has a wonderful slide collection that he uses.

IQ: It allows you to work with someone else that you don't necessarily get the opportunity to work with.

T: I think it is a good program. I support it. I think it is a very valuable thing we should be looking at and doing and with people outside of education because we are all in the same boat. They are trying to educate our majors as well as we are.

Jim Parks (Biology)

IQ: Looking back on it now, having done that, has it affected your own view of your own teaching?

P: Having done the seminar you mean?

IQ: Yes.

P: Yes, it has because at seminar you are really on the line. You are asking students to react to what is being done and you'd better be prepared to deal with negatives. Students are honest and I think these people felt comfortable to express themselves. I think that was good. I was receiving feedback in a better way than I would normally do and in that sense, that is good for the instructor.

IQ: Do you think the seminar affected your views on teacher education? On what teacher education should or should not be or what it is at Millersville?

P: I have a preset view on teacher education... and that has not changed. I think the seminars are a positive step to improve things. Equally important though are the relationships that develop when you work with someone in the school of education. Troy is a very capable person. He has a lot of things to contribute and I can learn from him and we are looking forward to doing some things; writing a grant proposal, for example, to develop some media. These are important things I felt Dean Smith is sympathetic to this and Dean Hoffman is and I hope more of this is going to go on.

IQ: Perhaps it has made it easier for the school of science and math to work with the school of education?

P: Yea, it opens doors. Now, whether people are going to be able to walk through those doors, or whether they are going to be resources, or whether this is going to be fostered by the university, that's another matter. I am increasingly concerned. I said it in the recent five year review that I had to write of this curriculum. Most of my colleagues have very little pedagogical training; no public school teaching experience. Because they are role models and teach those who are going to be teachers, it is a concern. I think we need to do more to break that down and do things in that area. So this seminar and the focus on science in the summer, all these are positive, including getting to know Troy Isaak better and maybe being able to do a few things with him. That is good. Eventually, our students will benefit. There is just so much that can be done, whether we will realize the potential in this, I don't know. We are all busy, really busy.

IQ: Do you have any last comments you want to get on tape about the P.G. seminars at all?

P: I think there are a lot of crummy ideas that come out in education that ruin a lot of students, that cause more harm then good. This is quite the opposite. I think this is a good idea, a positive move. I think that it is something that can very well worm its way into the curriculum of the teacher

eduction programs throughout the country. It is a good idea and I was glad to be a part of it.

Earth Science 221
Physical Geology
Bill Jordan and Roger Wilson

Bill Jordan (Earth Science)

IQ: Do you think that something like this pedagogy seminar is an important factor in teacher education? Should it be required?

J: I think it's worthwhile, but would probably work best with volunteers.

IQ: Would it be better at a higher level?

J: Yes. I think you can sense from my comments that I'm a little disappointed about the way it worked out. I think the main reason is that we were dealing with freshmen only. I think the basic idea is very good, and maybe a requirement would be to have it available only for upper-classmen, or something like that. I can see the advantages of having it open to anyone who is interested rather that just those in education. You don't want an education ghetto.

IQ: Did you learn anything?

J: A lot about pedagogy. I expounded my viewpoints as part of the overall discussion. I joined in on the discussions. I think I learned a lot.

IQ: Was it a sense of just confirming the stuff you've always known and now you have some conscious awareness.

J: I think there are some things that Roger brought up that I'd never really considered. I've never had any formal education courses and now you're getting that perspective from a different professional viewpoint. By being with the students you begin to see things from the students point of view too. By questioning and discussing such questions as why are those people always sitting there with a chip on their shoulder in the context of the pedagogy, you begin to understand a little bit where the students are coming from.

IQ: Would you recommend this experience to colleagues if they asked you?

J: Oh yes. I think it was very worthwhile, the whole thing. Of course I usually expect so much that I can see that it could have been much, much, more worthwhile, but it was very

worthwhile to begin with. The potential was there to be maybe five times more beneficial.

IQ: Do you have any sense of the seminars helping in that regard, the interaction of the arts and the sciences and the teachers?

J: Yes, I think any such mechanism builds a bridge. There is a gap that exists just as at present with Education staff up there in Stayer and the rest of us somewhere else on campus.

Roger Wilson (Early Childhood Education)

IQ: Were you able to tell if there was an effect by the seminar on these students?

W: One student was quite frank and said he took it because he needed the credit and he didn't even know what the word pedagogy meant. But, he turned out to be one of the more aggressive and more incisive students in terms of adding to the class. He ended up stating that he never ever considered teaching before this class. But by the end of the class he had become intrigued by the complexity of a college level teacher role and for the first time ever in his life saw where that might have some interest for him and I thought this was a very significant moment because he was quite honest in stating until this class he had never once considered being a teacher at any level.

IQ: Do you think the seminar had any effect on your teaching or your thinking about your own teaching?

