

CHAPTER V

INTRODUCTION

The purpose of the study was to investigate the major problems and concerns of first-year science teachers. The intent of the study was to (1) identify some of the major problems confronting first-year science teachers; (2) list school-based and district wide support practices and programs available to first-year secondary science teachers; and (3) describe problems of socialization confronting first-year secondary science teachers.

The study was limited to the perceptions of eight first-year secondary science teachers under contract at the start of the 1996-1997 school year. More specifically, the study viewed these teachers as novice by definition and perceptions of specific support activities that assisted them in moving from novice to veteran teachers.

The literature review provided an examination of research on teacher induction based on self-reported data. Several research projects studied first-year teachers in general, but few qualitative research projects focused specifically on first-year secondary science teachers. Few studies

examined the perceptions of first-year secondary science teachers, the demands of their new environment, or the developmental skills they needed to survive the year.

The research procedure used in this study was the individual case study method. Data were collected primarily through ethnographic interviews and written responses of the participants. The subjects included eight first-year secondary science teachers and six administrators responsible for evaluation of these teachers, (two administrators did not respond to the survey). A thematic conceptual matrix was used to display the problems and issues faced by these teachers and the programs available to help them.

This final chapter is divided into four sections. The first section summarizes the major findings of this study. The second section summarizes a discussion of the participants needs. The third section discusses recommendations for practice and the final section provides recommendations for further research.

FINDINGS

The development of professional teaching the role of a first-year secondary science teacher. The availability of mentors, support programs, and continuing education promotes positive interactions between and among administrators, teachers, and first-year secondary science teachers. A clear need exists for professional guidelines to help first-year secondary science teachers manage teaching skills.

The thematic conceptual matrix reveals discipline and classroom/time management to be the two problems perceived by first-year secondary science teachers as the most acute they faced. Discipline was clearly viewed as the most serious ongoing problem. The teachers interviewed for this study reported that many students come to school with so many problems that it is difficult for them to learn or to know how to behave.

With regards to the classroom-management problem, the first-year secondary science teachers reported that their inability to provide structure and organization for their students weakened the framework for positive student achievement. The data collected suggest that first-year secondary science teachers perceived teaching as non-manageable. In addition, the

burden of clerical work, and a lack of adequate teaching materials exacerbated the already difficult situation. The first-year secondary science teachers focused on the immediate problem of reaching and controlling students, but their efforts were undermined by their own failure to ask for help and by their superior's failure to provide help.

The lack of content knowledge in the subject they taught also prevented some first-year secondary science teachers from creating successful strategies for classroom management. These first-year secondary science teachers noted that a combination of factors kept them working at a frenetic pace (Zeichner, 1983). When they were allowed insufficient time during the day to reflect on their experiences and plan for the next day, they said their time at school felt like a roller coaster ride.

The major findings of this study are as follows:

1. The most persistent problems faced by all of the interviewed participants involved discipline.
2. Formal training in discipline strategies was not given to these first-year secondary science teachers.
3. The opportunities for first-year secondary science teachers to collaborate with each other and with administrators or other science

teachers were limited.

4. Feedback assessments were not provided to help first-year secondary science teachers improve classroom instruction and lessen discipline problems.
5. First-year secondary science teachers were not acquainted, via orientation or induction programs, with either the community or school policies and procedures.
6. Mentor programs were not responsive to first-year secondary science teachers' needs.
7. First-year secondary science teachers were not helped to understand the curriculum.
8. Information regarding curriculum guides, district resources, equipment location, catalogued materials and opportunities for professional growth was not given to first-year secondary science teachers.
9. Six administrators reported that some type of support did exist for first-year secondary science teachers. Two administrators failed to respond.
10. Half of the participants felt that the discipline problems they

encountered during the first year affected their teaching skills.

In summary, first-year secondary science teachers need to develop effective skills and strategies to help students achieve. First-year secondary science teachers need a variety of support programs and to achieve success.

DISCUSSION

The successful first-year secondary science teacher must understand the best way to help students achieve. A systematic effort to provide ongoing assistance to first-year secondary science teachers improves teaching performance. Support programs must promote the personal and professional well-being of first-year secondary science teachers.

Resources must be committed to help the first-year secondary science teacher understand the culture of both the school and community. First-year secondary science teachers may leave the teaching profession if their environmental difficulties and specific needs are not addressed.

First-year secondary science teachers who are actively helped by administrators or lead teachers become better at their jobs. Such efforts on the part of the administrator requires an investment of high levels of energy and personal dedication. The administrator becomes the driving force to assist veteran teachers to impart the positive difference in the school setting, more specifically, in the lives of students.

All participants reported that they willingly accepted any support or assistance provided to them. To actualize the true meaning of teaching, first-year secondary science teachers must be constantly nurtured and

administrators must have specific plans of action that can be articulated, organized, and pursued. Such efforts require members of the school and community to understand the needs of the first-year secondary science teacher and to commit resources to enhance the professional growth of the first-year secondary science teacher.

In summary, the first-year secondary science teacher needed in today's high school is one who must have courage, integrity, wisdom, and humility and who is given help to transform students into productive, knowledgeable citizens.

LESSONS LEARNED FROM FIRST-YEAR SECONDARY SCIENCE TEACHERS

Providing assistance to first-year secondary science teachers suggest areas of support by experts within the educational arena. All participants made positive suggestions about teacher preparation and support. They proposed a system in which first-year secondary science teachers would receive formal assistance from cooperating teachers, and mentors with a true understanding of the challenges of the first year. The participating teachers also suggested that education courses should be the primary source for learning education theory, subject content, and teaching methods.

