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Predicted effects of the Holmes Group recommendations on the preparation of health education teachers, as perceived by health education department chairs at Holmes Group members

Hjelm, John Robert, Ph.D.

The Ohio State University, 1991

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PREDICTED EFFECTS OF THE HOLMES GROUP RECOMMENDATIONS ON
THE PREPARATION OF HEALTH EDUCATION TEACHERS,
AS PERCEIVED BY HEALTH EDUCATION DEPARTMENT CHAIRS
AT HOLMES GROUP MEMBERS

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the
Degree Doctor of Philosophy in the Graduate School of
The Ohio State University

By

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1991

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DEDICATION

To Beth, Andra, Lisa, my parents, and my in-laws
without whom this project could not have been completed
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Major Field: Health, Physical Education and Recreation

Studies in Health Education and Teacher Education
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Overview

Calls for improved education of American students and for improved teaching are commonplace in the United States. Implied by those criticisms is a need to improve teacher education. According to Judith Lanier, Dean of the College of Education at Michigan State University, "American students' performance will not improve much if the quality of teaching is not improved- and teaching will not improve if the training and rewards for teachers and working conditions in schools are not changed" (Newsnotes, 1987). Proposals for reform of teacher education have been published by the federal government, private foundations, teacher education and teacher associations, university teacher education units, and individuals (Cruickshank, 1985). Cruickshank (1985) has identified 22 such proposals since the 1960s. However, the result of such efforts has typically been limited to the publication of a report containing the recommended changes (Murray, 1986). The professional preparation of teachers continues as it has in the past.
The proposal of The Holmes Group (1986), an organization of research universities dedicated to improving teacher education in the United States (Murray, 1987), appears to be an exception to the rule. Howey (1990), in his introduction to the Theory Into Practice theme issue about The Holmes agenda, writes that, "the continuing widespread publicity surrounding Holmes, the identity of the institutions that have made a commitment, and the sense of efficacy attached to a national movement all contribute to a disposition for change not readily evident earlier within many institutions." One hundred twenty-three institutions were invited to join The Holmes Group and implement changes based on its report, Tomorrow's Teachers. That invitation has been accepted by 98 universities (The Holmes Group, 1990). The participating universities include the leading research institutions in each of five geographic areas. The actions of those universities will presumably influence other universities nationwide.

The Holmes Group has identified five major goals: (1) to make the education of teachers intellectually more solid; (2) to recognize differences in teachers' knowledge, skill, and commitment, and their education, certification, and work; (3) to create standards of entry to the teaching profession which are professionally relevant and intellectually defensible; (4) to connect schools of education with the public schools; and (5) to make schools better places for
teachers to work and learn (The Holmes Group, 1986). The Holmes Group believes that teacher education must be restructured to produce highly competent teachers and that the status of teaching itself must be raised to that of the professions.

The revision of teacher education programs to achieve the goals of The Holmes Groups has implications for all university departments which prepare teachers. Reactions to Tomorrow's Teachers (The Holmes Group, 1986) have been published by deans of colleges of education and education faculty, as well as faculty of academic departments which prepare teachers. Examples of those reactions follow. Vocational education faculty believe that Tomorrow's Teachers has serious implications for their programs (Adams, Pratzner, Anderson, & Zimmerer, 1987). They fear that a five year preparation program will not be able to compete with business and industry or with community and technical institutes. Allman (1987) believes that implementation of The Holmes Group model can improve the preparation of teachers of the visually handicapped, but that the five-year plan will result in fewer trained teachers entering the field. A number of authors fear that the costs associated with an additional year of training will reduce the number of students choosing to enter teaching, especially low-income and minority students (Cherryholmes, 1987; Mehlinger, 1986; Wiggins, 1986).
The reaction of health educators has been minimal. Willcox (1988) adopts a relatively positive stance as he examines the implications for health education. He believes that moving pedagogy to the graduate level would allow more time for study of the rapidly expanding knowledge base of health education. He envisions a common undergraduate core for both school and community health educators with specialization at the graduate level. Concern over the future of the early field experience is expressed. He also fears that the additional year of study required will discourage students from entering teaching. This is of particular concern in an era when many students already are choosing community health over school health (Pigg, 1984). Not all health educators seek teaching credentials, but curricular changes for preservice teachers could impact students entering community and public health as well as prospective teachers. Curricular changes may affect all health education majors at those institutions if the different tracks overlap.

Cleary and Lowing (1990) question the assumptions underlying reform proposals such as Tomorrow's Teachers (The Holmes Group, 1986). They believe a "defensible knowledge base, and a comprehensive framework for professional preparation have evolved" in health education. They fear the evolution will be "short-lived" if health educators do not challenge the assumptions on which
The Holmes Group has based its proposals. They offer five examples of such assumptions: (1) majoring in the liberal arts is superior to majoring in secondary education, (2) secondary education students do not complete an academic major in their specialty, (3) longer preparation will result in higher pay, (4) members of The Holmes Group have implemented the proposals in *Tomorrow's Teachers* (The Holmes Group, 1986), and (5) graduate studies will produce better teachers.

**Need for the Study**

Teacher education has received little attention in the health education literature. A five year content analysis (1983-1987) of *Health Education* and the *Journal of School Health* revealed that only 4.1% of the articles published in those journals were related to teacher education (Hjelm & Willcox, 1990). Few of the articles were research-oriented. Over two-hundred colleges and universities prepare school health teachers (Association for the Advancement of Health Education, 1989, 1990). Clearly, teacher education is a primary focus of health education at the university level. Research concerning teacher education in health education departments is needed.

More specifically, research about the effects of The Holmes Group is needed. Program changes are being planned and
implemented at Holmes Group members (The Holmes Group, 1989). Evaluation of the effects of these curricular changes is important for all colleges and universities which prepare school health teachers. Implementation of the Holmes agenda will affect the undergraduate health education major and professional studies of prospective health education teachers. However, the program is not prescriptive (Crain, 1987, p. 17; Howey, 1990, p. 3). According to Griffin (1990, p. 37), "it would be foolhardy to attempt to develop a 'Holmes curriculum.' To do so would deny the importance of institutional variety, ignore fiscal differences, and blunt possibilities for invention and creativity." Universities and departments of health education will implement the program in different ways and to different degrees. This study will identify the predicted, perceived effects of implementing The Holmes Group recommendations. This study will provide information for other institutions which will consider adopting The Holmes Group recommendations in the future. In addition, this study will identify potential positive and negative aspects of such program revisions. It will function as a baseline for future investigations on the effects of using The Holmes Group model for the preparation of health education teachers.

A Delphi study conducted to identify the "most pressing research questions in health education" revealed concerns about
professional preparation (Frazer, Kush, & Richardson, 1984). One of those questions was, "How can process and content be taught at the same time in health education professional preparation courses?" The implication is that it is preferable to combine process and content. The Holmes Group has recommended that content be taught primarily at the undergraduate level and that professional preparation occur primarily at the graduate level. This study will predict effects which will result from implementation of The Holmes Group recommendations and also identify the advantages and disadvantages expected from such a program.

The health education literature reflects a knowledge gap. Little systematic inquiry about teacher education in health education is being conducted. This study begins to fill that gap by examining the potential impact of The Holmes Group recommendations on the preparation of health education teachers. This is an important area of study as members of The Holmes Group plan and implement curricula based on its recommendations.

Problem Statement

The purpose of this study is to identify the predicted effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by participating health education department chairs.
Subproblems
1. To identify positive effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by participating health education department chairs.
2. To identify negative effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by participating health education department chairs.
3. To identify the predicted significant effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by participating health education department chairs.

Definition of Terms
For the purposes of this study, the following definitions will be used:

1. The Holmes Group. "The Holmes Group is a national organization of some 90 research universities dedicated to solving problems associated with the generally low quality of teacher preparation in the U.S." (Murray, 1987, p. 29).

3. Career Professionals. Outstanding teachers with extensive experience and "specialized study, ordinarily for the doctorate either in an academic subject of in some other specialty" (The Holmes Group, 1986, p. 13).

4. Professional Teachers. Fully certified professionals who have completed Master's degrees, which include "advanced study in the ...academic field, studies of pedagogy and human learning, work in classrooms with children who were at risk, and a full year of supervised teaching" (The Holmes Group, 1986, p. 11).

5. Instructors. Teachers who have liberal arts degrees in the subject(s) they intend to teach. They are issued temporary certificates and are allowed to teach only under the direct supervision of fully certified professional (The Holmes Group, 1986, p. 11)

6. Delphi technique. "a carefully designed program of sequential interrogations (with questionnaires) interspersed with information and opinion feedback." (Cyphert & Gant, 1971)

Assumptions of the Study

For the purposes of this investigation, the following assumptions are accepted:

1. Subjects will identify perceived effects of implementing The Holmes Group recommendations.
2 Subjects are familiar with The Holmes Group recommendations.

3. Subjects are familiar with their institution's plans to implement The Holmes Group recommendations.

Limitations of the Study

The following limitations of this study must be considered:

1. The population was composed of health education department chairs. The results of the study cannot be generalized to health education faculty in general or to faculty in other disciplines.

2. Subjects were all faculty at universities which are members of The Holmes Group. The results of this study may not be generalized to health education department chairs at other universities.

3. The study findings rely on mailed questionnaire data only.

4. The person completing the instrument at each university may not be the most knowledgeable with regard to the health education department's implementation of The Holmes Group recommendations.

Conclusion

Universities which have joined The Holmes Group are responding to calls for reform in education and the education of
teachers. This study examines the predicted, perceived effects of The Holmes Group recommendations on the preparation of school health education teachers.
CHAPTER II
REVIEW OF LITERATURE

The goal of this review of the related literature is to provide a context from which to view the recommendations of The Holmes Group (1986) and to describe the Delphi technique and how it has been used in health education research. The chapter is divided into six sections to provide the framework. The sections are: (1) a review of other teacher education reform proposals, (2) origin and organization of The Holmes Group, (3) The Holmes Group agenda, (4) reactions to the recommendations of The Holmes Group contained in Tomorrow's Teachers (The Holmes Group, 1986), (5) the Delphi technique, and (6) applications in health education.

Teacher Education Reform Proposals

Reports calling for reform of teacher education are commonplace. Cruickshank (1985) has identified 22 such proposals since 1963. At least two have appeared since the publication of Cruickshank's book. The purpose of this review is to present an overview of previously published teacher education reform proposals. This will provide a historical context to which the recommendations of The Holmes Group can be compared. Following are synopses of selected reform proposals.
The Education of American Teachers. The best-selling book The Education of American Teachers (Conant, 1963) was based on a study of 77 colleges and state education officers. Conant recommends that colleges and universities be allowed to develop programs based on what will work best for each. He writes, "What is needed is on the one hand for the state to allow freedom for institutions to experiment, and on the other for the academic professors and professors of education in each institution to take joint responsibility for the reputation of their college or university in training teachers." However, the institution's president must certify that graduates are prepared to teach specific subjects at specific levels. In addition, each school must establish a state-approved student teaching program.

Conant recommended a strong general education component, advocating that half of the four year program be devoted to general education. He also recommended that approximately one year be devoted to preparation in the teaching specialty and that the subject should be pursued "well beyond the introductory level".

Conant's vision of professional preparation included five components: (1) development of proper attitudes in students, (2) social behavior, (3) child development, (4) principles of teaching, and (5) student teaching. He seemed to have mixed emotions about the value of education courses. Student teaching was viewed as "the one indisputably essential element in professional education."
Teachers for the Real World. The U.S. Office of Education created the National Institute for Advanced Study in Teaching Disadvantaged Youth in 1966. The steering committee, however, focused on teacher preparation in general. The committee's recommendations were published in Teachers for the Real World (Smith, Cohen & Pearl, 1969). They recommended a three-pronged program of teacher preparation. The first, or theoretical, component would occur on campus and was intended to help preservice teacher prepare for and understand events which would likely happen in their classrooms. Protocol materials were to be used to achieve this. Protocol materials involve the use of real or simulated classroom events in teacher education (e.g. cheating). The events may be filmed or transcribed. Students first read theoretical material related to the event. The event is then presented to the students who are guided in analyzing it and applying the theory (Cruickshank, 1985).

The second component of the program was training and would occur in the schools. Preservice teachers would learn and practice the skills of teaching. These skills would include diagnosing pupil needs, working with different size groups, using equipment, and evaluating learning (Cruickshank, 1985).

Subject matter preparation was the third component of professional preparation. This included the teaching specialty, general education, and "knowledge about knowledge."

Professional preparation is completed with a paid internship.
Crisis in the Classroom. The best-seller Crisis in the Classroom (Silberman, 1970) was based on a three-year study of the role of universities in teacher education. The Carnegie Corporation Commission on the Education of Educators provided funding for the project.

Silberman emphasized the broad goals of teacher education. He wrote that the "central task of teacher education . . . is to provide teachers with a sense of purpose, . . . with a philosophy of education." They needed to understand the relationships between the subjects they teach and other subjects.

Silberman argued that teachers must be more than technicians; they must be students of teaching. They need to understand the purposes of teaching and how they relate to society. This would allow them to "grow as teacher(s)."

Specific recommendations with curricular implications were also included. Silberman believes that the study of the history of education and philosophy of education, as well as the study of psychology, sociology, and anthropology, "deserves a central place in teacher education." He believed that these courses of study should combine liberal and professional education.

Educating a Profession. The Bicentennial Commission on Education for the Profession of Teaching of the American Association of Colleges for Teacher Education (AACTE) was published in 1976. Titled Educating a Profession (Howsam, Corrigan,
Denemark & Nash, 1976), the report recommended 11 major curriculum components in teacher education.

1. General studies to include the structure of knowledge, various ways of knowing, relationships between concepts in different disciplines, and implications for teaching.

2. Study of the "undergirding disciplines" of education. These included psychology, sociology, anthropology, and philosophy. This provided much of the theoretical framework on which educational practice is built.

3. Study of the teaching specialty with emphasis on the "broad principles and generalizations of a subject, rather than concentration on a maze of specific topics."

4. Study of the foundations of education in order to develop a "sense of social purpose." The goal was awareness of the issues, problems, and procedures affecting all educators.

5. Development of a professional knowledge base via study of theoretical knowledge combined with study of actual school situations.

6. Development of teaching behaviors and skills such as diagnosis and evaluation, classroom organization, setting goals, and instruction.

7. Study philosophy of education to help preservice teachers to "think seriously and continuously about the purposes and consequences of what they do."
8. Study of educational and sociopolitical issues to prepare them to work toward the resolution of those issues.

9. Participation in field experiences to provide the opportunity to apply theory.

10. Interaction with learning disabled students to prepare preservice teacher to teach children with a variety of learning disabilities.

11. Study of a subculture to develop the ability to adjust teaching behaviors to meet the needs of different school environments.

A Design for a School of Pedagogy. Smith, Silverman, Borg, and Fry (1980) believed that teacher education has tended to emphasize academic knowledge at the expense of pedagogy (Cruickshank, 1985). A Design for a School of Pedagogy (Smith et al, 1980) advocated the creation of new schools of pedagogy to reverse this trend.

Preservice teachers would complete a four-year baccalaureate degree. The undergraduate program would emphasize the teaching specialty and related subjects. The foundation for professional education would be provided via study of the social and behavioral sciences.

Two years of professional preparation in a school of pedagogy would lead to a master of pedagogy degree. The curriculum in the school of pedagogy would focus on the science and art of teaching. Examples of areas to be included in the program were clinical knowledge, measurement and evaluation, curriculum and instruction,
content selection and organization, field experiences, and clinical seminars using protocols. The program would be based on research on school and teacher effectiveness.

**Excellence in Our Schools.** The National Education Association (NEA) also published recommendations for teacher education. The document is titled *Excellence in Our Schools: Teacher Education, An Action Plan* (NEA, 1982). According to the NEA, teacher education programs must be based on what teachers have learned through experience, that is on craft knowledge. The proposed program has three components: liberal arts, teaching specialty, and professional studies. The liberal arts component should provide a "balance" of studies including the humanities, arts, sciences, mathematics, technology, and physical and health education.

The teaching specialty received less attention in the report. Students would be required to complete a "subject major." Instructional methods would be taught along with "in-depth instruction in the subject matter specialty."

The professional education component of the program received considerable attention in the NEA document. Study of teaching and learning theory in conjunction with field-based experiences were given top priority. Specific curricular topics included classroom management, teaching strategies, use of technology, group-process skills, and evaluation. Practical application of knowledge would occur through a sequence of field-based experiences which occur throughout one's professional preparation.
The Paideia Proposal. Adler's (1982) book was aimed primarily at K-12 reform. However, The Paideia Proposal did address teacher education. Adler described three kinds of learning: (1) acquisition of organized knowledge, which is a study of subjects typically included in the public school curriculum; (2) development of intellectual skills, which include reading, writing, speaking, problem-solving, and exercising critical judgment; and (3) enlarged understanding, which would involve discussion of books and other works of art. All teachers need to have completed a course of study as recommended by Adler.