W: It forces you to be reflective simply because it starts out that way and if you're asking other people to be reflective on the teaching act then I think it is only a natural thing that it happens to you. And, I liked our focus on the first question at the beginning of our syllabus and I think it is fitting to put it on the tape. The question was how does the successful teacher transform expertise in subject matter into a form that students can comprehend?

IQ: Did you learn anything personally from either your partner or the seminar students or the course? I know you said you originally intended to brush up on geology.

W: I did at the beginning try to stay up with the readings and the textbook for the first 3 or 4 weeks I was fairly successful with that. I did a good job from that initiative and also from my own need for reviewing plate tectonics and the major geology concepts related to plate tectonics. And, yes, it did help brush up on those concepts. It is an earth science component that I feel is not as strong as it could be in my elementary methods classes and I've been looking for

some materials to add a component to that.

IQ: So, you did get something out of it?

W: Yes. I had previously sent away for some materials that I might use in my methods class and they came with a handout on plate tectonics. I took that to Dr. Jordan in the role of saying, "Well, here, this is your area, take a look at it. This is sold by a certain company, what do you think of it?" He liked it. It looks like something that I'll be able to use. It will have an effect on my methods courses. That's a benefit.

IQ: That's interesting. Would you recommend this experience to another colleague if they ask you about what it was like? If they had been asked to do a pedagogy seminar and they came to you and said Roger I know you did one would you recommend that I do one?

W: I would strongly recommend it right off if for no other reason it gives a legitimacy to watching someone else teach and developing a dialogue with that person about the teaching act. One of the things that is so typical in many institutions whether it is elementary school or high school or college is what I call the island effect. So much of our teaching is done in an "island of isolation" and there aren't the appropriate bridges to get over there and observe what someone else does. This design seems to bring together two people that are willing to say, "these are some of the teaching things I do and I'm willing to share that with you."

IQ: What do you see in terms of collaboration between the arts and sciences and education? Do you think it helps or hinders that collaboration?

W: It should help because it builds a legitimate bridge. In other words, it gives a structure where it is appropriate to look at what each other is doing. It removes that barrier of peeking critically. It is a healthy way to examine teaching issues and one of the reasons it's healthy is because you're doing it in a more serious way than just hallway talk.

IQ: Any last conclusions?

W: It was particularly interesting to me because in our department and in the School of Education we talk about developing teachers as decision makers and that concept had not been presented to our pedagogy students but it came out as a natural process of them reflecting on their many different acts that went into make up their presentation. Dr. Jordan and I felt very good about that because we felt that all of them had gained in terms of insights related to the

overall teaching act. Literally for all of them the teaching act changed from something that is narrow and content oriented to something that is much more complex and much more filled with decisions that deal with the effectiveness of the lesson. We felt that we definitely made progress in terms of them gaining those insights. The last session had a "good feeling" about it. A good feeling from a very honest sharing about the reflection that all of us had done. This was a quite strong agreement that the students had grown from this process.

Economics 102
Principles of Economics II
Edward Plank

Edward Plank (Early Childhood Education)

IQ: What is your overall impression or evaluation of the success or failure of the pedagogy seminar?

P: Well, I think in the end the results on what the students said was rather impressive. They all said that they benefited from it. Once several students told me that they got more out of the course because of our seminar. It helped reinforce concepts and understand concepts that Dr. Lela was explaining more clearly. I would listen to what she was explaining and then I would say, you know I have material on that topic. We could take a look at it and show how it is introduced at a lower level. So, I think that helped a lot of students and then at the end there were some that said that it certainly helped them to know that they wanted to teach. Some said that they know they don't want to teach but I certainly have a lot of respect for teaching. Some said that they became very critical of their teachers now because I am sitting back and listening and saying, at what level are they teaching? How am I processing the information and what is my responsibility in the output? So I felt the students gave a really good feedback.

IQ: Other than the comment that you made before about some students realizing that this is really what they wanted to do, what kind of effect did this have on the education students do you think?

P: A very positive one. They said that they realized how difficult it was to explain something. How difficult it really was to teach because they said that just trying to teach a concept... and I tried to show them that you take one concept and try to develop it. You try to have a motivator to get peoples attention, get them involved. How many senses do you have involved and all that. They were really surprised how long they had to think about what they really wanted to

do and how they wanted to present it. They really realized how difficult it was to teach, but they felt good about it because they said realizing it is very important.

IQ: Good, good. Do you think these kind of seminars should be required for teacher education students?

P: I am not sure of that, I think I do quite a bit of this in the way I teach my education courses. I feel like elementary education students probably get quite a bit of that. Maybe they never see the connection between a general education course and how they can make the same learning applications. I think that would probably help. I think that it would be helpful. I don't know if it should be required.

IQ: Ok. I guess the other question is if the reason, and I am reading you correctly, that you don't need the requirement because they already get this in some other education courses?