Each teacher seemed to meet the challenge of the first year by either redefining their notions of discipline or developing strategies that allowed them to control their classrooms. Availability of mentor teachers was viewed as critical for helping these teachers make cogent instructional decisions and respond appropriately to disruptive students. First-year secondary science teachers felt that they could become more effective in dealing with parents and identifying the strengths needed to avoid the shortcoming of teaching, with the help of mentor teachers. Mentor

teachers helped participants decide what to teach and what not to teach and provided strategies that motivated reluctant students.

In conclusion, the first year of teaching provides a way for first-year secondary science teachers to think about learning to teach using skills and practices taught in college. Learning to teach is an ongoing process that links the study with the process of teaching. Each teacher must actively participate in determining the direction of his/her professional growth assisted by a mentor teachers, administrators and the school system.

RECOMMENDATIONS FOR PRACTICE

How do we stop the high attrition rate for secondary science teachers? This case study has revealed the perceptions of first-year secondary science teachers. These interviews, along with the written observations of the school administrators, formulated a thematic conceptual matrix that provided a visual display of the problems and issues faced by and supportive programs available to these teachers. Future research should focus on assessment of actual support given to first-year teachers.

Further recommendations:

1. Enhance the present teacher induction program sponsored by the North Carolina Department of Public Instruction, emphasizing accountability standards universities and colleges granting a certification for teaching science within the state.
2. Require accountability for school district's orientation programs according to guidelines set by the North Carolina Department of Public Instruction. Seminars could include such topics as first-year secondary science teachers' rights, instructional expectations, discipline situations, assertive discipline strategies, and school district overviews.

3. Assign first-year teachers reasonable tasks; do not require first-year teachers to perform extracurricular activities.
4. Provide first-year secondary science teachers with ample time for planning during the school day.
5. Increase opportunities for professional growth through advanced course work and reimbursement for approved courses.
6. Increase mentor responsibility and accountability. Assign only veteran science teachers to mentor first-year secondary science teachers.
7. Stratify the evaluation process for first-year secondary science teachers in accordance with skill and competence levels.
8. Provide more compensation for first-year secondary science teachers seeking National Teacher's Certification.

In conclusion, when first-year secondary science teachers are asked to reflect on their own experiences, they give a clear message about teacher preparation, induction, and problems of discipline. They dream of moving continuously through the process of becoming a master teacher. They prefer to move away from the swim or sink mode to the growth and win experience. First-year secondary science teachers with little or no support rely on their life's experiences or informal suggestions on how to

teach. When asked what they felt they needed to be successful, they proposed a system in which first-year secondary science teachers receive more formal preparations by colleges, increased assistance from supportive administrators and mentor teachers, more support from school-districts, more help understanding curriculum, and better evaluation processes that allow time for professional growth.

RECOMMENDATIONS FOR FURTHER STUDY

Education today faces a variety of complicated problems, that have no clear solutions. First-year secondary science teachers continue show little optimism regarding teaching and the education process. This study revealed how discipline and classroom management produce changes in first-year teachers' attitudes about teaching and longevity in the job.

How to effectively assist first-year secondary science teachers is a complex problem. The perception of reality for the first-year secondary science teacher and the relationship of the first-year teacher to the school community and the educational process demand flexibility for adjustment to new conditions. Refinement of existing programs and the development of new induction programs may provide a long range positive goal for further research.

Induction programs are divided into two types: informational and personal adjustment (Rebore, 1987). Informational programs are concerned with providing initial materials or updated information. Personal adjustment programs are designed to help the first-year secondary science teacher interact with other teachers, administrators, students, and parents. An assistance program conducted by administrators,

veteran teachers, supervisors, and other resourceful individuals provides a viable solution. This type of assistance plan represents the beginning of a successful continuous cycle that may result in the acquisition and retention of new innovative science teachers.

Results of this study suggest that further studies should be conducted to explore both qualitative and quantitative methods to focus on the diverse nature of human interactions within the school setting.

Quantitative studies data collected from multiple subjects may provide insight into relationships of realities, expectations, and perceived support and services provided to first-year secondary science teachers. Collecting data from multiple subjects would reveal “the other side of the process.”

Qualitative studies involving principals and veteran teachers would focus on the origins of perceptions of first-year secondary science teachers.

Resulting insights may have implications for informing first-year secondary science teachers’ problems and issues.

Also recommended are parallel studies in the content areas of mathematics, history, music, art, and English to compare consequences that may include curriculum, extracurricular activities, mentor support, and personal reactions during the same period of teaching. Science classes are

required to provide more hands-on activities. A study of these processes of various programs and support could be enlightening. Discovering linkages between content, conditions, and certain types of programs and support may help determine if college training is the critical ingredient in preparation for science teaching.

There was an indication from this study of “professional maturation.” This concept needs to be explored further.

Although this research produced evidence that discipline is the main problem faced by first-year secondary science teachers, it raises additional questions. Further research to test and refine this study is strongly suggested. The perception of support received by first-year secondary science teachers has shown to be directly linked to the degree of problems and issues faced by and support programs offered to first-year secondary science teachers in their first year on the job. The beneficiaries of support for first-year secondary science teachers ultimately are students.