The undergraduate program of preservice teacher would be "general college education." After completing such a program, specialized teacher training would begin. This would occur either in graduate school or in supervised internship. The internship is the most essential component of teacher preparation. According to Adler (1982), "all the skills of teaching are intellectual skills that can be developed only by coaching, not by lecture courses in pedagogy and teaching methods."

Educating a Profession: Profile of a Beginning Teacher. The purpose of this followup to the American Association of Colleges for Teacher Education (AACTE) bicentennial report was to (1) identify the characteristics an individual should possess upon graduation from a teacher education program and (2) describe a curriculum which would promote the development of those characteristics (Cruickshank, 1985).
Teacher (Scannell, Corrigan, Denemark, Dieterle, Egbert, & Nielson, 1983) advocated four components in the teacher education curriculum: general education, preprofessional study in the disciplines which undergird pedagogy, academic specialization, and professional study.

General education would emphasize communication. This would include (1) various types of communication, (2) mathematical skills, (3) language, and (4) mass communication. Students would also study groups and institutions, mental and physical health, and a variety of relationships such as between society and work, nature and the universe, and technology and human nature.

The second component would be study of the undergirding disciplines. These disciplines include "social and behavioral sciences such as anthropology, philosophy, and sociology." They are disciplines "from which teachers draw experience and knowledge" (Cruickshank, 1985).

The academic specialization would provide instruction in the subjects which students intend to teach. The structure of the discipline and research methodology would be emphasized.

Professional studies curriculum would have four components: foundational studies in education, generic pedagogy, specialized pedagogy, and field and clinical laboratory experience (Cruickshank, 1985). Foundational studies include learning, human development, philosophy of education, and history of education. The goal of the generic pedagogy component would be to provide opportunity to learn
to evaluate students and plan instruction based on evaluations, manage classrooms, and arrange conferences and referrals.

Specialized pedagogy would focus on knowledge and skills necessary to teach specific subjects and grade levels. The assumption is that teachers need specialized training for their particular discipline and for the students they intend to teach. Field and clinical laboratory experiences would make use of simulations, microteaching, Reflective Teaching, observations, and student teaching.

A Nation Prepared: Teachers for the Twenty-first Century. The report of the Carnegie Task Force on Teaching as a Profession (1986) calls for eight changes in educational policy in order to improve the teaching profession.

1. Create a National Board for Professional Teaching Standards to "establish high standards for what teachers need to know and be able to do."

2. Free teachers to decide how to meet state and local goals for students while holding them accountable.

3. Introduce a new level for proven teachers who can provide leadership in the schools. These teachers will be called "Lead Teachers."

4. Require a bachelors degree in the arts and sciences as a prerequisite for professional preparation. The undergraduate years should be "wholly devoted to a broad liberal education and a thorough grounding in the subjects to be taught."
5. Develop a curriculum which leads to a Master in Teaching degree. This program would develop instructional skills, the ability to reflect on one's own teaching, and lay the groundwork for continuing development. Field work is seen as an essential component of professional preparation.

6. Develop ways to prepare minorities for teaching careers.

7. Provide incentives for student performance to teachers and provide the necessary technology, services, and staff.

8. Make teachers' salaries and career opportunities competitive with those in other professions.

The Task Force envisioned a graduate teacher education program in which the first year is spent serving an internship in a school and taking graduate courses. A "residency" would be required during the second year. "Clinical" schools would be used for internships and residency programs. The candidates would work under the supervision of Lead Teachers.

**Summary.** Teacher education reform proposals have been published regularly during the past three decades. Recommendations vary considerably. Some would retain the four-year undergraduate program; others would establish a graduate program as the prerequisite for entry-level teachers. Some propose increasing the professional studies component of teacher education; others are more concerned with the liberal preparation of teachers. Some recommend programs based on research; others feel that practicing teachers provide the most insight into what teacher education
should be. One area of agreement, however, is that teacher education needs to be improved. Unfortunately, these reports seem to have had little impact on teacher education (Murray, 1986). Preservice teachers continue to be prepared in the same way they have been for decades.

**Origin and Organization of The Holmes Group**

The Holmes Group is an organization of research institutions "dedicated to solving problems associated with the generally low quality of teacher preparation in the U.S." (Murray, 1987). The Holmes Group was named for Henry W. Holmes, Dean of the Harvard Graduate School of Education during the 1920s. Holmes was an advocate of improving the quality and status of teacher education (Cherryholmes, 1987).

The background of The Holmes Group is included to identify the composition of the group and to understand its organization, as well as the development of its goals. This will provide a context for study of the proposals contained in *Tomorrow's Teachers* (The Holmes Group, 1986). The report includes much of this information in its appendix. Information presented here is from that document unless otherwise noted.

A series of meetings among education deans lead eventually to the formation of The Holmes Group. The initial meetings concerned the low quality of teacher education in the United States. Lax standards, weak accreditation policies, and the "historic disinterest
in teacher preparation on the part of major research universities" were discussed. Those present agreed that these problems were related.

The Johnson Foundation sponsored a meeting of deans who wanted to consider new ways for major research universities to improve teacher education in the fall of 1983. Several months later a second meeting included 23 deans and a number of chief academic officers from research institutions. A two-phase plan was approved at that meeting. The plan called for the development and implementation of new standards for teacher education in the leading research universities in each of the 50 states.

A grant proposal was written and submitted seeking funding for the project. The first phase was funded by the Carnegie corporation of New York, the Ford Foundation, the Johnson Foundation, the New York Times Foundation, and the U.S. Department of Education.

After a major revision, the second draft of The Holmes Group report received near unanimous approval in June, 1985. The Holmes Group decided at that time to postpone recommendations regarding special education, vocational education, bilingual education, and early childhood education until additional time could be devoted to study those areas.

The Holmes Group became an official organization in November, 1985. Articles of incorporation were signed and a regional
organizational structure was developed. Five regions of the United States, each with a regional coordinator, were designated.

The Holmes Group's National Coordinating Committee was composed of the regional coordinators and the president and vice-president of the Board of Directors. Responsibilities of the National Coordinating Committee included "planning and documenting implementation activities, establishing ad hoc committees for specialized tasks, planning general membership meetings and conferences, and managing funding for the regional and national offices."

The Board of Directors functions as a decision-making body and a research and study group. Members of the national Coordinating Committee and chairpersons and vice-chairpersons of standing committees serve as board members. The Board of Directors is responsible for policy recommendations and guiding the standing committees. Four standing committees had been formed when Tomorrow's Teachers was published: Curriculum Development, State Planning and Policy, Testing and Evaluation, and Membership. These standing committees were later restructured as the following: governmental relations, curriculum, testing and evaluation, and equity and excellence (Howey, 1990).

The Holmes Group believes that a "focused effort among a reasonable number of research universities will increase the chance of successful reform." Acting on this belief, 123 invitations for charter membership were issued. At least one leading public
university in each state was invited. At least one university for each 25,000 teachers in each region was invited. Ninety-eight have accepted the invitation (The Holmes Group, 1990). Chief academic officers and education deans must support The Holmes Group agenda in order to become charter members. Members indicate their commitment to The Holmes Group by the following: (1) efforts to implement the Holmes recommendations, (2) research and development, (3) documentation of implementation and outcomes, (4) sharing between universities, (5) providing instructional support for reforms, (6) changing entry requirements for professional teachers, and (7) payment of an initial membership fee.

The Holmes Group Agenda

The Holmes Group has organized its agenda around five goals. These goals are: (1) to make the education of teachers intellectually sound; (2) to recognize differences in teachers' knowledge, skill, and commitment in their education and work; (3) to create standards of entry to the profession that are professionally relevant and intellectually defensible; (4) to connect their own institutions to schools; and (5) to make schools better places for teachers to work and to learn.

Education of teachers. The Holmes Group believes that teachers need a stronger background in both the liberal arts and in their subject majors. In addition, they need better training in the
teaching of those subjects and to become "more thoughtful students of teaching."

A firm grasp of the liberal arts is important for all professionals, but especially for teachers. This is because teaching is "actually about knowledge." "Teachers must lead a life of the mind. They must be reflective and thoughtful: persons who seek to understand so they may clarify for others." Teachers must understand the undergirding disciplines of education. The Holmes Group calls for undergraduate education in general to be dedicated to "the historical tenets of liberal education." The compartmentalized nature of the university and its faculty is blamed for present shortcomings.

The Holmes Group offers three steps to improve the education of preservice teachers in the subjects they will teach. First, they should study under teachers who model good teaching and who understand the pedagogy of the subject. Second, the academic majors should provide a sense of the "intellectual structure of boundaries of their discipline." The Holmes Group believes that present course requirements are often disjointed fragments which do not provide an overview of the discipline. Third, colleges and departments of education must organize their programs to "support the advanced studies in pedagogy." Such programs would include specialized pedagogy courses and would focus on the preservice teachers' learning. They would also incorporate assessment of "professional performance" and evaluation of instruction.
The Holmes Group considers the professional education of teachers at present to be a "non-program." The courses are not related or coherent. Five integrated components are recommended to improve professional education: (1) the study of teaching and schooling as an academic field; (2) knowledge of subject matter pedagogy; (3) skills and understandings of classroom teaching; (4) dispositions, values, and ethical responsibilities of teaching; and (5) clinical experiences in which theoretical knowledge is used as the basis of action.

**Differences among teachers.** The Holmes Group recognizes that individuals bring different levels of commitment and ability to their profession. They propose three levels of teachers to take these differences into account. The top level would be composed of "Career Professionals." These individuals would be people who have "proven their excellence in teaching, in their own education, and in examinations." They would be experts in some specialized area, such as curriculum or evaluation. The Holmes Group compares their role to that of clinical professors in medicine. The Career Professionals would exercise leadership at both the classroom and school levels.

The majority of the teaching force would be composed of "Professional Teachers." These individuals would have demonstrated their competence through professional examinations and in their own education. They would be subject matter specialists and specialists in pedagogy. Professional Teachers would understand
learning problems of children and be trained in techniques of motivation and classroom management. They could eventually become Career Professionals if they were sufficiently talented and motivated to do so.

The third level of teachers would be "Instructors." These beginning teachers would have flexible entry requirements. Individuals who have adequate knowledge of one or more academic fields could take an examination and become Instructors. This group would work under the close supervision of Career Professionals. Instructors would not be involved formally in policy decisions, program evaluation, or developing curriculum. The role of Instructors would be limited to teaching a subject which they know well. The Holmes Group anticipates two advantages from this arrangement. First, individuals who want to explore teaching as a career option would be able to do so. Second, it would allow schools to "absorb enrollment swings."

Such an arrangement would provide well-educated teachers, but it would also provide opportunities for teachers to advance within in the teaching profession. The intended result is improvement of the profession.

**Entry standards.** The Holmes Group recognizes that raising standards can lead to requiring credentials which are meaningless. The possibility of "offering mediocre performance behind a facade of higher credentials" must be avoided. Past efforts to raise standards have sometimes resulted in the exclusion of certain groups such as
minorities. Teachers must demonstrate competency in basic skills such as reading and writing. In addition, they must "possess strong liberal arts and disciplinary background(s), and a repertoire of imaginative teaching and coaching skills, and a commitment to the responsibility for the learning of all children." Teaching credentials must ensure that teachers possess these characteristics.

The Holmes Group describes requirements for each of the three levels of teachers which are proposed. Instructors would be required to pass a written test in each subject they intend to teach. Tests of reading and writing ability and pedagogy would also be required. These tests would be "sufficiently difficult so that many college graduates could not pass."

Professional teachers would be required to complete a masters degree, which includes study in the teaching specialty, study of pedagogy and learning, field experiences with children who are at risk, and a full year of supervised teaching. The same exams that Instructors take would also be required of Professional Teachers. "Practical and varied demonstrations of professional skills and knowledge" would be exhibited.

The Career Professionals would receive the "highest license" in teaching. Only Professional Teachers would be eligible. They would have exhibited "outstanding performance" as Professional Teachers. Additional study would also be required. This would typically be for a doctorate.
Connecting universities and schools. The Holmes Group believes that universities need to take advantage of expert teachers in the schools. These teachers should be brought to the universities to teach pedagogy and about student learning. University faculty should spend time in schools teaching. Schools must become places where teachers and university faculty can conduct research and improve practice. The Holmes Group acknowledges the difficulties inherent in such practices. New arrangements between universities and schools will be required. New incentives for university faculty must be developed. There is danger that those who try to bridge the gap will become lost in the middle. Commitment to the idea is necessary on both sides.

The establishment of Professional Development Schools would provide stronger connections between schools and universities. These would be similar to teaching hospitals in medical education. These schools would provide opportunities "for teachers . . . to influence the development of their profession, and for university faculty to increase the professional relevance of their work." The "clinical faculty" in the schools would have university appointments. These schools would provide sites for research and the development of professional knowledge. Another benefit from the Professional Development Schools is that they are "expected to create a strong voice for teachers in the application of university research to school practice" (Devaney, 1990). School teachers and university faculty would work together in the following ways:
(1) reciprocity, or mutual exchange and benefit between research and practice; (2) experimentation, or willingness to try new forms of practice and structure; (3) systematic inquiry, or the requirement that new ideas be subject to careful study and validation; and (5) student diversity, or commitment to the development of teaching strategies for a broad range of children with different backgrounds, abilities, and learning styles.

Schools as better places to work. The differentiated levels of teachers would allow professional teachers to have more autonomy and additional opportunities to exercise leadership in the schools. This will produce schools with less bureaucracy and more opportunities for teachers to learn from each other.

New entry standards and the establishment of Professional Development Schools would provide a more challenging and rewarding place for teachers to work. It would encourage learning through participation in research and experimentation and provide for more dialogue between professionals.

Summary. The Holmes Group envisions restructuring both teacher education and the teaching profession. It believes that one cannot occur without the other. Therefore, the five goals of The Holmes Group address both teacher education and teaching.

Reactions to The Holmes Group Recommendations

Two indexes were searched to identify articles which were written in response to Tomorrow’s Teachers (The Holmes Group,
The Current Index to Journals in Education was searched from January, 1986-February, 1991 under the headings "Holmes Group" and "Holmes Group Report." The Education Index was searched from July, 1985-February, 1991 under the heading "Holmes Group Consortium." Eighty-six articles were reviewed. A number of journals published theme issues related to Tomorrow's Teachers (The Holmes Group, 1986). These included The Journal of Negro Education, Phi Delta Kappan, Teachers College Record, Social Education, and Theory Into Practice. The search revealed two articles about The Holmes Group in the Health Education literature (Willcox, 1988; Cleary & Lowing, 1990).

Presentation of the reactions is organized in 6 sections. Five are the goals of the Holmes Group: (1) to make the education of teachers intellectually sound; (2) to recognize differences in teachers' knowledge, skill, and commitment in their education and work; (3) to create standards of entry to the profession that are professionally relevant and intellectually defensible; (4) to connect their own institutions to schools; and (5) to make schools better places for teachers to work and to learn. The sixth section contains general and/or miscellaneous reactions which do not fit into the other sections.

Education of Teachers. Most of the reactions to the proposals for teacher education revolved around two points: the graduate program of professional studies and the value of a liberal arts education. Opinions regarding graduate teacher education were
mixed. Magrath (1986) favors graduate teacher education, but contends that it will not happen without additional funding. Ryan (1987) also favors graduate teacher education and adds that more is better: "more general education, more academic training in the discipline or disciplines to be taught, and in pedagogy." Gifford (1986) believes it will be good to abolish undergraduate teacher education and provides five reasons to support that position. Smith (1986) offers general support of the program.

Most writers question the value of eliminating undergraduate teacher education. Many concerns are raised. Why is a graduate program necessary (Hawley, 1986)? Where is the empirical evidence to support a five or six year teacher education program (Ducharme, 1986)? Cleary and Lowing (1990) and contend that research on the relationship between master's degrees and measures of teaching success is limited. They cite studies and reviews with both positive and negative correlations. Knapp, McNergney, Herbert, and York (1990) show that the relationship between graduate study and teaching success is "modest" and conclude that "it is unwise to commit resources to extended teacher education programs."

Nussel (1986) contends that it will destroy field experiences which now occur throughout the program and worries that prospective teachers will not have the opportunity to "try teaching" until the fifth or sixth year. Mehlinger (1986) claims that many of the goals of teacher education can be achieved in a four year program. Some believe that The Holmes Group has missed the real
issue—that is quality of preparation, not quantity (Tom, 1986; Tuckman, 1987).

Others worry about the impact of a longer program on student recruitment. Cherryholmes (1987) fears that the increased cost of additional schooling will result in decreased enrollment in teacher education programs. Mehlinger (1986) expects that minorities will choose other careers or attend institutions which offer four year teacher education programs. Hawley (1990) questions the "idea that large numbers of academically talented persons would become teachers if only the costs for entry to the profession were higher."