P: I would certainly hope we would do that.

IQ: Then, does this format provide in a, maybe this isn't the right word, a better way so that maybe these could be used instead of some of the education course?

P: The only thing is, we couldn't get enough depth.

IQ: Ok.

P: At this point, I still feel like we haven't gone into enough depth, enough theory and enough background. I felt we just laid a little bit of a foundation for it. At least it gave what you call that initial experience because if somebody wants to go into education, many times they have no idea what it is really about. We have no courses available where people can experiment. You have to be accepted into elementary education department before you can take el. ed. 100. You have to be an education major before you can take one of the courses.

IQ: So this would be good then as a way of screening people or maybe as something that...?

P: Yea or undecided people. People say that they don't really know what I want but I would like to experiment something. I think this is one... I use to advice undecided students. The thing that was difficult for me is that we had no courses you could sit and say, or very few course, where you could say why don't you try this course and see what it is like. This is their introductory course, but you couldn't do that because you had to be accepted into the program/major. So there was no experimental level, this is where I feel this is really

strong.

IQ: Ok, that is essentially the next question. What did you learn from your partner?

P: That is a rich experience right there. Just to get a chance to work with somebody from another department like that, to interact and to share and I learned a lot from her. I felt I learned a tremendous amount from her.

The Christa McAuliffe Award

CHRISTA MCAULIFFE
SHOWCASE FOR EXCELLENCE

Developing Models to Enhance the Teaching Profession

Compiled and Edited By
Gwen Kaebnick
Division of Academic Programs

American Association of State
Colleges and Universities

Contents

Foreword

I am proud to announce the 1990 AASCU/Christa McAuliffe Showcase for Excellence Awards. They were named in honor of the late teacher/astronaut Christa McAuliffe, who received her bachelor's degree from Framingham State College in Massachusetts and her master's from Bowie State University (Md.), both AASCU institutions.

Teacher preparation has long been a vital element of the member institutions of AASCU. From the days of normal schools and teachers colleges, AASCU institutions have grown into comprehensive public colleges and universities. Throughout the years of growth, they have continued to pay tribute to their historical roots through their colleges of education. The AASCU Showcase for Excellence Awards, conducted for the first time in 1985, were initiated to highlight the unique commitment of state colleges and universities to an important mission: the training of the future teachers of our nation.

I would like to extend special recognition to James E. Gilbert, president of East Stroudsburg University of Pennsylvania and chair of the 1990 AASCU Committee on Excellence in Teaching and Learning, and Jerry L. Beasley, president of Concord College (W.Va.) and chair of the Christa McAuliffe subcommittee, for their efforts in coordinating the 1990 award program. I would also like to thank the panel of judges: Leslie Cochran, provost of Southeast Missouri State University; Constantine Curris, president of the University of Northern Iowa; Gene Maeroff, senior fellow at the Carnegie Foundation for the Advancement of Teaching; and Henry Worrest, dean of education at Concord College (W.Va.) for making this year's Christa McAuliffe Showcase for Excellence a success.

Allan W. Ostar, President
American Association of State
Colleges and Universities

Introduction

The AASCU/Christa McAuliffe Showcase for Excellence Awards competition was designed for three purposes:

- to identify outstanding initiatives that carry out the pursuit of academic excellence in the teacher education programs of state colleges and universities
- to highlight model teacher education programs that enhance the teaching profession
- to recognize the historical and traditional role AASCU institutions play in preparing the nation's teachers.

Nominations for the 1990 Christa McAuliffe Showcase Awards were invited in the following ten categories. Included in the listing below are the number of nominations received and the number of winners.

1 Attracting More Talented Students as Majors in the Field of Education
6 nominees, 1 winner

2 Developing More Innovative Curricula in Teacher Preparation Programs
9 nominees, 1 winner

3 Strengthening Relationships with Local School Districts
25 nominees, 3 winners

4 Building and Sustaining New Strategies for Involving the Entire University in Teacher Preparation Programs and Enhancing the Institutional Climate for Teaching and Learning
3 nominees, 1 winner

5 Creating New Strategies for Ensuring the Quality of Graduates in the Field of Education
5 nominees, 1 winner

6 Initiating Innovative Applied Research Projects in Education and Disseminating the Findings to Schools and Other Campuses as well as Throughout the Institution
4 nominees, 1 winner

7 Discovering New Ways of Training Teachers to Work with Disadvantaged Youth
2 nominees, 1 winner

8 Providing Professional Leadership to Influence State Policies Affecting the Field of Teacher Education
1 nominee, 0 winners

9 Discovering New Ways of Attracting Minority Youth to Enter the Teaching Profession
14 nominees, 1 winner

10 Creating New Strategies for Attracting Minority Faculty Members to Schools and Colleges of Education
1 nominee, 1 winner

Total 70 nominees, 11 winners

Eleven AASCU institutions received awards in the 1990 competition. Their programs are described herein, with information about whom to contact for additional information. Following the descriptions of the award winners is a listing of nominees, with names and telephone numbers of persons to contact at the institutions, as well as brief descriptions of the programs.

