A COLLABORATIVE PRE-PRACTICUM APPRENTICE PROGRAM GIVES A COMMUNITY COLLEGE A JUMP-START IN TEACHER PREPARATION

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Abstract

The Virginia Collaborative for Excellence in the Preparation of Teachers (VCEPT), funded by a grant from the Division of Undergraduate Education of the National Science Foundation, implemented the VCEPT Pre-Practicum Apprentice Program a couple of years into the grant. Groups of colleges within the Collaborative were to work together to set up an experience for pre-service teachers at their colleges which emphasized mathematics, science, and technology and which gave the pre-service teachers some in-field experience observing instruction in the local schools with lead teachers in these disciplines. Virginia Commonwealth University (VCU), Virginia Union University (VUU), and J. Sargeant Reynolds Community College (JSRCC) formed a collaboration of colleges with the City of Richmond. The carefully planned program of seminars and in-field observations in Richmond Public Schools provided a model program for identifying pre-service teachers and giving them the opportunity to decide if teaching was a career for them. All evaluations of the Program at J. Sargeant Reynolds Community College indicate that it was educational for the pre-service teachers and assisted them in forming their own philosophies of education. Once the VCEPT grant was complete, JSRCC institutionalized the Program by developing a course, *Introduction to Teaching as a Profession*, modeled after the Program, included teacher preparation as part of the Strategic Plan of the College, and created a Center for Teacher Education.

Introduction

The Virginia Collaborative for Excellence in the Preparation of Teachers (VCEPT), funded by a grant from the Division of Undergraduate Education of the National Science Foundation, implemented the VCEPT Pre-Practicum Apprentice Program a couple of years into the grant. Groups of colleges within the Collaborative were to work together to set up an experience for pre-service teachers at their colleges which emphasized mathematics, science, and technology and which gave them some in-field experience observing instruction in the local schools with lead teachers in these disciplines. This article will show how one such group of colleges developed the Program through partnership, and how this effort gave the community

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college a substantial impetus in teacher preparation. The process used, the seminars developed, the observations experienced, the evaluation of the community college effort, and the impact on the college as the college attempted to address the teacher shortage will be the focus of this article.

Pre-Practicum Apprentice Program

The purpose of the Pre-Practicum Apprentice Program was to give students a chance to view math and science being taught in the public schools and to assist the students in deciding early in their college career whether teaching is the career for them. One goal of the program was that students would begin to form their own philosophy of education. Students received a $6 per hour stipend for up to eight hours of observation in the local schools and for each hour of seminar attendance. The students attended three seminars emphasizing mathematics, science, and technology, and had observation experience appropriate to these disciplines.

Development of the Pre-Practicum Apprentice Program

Virginia Commonwealth University (VCU), Virginia Union University (VUU), and J. Sargeant Reynolds Community College (JSRCC) each appointed a faculty member to develop and coordinate the Program. The three coordinators called a formation meeting and were joined by the JSRCC chair of the Division of Mathematics and Science, the City of Richmond Mathematics and Science supervisors, and the Program coordinator. It was decided that the group of colleges and the City of Richmond would together hold three seminars for the students and would provide observation in local schools. A syllabus was developed describing details of the Program, such as purpose and expectations, guidelines for the observations, and evaluation questions. Ideas on methods of promoting the Program at the colleges were shared. The planning meetings were held on a regular basis the first year to monitor the progress of the Program. As the years of the grant continued, the number of planning meetings decreased, and e-mails and telephone calls were the main source of communication between the coordinators.

Structure of the Seminars

Seminar I — The first seminar essentially remained the same each semester for the full grant period and always lasted one-and-a-half hours. It was always held at VCU approximately one month into the semester to provide sufficient time to recruit the students. Recruitment time was especially important at JSRCC due to the fact that identification of pre-service teachers was

very difficult since there was no education curriculum at the college. The purpose of the first seminar was to help students understand the Program, prepare them for observations in the local schools, explain ways to become certified to teach, and answer their questions.