Another concern is that colleges of education will lose what little leverage they have with the college of arts and sciences faculties (Mehlinger, 1986). Locating the college of education at the graduate level will decrease its influence over undergraduate education. That would make it even more difficult to institute the changes The Holmes Group recommendations to strengthen liberal arts education.

The Holmes Group’s emphasis on an improved undergraduate liberal arts education is also addressed. Feinberg (1987) believes The Holmes Group is on the "right track," but wonders how primary school teachers can be required to earn a liberal arts degree. Raywid (1987) wonders how improvement will be achieved. Raywid (1987) considers work in the liberal arts to be part of the professional education of teachers and believes it plausible that it should differ from liberal arts courses taught as part of the general
education requirements for other students. Tom (1986) wonders how such a degree will improve teaching. Cleary and Lowing (1990) ask "Why is there so much blind faith and belief in the benefits of a liberal arts education?" They contend that no evidence supports the emphasis on the liberal arts. The ability of colleges of education to change the liberal arts curriculum is also a concern (Nussel, 1986; Ducharme, 1986; Cuban, 1987; Jacobson, 1986). McDiarmid (1990) believes that reform of the liberal arts curriculum is not enough: there must also be changes in "pedagogy in the liberal arts." What power they do have may be sacrificed by moving teacher education to the graduate level (Mehlinger, 1986).

A number of writers also comment on the professional components of teacher preparation contained in Tomorrow's Teachers (The Holmes Group, 1986). Feinberg (1987) felt The Holmes Group conception of professional education was "rather sketchy and narrow." Joyce (1987) contends that The Holmes Group overemphasizes subject-specific teaching methods and believes that knowledge exists which applicable to the teaching of many disciplines. Evidence of the existence of the "science of education" described in the report is not provided (Johnson, 1987; Cornbleth, 1987). Griffin (1990) contends there is little agreement "as to what this 'knowledge base' is or should be." Jackson (1987) is not sure that we know much more about teaching than we did "a generation or two ago." Clements (1987) comments that education cannot be understood through science because it is a "moral undertaking." A
single model of teacher education is not appropriate because teacher education is not a single entity (Smith, 1986).

A variety of other concerns are also raised in the literature: Dreeben (1987) questions the importance of university professors as role models in the shaping of teaching skills. The proposed program is not new; it merely incorporates ideas which have been proposed before (Nussel, 1986). The Holmes model will result in a decrease in the number of institutions offering teacher education programs (Howey & Zimpher, 1986). Teacher education is too vast an enterprise to be done only at Holmes Group members (Magrath, 1986). Ryan (1987) asks "Can these deans of research institutions really change the character of their universities from professorial directed research to programmatic, school-based practice?"

Differences among teachers. A variety of criticisms of the proposal for differentiation among teachers are offered. Keppel (1986) comments that teacher differentiation is an old idea. He cites the Lancastrian method of the 19th century and the "master teachers" of the 1950s, and notes that little has been written about it during the past 20 years. Judge (1987) complains that the report provides no rationale for the three-tier ladder it proposes.

Hawley (1986) notes two negative aspects of the proposal. First, it will increase the per student cost of K-12 education. Second, The Holmes Group goal of raising the status of teaching as a profession will be achieved only for career professionals. The
instructors and professional teachers will not enjoy improved status.

A number of authors are critical of the proposed instructor level. Futrell (1987) feels The Holmes Group contradicts its own arguments for professional teachers by including such teachers. Instructors would be less qualified than today's teachers, therefore it is a "step backward" to allow them to teach (Magrath, 1986; Willcox, 1988). Tom (1986) contends that the "limited professional preparation of instructors undercuts the case for the professional status of teaching by lowering standards of entry into teaching." He furthers argues that the instructor rank will create an underclass in the teaching profession. This may affect staff stability, curricular coherence, and collegiality. Finally, he argues that the creation of the instructor rank "suggests the schools are more in need of Peace Corps volunteers than of talented and trained professionals."

Relatedly, Feinberg (1987) identifies a problem regarding the amount of supervision instructors will require. If much supervision is needed, the system will lose efficiency. If there is little supervision, the need for the different ranks must be questioned.

Raywid (1987) is concerned about the proposed differentiated staffing. She believes that the proposal will prevent the lower two levels from performing "functions essential to maximal performance" and that it assumes that only a small proportion of teachers will be of top quality. Darling-Hammond (1987) believes that "responsibility for shaping schooling must permeate the
teaching force" and is concerned that only Career Professionals will involved in such activities. Futrell (1987) feels The Holmes Group has overemphasized the doctoral degree for Career Professionals. She states that the doctoral degree is a research degree, but that "K-12 teachers are not in the research business."

Some writers feel the three-tier staffing proposal is really not much different from the current situation. Conley and Bacharach (1987) note that three levels are not necessary to allow teachers to play a more active role in leadership and policy making. They feel that the present tenure system needs attention, implying that tenured teachers are already in a position to work in these areas. Dreeben (1987) contends that the Professional Teacher is very similar to the current tenured teacher. He also believes that Instructors will be similar to present untenured teachers; "Instructors rather than untenured teachers will be laid off and hastily rehired." Finally, he contends that the role of the Career Professional will be very similar that of the present administrators and academics.

Writing in favor of differentiation, Johnson (1987) calls the identification and use of Career Professionals the "most important proposal" in the report. He contends that the best teachers must be given more autonomy, a greater role in decision-making, and more control over their working environment. He also believes these Career Professionals should play a significant role in teacher education.
Entry Standards. One concern of those reacting to Tomorrow's Teachers (The Holmes Group, 1986) is that university faculty are setting entry standards. One characteristic of a profession is that it sets its own entry standards. The Holmes Group believes that education faculty should perform that task (Johnson, 1987). Wiggins (1986) believes that The Holmes Group has set itself up as the accreditation agency. This undercuts the goal of professionalization of teaching, because standards are not created by practitioners.

Darling-Hammond (1987) believes that The Holmes Group's proposed testing requirements will "create an inflexible hierarchy of teachers" in which credentials are overemphasized. She believes that teachers' roles and responsibilities should be based largely on "demonstrated aptitude and performance." Dreeben (1987) wonders why The Holmes Group advocates increased academic standards without indicating how they will result in improved teaching. Hawley (1990) regrets the lack of evidence to demonstrate that the Holmes proposals will improve teaching or learning.

The problem of raising standards during an anticipated teacher shortage is also addressed. Conley & Bacharach (1987) believe minimum standards can be easily "sidestepped or ignored." They contend that the dual goals of "hiring more people into the profession and raising standards of teachers must" be addressed.

Connecting universities and schools. The reactions to the goal of improving the relationships between universities and schools received relatively little attention in the literature. Johnson (1987)
is concerned about the use of Career Professionals as teacher educators. Colleges and universities will have to find ways to integrate the knowledge of these professionals into the curriculum. Given that education faculty are already viewed as "second-class citizens" on many campuses, Johnson fears that "expert teachers" will function as "third-class citizens." He believes that the temptation will be to change them into producers of research, and fears that this approach will minimize their contribution of the "practitioner knowledge" which they possess.

Magrath (1986) reacts to the proposed Professional Development Schools saying that the model is "old-fashioned and narrow" and that it is merely a reincarnation of the "lab schools." The establishment of Professional Development Schools is an ideal which may not be possible for some universities to implement (Allman, 1987).

Zimpher (1990) lists four major challenges related to creating Professional Development Schools: (1) limited resources, both time and money; (2) effective collaboration between schools, universities, and local school systems; (3) equitable distribution of university efforts across school sites; and (4) developing a set of standards or attributes which characterize effective Professional Development Schools. She believes that Professional Development Schools have the potential to build continuity within the teaching profession allowing both "initial and continuing growth and development of teachers."
The idea of Professional Development Schools does receive support. Judge (1987) considers them to be one of the "greatest" virtues of the report. He believes they will demonstrate the viability of The Holmes Group's proposals, such as differentiated staffing.

Johnson (1987) notes that there is a tone of condescension toward teachers throughout the report. The university faculty will set professional standards, not teachers. Teachers will advance through the ranks by completing degrees at research-oriented universities.

Ducharme (1986) contends that "mere collaboration" is not enough. Creation of Professional Development Schools will "require that school systems accept much greater responsibility for teacher education than they have been willing to accept and than universities have been willing to accord" (Hawley, 1990). A potential advantage of the proposal is increased opportunities for research for both faculty and teachers (Willcox, 1988).

Schools as better places to work. Allman (1987) believes schools must become better places to work, if the other goals are to be achieved. He states that "well-trained and qualified professionals desire and demand a positive and creative work environment." Including teachers in the administrative decisions will also contribute to make schools better places to work and learn. Judge (1987) believes that the establishment of Professional Development
Schools will improve the "working conditions and satisfactions of career teachers."

Feinberg (1987) believes that one of the strengths of *Tomorrow's Teachers* (The Holmes Group, 1986) is its image of teachers: "Professional Teachers, when properly trained, will be able to evaluate and pass judgment on the transmission process. They will be able to challenge the advice of 'experts' and knowledgeably advance the cause of individuals students." Futrell (1987) supports The Holmes Group view of teachers stating that the proposal grants "teachers control of the learning environment at the building level." She praises the report for publicly acknowledging that teachers are "capable and worthy of professional self-governance."

**Other reactions.** *Tomorrow's Teachers* (The Holmes Group, 1986) is a report which cannot be ignored. It has generated interest among the popular press and the lay public appears receptive to its ideas (Manning, 1987). The Holmes Group has been described as "the most visible and probably the best funded effort to reform teacher education America has ever seen" (Hawley, 1990). The goals generally receive support (e.g. Imig, 1986; Nussel, 1986; Erekson, 19882; Cuban, 1987). It is the recommendations rather than the goals which have generated controversy (Pietig, 1987). The lack of practical guidelines for achieving the goals is one complaint (Conl éy & Bacharach, 1987; Cuban, 1987).
In spite of the report's appeal to some and the publicity surrounding its release, several writers contend that it contains little that is new (Ducharme, 1986; Imig, 1986; King, 1986). Magrath (1986) views it as similar to other reports and recommendations. Smith (1986) contends that the "major portion of the substance of its report is not new."

The report has value for some because it "stirs us to reflection" (Soder, 1986) or because The Holmes Group is a professionally and politically important group (Ducharme, 1986). It will focus attention on teacher education which will in turn provide an opportunity to work on other goals (Ducharme, 1986). Tom (1986) believes the real contribution of the report is to bring about public debate.

King (1986), however, believes the recommendations are both dangerous and formidable. He contends that the report fosters elitism and that the goals of The Holmes Group include taking control of teacher education. Hawley (1990) fears that The Holmes Group may "stifle other reforms" and offers four reasons: (1) it has attracted much of the available foundation money, (2) it has established itself as the teacher education reform movement, (3) it may impose its model on all institutions, (4) it offers "relatively small changes in what and how teachers learn in preservice teacher education."

Some critics question the role The Holmes Group members want to assume in teacher education. Clements (1987) believes that
quality of the program should be the central issue rather than the size of the institution or teacher education program. Whether Holmes members are the only institutions capable of offering high-quality teacher education is also questioned (Smith, 1986). Feinberg (1987) is concerned about the education programs at smaller liberal arts colleges and suggests that reformers be "cautious about taking any steps which could weaken them." Tuckman (1987) contends that Holmes members may not be the best reformers. Pietig (1987) believes that the Holmes agenda benefits Holmes institutions. Altbach (1987) cites the fact that The Holmes Group represents only a small segment of institutions preparing teachers as a disadvantage.

Concern about the effect of the Holmes proposals on recruitment of minorities into teaching is voiced by several writers. Tomorrow's Teachers (The Holmes Group, 1986) gave only limited attention to this issue (Grant, 1990; Gordon, 1988; Grant & Gillette, 1988). Wiggins (1986) complains that only one paragraph in the report dealt specifically with minorities and that the suggestions made in the report may be unworkable or even illegal. Several predict that enrollment of minorities in teacher education will decline (Dillworth, 1988; Pietig, 1987; Tom, 1987b; Wilson, 1988). Wilson (1988) fears that historically black institutions may eventually be forced out of teacher education. Grant and Gillette (1987) take an even stronger position. They contend that minorities were virtually ignored in the report, that they were not represented
in The Holmes Group, and that adoption of the Holmes model will ensure that schools remain racist.

A further criticism is that *Tomorrow's Teachers* (The Holmes Group, 1986) is largely undocumented (Hawley, 1990; Joyce, 1987; Ryan, 1987). Nussel (1986) describes the report as containing "rhetoric that is often trite," "an overabundance of platitudes," and "erroneous and undocumented statements." He expresses disappointment at the absence of new research. Erekson (1988) believes that the report was based on philosophy and opinion rather than research. King (1986) complains that few data or references were included. Cuban (1987) expresses sadness that The Holmes Group ignored earlier efforts such as the Master of Arts in Teaching and the National Teacher Corps. Relatedly, Howey (1990) comments that The Holmes Group "appears to have given little thought to existing entry-year, induction, or internship models" already in many states.

Another concern is the time it will take to implement the Holmes recommendations. Cuban (1987) believes at least ten years will be required. Howey (1990) writes that "such an ambitious agenda entails a multi-year, long range timetable."

The role of school administrators is also addressed. Conley and Bacharach (1987) question the omission of this issue from the report. They contend that placing qualified teachers in poorly managed schools will gain nothing. They also note that universities prepare school administrators, as well as teachers.
The Delphi Technique

The Delphi technique has been used in various settings with a number of goals in mind. The purpose of this section of the literature review is to describe (1) the origin and uses of the Delphi, (2) the Delphi process, and (3) panel selection.

Origin and uses. The Delphi method was developed by the Rand Corporation in the 1950s (Linstone & Turoff, 1975). Its original application was "to estimate the probable effects of a massive atomic bombing attack on the United States" (Helmer, 1975). It was used as a forecasting tool. The Delphi technique has been adapted for a variety of uses. Linstone and Turoff (1975) have listed some of them:

1. gathering historical data
2. examining the significance of historical events
3. evaluating possible budget allocations
4. exploring urban and regional planning options
5. planning curriculum development
6. identifying the pros and cons associated with policy options
7. developing causal relationships in complex economic and social phenomena
8. distinguishing and clarifying real and perceived human motivations
9. exposing priorities of personal values, social goals.
Specific subject areas in which the Delphi has been employed include education, economics, sociology, public affairs, psychology, health sciences, and business (Crowley & Johnson, 1977).

Process. The Delphi technique has been described as a "carefully designed program of sequential interrogations, interspersed with information and opinion feedback" (Cyphert & Gant, 1970). A series of mailed questionnaires are typically used to collect data.

The classic Delphi technique involves four steps: (1) a committee is selected and asked to list opinions on a specific topic (round 1), (2) a second questionnaire is developed from the data collected in round 1 and the subjects are asked to evaluate the items using some criterion, (3) the data from the second questionnaire are used to develop a third questionnaire and subjects are asked to evaluate their previous positions relative to summary data from round 2, (4) the third questionnaire is analyzed and subjects receive a final opportunity to revise their opinions (Travis, 1976).

Gilmore (1977) gives an expanded description of the method as it applies to health education:

1. Define the issue. A clear, concise statement of the central issue should be developed.

2. Establish who the participants will be. Subjects must be knowledgeable about the subject and be able to work with the written format.
3. Develop the first questionnaire. The central issue should be identified and the subjects should be instructed to respond to an open-ended format. A deadline should be given. After the questionnaires have been returned, the responses are collated into categories.

4. Develop the second questionnaire. The categories developed in round 1 are listed with response sections next to them. Typical formats for responses are priority voting and comments.

5. Develop the third questionnaire. The values assigned to each category in Round 2 are added together to form the "initial vote total," and a summary of comments is prepared. This information is provided on the Round 3 questionnaire, which also provides space for "final votes." After the Round 3 questionnaires have been returned, the final votes are totaled and the categories are listed in priority order.

6. Final considerations. A final report should be sent to the subjects.

The Delphi technique has a number of advantages: (1) ability to work with a variety of target group representatives, (2) wide geographical outreach is possible, (3) large numbers can be handled, and (4) participants remain anonymous, which minimizes influences of group conformity, prestige, power, and politics (Gilmore, 1977). Subjects also have time to think, give an independent opinion, and remain anonymous to minimize coercion, the bandwagon effect, and being held to previous opinion (Travis, 1976).
Panel selection. Subjects who are knowledgeable about the subject to be studied must be selected (Gilmore, 1977). They should: (1) feel involved in the problem or concern, (2) have pertinent information, and (3) be motivated to participate (Crowley & Johnson, 1977).