President James E. Gilbert
Chair, AASCU Committee
on Excellence in Teaching and Learning

Building and Sustaining New Strategies for Involving the Entire University in Teacher Preparation Programs and Enhancing the Institutional Climate for Teaching and Learning

Millersville University of Pennsylvania
Pedagogy Seminar Program
Contact:
Dr. Nancy J. Smith, Dean
School of Education
717/872-3379

Millersville University of Pennsylvania

Overview

The Pedagogy Seminar program involves one easily implemented curricular intervention that has improved the preparation of teacher education students, faculty development in teaching, and interaction between arts and sciences and teacher education faculty. Pedagogy Seminars are one-credit, optional seminars that supplement selected arts and sciences courses, team taught by arts and sciences faculty and teacher education faculty. Each seminar focuses on its accompanying arts and sciences course, and its instructor, as a "case study" in pedagogical content knowledge. With the faculty team, students analyze the teaching of that particular course and practice transforming course content for teaching.

Questions and Answers

The Pedagogy Seminars program was designed to answer two questions:

- How is it that future teachers learn to take a pedagogical point of view of subject matter?
- How can we cross the "great divide" between faculty and arts and sciences and faculty in education?

In the Pedagogy Seminar program, the regular arts and sciences course instructor works with an education faculty member to teach the optional seminar. The seminar allows students to analyze effective teaching techniques employed by the course instructor and to encourage students to reflect on the process of their own learning, so that they themselves might take course content and effectively transform it for another audience. The seminar's focus is on the specific course content as it is taught and learned, rather than on generic principles of pedagogy. In essence, the primary arts and sciences course to which the seminar is attached becomes a "case study."

The structure of the seminar is simple. The arts and sciences instructor conducts class as usual, and the team member from the school of education observes it at least once a week. One hour a week, the two instructors gather with the group of students who have chosen to participate in the Pedagogy Seminar. Each seminar has a different character and flavor, dictated by the course content and by the characteristics of the faculty team teaching it. Seminar discussions may focus on handling and anticipating student questions. Other sessions may be devoted to examining

the examples used to illustrate concepts taught. Pedagogy seminars also allow students to reflect on their own experiences as learners and allow instructors to reflect on their own understanding of teaching.

American Association of Colleges/ National Endowment for the Humanities Consulting Project

invites applications to participate in
a national planning and consultation project on

STRENGTHENING HUMANITIES FOUNDATIONS FOR TEACHERS

Supported by the National Endowment for the Humanities

Application deadline: DECEMBER 13, 1991

STRENGTHENING HUMANITIES FOUNDATIONS FOR TEACHERS: A NATIONAL PLANNING AND CONSULTATION PROJECT

In response to widespread concern about the nation's schools, many U.S. colleges and universities are newly interested in strengthening their teacher education programs. The Association of American Colleges (AAC) is pleased to announce a national project that will allow twenty-one competitively selected institutions to act on this concern. AAC invites all accredited institutions wishing to have a place in the project to apply.

Supported by a major grant from the National Endowment for the Humanities (NEH), the project will help colleges and universities develop new means for providing current and prospective elementary and secondary school teachers with strong foundations in the humanities. This two-year initiative will create relationships between campuses that already have developed effective approaches and institutions that want to develop such programs.

Participating institutions will work on the intellectual and practical challenges of designing curricula and instructional approaches that can help equip all teachers with a broad understanding of the humanities and those who teach in these fields with genuine mastery. A special emphasis will be on programs that provide teachers with opportunities to ground their reflections on how to teach in the actual study of those humanities issues and texts they will be teaching. The project will build on AAC's experience in linking liberal and professional education, most recently through the publication of a book-length study, *Those Who Can* (AAC, 1989), addressing the liberal education of teachers.

AAC's project will support:

☐ the creation of a network of competitively selected colleges and universities ("planning institutions") that wish to strengthen the education of teachers in the humanities

☐ a working conference at which "mentors" from campuses with substantial experience in this kind of effort ("resource institutions") will help planning institutions shape initiatives of their own

☐ postconference consultations involving visits both by the planning teams to the resource institutions and by the mentors to the planning institutions

☐ the creation of a network of actively involved faculty members and administrators who will meet at a special session at the AAC's 1993 Annual Meeting as well as contribute to and receive a project newsletter.

Planning Institutions

Twenty-one colleges and universities will be selected to participate as planning institutions in this project. AAC seeks applications from all kinds of public and private institutions: liberal arts colleges, research universities, and comprehensive colleges and universities.