The topic of the first program was always, "Introduction to the Program, Guidelines for Participation." The seminars began with introductions so students would understand which students were from which college, so everyone would know which level and/or subject each student planned to teach. One of the Program coordinators reviewed the syllabus for the course and emphasized how the students should approach their observations in the public schools. For instance, such topics as dress, proper behavior, ethical concerns, and considerations of class time were discussed. The main speaker, usually from the Department of Human Resources of Richmond Public Schools, explained the different ways that someone can become a teacher in the Commonwealth of Virginia. The pre-service teachers found it very helpful to learn teacher shortage areas. The speaker allowed time for students to ask questions and the students found that this question-and-answer period was one of the greatest benefits of the Program. The students seemed desperate for information!

At the end of the seminar, the students signed up for the schools in which they wished to observe. A social time completing the seminar provided valuable networking opportunities for the students.

Seminar II — The second seminars were the most varied during the four years of the Program. Twice the seminars featured an award-winning math teacher from Mosby Middle School in Richmond discussing his teaching techniques and/or illustrating how to make quick web lessons by inserting photographs and other graphics into the computerized lesson. One of the seminars featured fourth graders who were taken to the James River with graphing calculators, data collectors, and probes and learned to graph the data from real sources, such as water pollution. The pre-service teachers were asked to participate in the program demonstrations. The students also seemed to feel very comfortable in asking questions and in sharing situations which had occurred during their observation experiences.

Two of the most memorable seminars were actually full-day pre-service teacher conferences held on Saturdays and hosted by JSRCC. Other groups of VCEPT pre-service teachers from other colleges in the Collaborative joined with the Richmond group to experience

presentations, and mathematics, science, and technology sessions led by faculty from the various colleges. Some of the titles of the sessions were: "Flying through the SOL"; "Teaching the Mathematics SOL with the Newspaper"; "A Teacher Apprentice in Action"; "Learning about the Learning Cycle"; "Fun and Inexpensive Science Activities"; "Finding the Median Fit Line: An Algebra I SOL"; and, "Using Different Learning Styles to Teach Science." The pre-service teachers had time to share their teaching experiences and to demonstrate through exhibits what they had accomplished at their individual colleges.

One spring semester, the pre-service teachers really enjoyed going to Lewis Ginter Botanical Gardens in April for their second seminar. Lewis Ginter has a greenhouse where they meet with City of Richmond school children and provide classes on plants—especially interesting and unusual plants that the children find fascinating. The pre-service teachers experienced some of the same lessons the children had experienced and toured the gardens.

The teaching apprentices met at the Science Museum of Virginia for one second seminar. They were invited to use the resource center whenever they wished. One of the JSRCC students was surprised at this invitation since the student did not really think of herself as a real teacher yet. The student was told, "Just tell whoever is here, 'I am a teacher' because you really are." This conversation marked the importance of teaching apprentices in the community college envisioning themselves as teachers early in their college career. This self-concept is helpful so that the students can develop their philosophies of education, can begin to save materials and collect ideas from workshops that they might incorporate into their lessons in the future, and can develop their self-image and confidence as a teacher. The pre-service teachers were able to use the e-microscopes in the resource center and to browse through the models and materials. Then the students were taken on a very unusual tour of the Science Museum. The tour included offices and the behind-the-scenes efforts necessary to run such a large museum. This seminar not only provided the pre-service teachers a resource for themselves, but also a view of what a field trip for their students could be like.

Seminar III — The third seminars were held at JSRCC. The first year, a professor of mathematics at JSRCC led an interesting program using the graphing calculator, a data collector, and probes. The pre-service teachers were active participants in the program. For instance, a pre-service teacher would walk toward a motion probe, and distance and time were collected at time intervals so close that graphs of the motion of the pre-service teacher were drawn on the

calculator. Students were then shown some graphs and asked what type of motion a person would walk to form the presented graph. This program was very helpful in enabling the students to see how technology can be used in a meaningful manner to convert real life data into abstract algebraic graphs.