The number of subjects included in Delphi studies varies considerably. Definitions and scope of school health were studied by Crowley and Johnson (1977) using 495 subjects. Cyphert and Gant (1971) identified 421 subjects in a study to collect opinions about teacher education. Sutphin (1981) selected 146 subjects from three different groups for his study on national issues in agricultural education. Seventy subjects from three subgroups were used in a study concerning health and the spiritual dimension (Banks, 1979). The expert panel selected by Bixler (1988) to identify major issues in health education numbered 40. A study concerning the role of the physician's assistant involved 28 subjects (Travis, 1976). Twenty-five national leaders in health education were surveyed regarding trends in health education (Toohey & Shirreffs, 1980). Frazer, Kush, and Richardson (1984) used 21 individuals to identify research questions in health education.

The researcher's ability to analyze and summarize the data seems to be the only limiting factor on the number of subjects selected for a study (Hentges & Hosokawa, 1980). However, Gilmore (1977) reports that 15-30 subjects will usually provide the needed
input and, relatedly, that more than 30 subjects may not lead to enhanced results.

**Applications of the Delphi Technique in Health Education**

The Delphi technique has been used in a variety of studies covering an array of topics in health education. This section describes studies concerning issues in health education, research questions in health education, health and the spiritual dimension, health education curriculum development, and definitions and scope of school health.

Bixler (1988) used the Delphi technique to identify and rank major issues in health education, as perceived by expert health educators. Results indicated that the most important issues in health education concerned (1) the primary goal of health education, (2) the basis for credentialing, and (3) the selection of methodology affecting behavioral change.

Frazer, Kush, and Richardson (1984) identified the "most pressing research question(s) in health education." The three Delphi rounds yielded 47 questions which were divided into five categories: health education as a professional field, the health educator, health education programs, methodology in health education, and outcomes of health education. The areas which were rated most significant included: (1) defining health education, (2) assessing professional preparation, (3) identifying strategies for behavioral change, (4) considering "ethical determinants," (5) evaluating health education
efforts, and (6) discovering any "uniqueness" of health education research methodology. The ten highest rated questions concerned implementation and maintenance of programs, outcomes of programs, curricular strategies, and evaluation of methods.

The Delphi technique has also been used to involve teachers in the planning of health education curriculum (Hentges & Hosokawa, 1980). All K-6 teachers from the Columbia (MO) School District served as subjects for the study. Using the input from the subjects a new health education curriculum guide was written for the district.

Twenty-five national leaders in health education were surveyed regarding future trends in health education (Toohey & Shirreffs, 1980). The subjects were asked to predict when events would occur. Consensus was defined as 50% of the responses falling within a range of 10 years. Consensus was achieved on 16 of the 17 items on the questionnaire. The items on the questionnaire included subjects such as patient education, credentialing, research, and school health education.

The spiritual dimension of health was studied by Banks (1979) using three subgroups: retired health educators, active health educators, and graduate students in health education. Research questions included the following: Is there a spiritual dimension to health? Should the spiritual dimension be included in the professional preparation of health educators? What will be the role of the spiritual dimension in health and professional preparation
programs in 25 years? (Banks, Poehler, & Russell, 1984) Results of this study ranked the components of the spiritual dimension of health and ways to teach about the spiritual dimension of health. In addition, the responses from the three subgroups were compared.

A Delphi study concerned with the definition and scope of school health was conducted by Crowley and Johnson (1977). Participants were representative of all professional groups involved in school health, as well as parents. The instrument solicited responses regarding the following categories: definition of school health, national issues in school health, local issues in school health, an ideal school health program, and societal influences on program development.

**Summary**

The purpose of this study is to identify the predicted, perceived effects of The Holmes Group recommendations on the preparation of health education teachers. This literature review described the origins of The Holmes Group and provided a historical context within which to view the proposals contained in its report, *Tomorrow's Teachers* (The Holmes Group, 1986). The chapter also provided an overview of the Delphi technique, which is the methodology used in the study, and its previous applications in health education.
CHAPTER III
METHODS

This chapter will describe the procedures used to conduct this study. In other words, it will describe in detail the methods employed. The purpose of this study was to identify the predicted effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by health education department chairs at Holmes Group members (see Chapter 1 for a detailed description of the purpose). The Delphi technique was used in the study. A description of the Delphi technique is provided in Chapter 2. Bixler's (1988) study of issues in health education provided a thorough description of the Delphi technique and was used as a guide. This chapter is organized into ten sections: (1) use of qualitative methods, (2) summary of procedures, (3) identification of the subjects, (4) development of the instrument, (5) validation of the instrument, (6) Round 1, (7) Round 2, (8) Round 3, (9) the study summary, and (10) data analysis.

Use of Qualitative Methods

Appropriateness. Qualitative methods were employed in this study. Qualitative studies generally are inductive in nature (Mullen
& Iverson, 1986). That is, concepts are generated from data. Quantitive analysis, on the other hand, is typically deductive. Data are analyzed in order to verify a theory. This difference has been described as "discovery versus confirmation" (Health Services Research Center, 1986). Qualitative approaches attempt to describe what is and then form concepts based on the data. This study collected data in order to identify the predicted, perceived effects which will result from implementation of The Holmes Group recommendations.

Qualitative approaches are important in the developmental stages of a program (Mullen & Iverson, 1986). Such is the case with The Holmes Group recommendations. Programs are still in the planning phase. At this stage programs may be poorly understood or the objectives may be "diffusely phrased" (Health Services Research Center, 1986). The broader approach of qualitative research is better able to describe what really exists. The diverse reactions to the document Tomorrow's Teachers (The Holmes Group, 1986) presented in Chapter 2 indicate it is perceived differently by different individuals. For example, some writers believe that the entire professional component of the program will be placed at the graduate level. Others believe it will be spread throughout the five- or six-year program. Some support the raising of entry standards into teaching. Others believe that The Holmes Group is setting itself up as the accrediting agency.
The goal-free method (Mullen & Iverson, 1986) used in this study avoids the bias which may be introduced when the researcher knows what he or she is supposed to discover. This strategy "gathers data on a broad array of actual effects and evaluates their importance" (Mullen & Iverson, 1986). It focuses on what happens rather than what is supposed to happen. This investigation studied predicted effects, as perceived by the subjects. The subjects were free to identify those effects. They were not limited by the researcher's preconceptions of program effects, nor by the predictions of others. According to Miles and Huberman (1984), "If you are running an exploratory, largely descriptive study, you don't know the parameters or dynamics of a social setting with any certainty. So heavy front-end instrumentation or closed-ended devices are inappropriate." Rather than construct a questionnaire based on a literature review, a open-ended format was used. This is typical in qualitative research (Patton, 1980; Mullen & Iverson, 1986). This was especially important to allow effects which might be specific to school health education to emerge. Such effects would not have appeared in a literature review, because Tomorrow's Teachers had been largely ignored in the health education literature. At the time the questionnaire was constructed only one article related to The Holmes Group had been published in the health education journals (Willcox, 1988). The open-ended format also allowed the subjects to evaluate and respond to the actual words of
their fellow subjects. That is, in Round 2 and Round 3 the questionnaire was composed of items submitted by the subjects in Round 1.

Patton (1980) describes the purposes of open-ended questions. Open-ended questions allow the researcher to "capture the points of view of other people without predetermining those points of view." Those points of view are not limited by preconceptions of the researcher. The challenge is to "provide a framework within which people can respond in a way that represents accurately and thoroughly their points of view about the world, or that part of the world about which they are talking." In this study that part of the world is the effects of The Holmes Group recommendations on the preparation of health education teachers. It was presumed that the subjects, who were all university faculty, were thoughtful and critical individuals who would be able to express their views in writing.

Characteristics. Qualititative research possesses certain characteristics. First, the data collected in qualitative research are usually the actual words of the subjects, rather than numbers (Miles & Huberman, 1984). The Round 1 questionnaire in this study is exclusively qualitative. The subjects were asked predict effects of the The Holmes Group recommendations on the preparation of health education teachers. In addition, they were asked to write comments related to the effects they listed. All data collected in
Round 1 was in the "language of the subjects" (Mullen & Iverson, 1986). No attempt was made to classify the responses into predetermined categories.

Open-ended questions have some potential limitations. Patton (1980) describes some limitations related to the data collected in open-ended questionnaires. The first limitation may be the writing skills of the subjects. The researcher assumed that this problem would not be applicable in this study. The subjects are all university faculty members, who have adequate writing skills. The second limitation is the impossibility of "probing or extending responses." When compared to interviewing (another common qualitative technique), this limitation is apparent. However, this study used the Delphi technique. The multiple round nature of a Delphi study does allow subjects to refine or expand on their earlier responses. The request for comments related to the effects of The Holmes Group also allowed more extended responses. The third limitation described by Patton is the effort required to complete open-ended questionnaires. This is compounded in a Delphi study by the fact that subjects are asked to complete a series of questionnaires. The present study required subjects to complete three questionnaires on different occasions. The researcher used two strategies to minimize the problem of the time-consuming questionnaires. First, the subjects were clearly informed in the Round 1 cover letter that the study required them to
complete three questionnaires, which would be mailed separately. Second, efforts were made to keep the questionnaires as short as possible. The Round 1 questionnaire, for example, was only two pages long.

A second characteristic of qualitative research is that it is inductive- "concepts are generated from data" (Mullen & Iverson, 1986). In contrast, quantitative research typically uses data to confirm theory (Reichardt & Cook, 1979; Mullen & Iverson, 1986). Qualitative methods ask, "What can we learn from the data?" Quantitative research asks, "Does the data support the theory?" The question asked by this study is qualitative in nature: "What are the predicted effects of The Holmes Group recommendations on the preparation of health education teachers?" The researcher did not have preconceived ideas about what those effects would be, how they would be ranked, or whether they would be perceived as positive or negative. The researcher anticipated that some general concepts would emerge from the data which was collected.

A third characteristic of qualitative research is that numbers are used in addition to words. Numbers allow a researcher to "see what you have" (Miles & Huberman, 1984). The number of times an effect was listed in Round 1 was counted and included in the Round 2 questionnaire. Measures of central tendency were used to determine the overall rank of each effect in Round 2 and Round 3. Both means and medians were calculated based on the data.
collected in Round 2 and Round 3. The number of subjects who considered each effect to be positive or negative was also counted in Round 2 and Round 3. "One 'sees' the drift of the data more easily and rapidly" using numbers to describe the responses. The numbers can help illuminate the data.

Advantages of qualitative research. Qualitative research allows the researcher to discover what exists. According to Mullen and Iverson (1986) the "scope of inquiry with qualitative methods is generally broader, unconfined by a presumed reality or program objectives." This allows the researcher to discover unintended effects and minimizes the tendency to consider such effects as "second-class interests" (Mullen & Iverson, 1986).

Qualitative methods also allow subjects to identify salient effects related to a program or intervention under study. Instruments developed for quantitative studies typically limit responses to a framework developed by the researcher. The qualitative approach may result in "serendipitous findings" (Miles & Huberman, 1984). In the present study effects of The Holmes Group recommendations which are specific to health education may be identified. These effects would not have appeared in a review of the literature, because the literature was almost entirely written by people outside of the health education discipline.

Qualitative research is typically inductive. The method "begin(s) with specific observations and build(s) toward general
patterns" (Patton, 1980). Concepts are grounded in the data. Programs such as curricula based on The Holmes Group recommendations are still being developed. Therefore, patterns or generalizations about the effects do not yet exist. The subjects in this study were asked to predict effects and their perceptions of those effects. Based on the data, patterns can be identified. It is not necessary or appropriate to test hypotheses as is typical in deductive designs.

Qualitative methods are also naturalistic. The researcher does not control or manipulate the research setting. The point is to understand events, or in this case programs, as they occur naturally. The questionnaires used in this study did not attempt to influence the subjects. Subjects were expected to respond based on their own experiences within the context of their own universities. The research is discovery-oriented. It is an attempt to identify what exists.

Summary. Qualitative research methods were appropriate for this study. These methods allowed an educated and articulate group of subjects to describe anticipated effects of The Holmes Group recommendations. The data collected were the actual words of the subjects. Subjects were then asked to evaluate the words submitted in Round 1. Round 2 and Round 3 were based on the data collected in Round 1. The researcher used measures of central tendency to gain an understanding of the responses of the subjects.
Summary of Procedures

A modified Delphi technique was used to identify the predicted, perceived effects of The Holmes Group recommendations on the preservice preparation of health education teachers. The Delphi technique employs a series of questionnaires which allows subjects to evaluate prior responses in relation to the responses of the other subjects. Opinions can be modified without embarrassment or loss of face. Health education department chairs at Holmes member universities served as subjects for the study. The subjects were identified by cross-checking the directory of colleges and universities offering programs in school health with the list of members of The Holmes Group. Thirty-four universities were identified using this method.

Round 1 consisted of an open-ended questionnaire. Subjects were asked to list the most significant effects of the Holmes Group recommendations and to add comments related to their choices. Round 1 data was used to generate a list of effects. Thirty-two effects were identified in Round 1. The effects are listed in Table 5.

The Round 2 questionnaire was composed of the list of the effects generated in Round 1. The effects were listed in random order. Subjects were instructed (1) to rank the items in terms of their significance for the preparation of health education teachers...
and (2) to indicate whether they perceived each effect to be positive or negative. Comments related to responses were also solicited. Composite rankings were calculated based on the Round 2 data. Chapter 4 presents the results of this study.

The Round 3 questionnaire instructed subjects (1) to review their Round 2 responses in relation to the summarized data from Round 2 and (2) respond to the Round 3 questionnaire in the same manner as the second round. Based on the data gathered in Round 3, the "most significant" effects were identified. In addition, votes on whether the effects were positive or negative were tallied. Subjects were also asked to provide background data as part of the Round 3 questionnaire. The background data included information about the subjects and about the universities in which they teach.

Identification of Subjects

This study surveyed health education department chairs at universities holding membership in The Holmes Group. These subjects were chosen because they are health educators at universities and because they are familiar with The Holmes Group recommendations. Holmes member institutions which offer teaching degrees in health education had to be identified in order to determine the population for the study. First, the "1989 Directory of Institutions Offering Specialization in Undergraduate and Graduate Professional Preparation Programs in School, Community,
and Public Health Education" (Association for the Advancement of Health Education, 1989) and its addendum (Association for the Advancement of Health Education, 1990) were consulted. This directory lists colleges and universities offering degrees or other programs in school health, community health, or public health. The names of department chairs, their mailing addresses, and their telephone numbers are also provided in the Directory. The number of universities offering bachelors degrees in school health or programs leading to teacher certification in health education totaled 202.

Second, the list of Holmes member institutions (The Holmes Group, 1990) was checked to determine which universities identified in the AAHE directory were also Holmes Group members. Cross-checking the two lists resulted in the identification of 35 Holmes Group members offering a bachelors degree in school health. The 35 universities were called on July 5 and 6, 1990 to confirm or update the information provided in the AAHE directory. One university had discontinued its health education major. Thus, the number of subjects identified for the study was 34. The Round 1 questionnaire was sent to the 34 subjects. Twenty-five subjects responded to the Round 1 questionnaire, and 12 completed the instrument. Table 1 provides a summary of participation in the study.
Development of the Instrument

An open-ended format was used in Round I, as recommended by Gilmore (1977). According to Dillman (1978, p. 87), this format is appropriate when the study's "main purpose is to find the most salient aspects of a topic." This format was chosen to minimize researcher bias that might be introduced by listing effects. Such a listing might omit items which should be included, and subjects may not think beyond the items provided. One common reason for failure of the Delphi method is imposing views and preconceptions of the investigator on the subjects (Linstone & Turoff, 1975, p. 6).

The purpose of this study was to identify the predicted, perceived effects of The Holmes Group recommendations on the preparation of health education teachers. The goal of the Round 1 questionnaire was to generate a list of effects, as perceived by the subjects. Subjects were asked to "list as many as seven significant effects the recommendations of The Holmes Group will have on the preparation of health education teachers". The number seven was chosen because it would provide a variety of responses, but still result in a short questionnaire. Space was provided for subjects to make comments related to their responses (see Appendix A).

Validation of the Instrument

A field test was used to validate the Round 1 instrument. A packet was sent to nine program coordinators (e.g. foreign language
education, physical education, English education) at The Ohio State University, a member of The Holmes Group. The reviewers for the field test were selected by the Dean of the College of Education at The Ohio State University (see Appendix A). Two criteria were used as the basis for subject selection for the field test: (1) availability during the Summer Quarter, 1990 and (2) anticipated willingness to participate in such a project. In addition, coordinators of programs at different stages of planning for implementation of The Holmes Group recommendations were sought. The subjects for the field test had three characteristics similar to the study's population. First, they were faculty members at a Holmes Group member. Second, they were at the same administrative level as the study's population. Third, they were expected to devise a plan to implement The Holmes Group recommendations.

The packets were delivered to the reviewers' offices by the researcher on July 3, 1990. Each packet included (1) a cover letter briefly explaining the study and asking for validation of the instrument, (2) an abstract of the study, (3) the Round 1 instrument, (4) the background information section of the Round 3 instrument, (5) an evaluation form, (6) a McDonald's gift certificate as a token of appreciation, and (7) a stamped, self-addressed return envelope. A return date of one week was requested (see Appendix A).
The participants were asked to complete the Round 1 instrument and the Background Information section of the Round 3 instrument. They were asked to write comments and suggestions in the margins of the instrument. Participants then completed an evaluation form, which was developed for this study (see Appendix A).