Resource Institutions

Seven colleges and universities have been invited to participate in the project as resource institutions. Because the project emphasizes the development of stronger humanities foundations for teachers in any institutional setting, the seven were chosen to reflect a variety of institutional circumstances and experiences. Located in rural and urban settings in seven different states, they differ in size of enrollment from 410 to 29,000. Public and private, religiously affiliated and nondenominational, they include two liberal arts colleges, three comprehensive institutions, and two research universities.

The particular approaches for which the seven resource institutions have been selected are as diverse as the institutions themselves. Brief profiles of each resource institution's program appear on the following pages.

Mentors from the seven resource institutions will assume lead roles in the various sessions of the working conference scheduled for March 1992. They will be assigned to work with specific planning teams during the conference, and they will continue to provide mentoring assistance to those same planning teams after the conference.

Reciprocal Commitments

AAC will:

☐ select participants and determine pairings of resource and planning institutions

☐ coordinate the conference and subsequent mentoring visits

☐ create a network and vehicles for the exchange of ideas and materials among project participants

☐ disseminate project results to a national audience

☐ direct a project evaluation.

AAC will support twenty-one planning institutions in:

☐ sending two faculty members to the working conference, March 14–17, 1992, in Baltimore, Maryland

☐ sending two faculty members for a site visit to one of the seven resource institutions

☐ working with a mentor from one of the seven resource institutions through 1992–93

☐ sharing their work with others through AAC publications and forums.

Planning institutions will:

☐ identify a team of three persons (one academic administrator and two faculty members) appropriately representing both education and the humanities to participate in the project, including the conference in March 1992, and name one team member as the team leader for the entire project

☐ participate fully in the project's conference and mentoring relationships, including one site visit by the project team to a resource institution and one site visit by a mentor to the planning institution
☐ provide travel expenses for the administrator both to the conference and for the subsequent visit to one of the resource institutions
☐ provide continuing support on campus for the work of curriculum planning and faculty development
☐ report on their progress at designated times during the project's two-year cycle.

GENERAL INFORMATION

Eligibility

Applications may be submitted by any college or university seriously interested in strengthening the humanities foundations of current and prospective teachers.

Selection Criteria

AAC seeks applications that:
☐ describe the current design of the humanities preparation of teachers and detail plans and possible approaches for strengthening this preparation
☐ demonstrate institutional commitment to strengthening study in the humanities for teachers
☐ present a strong case that one or more of the resource institutions employs an approach that might well be adapted by the applicant, given its mission, academic program, faculty, student body, resources, location, and the like
☐ commit the time of appropriate persons to the proposed project te m
☐ demonstrate a readiness to contribute the time and resources necessary to implement project work and sustain it beyond the project period.

Selection Process

Applications will be reviewed by a broadly representative selection committee. AAC will make every effort to ensure diversity in the kinds of institutions selected as well as a "fit" between the paired resource institutions and the selected planning institutions. Decisions will be announced by the middle of January 1992.

RESOURCE INSTITUTIONS

Boston University

Boston University, a large, urban, research institution, enrolls more than twenty-five thousand students annually in fifteen schools and colleges. In the news recently for accepting responsibility for the Chelsea Public Schools, the university has prepared teachers since the founding of its School of Education in 1918. Its programs emphasize strong preparation in both content and pedagogy. As of the fall of 1991, a minimum of seventy-six semester hours in the liberal arts is required of all education majors, and dual majors in education and a liberal arts subject are strongly encouraged. Since 1989, under the leadership of Dean Peter Greer, special efforts have been made to devise offerings through which students might integrate their studies in the two fields.

A centerpiece of this effort is a two-course sequence, "Cultural Foundations for Educators." It offers future teachers pedagogically relevant engagement with texts fundamental to American culture. Offered within the College of Liberal Arts by Professor of Philosophy Steven Tigner, the sequence focuses on "primary texts of the culture rather than themes." The reading list of the first course focuses on works written prior to 100 B.C., including Homer, Platonic dialogues, and readings from the Bible; the second begins with Virgil and ends with Milton. A possible third-semester course will include both Western and non-Western texts.

"Cultural Foundations for Educators" is designed to make students "partners in instruction, continually thinking not only about the material itself but also about how to best promote their own fruitful engagement with it in the classroom." Students taking the second course in the sequence serve as "mentors" to those taking the first. Both courses provide students with structured laboratory/field sessions in local museums and culminate in participants preparing and providing instruction at the museums to students from the Chelsea Public Schools.

This initiative, though recent, already has achieved attention in the press and prompted numerous inquiries from other colleges and universities. It will contribute to the project as an example of a highly integrated course sequence centered in the study of classic humanities texts but incorporating elements of fieldwork and practice that challenge and strengthen students' command both of content and teaching approaches.