During another third seminar, the same mathematics professor conducted a program called "Amazing Animals Using the Casio 9850+." Each student was given a Casio 9850+ graphing calculator and told which buttons to push on the calculator in order to graph drawings of various animals such as rabbits. This program was fun for the pre-service teachers, they had experience with a Casio 9850+ calculator, and the activities could be used later in their teaching. The activities were suited to the upper elementary school or middle school level.

Another seminar program, led by two community college professors, was entitled, "Active Learning Without Technology—Triangles, Patty Paper and Stellation of Tetrahedron (A Hands-On Way to Learn Geometry)." The presenters had the students work with paper in order to learn geometry. The students enjoyed it so much that they did not want to leave the seminar even when the ending time approached. Many of them took paper home and worked on the activities that night. These activities were ones that the teaching apprentices can use in their own teaching of geometry concepts.

The third seminars always included time for paperwork so that the students could turn in their time logs of observations in the public schools. These logs had to be signed by the supervising teacher. The students also turned in their evaluations of the Program. Certificates were presented to those completing the Program, and were encouraged to mention this experience on their future résumés.

In-Field Experiences of the Pre-Service Teachers

The VCEPT Pre-Practicum Apprentice Program provided for ten hours of in-field experience in a local school. The Richmond City Schools was a partner in this collaboration with VCU, JSRCC, and VUU. Letters were sent to the principals explaining the program and asking for their cooperation. For the first year of the program, the pre-service teachers were able to choose any school in Richmond and any grade level. Afterward, however, the coordinators of the Program decided that it would be best to limit the number of schools to approximately three or four near each college and to limit the experiences to the elementary or middle school level. This

process was much more successful. The principals expected the students and the students called the principals to arrange their first visit to the schools.

The students had been told during the first seminar that they should get to know the staff in the school's main office, and should sign in and out each day they went to school. The students had been instructed to be prompt so as not to disturb a lesson prepared by the teacher. The pre-service teachers were encouraged to go one hour each week or possibly two hours per week, rather than doing all eight hours immediately. A few students, due to their work schedules and their class schedules, had no choice but to spend an entire day at the school. It was felt that this was better than not having the experience at all. The pre-service teacher's purpose at the school was to observe the components of the classroom environment, the motivation of the students, the discipline issues, the learning style of the students, the technology used in the instruction, the assessment of the students' learning, and the professionalism of the teacher. This purpose had been explained in the first seminar, and the syllabus had a whole page listing techniques to notice in the classroom. Since the pre-service teachers were placed with lead teachers in the schools, it was hoped that they would observe the best practices in these crucial subject areas.

The excitement and dedication observed in most good teachers was also manifested in these pre-service teachers and some observed more than eight hours and/or refused a stipend. Some supervising teachers took special interest in the pre-service teachers and let them be more involved in the classrooms.

Evaluation of the Program at the Community College

Pre-service teacher evaluation of the experience — The first two years of the Program, the students were asked to write a two-page paper about their experience as pre-service teachers. After that, the coordinators designed an evaluation containing four questions for the pre-service teachers to answer. The questions were:

1. What have you learned from your observations about teaching in today's classroom?
2. Have your observations influenced your decision to teach? If so, how? If not, why not?
3. Describe any experiences which moved you.
4. Describe how these observations may or may not have changed your perspectives on the best ways to teach students.