The cover letter was written on The Ohio State University letter head and included the signatures of the investigator and the major advisor (Dillman, 1978). Both signatures were included on correspondence as recommended by the major advisor. All envelopes were hand-addressed. This was done in order give the study a more personal touch.

All questionnaires were printed on 8 1/2" x 11" paper. Dillman (1978) recommends printing reduced questionnaires in booklet form to save paper and to make the instrument appear shorter. However, standard size paper was chosen due to the brief nature of the questionnaires used for the field test.

A postcard reminder was delivered to each participant on July 10, 1990. The card served as a thank you to those who had already responded and as a reminder to those whose responses had not yet been received (see Appendix A). On July 17, 1990 telephone calls were placed to all program coordinators who had not responded. The four nonrespondents were called during the week of July 17-20,
1990. Two were contacted and subsequently returned the questionnaires. Two could not be reached by phone.

A second packet containing identical information as the initial packet was delivered to the two remaining nonrespondents on July 26, 1990. The cover letter was revised to reflect the fact that it was a followup letter. The reviewers were encouraged to respond in order to improve the quality of the study. One reviewer responded as a result of this second packet.

Of the nine program coordinators contacted for the field study, eight returned the instrument and evaluation form for a response rate of 88.9%. The responses and the recommendations of the reviewers were examined by the researcher. The Round 1 instrument and the Background Information section of the Round 3 instrument were revised based on the comments and recommendations of the participants in the field study. Several revisions were made based on the recommendations of the reviewers.

The Round 1 instrument was revised in order to clarify instructions and provide more space for responses. The following changes in the instructions were made: (1) subjects were instructed to "state" rather than "list" effects and to "predict" effects in order to avoid responses phrased as questions, (2) the term "preservice" was added in order to eliminate responses related to inservice preparation of teachers, (3) the possibility of either
positive or negative effects was specified, (4) the desirability of succinct answers containing only one effect was added in order to simplify categorization of the responses. One reviewer mentioned that more space was needed for responses and several others required more than the space provided in order to complete their responses. Therefore an additional line was added for each effect and for each comment. A copy of the original Round 1 instrument is included in Appendix A. The revised Round 1 instrument is included in Appendix B.

Part 2 of the questionnaire was also revised based on the field test. References to questions in the following statements are based on the numbering used on the field test instrument (see Appendix A). The second question was omitted because information regarding highest degree earned was collected while confirming mailing addresses by telephone. Question 3 was changed to reflect the variety of titles which the subjects hold. An additional publication by The Holmes Group was added to the list in question 6. Question 7 was altered to make it open-ended. This change was made because some reviewers questioned how the publications listed were chosen and why others were omitted. An open-ended format was also used for question 8. Minor wording changes were made in order to clarify questions 9 and 10. Finally, a new question was added between numbers 8 and 9 to determine whether The Holmes Group-based curriculum would be the only alternative for
teacher certification in health education (see Appendix D for the revised instrument).

Round 1

The study was initiated on September 18, 1990. Postcards were sent to all subjects announcing the study and encouraging their participation (see Appendix B). Some have suggested that such contact prior to the study will increase the response rate (Dillman, 1978; Smith & Hewitt, 1972). The postcards were colored pink so that they would stand out in the mail.

All mailings during the study were sent on Tuesdays (Dillman, 1978). This allowed the subjects to receive the questionnaire as soon after the mailing date as possible and avoids the weekend buildup.

On September 25, 1990 packets were mailed to the subjects. Each packet included a cover letter which described the value of the study, the criteria by which the subjects were chosen, and the importance of the individual's response to the success of the study. The letter suggested that the researcher was requesting a favor from the expert subjects (Dillman, 1978). All letters were printed on letterhead of The Ohio State University School of Health, Physical Education, and Recreation. Subjects were asked to return the completed instruments by October 2, 1990. All envelopes were
hand-addressed. Letters and postcards were signed by hand (see Appendix B).

Each packet also contained an abstract of the study; the Round 1 instrument; a coupon; and a stamped, addressed return envelope. The instrument asked the subjects to list "as many as seven significant effects" of The Holmes Group recommendations on the preparation of health education teachers. Space was provided for comments related to each item listed on the instrument (see Appendix B).

On October 2, 1990, one week after the initial mailing, a postcard was sent to each subject (Babbie, 1973; Dillman, 1978). The postcard served as a thank you to those subjects who had already responded. It also included a reminder to those who had not responded (see Appendix B). The postcard was intended to encourage the subjects to return completed questionnaires.

On October 9, 1990 a second follow-up was sent to the 27 nonrespondents. The new packet included (1) a new cover letter which informed them that their completed instrument had not been received and restated the contents of the first cover letter, (2) a replacement instrument, (3) a stamped, self-addressed return envelope, and (4) a stick of sugarless gum as a token of appreciation. The new cover letter emphasized the importance of each individual's participation in the study (see Appendix B).
On October 10 and 11, 1990, calls were received from two separate subjects indicating that they had received the postcards, but not the instrument. Based on these calls and the low response rate (7 completed questionnaires or 20.6%), telephone calls were placed to nonrespondents to determine whether they had received the instrument and to encourage them to respond. Three subjects could not be reached by telephone. Three additional packets were sent to subjects who had not received them. The deadline was extended in order to provide time for these subjects to respond.

Twenty-five (73.5%) subjects had responded by October 26, 1990 (see Table 1). Twelve subjects completed the questionnaire. Two reported that their universities did not have teacher education programs for health education. Three had discontinued or were about to discontinue the program. Five felt they did not possess the necessary expertise about The Holmes Group. Two subjects did not have time to participate, and one chose not to participate.

The mean number of effects listed was 4.3 per subject. The number of effects listed ranged from one to eight, inclusive. Eight subjects included comments related to the effects they listed on the questionnaire. Four respondents did not submit comments. The 12 subjects who completed the Round 1 questionnaire were recipients of the Round 2 instrument. Table 1 summarizes participation of the subjects in Round 1.
Table 1
Participation and Returns by Subjects

<table>
<thead>
<tr>
<th></th>
<th>Round 1</th>
<th>Round 2</th>
<th>Round 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Invited</td>
<td>34</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Formally Withdrew</td>
<td>13</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>no teacher preparation program</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lack expertise</td>
<td>5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>lack of time</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>other</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonrespondents</td>
<td>9</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Completed Instrument</td>
<td>12</td>
<td>12</td>
<td>9</td>
</tr>
</tbody>
</table>

Thirty-two effects of The Holmes Group recommendations on the preparation of health education teachers were submitted by the 12 subjects, who had completed the Round 1 questionnaire. Two effects were listed by five different subjects, two effects were listed by three subjects, three effects were listed by two subjects, and 25 effects were listed by one subject.

The results of Round 1 were analyzed and summarized for the Round 2 instrument. First, all items submitted were copied onto
index cards. Second, cards which listed the same effect were grouped together. Third, all effects submitted were listed and the percentage of subjects listing each item was calculated. This randomly ordered list of effects with percent of subjects submitting each effect formed the Round 2 questionnaire (see Appendix C). Comments related to each effect as submitted by the subjects were also listed on the questionnaire just below the effect. The Round 1 responses of each individual subject were highlighted in blue on the Round 2 instrument each received.

Six individuals were asked to evaluate the Round 2 questionnaire. Four reviewers were education faculty members at North Park College in Chicago, Illinois. Two were doctoral students in health education and teacher education at The Ohio State University in Columbus, Ohio. All agreed to participate. On November 8, 1990 a packet was sent to each reviewer. The packet contained (1) a cover letter, (2) an abstract of the study, (3) an executive summary of The Holmes Group report (Murray, 1986), and (4) the Round 2 instrument. These documents are included in Appendix E. The reviewers were instructed to evaluate the instrument for item clarity, wording, format, and overall appearance. In addition, they were asked to note any items which seemed redundant. They were instructed to make comments and suggestions in the margins of the instrument. A response was requested by November 15, 1990.
Modifications were made based on the recommendations of the review panel. First, instructions were clarified by listing them rather than describing them in a paragraph. Second, column headings were added on each page of the questionnaire. Third, one typographical error was corrected. These modifications were intended to clarify the questionnaire and make it easier to complete.

**Round 2**

Mailing of the Round 2 questionnaire was delayed due to the academic break during December. On January 2, 1991 postcards (see Appendix C) were sent to the subjects thanking them for their participation in Round 1 of the study and informing them that they should receive the Round 2 questionnaire in about one week. Addresses on all Round 2 correspondence were typed rather than hand-written. This was due recommendations of the United States Postal Service (1988) and delays which were experienced in Round 1.

The Round 2 instrument was mailed on January 8, 1991. The packet contained (1) a cover letter thanking the subjects again for their input (see Appendix C), (2) the revised Round 2 instrument, (3) a stamped, addressed return envelope, and (4) a bookmark as a token of appreciation. Each subject's Round 1 responses and comments were highlighted in the questionnaire he or she received. The
subjects were asked to (1) review their previous responses in relation to the summarized data from Round 1, (2) consider items and comments provided by other subjects, and (3) rank the 15 most significant items listed. The number 15 was chosen in order to reveal a diversity of opinions while keeping the task manageable. The researcher felt that subjects would be frustrated trying to distinguish between the significance of effects beyond 15. In addition, they were asked to indicate whether they believed each item would have a positive or negative effect on the preparation of health education teachers. Comments related to the items were solicited at the end of the questionnaire. Respondents were asked to respond by January 22, 1991. A longer response period was given for Round 2 because some subjects did not receive the Round 1 questionnaire until after the one-week deadline had passed. The researcher felt the two-week deadline was more realistic. The cover letter also included a FAX number which the subjects could use to return the Round 2 questionnaires.

A follow-up postcard was mailed to nonrespondents one week later, January 15, 1991. The card thanked them for their continuing input and served as a reminder to return the instrument, if they had not already done so (see Appendix C). Subjects who had not responded by January 22, 1991 were telephoned to encourage their responses. Four indicated that they had already returned the questionnaires, and one said it would be mailed by the end of the
week. The last response was received on January 31, 1991. The response rate for Round 2 was 100%. All 12 subjects who completed Round 1 also completed and returned the Round 2 questionnaire. Eleven subjects ranked the 15 "most significant effects" as instructed. One subject ranked only ten effects and commented that "the other statements do not seem to apply." Three new comments related to the effects were made in Round 2. These were included in the Round 2 Results (see Appendix D). One subject commented that it would have been easier to rank the items if they had been presented on one page rather than six pages. The format for the Round 3 instrument was altered so that all effects were listed on one page in response to this comment.

The Round 2 responses were analyzed and summarized as follows: The composite rank for each of the 32 effects listed on the Round 2 questionnaire was determined. The procedure was to score them as follows: number 1 rank scored 1 point, number 2 rank scored 2 points,... number 15 rank scored 15 points. Unranked effects scored 16 points. In addition, the number of votes each effect received was determined. The number of "positive" and "negative" votes received were also counted. Some subjects did not complete this part of the questionnaire or listed other outcomes (e.g. "?" or "±").

Difficulty arose in construction of the Round 3 questionnaire. The volume of information created space problems. There was so
much information from Round 2 that no space was available for the Round 3 instrument. One document could not accommodate both Round 2 results and spaces for Round 3 responses. Therefore, two documents were constructed. The first summarized the data collected in Round 2 (see Appendix D). All effects and comments from both Round 1 and Round 2, composite rank, number of votes, total score, and number of positive and negative votes were included on the Round 2 Results document. Each individual's round 2 responses were also listed. Columns listing each individual's Round 2 responses were also included on the Round 2 Results document sent to the individual.

The Round 3 questionnaire was composed of two parts (see Appendix D). Page one was a list of effects and spaces to rank them and identify whether they were perceived as positive, negative, or "other" effects. Page two asked background questions about the subjects and the universities in which they were employed. Both the Round 2 Results and the Round 3 questionnaire were included in the packet mailed in Round 3. The separate documents allowed the subjects to simultaneously study the detailed information from Round 2 and see the entire list of effects. This followed the recommendation made by one subject in Round 2.

The Round 3 instrument was sent to the same review panel as used in Round 2 on February 6, 1991 (see Appendix E). The reviewers were instructed to evaluate the instrument for clarity
and format. They were also asked to evaluate the Round 2 Results document for redundant information or additional information which was needed. The Round 2 Results and the Round 3 questionnaire were revised following the recommendations of the review panel. The explanation of the Round 2 Results document was changed to a list describing the content and one typographical error was corrected. A space for comments was added to the bottom of page 1 of the Round 3 questionnaire.

**Round 3**

The Round 3 instrument was mailed on March 5, 1991. The packet included (1) a cover letter thanking the participants for their participation, (2) the Round 2 Results, (3) the Round 3 instrument, (4) a stamped, self-addressed return envelope, and (5) a one-dollar bill, which served as a token of appreciation (see Appendix D). Subjects were requested to (1) review their Round 2 positions in relation to the summarized data from Round 2, (2) consider the input from other subjects, and (3) respond to the Round 3 instrument in the same manner as Round 2. Subjects were asked to respond by March 19, 1991.

In addition, background information was requested on page 2 of the questionnaire. This data included number of years in health education, health education specialty, and size of school health program, publications in which subjects had read about The Holmes
Group, and questions about implementation of The Holmes Group proposals (see Appendix D). Dillman's (1978) suggestions for arranging questions were used as a guide:

1. Use lower case letters for questions, upper case for answers.
2. Identify answer categories on left, with numbers.
3. Establish a vertical flow (i.e. answers are registered in a vertical line on each page.
4. Provide directions for how to answer.
5. Make questions fit each page.

The background information was requested at the end of the Round 3 questionnaire (Dillman, 1978).

Postcards were mailed on March 12, 1991, one week after the initial Round 3 mailing. The cards thanked those who had responded and reminded nonrespondents that their instrument had not been received (see Appendix D). Four subjects had responded by the March 19, 1991 deadline. Subjects who had not responded by March 19, 1991 were called on the telephone starting March 20, 1991.

Seven of the nonrespondents were contacted by phone between March 20 and March 26, 1991. One asked the researcher to mail another Round 3 packet. It was sent on March 22, 1991, and the deadline was extended to provide time for its return. Five did return the completed instruments. One indicated she was very busy but that she would try to complete it. Five additional completed
questionnaires were received. The subject who could not be reached by telephone formally withdrew from the study citing a lack of time. He did complete the Background Information section of the instrument. This data was not included in the results because the subject did not complete Round 3 of the study. Nine completed questionnaires (75%) had been received by the extended deadline.

The Study Summary

A study summary was written based on the results of Round 3 (see Appendix F). This was mailed on April 16, 1991 to participants who had completed all three rounds. Also included in this mailing was a letter thanking them for their participation in the study. (see Appendix F).

Analysis of Data

Descriptive statistics were used to analyze the data collected in this study. The subjects were asked to rank the items listed on the instrument according to their significance, with most significant item for each part ranked number one. Both the mean and median were calculated for each item due to the small sample size (Bixler, 1988). The median was included because it is a statistic based on rank (Ary, Jacobs, & Razavieh, 1985).
Percentages of subjects who believed each item on the instrument would be a positive or negative effect were calculated.

Summary

A qualitative study using the Delphi technique was conducted to identify the predicted effects of The Holmes Group recommendations, as perceived by the health education department chairs of universities which are members of The Holmes Group. The effects were identified by the subjects during Round 1. The Round 1 instrument was an open-ended questionnaire. Subjects were asked to list as many as seven effects which would result from implementation of The Holmes Group recommendations. Thirty-two effects were submitted by 12 subjects in Round 1. A random list of the 32 effects formed the Round 2 questionnaire.

In Round 2 subjects ranked the items generated in Round 1 and indicated whether they perceived the effects to be positive or negative. All 12 subjects completed the Round 2 questionnaire. Data collected during Round 2 was summarized and the Round 2 Results document was constructed. The Round 3 questionnaire was composed of two parts. The first part was the random list of effects. The second part was background information about the subjects and the universities in which they teach.

Round 3 provided the opportunity for subjects to evaluate their previous positions in relation to statistical data and
comments from other subjects from the previous round. They were again asked to rank the 15 "most significant effects" of The Holmes Group recommendations and to indicate whether each item would have a positive, negative, or other effect on the preparation of health education teachers.
CHAPTER IV
RESULTS

This chapter will describe the data collected in this study. The purpose of this study was to identify the predicted significant effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by participating health education department chairs. A three-round Delphi study was used to identify effects and then rank the "significance" of those effects. The Delphi technique has been described as "a carefully designed program of sequential interrogations (with questionnaires) interspersed with information and opinion feedback." (Cyphert & Gant, 1971). The chapter is divided into four sections: (1) background information on the subjects and the universities at which they work, (2) Round 1 results, (3) Round 2 results, and (4) Round 3 results.