Mentors: Edwin J. Delattre, Dean *ad interim*, School of Education; Steven S. Tigner, Professor of Philosophy

City University of New York–Brooklyn College

Brooklyn College is a public comprehensive institution enrolling nearly sixteen thousand students. At the heart of the undergraduate program is the core curriculum, a nationally acclaimed ten-course program required of all students, which provides a common intellectual experience and a foundation for advanced study. Many of the college's ninety-five baccalaureate programs are in the humanities; Brooklyn College ranks eighth nationally in the number of graduates who have earned doctorates in the humanities over the past thirty years.

For the past three years, with the encouragement of Dean Madeleine R. Grumet, faculty members in the college's School of Education have been working with colleagues in the liberal arts to develop education curricula for prospective elementary school teachers that integrate studies in education with studies in the liberal arts. They have developed the equivalent of a double major drawn from courses in three liberal arts domains–the humanities, the social sciences, and the sciences and mathematics–rather than requiring single liberal arts majors. This interdisciplinary major offers undergraduates a strong preparation in the many subjects that constitute the curriculum of elementary education.

Each student in the new program completes, among other requirements, a four- to six-course concentration in a liberal arts discipline and a three- or four-course sequence in each of the three liberal arts domains. Each such sequence ("integrated strand") builds on–indeed has as a prerequisite–a course in the core. Each sequence begins with a liberal arts course specifically designed for the sequence. It continues with a "bridging course" designed to join "the discourse of the liberal arts discipline and the discourse of the methods of teaching." It culminates in one or two teaching arts courses with a school-based component that explore ways to share the disciplines of knowledge with young children.

Nine humanities departments have created special courses for the integrated strands in the humanities. All were designed in close collaboration with education faculty members. The courses in any given strand are scheduled back-to-back, enroll the same students, and are planned collaboratively by the faculty members who teach them.

The work done at Brooklyn College to integrate teacher education and the liberal arts has been supported by grants from Xerox Corporation, the Diamond Foundation, NEH, and the National Science Foundation.

Mentors: Madeleine R. Grumet, Dean, School of Education; Vera M. Jiji, Professor of English

Lewis and Clark College

Lewis and Clark, located in Portland, Oregon, is a private college enrolling more than three thousand students. Undergraduates at Lewis and Clark preparing for a teaching career complete a major in an academic discipline as well as a college core curriculum. By the beginning of their junior year, students may apply for a minor course of study in education that includes the requirements for an Oregon basic teaching certificate. As a result, Lewis and Clark students preparing to teach in the humanities also have an opportunity to explore the structure of their particular discipline and its characteristic modes of inquiry.

Designed to help students connect study in their field with their study of education, a new course entitled "The Structure of Knowledge and the Curriculum" builds upon and extends the work students have done in their humanities major with conscious questioning about the nature of teaching, learning, and knowing in that discipline. In the first part of the course, students investigate independently the literature of the field in which they will teach. A student preparing to teach history, for instance, would read professional education journals in the field to learn about curricular issues, controversies in the subject area, and misconceptions about the way history structures itself as a field of study.

The course also helps prospective teachers examine learning processes and apply their understanding to their teaching of specific disciplinary knowledge. Readings in learning styles, curriculum, psychology and teaching, concepts of disciplines, and subject-specific pedagogy are used. Students design curricula and must justify both the material they choose and the assumptions that have informed their approach to the discipline.

A central feature of the course is a project in which each student interviews a faculty member doing original work in the student's field of study. Students make presentations exploring the "telling questions," key concepts, methods, and knowledge and value claims identified by the professor as figuring in his or her teaching and research. Students also create a portfolio containing records of their search for materials in their subject field and in curricular issues relating to their teaching area.

"The Structure of Knowledge and the Curriculum" is an example of the redesign of disciplinary study along the lines recommended in several recent and thoughtful reports on undergraduate education.

Mentors: Jeffrey G. Barlow, Professor of History; Carol Witherell, Associate Professor of Education

Millersville University of Pennsylvania

Millersville University of Pennsylvania (near Lancaster, Pennsylvania) is a public comprehensive institution enrolling 7,400 students, approximately one-third of whom are prospective teachers. As a part of its work with Project 30–a Carnegie Foundation-funded teacher education initiative–Millersville developed a set of "pedagogy seminars," optional one-credit team-taught seminars that accompany regular three-credit arts and sciences courses. An arts and sciences professor teaches the primary course; an education team member observes the class and–with the arts and sciences faculty member–leads the one-hour seminar with the students. Students are required to keep teaching/learning journals and to complete other assignments, including planning and teaching a mini-lesson related to the primary course content.

The purposes of the pedagogy seminar are to analyze the effective combination of content and method and to encourage students to reflect on the process of their own learning so that they themselves are able to transform and translate course content for another audience. Students thus come to know subject matter from a teacher's perspective. By participating in pedagogy seminars, they begin apprenticeships as teachers.