Some of the written responses in the evaluations were:

- " ...it is my firm belief that teaching students is best done through understanding the individual learning styles,..." Michael Moon, Fall 2000

- "There is a lot to teach a child in a day." Paula Katz, Fall 2000

- " I noticed several teachers had the students get up and release some energy—with songs or a reading break so they could concentrate better." Paula Katz, Fall 2000

- "My observations have changed my opinion on how to maintain classroom control. I admired the way the teacher always got the student's attention when they seemed to begin to lose their focus. Instead of yelling or saying 'look up here, please,' she would walk around, ask questions, show cool pictures. This kept excellent order in the classroom and let the children learn while having fun." Sharon Johnson, Fall 2000

- " My goal for attending this program was to see what teaching was like, but in the end I had reached beyond my goal. I had helped students grasp an understanding on a particular problem that gave them confidence in themselves which put a smile on their face as well as mine." Sarah Bertrand, Fall 1999

- "I can now understand more clearly that you definitely have to be more than just book smart. As a teacher you definitely have to care about the students and want them to succeed." Bernice Collins, Fall 1999

- "I've learned you have to be creative and imaginative." Rodira Walker, Spring 2002

Overall evaluation of the program at JSRCC — There have been 105 different students involved in the VCEPT Pre-Practicum Apprentice Program at JSRCC during its four year term. By Summer 2002, there were eighteen graduates from the College who had been involved in the VCEPT Program at some time. Presently, 55 students who have been in the Program are still at the College, so it appears that it might have influenced the retention of these students. Most of the teaching apprentices at JSRCC were in the social science, liberal arts, or science curriculums.

The VCEPT Pre-Practicum Apprentice Program has been considered by some of the mathematics and science faculty (full-time and adjunct) at JSRCC as a valuable part of the VCEPT grant. These faculty assisted the coordinator many times in recruiting participants, in helping with seminars and Saturday conferences, and in helping to arrange special programs for the seminars. The Program also increased the interest of faculty at the College in teacher preparation.

Implications for the Community College

The most direct implication of the VCEPT Teaching Apprentice Practicum at JSRCC is the development of a course, *Introduction to Teaching as a Profession*, that institutionalizes the efforts made with the VCEPT Pre-Practicum Apprentice Program. A committee was formed at JSRCC during Spring 2002—the last semester of the VCEPT grant funds. This committee began by listing the topics that should be included in the course, and finished developing it by Summer 2002. The course has two credits and since there are writing and speaking components in the course, students must place in *ENG 111* at the College in order to be eligible to take it. The course contains an observation component involving ten hours of observation in the local schools. The course topics are: requirements for teacher licensure; school and classroom environments, assessment, and standards; introduction to learning styles; special needs students; curriculum and pedagogy; philosophies of education; technology in education; time management and study skills; transfer opportunities (especially schools of education); and, resources at JSRCC for success in learning. Upon successful completion of the course, the pre-service teacher will:

- report on a direct observation experience in a local school setting;
- design a flowchart of the student's individual path to becoming a teacher;
- explain the multiple roles associated with the teaching profession;
- design a model classroom or school; prepare a bulletin board;
- use the Internet to examine topics in education; use new technologies for teaching and learning;
- prepare a portfolio to demonstrate an understanding of the course content for assessment purposes;
- demonstrate knowledge about teacher entrance exams; and, make presentations on class-related topics.

Realizing the critical teacher shortage in Virginia as well as the United States and the fact that over 40% of the nation's current teachers did course work at a community college [1], JSRCC has added a goal in their new strategic plan: " Increase the number of students in the teacher preparation pipeline to meet the needs of our region." One of the first tasks to meet this goal was to establish a Center for Teacher Education. Having this goal in mind, the development officer of the College proceeded with a proposal to support the new course by finding funds from local businesses and patrons.

Conclusion

The VCEPT Pre-Practicum Apprentice Program will be definitely institutionalized by the offering of *Introduction to Teaching as a Profession*, and by the formation of the Center for Teacher Education. For other colleges desiring the same benefits of such a course, it is recommended that a team-oriented and collaborative approach be used, i.e., enlisting the assistance of college/university coordinators, supervisors, and the principals of the local school system(s). By assigning these participants well defined roles and responsibilities, other pre-practicum apprentice programs are sure to experience the same level of success. ■

References

[1] *Investing in Tomorrow's Teachers: The Integral Role of Two-Year Colleges in the Science and Mathematics Preparation of Prospective Teachers*, National Science Foundation, NSF-9949, 1998, 3.