Background Information
Subjects who participated in all three Rounds of the study were instructed to answer questions about themselves and the universities in which they teach. This information was requested in Round 3 (see Appendix D). This section of the chapter is divided
into two parts: (1) the subjects and (2) the universities at which the subjects teach.

The subjects. Four subjects identified themselves as school health educators. Five listed their specialty as community health. The mean number of years served as department chair (or equivalent) was 5.4, and the range was 2 to 11 years (see Table 2). The mean number of years working as a health educator was 17.3 and ranged from 10 to 23 years. The mean number of years working at their present university was 10.3 and ranged from 1 to 17 years.

Subjects were also asked to identify Holmes Group publications which they had read, as well as other professional publications in which they had read about The Holmes Group. The results are presented in Table 3.

Table 2
Characteristics of Subjects

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Years as Department Chair</td>
<td>5.4</td>
<td>2-11</td>
</tr>
<tr>
<td>Years as Health Educator</td>
<td>17.3</td>
<td>10-23</td>
</tr>
<tr>
<td>Years at Present University</td>
<td>10.3</td>
<td>1-17</td>
</tr>
</tbody>
</table>
Table 3

Publications in which Subjects had read about The Holmes Group

<table>
<thead>
<tr>
<th>Publication</th>
<th>Number</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Holmes Group Publications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tomorrow's Teachers</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Tomorrow's Schools</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>The Holmes Group Forum</td>
<td>6</td>
<td>66.7</td>
</tr>
<tr>
<td>Work In Progress</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>other</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Other Publications</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AAHPERD Update</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Association for Supervision and Curriculum Development</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Chronicle of Higher Education</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td>Education Week</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Health Education</td>
<td>2</td>
<td>22.2</td>
</tr>
<tr>
<td>Teachers College Record</td>
<td>1</td>
<td>11.1</td>
</tr>
</tbody>
</table>

**The Universities.** All universities in The Holmes Group share some characteristics. All are leading research universities. All offer programs in teacher education. The leading research
university in each state was invited to become a charter member of The Holmes Group. At least one university for every 25,000 teachers in each state was also invited to join.

Subjects were asked to answer four questions about the universities at which they work. The mean number of health education graduates earning teaching certificates (or endorsements) each year was 9.4 and ranged from 1 to 30. Two universities graduated 20 and 30 students per year. These values had a large effect on the mean. The median number of graduates was five per year. The mean undergraduate enrollment of the universities was 19,800 and ranged from 5,000 to 30,000. Two subjects did not answer this question (see Table 4).

Six subjects indicated that their universities would provide routes other than the Holmes-based program for certification of health education teachers. The routes listed were 4-year curriculum, state competency program by courses, CHES (Certified Health Education Specialist), and Association for the Advancement of Health Education. One subject was unsure of the alternate route(s) and another did not specify other routes. Subjects were also asked to indicate the academic year in which their department would implement programs based on The Holmes Group. Two subjects responded with a question mark. There was no agreement among the other responses. The following were listed: 1991-92, 1992, 1993, 1995?, no plans, none, and never.
Table 4
Characteristics of Subjects' Universities

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Characteristics of Subjects' Universities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
</tr>
<tr>
<td>Undergraduate Enrollment</td>
<td>19,800</td>
</tr>
<tr>
<td>School Health Education</td>
<td>9.4</td>
</tr>
</tbody>
</table>

Round 1

Subjects were instructed in Round 1 to identify "as many as seven significant effects" of The Holmes Group recommendations on the preparation of school health education teachers. All items submitted were examined to determine how many different effects were identified. Thirty-two effects were submitted by the subjects in Round 1. These are listed in random order in Table 5. These 32 effects served as the items in the Round 2 questionnaire.
Table 5
Effects submitted in Round 1

<table>
<thead>
<tr>
<th>Effect</th>
<th># Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect 1: It will be difficult for Health Education to find field experiences for students.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 2: Fewer students will select to go to schools offering Holmes versus a four-year degree.</td>
<td>5</td>
</tr>
<tr>
<td>Effect 3: Students will switch to community health.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 4: Fewer universities will continue to offer teacher education programs.</td>
<td>3</td>
</tr>
<tr>
<td>Effect 5: School Health Education students will be better prepared to deal with their students.</td>
<td>2</td>
</tr>
<tr>
<td>Effect 6: The critical and creative thinking of the Health Education majors will be enhanced.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 7: Certification requirements for teachers of Health Education will be enhanced.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 8: A sense of &quot;profession&quot; will be instilled.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 9: Students will be more committed to teaching.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 10: A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
<td>5</td>
</tr>
<tr>
<td>Effect 11: The Holmes Group will have no effect whatsoever on Health Education.</td>
<td>2</td>
</tr>
</tbody>
</table>
Table 5 (continued)

<table>
<thead>
<tr>
<th>Effect</th>
<th># Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect 12: Students will be better prepared to pass the National Teachers Exam.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 13: There will be a failure to balance theoretical knowledge and practical application.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 14: Universities will redesign their curricula.</td>
<td>2</td>
</tr>
<tr>
<td>Effect 15: Universities will alter their programs to be general studies and/or liberal arts majors.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 16: School Health Education majors will first receive a degree in community health (four years).</td>
<td>1</td>
</tr>
<tr>
<td>Effect 17: More of the curriculum and instruction courses will be taught by faculty in curriculum and instruction.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 18: General education will be separate from professional education.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 19: A new more general Health Education degree will be developed.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 20: Health Education majors will have more practical experience opportunities.</td>
<td>3</td>
</tr>
<tr>
<td>Effect 21: General education/liberal arts requirements will be increased.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 22: Students will have trouble scheduling the required courses.</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 5 (continued)

<table>
<thead>
<tr>
<th>Effect</th>
<th># Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect 23: Health Education faculty will need to work more closely with other faculty in the college of education.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 24: Students will work with a master teacher during the fifth year.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 25: Health Education will be put on the nation's education reform agenda.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 26: Workplace health promotion programs will emerge.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 27: More challenging career paths will develop for health education teachers due to the need for a &quot;differentiated&quot; teaching profession.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 28: The different graduation times will lead to conflicts between community and school health.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 29: Early exposure to teaching will need to be retained.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 30: The preservice program will focus more on research.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 31: Undergraduate preparation of teachers will be eliminated.</td>
<td>1</td>
</tr>
<tr>
<td>Effect 32: Program length will be altered from 4 to 5 years.</td>
<td>1</td>
</tr>
</tbody>
</table>
Round 2

The Round 2 questionnaire instructed the subjects to rank the 15 "most significant effects" of The Holmes Group recommendations on the preparation of school health education teachers. Subjects were also asked to identify whether the effect of each item which they ranked would be positive or negative. The results of Round 2 are summarized in Appendix C. The effects ranked as the fifteen "most significant" with mean and median scores are presented in Table 6. Data regarding each effect is described below. The effects are discussed in the same random order in which they were presented in the Round 2 questionnaire.

Effect 1: It will be difficult for Health Education to find field experiences for students. One subject ranked this effect among the 15 most significant. It was ranked number 10 by that individual, and the effect was perceived to be negative. Mean rank was 15.5, and the median was 16. The composite rank for Effect 1 was 30.

Effect 2: Fewer students will select to go to schools offering Holmes versus a four-year degree. Nine subjects ranked this effect among the 15 most significant. The rankings ranged from 1 to 11, inclusive. All nine subjects perceived the effect to be negative. Mean rank was 5.33, and the median was 3. The composite rank for Effect 2 was two.
### Table 6
Fifteen Highest Ranked Predicted Effects in Round 2

<table>
<thead>
<tr>
<th>Rank</th>
<th>Effect</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Universities will redesign their curricula.</td>
<td>3.92</td>
<td>3.5</td>
</tr>
<tr>
<td>2</td>
<td>Fewer students will select to go to schools offering Holmes versus a four-year degree.</td>
<td>5.33</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
<td>7.17</td>
<td>6</td>
</tr>
<tr>
<td>4</td>
<td>School Health Education students will be better prepared to deal with their students.</td>
<td>7.42</td>
<td>6.5</td>
</tr>
<tr>
<td>5</td>
<td>Fewer universities will continue to offer teacher education programs.</td>
<td>8.17</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>Health Education majors will have more practical experience opportunities.</td>
<td>9.83</td>
<td>8.5</td>
</tr>
<tr>
<td>7</td>
<td>Students will be more committed to teaching.</td>
<td>11.17</td>
<td>11.5</td>
</tr>
<tr>
<td>8</td>
<td>Students will switch to community health.</td>
<td>10.00</td>
<td>11.5</td>
</tr>
<tr>
<td>9</td>
<td>Health Education faculty will need to work more closely with other faculty in the college of education.</td>
<td>11.5</td>
<td>11.5</td>
</tr>
</tbody>
</table>
Table 6 (continued)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Effect</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>The critical and creative thinking of the Health Education majors will be enhanced.</td>
<td>12.33</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>Certification requirements for teachers of Health Education will be enhanced.</td>
<td>12.5</td>
<td>15</td>
</tr>
<tr>
<td>12</td>
<td>Students will be better prepared to pass the National Teachers Exam.</td>
<td>12.5</td>
<td>16</td>
</tr>
<tr>
<td>12</td>
<td>The differences in program length will lead to conflicts between community and school health.</td>
<td>12.5</td>
<td>16</td>
</tr>
<tr>
<td>14.5</td>
<td>Universities will alter their programs to be general studies and/or liberal arts majors.</td>
<td>12.67</td>
<td>16</td>
</tr>
<tr>
<td>14.5</td>
<td>Early exposure to teaching will need to be retained.</td>
<td>12.67</td>
<td>14</td>
</tr>
</tbody>
</table>

Effect 3: Students will switch to community health. Eight subjects ranked this effect among the 15 most significant. The rankings ranged from 2 to 15, inclusive. Seven subjects believed the effect would be negative, and one subject indicated that it could be positive or negative. Mean rank was 10.0, and the median was 11.5. The composite rank for Effect 3 was eight.
Effect 4: Fewer universities will continue to offer teacher education programs. Nine subjects ranked this effect among the 15 most significant. The rankings ranged from 1 to 15, inclusive. Four believed the effect would be positive; four believed it would be negative; one indicated that it would be positive and negative. Mean rank was 8.17, and the median was 5. The composite rank for Effect 4 was five.

Effect 5: School Health Education students will be better prepared to deal with their students. Eleven subjects ranked this effect among the 15 most significant. The rankings ranged from two to 13, inclusive. All 11 subjects believed the effect would be positive. Mean rank was 7.42, and the median was 6.5. The composite rank for Effect 5 was four.

Effect 6: The critical and creative thinking of the Health Education majors will be enhanced. Five subjects ranked this effect among the 15 most significant. The rankings ranged from four to 10, inclusive. All five subjects believed the effect would be positive. Mean rank was 9.67, and the median was 16. The composite rank for Effect 6 was 10.

Effect 7: Certification requirements for teachers of Health Education will be enhanced. Six subjects ranked this effect among the 15 most significant. The rankings ranged from three to 14, inclusive. Five subjects believed the effect would be positive. One subjects did not indicate whether it would be positive or negative.
Mean rank was 12.5, and the median was 15. The composite rank for Effect 7 was 12.

Effect 8: A sense of "profession will be instilled. Six subjects ranked this effect among the fifteen most significant. Three subjects ranked this effect among the 15 most significant. The rankings ranged from 10 to 15 inclusive. All three subjects believed the effect would be positive. Mean rank was 15.0, and the median was 16. The composite rank for Effect 8 was 28.

Effect 9: Students will be more committed to teaching. Seven subjects ranked this effect among the 15 most significant. The rankings ranged from two to 12, inclusive. All seven subjects believed the effect would be positive. Mean rank was 11.17, and the median was 11.5. The composite rank for Effect 9 was seven.

Effect 10: A stronger preparation of teachers of Health Education, in terms of content background, will result. Nine subjects ranked this effect among the 15 most significant. The rankings ranged from one to nine, inclusive. All nine subjects believed the effect would be positive. Mean rank was 7.17, and the median was 6. The composite rank for Effect 10 was three.

Effect 11: The Holmes Group will have no effect whatsoever on Health Education. Five subjects ranked this effect among the 15 most significant. The rankings ranged from one to 15, inclusive. One subject believed the effect would be positive, and three believed it would be a negative effect. One subject ranked this
Effect number one and believed the effect would be neither positive or negative. Mean rank was 13.25, and the median was 16. The composite rank for Effect 11 was 17.

Effect 12: Students will be better prepared to pass the National Teachers Exam. Five subjects ranked this effect among the 15 most significant. The rankings ranged from four to 12, inclusive. All five subjects believed the effect would be positive. Mean rank was 12.5, and the median was 16. The composite rank for Effect 12 was 12.

Effect 13: There will be a failure to balance theoretical knowledge and practical application. One subject ranked this effect among the 15 most significant. The ranking was eight and was perceived to be a negative effect. Mean rank was 15.33, and the median was 16. The composite rank for Effect 13 was 29.

Effect 14: Universities will redesign their curricula. All 12 subjects ranked this effect among the 15 most significant. The rankings ranged from one to ten, inclusive. Eight subjects believed the effect would be positive, and two believed it would be a negative effect. One subjects was unsure about the effect (?) and another indicated that it could be either positive or negative (±). Mean rank was 3.92, and the median was 3.5. The composite rank for Effect 14 was one.

Effect 15: Universities will alter their programs to be general studies and/or liberal arts majors. Four subjects ranked
this effect among the 15 most significant. The rankings ranged from two to 14, inclusive. Two subjects believed the effect would be positive, and two believed it would be a negative effect. Mean rank was 12.67, and the median was 16. The composite rank for Effect 15 was 14.5.

Effect 16: School Health Education majors will first receive a degree in community health (four years). Four subjects ranked this effect among the 15 most significant. The rankings ranged from five to 14, inclusive. Two subjects believed the effect would be positive, and two believed it would be a negative effect. Mean rank was 13.83, and the median was 16. The composite rank for Effect 16 was 22.

Effect 17: More of the curriculum and instruction courses will be taught by faculty in curriculum and instruction. Five subjects ranked this effect among the 15 most significant. The rankings ranged from six to 14, inclusive. Two subjects believed the effect would be positive, and two believed it would be a negative effect. One subject did not indicate whether it would be positive or negative. Mean rank was 13.75, and the median was 16. The composite rank for Effect 17 was 20.5.

Effect 18: General education will be separate from professional education. Three subjects ranked this effect among the 15 most significant. The rankings ranged from five to 14, inclusive. All three subjects believed the effect would be positive.
Mean rank was 14.25, and the median was 16. The composite rank for Effect 18 was 24.

**Effect 19:** A new more general Health Education degree will be developed. Six subjects ranked this effect among the 15 most significant. The rankings ranged from two to 15, inclusive. Five subjects believed the effect would be positive, and one believed it would be a negative effect. One subject was uncertain (?) whether the effect would be positive or negative. Mean rank was 12.92, and the median was 15.5. The composite rank for Effect 19 was 16.

**Effect 20:** Health Education majors will have more practical experience opportunities. Seven subjects ranked this effect among the 15 most significant. The rankings ranged from two to ten, inclusive. All seven subjects believed the effect would be positive. Mean rank was 9.83, and the median was 8.5. The composite rank for Effect 20 was 6.

**Effect 21:** General education/liberal arts requirements will be increased. Four subjects ranked this effect among the 15 most significant. The rankings ranged from three to 14, inclusive. Three subjects believed the effect would be positive, and one believed it would be a negative effect. Mean rank was 13.75, and the median was 16. The composite rank for Effect 21 was 20.5.

**Effect 22:** Students will have trouble scheduling the required courses. Three subjects ranked this effect among the 15 most significant. The rankings ranged from eight to 13, inclusive. All
three subjects believed the effect would be negative. Mean rank was 14.88, and the median was 16. The composite rank for Effect 22 was 26.

Effect 23: Health Education faculty will need to work more closely with other faculty in the college of education. Eight subjects ranked this effect among the 15 most significant. The rankings ranged from six to 12, inclusive. Seven subjects believed the effect would be positive, and one was uncertain (?) whether it would be positive or negative. Mean rank was 11.5, and the median was 11.5. The composite rank for Effect 23 was 9.

Effect 24: Students will work with a master teacher during the fifth year. Three subjects ranked this effect among the 15 most significant. The rankings ranged from three to 15, inclusive. All three subjects believed the effect would be positive. Mean rank was 14.25, and the median was 16. The composite rank for Effect 24 was 24.

Effect 25: Health Education will be put on the nation's education reform agenda. Four subjects ranked this effect among the 15 most significant. The rankings ranged from nine to 12, inclusive. Three subjects believed the effect would be positive, and one was uncertain whether the effect would be positive or negative. Mean rank was 14.25, and the median was 16. The composite rank for Effect 25 was 24.
Effect 26: Workplace health promotion programs will emerge. One subject ranked this effect among the 15 most significant. The ranking was 15. The subject believed the effect would be positive. Mean rank was 15.92, and the median was 16. The composite rank for Effect 26 was 31.