Careful assessment of the pilot effort–which developed twenty-two seminars–has shown that the pedagogy seminar is an elegant and powerful curricular experiment in that it:

- ☐ enables future teachers to focus on content from the perspective of a teacher
- ☐ overcomes institutional barriers by enabling arts and sciences and education faculty members to become colleagues in teaching
- ☐ provides both members of the faculty team opportunities to think about, discuss, and develop their own teaching.

Developed with grant support from several sources, the pedagogy seminar program was a winner of one of the 1990 Christa MacAuliffe Showcase for Excellence Awards from the American Association of State Colleges and Universities. It is a promising means of strengthening study in the humanities for teachers and is highly replicable in other settings.

Mentors: Kenneth Clair Shields, Jr., Professor of English; Barbara Senkowski Stengel, Associate Professor of Educational Foundations

St. John's College (Md.)

St. John's College in Annapolis, Maryland, in some respects may appear to be an implausible resource institution for this project. St. John's has no education program or courses and does not certify teachers; its curriculum consists entirely of courses in the liberal arts. Yet these very facts enable St. John's to serve as confirmation that any institution–with or without formal programs in education–that is a strong environment for teaching and learning can develop in students many of the qualities and habits of mind that predispose them to teach and prepare them to do it well. St. John's also has a strong commitment to the education of practicing teachers and involvement with the schools.

Key to St. John's value to AAC's project are its teaching method and curricular materials: seminar discussion of the great books without reliance on secondary sources. Since the emphasis is on questioning rather than authority, students are drawn into active learning throughout their experience. In this mode of instruction, tutors (St. John's faculty has no ranks) try to guide their students into learning that is dependent more on the student's activity and initiative and less on the tutor's academic expertise. Since tutors do not teach as specialists, learning is more collaborative. Students also bear an explicit obligation to help others in the seminar understand what they themselves come to grasp or think, and many become practiced collaborative-teachers in the process. The largest percentage of St. John's graduates (21 percent) choose teaching careers at some level.

St. John's also is included because of two programs distinct from but consonant in aim and method with its undergraduate program. One is its Graduate Institute for Liberal Education. Established in 1977, this program was conceived specifically "to meet a need of teachers at all levels for advanced training in this classical idea of the liberal arts." The other program is the Touchstones Project, which introduces the seminar method and study of important texts directly into the secondary school classroom. Conducted by St. John's tutors, Touchstones now involves 100,000 students in twenty-four states and four foreign countries.

Institutions with an interest in strengthening teachers' study in the humanities may learn from St. John's broader programs and its several ways of carrying out its commitment to the schools.

Mentors: Eva T.H. Brann, Dean of the College; Geoffrey J. Comber, tutor and former director of the Graduate Institute

University of Dayton

At the University of Dayton, a Catholic institution enrolling 6,500 undergraduates in Dayton, Ohio, the integration of teacher education and the humanities is an established practice. Particularly noteworthy is the close coordination of prospective teachers' work in Dayton's integrated humanities core curriculum (known as CORE) and in several "foundational" education courses.

Developed in the mid-1980s with NEH support, the CORE program engages students in a broad three-year exploration of the humanities. Although the CORE program is optional, a substantial and increasing number of prospective teachers choose to take it. With additional support for planning from NEH and the Lilly Endowment, Inc., faculty members teaching in the CORE program and those teaching several basic courses in education have been able to achieve significant articulation among the courses these students will take.

There is, for example, integration between discussions in ASI 101 and English 101—the first a CORE course in philosophy and religion and the second in English—and those in Education 110, "The Profession of Teaching," which is required of education students. The latter course grounds its consideration of freedom of choice and teachers-as-decision makers in discussion of the texts—including *Antigone* and *A Man For All Seasons*—used in the former courses. When students in the CORE English course are reading *All Quiet on the Western Front*, that novel's memorable German pedagogue is used to explore ideas of professionalism and cultural difference. Two other foundational education courses—"The Child and Adolescent in Education" and "History of Education Since 1789"—are equally well integrated with CORE courses.

This integration continues as students complete their education coursework. All elementary methods courses, for example, are interrelated conceptually to ensure that students see the connectedness of knowledge—a perspective that is initially emphasized in the CORE program.

Articulation has been attained through a sustained interdisciplinary conversation. In recent summers, CORE and education faculty members have participated in special planning workshops at which they studied common texts and designed or redesigned their courses. More detailed planning and coordination continues in biweekly meetings during the academic year.

Mentors: Thomas J. Lasley, Professor of Teacher Education; Michael A. Payne, Director, CORE Program

University of Virginia

The University of Virginia is a selective public research university enrolling nearly eighteen thousand students. Recognizing the decline in American schools and the strength of universities in fields of knowledge in which schools are deficient, faculty members met in 1984 to discuss whether the university might apply its resources to improving teaching in the schools.