Effect 27: More challenging career path will develop for health education teachers due to the need for a "differentiated" teaching profession. Three subjects ranked this effect among the 15 most significant. The rankings ranged from nine to 13, inclusive. All three subjects believed the effect would be positive. Mean rank was 14.92, and the median was 16. The composite rank for Effect 27 was 27.

Effect 28: The different graduation times will lead to conflicts between community and school health. Five subjects ranked this effect among the 15 most significant. The rankings ranged from three to 14, inclusive. All five subjects believed the effect would be negative. Mean rank was 12.5, and the median was 16. The composite rank for Effect 28 was 12.

Effect 29: Early exposure to teaching will need to be retained. Seven subjects ranked this effect among the 15 most significant. The rankings ranged from five to 15, inclusive. All seven subjects believed the effect would be positive. Mean rank was 12.67, and the median was 14. The composite rank for Effect 29 was 14.5.
Effect 30: The preservice program will focus more on research. None of the subjects ranked this effect among the 15 most significant. This was the only effect which received no votes. Mean rank was 16, and the median was 16. The composite rank for Effect 30 was 32.

Effect 31: Undergraduate preparation of teachers will be eliminated. Four subjects ranked this effect among the 15 most significant. The rankings ranged from four to 15, inclusive. All four subjects believed the effect would be positive, and one filled in a double negative sign. Mean rank was 13.58, and the median was 16. The composite rank for Effect 31 was 19.

Effect 32: Program length will be altered from 4 to 5 years. Five subjects ranked this effect among the 15 most significant. The rankings ranged from four to 14, inclusive. All five subjects believed the effect would be negative. Mean rank was 13.33, and the median was 16. The composite rank for Effect 32 was 18.

Summary of Round 2 results. Thirty-one of the 32 items were ranked among the fifteen most significant by at least one subject. The mean ranks ranged from 3.92 to 16.00. The median ranks ranged from three to 16. Twenty of the effects had mean ranks of 16, which means that less than 50% of the subjects ranked them among the fifteen most "significant." Twelve of the effects were perceived to be positive by all subjects who ranked them among the
Table 7
Ratings of Effects as Positive, Negative, or Other in Round 2

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Highest Ranked Effects</td>
<td>77</td>
<td>29</td>
<td>6</td>
</tr>
<tr>
<td>All Effects</td>
<td>106</td>
<td>51</td>
<td>10</td>
</tr>
</tbody>
</table>

fifteen "most significant." Seven of the effects were perceived to be negative by all subjects who ranked them among the fifteen most "significant." Twelve of the effects were perceived to be positive by some subjects and negative by others. Table 7 presents the composite ratings of the effects as positive or negative.

Examination of the votes for the effects as positive, negative, or other shows that the 68.7% (77) of the votes for fifteen most "significant" effects were positive effects. When looking at all 32 items, 63.5% (106) of the votes were positive (see Table 7).

Round 3

The Round 3 questionnaire instructed the subjects to rank the "15 most significant effects" of The Holmes Group recommendations on the preparation of school health education teachers. Subjects were also asked to identify whether each item which they ranked would have positive, negative, or other effect.
The data for the effects ranked as the fifteen "most significant" are presented in Table 8. Data regarding each effect is described below. The effects are discussed in the same random order in which they were presented in the Round 2 and Round 3 questionnaires.

**Effect 1:** It will be difficult for Health Education to find field experiences for students. One subject ranked this effect among the 15 most significant. It was ranked number 8 by that individual, and the effect was perceived to be "other" (i.e. neither positive or negative). Mean rank was 15.11, and the median was 16. The composite rank for Effect 1 was 26.

**Effect 2:** Fewer students will select to go to schools offering Holmes versus a four-year degree. Seven subjects ranked this effect among the 15 most significant. The rankings ranged from 1 to 9, inclusive. All nine subjects perceived the effect to be negative. Mean rank was 7.00, and the median was 6. The composite rank for Effect 2 was two.

**Effect 3:** Students will switch to community health. Seven subjects ranked this effect among the 15 most significant. The rankings ranged from 1 to 11, inclusive. Six subjects believed the effect would be negative, and one subject indicated that it could be positive or negative. Mean rank was 10.67, and the median was 11. The composite rank for Effect 3 was seven.
Table 8
Fifteen Highest Ranked Predicted Effects in Round 3

<table>
<thead>
<tr>
<th>Rank</th>
<th>Effect</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Universities will redesign their curricula.</td>
<td>5.44</td>
<td>6</td>
</tr>
<tr>
<td>2</td>
<td>Fewer students will select to go to schools offering Holmes versus a four-year degree.</td>
<td>7.00</td>
<td>6</td>
</tr>
<tr>
<td>3</td>
<td>A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
<td>8.00</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>School Health Education students will be better prepared to deal with their students.</td>
<td>8.78</td>
<td>5</td>
</tr>
<tr>
<td>5</td>
<td>Students will be more committed to teaching.</td>
<td>9.67</td>
<td>9</td>
</tr>
<tr>
<td>6</td>
<td>Fewer universities will continue to offer teacher education programs.</td>
<td>10.44</td>
<td>11</td>
</tr>
<tr>
<td>7</td>
<td>Students will switch to community health.</td>
<td>10.67</td>
<td>11</td>
</tr>
<tr>
<td>8</td>
<td>Health Education majors will have more practical experience opportunities.</td>
<td>11.33</td>
<td>12</td>
</tr>
<tr>
<td>9</td>
<td>Program length will be altered from 4 to 5 years.</td>
<td>11.44</td>
<td>14</td>
</tr>
</tbody>
</table>
Table 8 (continued)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Effect</th>
<th>Mean</th>
<th>Median</th>
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<tbody>
<tr>
<td>10</td>
<td>Certification requirements for teachers of Health Education will be enhanced.</td>
<td>11.56</td>
<td>12</td>
</tr>
<tr>
<td>11</td>
<td>Early exposure to teaching will need to be retained.</td>
<td>11.78</td>
<td>13</td>
</tr>
<tr>
<td>12.5</td>
<td>School Health Education majors will first receive a degree in community health (four years).</td>
<td>12.00</td>
<td>13</td>
</tr>
<tr>
<td>12.5</td>
<td>The differences in program length will lead to conflicts between community and school health.</td>
<td>12.00</td>
<td>16</td>
</tr>
<tr>
<td>14.5</td>
<td>Health Education faculty will need to work more closely with other faculty in the college of education.</td>
<td>12.22</td>
<td>12</td>
</tr>
<tr>
<td>14.5</td>
<td>The critical and creative thinking of the Health Education majors will be enhanced.</td>
<td>12.22</td>
<td>16</td>
</tr>
</tbody>
</table>

**Effect 4:** Fewer universities will continue to offer teacher education programs. Five subjects ranked this effect among the 15 most significant. The rankings ranged from 2 to 11, inclusive. One believed the effect would be positive; three believed it would be negative; one indicated that it could be positive or negative. Mean
rank was 10.44, and the median was 11. The composite rank for Effect 4 was six.

Effect 5: School Health Education students will be better prepared to deal with their students. Six subjects ranked this effect among the 15 most significant. The rankings ranged from three to 9, inclusive. All 6 subjects believed the effect would be positive. Mean rank was 8.78, and the median was 5. The composite rank for Effect 5 was four.

Effect 6: The critical and creative thinking of the Health Education majors will be enhanced. Three subjects ranked this effect among the 15 most significant. The rankings ranged from one to 9, inclusive. All three subjects believed the effect would be positive. Mean rank was 12.22, and the median was 16. The composite rank for Effect 6 was 14.5.

Effect 7: Certification requirements for teachers of Health Education will be enhanced. Five subjects ranked this effect among the 15 most significant. The rankings ranged from two to 10, inclusive. All five subjects believed the effect would be positive. Mean rank was 11.56, and the median was 12. The composite rank for Effect 7 was 10.

Effect 8: A sense of "profession will be instilled. Six subjects ranked this effect among the fifteen most significant. Two subjects ranked this effect among the 15 most significant. Both ranked it number 14 and believed the effect would be positive.
Mean rank was 15.56, and the median was 16. The composite rank for Effect 8 was 29.5.

**Effect 9: Students will be more committed to teaching.**
Seven subjects ranked this effect among the 15 most significant. The rankings ranged from two to 15, inclusive. All seven subjects believed the effect would be positive. Mean rank was 9.67, and the median was 9. The composite rank for Effect 9 was five.

**Effect 10: A stronger preparation of teachers of Health Education, in terms of content background, will result.** Seven subjects ranked this effect among the 15 most significant. The rankings ranged from one to 14, inclusive. Six subjects believed the effect would be positive, and one listed the effect as "other." Mean rank was 8.00, and the median was 8. The composite rank for Effect 10 was three.

**Effect 11: The Holmes Group will have no effect whatsoever on Health Education.** Three subjects ranked this effect among the 15 most significant. The rankings ranged from one to 15, inclusive. One subject believed the effect would be negative, and two listed it as "other." Mean rank was 13.78, and the median was 16. The composite rank for Effect 11 was 23.

**Effect 12: Students will be better prepared to pass the National Teachers Exam.** Four subjects ranked this effect among the 15 most significant. The rankings ranged from eight to 15, inclusive. Three subjects believed the effect would be positive, and
one listed the effect as "other." Mean rank was 15.67, and the median was 16. The composite rank for Effect 12 was 31.

Effect 13: There will be a failure to balance theoretical knowledge and practical application. Two subjects ranked this effect among the 15 most significant. The ranking ranged from 13 to 15, inclusive. Both believed the effect would be negative. Mean rank was 15.56, and the median was 16. The composite rank for Effect 13 was 29.5.

Effect 14: Universities will redesign their curricula. All 9 subjects ranked this effect among the 15 most significant. The rankings ranged from one to ten, inclusive. Six subjects believed the effect would be positive, and three believed it would be a negative effect. Mean rank was 5.44, and the median was 6. The composite rank for Effect 14 was one.

Effect 15: Universities will alter their programs to be general studies and/or liberal arts majors. Three subjects ranked this effect among the 15 most significant. The rankings ranged from three to seven, inclusive. Two subjects believed the effect would be positive, and one believed it would be a negative effect. Mean rank was 12.33, and the median was 16. The composite rank for Effect 15 was 16.

Effect 16: School Health Education majors will first receive a degree in community health (four years). Five subjects ranked this effect among the 15 most significant. The rankings ranged
from four to 13, inclusive. Three subjects believed the effect would be positive, and two believed it would be a negative effect. Mean rank was 12.00, and the median was 13. The composite rank for Effect 16 was 12.5.

**Effect 17:** More of the curriculum and instruction courses will be taught by faculty in curriculum and instruction. Four subjects ranked this effect among the 15 most significant. The rankings ranged from 12 to 13, inclusive. One subject believed the effect would be positive, and three believed it would be a negative effect. Mean rank was 14.11, and the median was 16. The composite rank for Effect 17 was 24.

**Effect 18:** General education will be separate from professional education. Three subjects ranked this effect among the 15 most significant. The rankings ranged from four to 14, inclusive. One subject believed the effect would be positive, another believed it would be a negative effect, and the third subject listed the effect as "other." Mean rank was 13.11, and the median was 16. The composite rank for Effect 18 was 20.5.

**Effect 19:** A new more general Health Education degree will be developed. Three subjects ranked this effect among the 15 most significant. The rankings ranged from three to 13, inclusive. All three subjects believed the effect would be positive. Mean rank was 13.22, and the median was 16. The composite rank for Effect 19 was 22.
Effect 20: Health Education majors will have more practical experience opportunities. Five subjects ranked this effect among the 15 most significant. The rankings ranged from six to 12, inclusive. All five subjects believed the effect would be positive. Mean rank was 11.33, and the median was 12. The composite rank for Effect 20 was 8.

Effect 21: General education/liberal arts requirements will be increased. Four subjects ranked this effect among the 15 most significant. The rankings ranged from three to 14, inclusive. Three subjects believed the effect would be positive, and one listed the effect as "other." Mean rank was 12.44, and the median was 16. The composite rank for Effect 21 was 17.

Effect 22: Students will have trouble scheduling the required courses. Three subjects ranked this effect among the 15 most significant. The rankings ranged from one to 13, inclusive. All three subjects believed the effect would be negative. Mean rank was 13.11, and the median was 16. The composite rank for Effect 22 was 20.5.

Effect 23: Health Education faculty will need to work more closely with other faculty in the college of education. Five subjects ranked this effect among the 15 most significant. The rankings ranged from six to 12, inclusive. All five subjects believed the effect would be positive. Mean rank was 12.22, and the median was 12. The composite rank for Effect 23 was 14.5.
Effect 24: Students will work with a master teacher during the fifth year. Four subjects ranked this effect among the 15 most significant. The rankings ranged from two to 15, inclusive. Three subjects believed the effect would be positive, and one listed the effect as "other." Mean rank was 12.78, and the median was 16. The composite rank for Effect 24 was 18.

Effect 25: Health Education will be put on the nation's education reform agenda. One subject ranked this effect among the 15 most significant. The ranking was 9. The subject believed the effect would be positive. Mean rank was 15.22, and the median was 16. The composite rank for Effect 25 was 27.

Effect 26: Workplace health promotion programs will emerge. One subject ranked this effect among the 15 most significant. The ranking was 10. The subject believed the effect would be positive. Mean rank was 15.33, and the median was 16. The composite rank for Effect 26 was 28.

Effect 27: More challenging career paths will develop for health education teachers due to the need for a "differentiated" teaching profession. No subjects ranked this effect among the 15 most significant. The mean rank was 16.00, and the median was 16. The composite rank for Effect 27 was 32.

Effect 28: The differences in program length will lead to conflicts between community and school health. Four subjects ranked this effect among the 15 most significant. The rankings
ranged from two to 15, inclusive. All four subjects believed the effect would be negative. Mean rank was 12.00, and the median was 16. The composite rank for Effect 28 was 12.5.

Effect 29: Early exposure to teaching will need to be retained. Six subjects ranked this effect among the 15 most significant. The rankings ranged from three to 14, inclusive. All six subjects believed the effect would be positive. Mean rank was 11.78, and the median was 13. The composite rank for Effect 29 was 11.

Effect 30: The preservice program will focus more on research. One subject ranked this effect among the 15 most significant. The rank was 5. The effect was perceived to be positive. Mean rank was 14.78, and the median was 16. The composite rank for Effect 30 was 32.

Effect 31: Undergraduate preparation of teachers will be eliminated. Four subjects ranked this effect among the 15 most significant. The rankings ranged from five to 15, inclusive. All four subjects believed the effect would be negative. Mean rank was 13.00, and the median was 16. The composite rank for Effect 31 was 19.

Effect 32: Program length will be altered from 4 to 5 years. Six subjects ranked this effect among the 15 most significant. The rankings ranged from two to 15, inclusive. Five subjects believed the effect would be negative, and one listed the effect as "other."
Mean rank was 11.44, and the median was 14. The composite rank for Effect 32 was 9.

Table 9

Ratings of Effects as Positive, Negative, or Other in Round 3

<table>
<thead>
<tr>
<th></th>
<th>Positive</th>
<th>Negative</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Highest Ranked Effects</td>
<td>53</td>
<td>30</td>
<td>4</td>
</tr>
<tr>
<td>All Effects</td>
<td>74</td>
<td>46</td>
<td>10</td>
</tr>
</tbody>
</table>

Summary of Round 3 results. Thirty-one of the 32 items were ranked among the fifteen most significant by at least one subject. The mean ranks ranged from 5.44 to 16.00. The median ranks ranged from six to 16. Nineteen of the effects had median ranks of 16, which means that less than 50% of the subjects ranked them among the fifteen most significant. Twelve of the effects were perceived to be positive by all subjects who ranked them among the fifteen most significant. Five of the effects were perceived to be negative by all subjects who ranked them among the fifteen most significant. Fifteen of the effects were perceived differently by the subjects who ranked them among the fifteen most significant (i.e. some combination of positive, negative, and other).
Examination of the votes for the effects as positive, negative, or other shows that the 60.9% (53) of the votes for fifteen highest ranked effects were positive. When looking at all 32 items, 56.9% (74) of the votes were positive (see Table 9).

**Summary**

A three-round Delphi study was conducted to identify the predicted, perceived effects of The Holmes Group recommendations on the preparation of health education teachers. Thirty-two potential effects were identified in Round 1. The effects were then ranked during Round 2 and again during Round 3. The fifteen "most significant" effects and whether they were perceived to be positive or negative effects were identified.
CHAPTER V
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

The purpose of this study was to identify the predicted effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by health education department chairs at Holmes Group members. The Holmes Group is a national organization of 94 research universities "dedicated to solving problems associated with the generally low quality of teacher preparation in the U.S." (Murray, 1987). The Holmes Group has identified five major goals: (1) to make the education of teachers intellectually more solid; (2) to recognize differences in teachers' knowledge, skill, and commitment, and their education, certification, and work; (3) to create standards of entry to the teaching profession which are professionally relevant and intellectually defensible; (4) to connect schools of education with the public schools; and (5) to make schools better places for teachers to work and learn (The Holmes Group, 1986).