The first meetings led to an agreement that the university has a responsibility to other levels of education and that arts and sciences faculty members could be recruited to assist in improving school education. A plan of action has produced inservice programs for teachers, lecture series, graduate courses, and scholarships to support advanced study under the auspices of the university's Center for the Liberal Arts.

Through the center, faculty members examine issues and difficulties related to each humanities discipline taught in elementary and secondary schools and explore the ways that teaching and learning might be improved. Programs have been developed to serve the special needs of both preservice and inservice teachers—including seminars, inservice programs, workshops, fellowships for study in the United States and abroad, and institutes. The most common format is the summer study seminar.

Since it began, the center has initiated projects in the arts, chemistry, classics, English language and literature, several foreign languages, history, mathematics, physical science, and many other disciplines. The center has received numerous awards and substantial support from foundations.

Participating faculty members recognize school teachers as colleagues and fellow learners. The center's programs help teachers in the schools become more confident and competent in their disciplines and more effective in conveying their knowledge in the schools.

The Center for the Liberal Arts exemplifies a kind of initiative that is feasible at, and appropriate to, major research universities—where, because education tends to be lodged in graduate schools, interdisciplinary efforts focused on the undergraduate education of teachers may be difficult or even impossible. The center mounts programs through which humanities scholars—many of eminence—work directly with practicing teachers, deepening and expanding the latter's understanding of the humanities they teach.

Mentors: Marjorie P. Balge, Assistant Director, Center for the Liberal Arts; Harold H. Kolb, Jr., Professor of English and Director, Center for the Liberal Arts

CONFERENCE PREVIEW

PART I
Strengthening Humanities Foundations for Teachers: Rationale and Approaches

Saturday, March 14, 1992

3 P.M. Conference registration

4 P.M. Welcome and orientation

4:45 P.M. Resource institutions meet with assigned planning institutions; each planning institution describes its proposals and progress and specific issues it wants to address during the project

6:15 P.M. Reception

8:15 P.M. Keynote address

Sunday, March 15

10:30 A.M. Optional conversation on Boston University's experiences with the Chelsea Public Schools

1 P.M. **The Resource Institutions: Seven Approaches**
In two successive sessions, with a break between, the seven resource institutions briefly describe their programs for strengthening the humanities foundations of teachers

4:15 P.M. Planning teams meet with assigned mentors and as individual teams

PART II
Particular Contexts and Dimensions

8:15 P.M. Panel Discussion
Accrediting Agencies, State Departments, School Districts: Fostering the Liberal Education of Teachers in a Context of Regulation

Monday, March 16

9 A.M. and 10:30 A.M. **Key Dimensions of the Challenge**
Concurrent sessions (repeated) on particular dimensions of strengthening humanities foundations for teachers, featuring presentations by representatives of several resource institutions
☐ Fostering self-consciousness about teaching and learning
☐ Designing courses and sequences that integrate the humanities and professional education
☐ Extending the humanities to practicing teachers
☐ Engaging students in the study of classic works

1 P.M. Resource institutions meet with assigned planning institutions. Planning teams share, and get reactions to, their thinking about their plans as it has been informed by sessions and team discussions to this point

PART III
Implementation

2:45 P.M. **Finding Points of Connection Between Professional Education and the Humanities Disciplines**
Five groups each focus on a distinct discipline within the humanities and its potential connection to the concerns and methods of teacher education. Participants select a group according to their individual interests:
☐ Literature
☐ History
☐ Philosophy and Religion
☐ Arts
☐ Social Sciences

7:30 P.M. *Optional session*: Developing NEH Proposals (with NEH staff)

Tuesday, March 17

8:30 A.M. **Initiating and Sustaining Programs**
In breakout sessions organized by institutional type, participants discuss such critical implementation issues as building faculty and administrative support, staffing, and financing

10:30 A.M. Planning teams meet with mentors and as individual teams to prepare brief accounts of revised plans for presentation and critique within afternoon quartet meeting

1:30 P.M. Quartets meet and planning teams briefly present their revised plans. Mentors and other planning teams respond.

3-3:30 P.M. Concluding plenary session
Project director reviews next steps of project. Planning teams complete conference evaluations.

Please note: All participants are expected to stay until the conference concludes on Tuesday, March 17, 1992, at 3:30 P.M.

1818 R Street, N.W.
Washington, D.C.
20009

The Association of American Colleges is the only institutional membership higher education association whose primary mission is improving undergraduate liberal education. AAC's goals–promoting lifelong humane and liberal learning, strengthening institutions of higher education as settings for liberal learning, and extending the benefits of liberal learning to all–are carried out through research, projects, publications, and workshops.

AAC's programs reflect its commitment to enhancing public understanding of liberal learning, strengthening general and specialized curricula, improving teaching and learning, increasing opportunities for equity and achievement, and developing institutional and academic leadership. Founded in 1915, AAC comprises more than 620 public and private colleges and universities.