This chapter will (1) provide a summary of the study, (2) discuss the implications of the findings, and (3) make recommendations for future research. The chapter is organized into three sections. The first section summarizes the methods and
results of the study. A three-round Delphi study was used to identify the predicted effects of The Holmes Group recommendations on the preparation of health education teachers, as perceived by health education department chairs at Holmes Group members. Data was also collected to indicated whether the effects were perceived as positive or negative.

The second section discusses the results of this study as they relate to four variables: (1) the five goals of The Holmes Group, (2) the variables of teacher education as identified in Cruickshank’s (1984) model of preservice teacher education, (3) lack of agreement among subjects, and (4) background information provided in Round 3. The information solicited included data about the subjects' experience and specialty within health education, the size of their universities and the school health education program, and implementation of a Holmes-based school health education program.

The third section describes ways in which the present study could have been improved and proposes future research which is related to this study. For example, a quantitative followup study to identify and evaluate the actual effects of implementation of a Holmes-based curriculum is one possibility. The third section of this chapter also makes recommendations which would have improved this study. These include procedural changes such as personally recruiting subjects rather than the initial mailing which was employed. Another recommendation is to study degree of
achievement of The Holmes Group goals among universities which implement Holmes-based programs.

Summary of the Study

Health education department chairs at universities which belong to The Holmes Group were invited to participate in a three-round Delphi study to identify the predicted, perceived effects of The Holmes Group recommendations. The subjects were identified by cross-checking the "1989 Directory of Institutions Offering Specialization in Undergraduate and Graduate Professional Preparation Programs in School, Community, and Public Health Education" (Association for the Advancement of Health Education, 1989) and its addendum (Association for the Advancement of Health Education, 1990) with the list of Holmes member institutions (The Holmes Group, 1990). This resulted in the identification of 35 Holmes Group members offering programs in school health. The 35 universities were called to confirm or update the information provided in the AAHE directory. One university had discontinued its health education major. Thus, the number of subjects identified for the study was 34. All were invited to participate in the study via an announcement card mailed prior to the Round 1 packet.

Twenty-five (73.5%) responses to the Round 1 questionnaire were received. Thirteen subjects chose not to participate for a number of reasons. The reasons were: (1) their universities did not
offer programs in school health education, (2) their universities no longer belonged to The Holmes Group, (3) they lacked expertise, (4) they did not have enough time to complete the study, and (5) no reason given. Twelve subjects agreed to participate and completed the first two rounds of the study. One subject formally withdrew from the study in Round 3, and two subjects did not return the Round 3 questionnaire. Nine subjects completed all three rounds.

The methods and instrument format followed the procedures developed by Dillman (1978). Dillman (1978) describes a procedure for conducting mail and telephone surveys. Gilmore's (1977) format for conducting Delphi studies was used as a guide. He describes six steps for conducting a Delphi study:

1. Define the issue. A clear, concise statement of the central issue should be developed.

2. Establish who the participants will be. Subjects must be knowledgeable about the subject and be able to work with the written format.

3. Develop the first questionnaire. The central issue should be identified and the subjects should be instructed to respond to an open-ended format. A deadline should be given. After the questionnaires have been returned, the responses are collated into categories.
4. Develop the second questionnaire. The categories developed in round 1 are listed with response sections next to them. Typical formats for responses are priority voting and comments.

5. Develop the third questionnaire. The values assigned to each category in Round 2 are added together to form the "initial vote total," and a summary of comments is prepared. This information is provided on the Round 3 questionnaire, which also provides space for "final votes." After the Round 3 questionnaires have been returned, the final votes are totaled and the categories are listed in priority order.

6. Final considerations. A final report should be sent to the subjects.

The Round 1 instrument was open-ended. Subjects were asked to list "significant" effects of The Holmes Group recommendations on the preparation of health education teachers. Comments regarding the effects were also solicited. Space for listing effects and related comments were provided. Thirty-two effects were identified in Round 1. The mean number of effects listed was 4.3 per subject. The number of effects listed ranged from one to eight, inclusive. Eight subjects included comments related to the effects they listed on the questionnaire.

The effects were listed in random order with the related comments to form the Round 2 questionnaire. The subjects were instructed in Round 2 to rank the 15 most significant effects,
make comments related to those which they ranked, and to indicate whether they perceived each effect to be positive or negative. The Round 2 results were summarized and prepared for mailing in the Round 3 packet. The data included in the Round 2 Results document were the overall rank, number of subjects who ranked each effect, number of subjects who perceived each effect to positive or negative, and the individual's Round 2 response.

In Round 3, the subjects were provided with the Round 2 results. They were asked to review their own responses in relation to the summarized data from Round 2 and to respond to the Round 3 questionnaire in the same manner as the second round. They were instructed to rank the "15 most significant effects" and to indicate whether they perceived each of those effects to be positive, negative, or other. The format for the Round 3 questionnaire was similar to the Round 2 instrument. The following fifteen effects were ranked by subjects as most significant (#1 = most significant, etc.):

1. Universities will redesign their curricula.
2. Fewer students will select to go to schools offering Holmes versus a four-year degree.
3. A stronger preparation of teachers of health education, in terms of content background, will result.
4. School health education students will be better prepared to deal with their students.
5. Students will be more committed to teaching.

6. Fewer universities will continue to offer teacher education programs.

7. Students will switch to community health.

8. Health education majors will have more practical experience opportunities.

9. Program length will be altered from 4 to 5 years.

10. Certification requirements for teachers of health education will be enhanced.

11. Early exposure to teaching will need to be retained.

12(a). School health education majors will first receive a degree in community health (four years).

12(b). The differences in program length will lead to conflicts between community and school health.

14(a). Health education faculty will need to work more closely with other faculty in the college of education.

14(b). The critical and creative thinking of the health education majors will be enhanced.

Only the number one-ranked effect was ranked by all nine respondents in Round 3. This effect is that universities will redesign their curricula. Six believed it would be a positive effect, and three believed it would be negative. No comments related to this effect were made by the subjects. This effect could be investigated in another study.
Six of the effects were perceived by all who ranked them as positive effects:

4. School health education students will be better prepared to deal with their students.
5. Students will be more committed to teaching.
8. Health education majors will have more practical experience opportunities.
10. Certification requirements for teachers of health education will be enhanced.
11. Early exposure to teaching will need to be retained.
14(b). The critical and creative thinking of the health education majors will be enhanced.

Two effects were perceived by all who ranked them as negative effects:

6. Fewer universities will continue to offer teacher education programs.
12(b) The differences in program length will lead to conflicts between community and school health.

Discussion

This section will discuss the results of the study and their implications. The goal of this study was to identify the predicted, perceived effects of The Holmes Group recommendations on the preparation of health education teachers. Five topics will be
considered: (1) goals of The Holmes Group, (2) theory of preservice teacher education, as described by Cruickshank (1984), (3) lack of agreement among subjects, (4) agreement among subjects, (5) background information.

Discussion related to the goals of The Holmes Group. The Holmes Group (1986) identified five major goals: (1) to make the education of teachers intellectually more solid; (2) to recognize differences in teachers' knowledge, skill, and commitment, and their education, certification, and work; (3) to create standards of entry to the teaching profession which are professionally relevant and intellectually defensible; (4) to connect schools of education with the public schools; and (5) to make schools better places for teachers to work and learn. Several of the effects identified in this study as "most significant" relate to these goals. For example, the highest ranked effect, universities will redesign their curricula, is related to the goal to make the education of teachers intellectually more solid.

The first goal of The Holmes Group (1986) is to make the education of teachers intellectually more solid. This goal was addressed by two of the effects from the study: universities will redesign their curricula (#1) and students will be better prepared in terms of the content of health education (#3). Presumably, the redesigned curricula will be "intellectually more solid." It is interesting to note that although all subjects ranked curriculum
redesign among the fifteen most significant, three thought it would be a negative effect. They may believe that the present curriculum is appropriate. They might wish to avoid the time-consuming work of curriculum revision. Over two-thirds of the subjects believed that improved knowledge of the content of health education would result from implementation of The Holmes Group program.

The second goal is to recognize differences in teachers. The Holmes Group proposes three levels of teachers to take into account the different levels of commitment and ability of teachers. The three levels are: (1) Career Professionals, (2) Professional Teachers, and (3) Instructors. Career Professionals would be experienced teachers, typically possessing terminal degrees. Their roles would be analagous to clinical professors in medicine. The majority of the teaching force would be Professional Teachers. These individuals would be subject matter specialists and specialists in pedagogy and would possess a Master's degree. The third level of teachers would be the Instructors. These would be beginning teachers with minimal professional preparation. They would possess adequate knowledge of subject matter and pass an examination. They would be supervised by Career Professionals. This goal was not addressed by any of the fifteen highest ranked effects identified in this study. This is understandable presuming that the universities involved will prepare preservice teachers to enter the teaching profession as "Professional Teachers" rather
than "Instructors." The Professional Teacher level is most similar to present entry level teachers. Preservice teacher education programs will not involve individuals at the Instructor or Career Professional levels.

The third goal was related to entry standards. It was addressed by two effects. This goal is to raise standards in a meaningful way. Competency testing and demonstration of teaching skills will be required. Instructors, Teaching Professionals, and Career Professionals will each have different requirements. For example, Professional Teachers will be required to earn a Master's degree. The highest-ranked effect, universities will redesign their curricula, addresses this goal. The Holmes Group (1986) expects teachers to "possess strong liberal arts and disciplinary background(s), and a repertoire of imaginative teaching and coaching skills." The redesigned curriculum must incorporate these components. The tenth-ranked effect asserted that certification requirements will be enhanced. All five subjects who ranked this effect believed it would be a positive effect. It would seem that the subjects believe present certification requirements need to be altered.

The fourth goal, connecting universities to schools, was indirectly addressed by one effect. The "connections" involved in this goal include bringing teachers into the universities to teach preservice teachers and sending university faculty into K-12
schools to teach. The Holmes Group also believes schools should become places where teachers and university faculty can conduct research and improve practices. The related effect states that health education majors will have more practical experience opportunities. Connections may be improved by the fact that university faculty will spend more time in the schools supervising their students' field experiences. If faculty supervisors spend more time in the schools, they will have more opportunity to develop relationships with public school teachers and administrators. Improved relationships could lead to the types of activities envisioned by The Holmes Group.

The fifth goal of The Holmes Group is to make schools better places to learn and work. The Holmes Group believes that the differentiated levels of teachers (i.e. Career Professional, Professional Teachers, and Instructor) will allow professional teachers to have more autonomy and opportunities to exercise leadership in the schools. New entry standards would make schools more challenging and rewarding places for teachers to work. This goal was not addressed by any of the effects identified in this study. This might be expected because this goal is not directly related to teacher preparation. The goal relates more to the climate of the schools for teachers who are already inservice. The focus of this study is preservice teacher education.
In summary, the data collected in this study address three of The Holmes Group's five goals. They are: to make the education of teachers intellectually more solid, to create new standards of entry to the teaching profession, and to connect schools of education with the public schools. The goals not addressed by this study are related more to inservice teachers than preservice teachers.

**Discussion related to theory of teacher education.** The preceding section discussed the results of this study in relation to the stated goals of The Holmes Group. Three models of teacher education were published in the *Journal of Teacher Education* in 1984-1985 (Cruickshank, 1984; Katz & Raths, 1985; Zimpher & Ashburn, 1985). This section describes the three models and discusses the results of this study in relation to teacher education as a whole.

Donald R. Cruickshank, of The Ohio State University, is a nationally known expert on teacher education. He has written extensively on the subject and conducted research on teaching methods. Cruickshank (1984) has proposed a "model to guide inquiry in preservice teacher education." The model has five components or explanatory variables: (1) teacher educators, (2) teacher education students, (3) context of teacher education, (4) content of teacher education, and (5) instruction and organization in teacher education. Cruickshank believes that inquiry is needed in each of these areas. A sixth variable proposed by Cruickshank is outcomes of teacher
education. He spends little time developing this variable noting only that the goal of teacher education is to produce "sufficient and effective teachers."

Cruickshank's first two variables include the "principals" involved in teacher education: the teacher educators and the students. Teacher educators include both campus and field based faculty. Students are the preservice teachers. They are the individuals which the teacher education program serves and prepares for teaching careers. Formative influences, as well as personal and professional characteristics and abilities, are appropriate topics for inquiry.

The third variable in Cruickshank's model is the context of teacher education. This includes characteristics of the university and the schools in which field experiences occur. It may involve physical characteristics, as well as the emotional climate and support (or lack of support) for the program.

The teacher education curriculum is Cruickshank's fourth variable. Most interaction between teacher educators and preservice teachers "revolve(s) around the preservice teacher education curriculum." Research questions about curriculum are related to the sources of curriculum, the components of the curriculum (e.g. general education and professional education), and the scope and sequence of the curriculum.
The fifth variable described by Cruickshank is instruction. Instructional alternatives are one aspect of this variable. These include teaching in natural classrooms, Reflective Teaching, Microteaching, and "talk about teaching." Organization of instruction, such as independent learning and group learning, and student-teacher ratio are also included in this variable.

Cruickshank believes that all the variables interact with one another and that the acceptance of a model of teacher education is necessary to guide inquiry. He also notes that it will aid the evolution of teacher education as a discipline.

One year after the publication of Cruickshank's model, Katz and Raths (1985) published a "framework for research on teacher education." They believe such a framework will help identify critical research questions. Teacher education is defined as a "set of phenomena deliberately intended to help candidates acquire the knowledge, skills, dispositions, and norms of the occupation of teaching." Eleven interacting parameters are proposed. Each contains several "variables." Four of the parameters are the same as Cruickshank's explanatory variables: characteristics of candidates, characteristics of the staff, content, and methods. The other parameters are: (1) goals, (2) time/timing, (3) ethos, (4) regulations, (5) resources, (6) evaluation, and (7) impacts of the programs. Ethos and resources would both be included in
Cruickshank's context variable. Brief explanations of the other variables follow.

Variables which define the goals of the teacher education program include the extent to which the goals are "explicit, realistic, shared, specific, coherent, compatible, thematic, technical, and humanistic."

Time/timing is another parameter identified by Katz and Raths. This includes order of events within the program and time of candidates' entry into the teacher education program.

Regulations also affect the teacher education program and are identified as another parameter. Graduation requirements, certification requirements, laws, and stipulations of labor unions and school districts are variables which fall under the parameter identified as "regulations."

Evaluation, another parameter described by Katz and Raths, relates to both student and program evaluation. Variables of student evaluation include frequency and objectivity of assessment. Program evaluation may include self-studies and follow-up studies of graduates.

"Impacts of the program" is the final parameter proposed by Katz and Raths. Both short-term and long-term effects are included. Candidates' opinions of various aspects of the program, proportion of graduates employed, and evaluations of effectiveness of graduates are variables in this category.
Katz and Raths emphasize that the eleven parameters are "interacting and confounding." They propose a matrix to aid in the identification of research questions. Researchers can identify questions which revolve around one or two parameters using the matrix.

The third model of teacher education was also published in 1985 by Zimpher and Ashburn. They define teacher education as "the process of preparing teachers." Zimpher and Ashburn use six "classes of variables" to describe teacher education: (1) teacher candidates, (2) schools of education, (3) teacher education programs, (4) immediate preservice program outcomes, (5) teaching, and (6) pupils (in the classroom).

Several of these are related to Cruickshank's classifications. "Teacher candidates" is similar to classifications used in the other models. Schools of education is similar to Cruickshank's context of teacher education. Teacher education programs is similar to Cruickshank's "content" variable, except that teacher educator is included within it. Cruickshank identifies teacher educators as a separate variable. "Immediate program outcomes" is similar to Cruickshank's outcomes variable. It includes knowledge, attitudes, and skills of candidates, as well as indicators of the success of the institution (e.g. placement records and standardized measures).

Cruickshank's (1984) model seems to be the simplest of the models. Each variable identified by Cruickshank is included within
the other models. Therefore, discussion of this study's results will be based on the Cruickshank model with references to the others as necessary.

Cruickshank's first variable is the teacher educators. Only one effect among the fifteen most significant was related to teacher educators: "Health education faculty will need to work more closely with other faculty in the college of education" (#14). This implies that The Holmes program will require more interaction between different faculty groups on campus in order to integrate the whole program. Such communication is needed to provide an integrated program of professional preparation.

The second variable is the students or preservice teachers. Several effects relate directly to the students. One effect is that students will choose four-year programs rather than the longer Holmes programs. This may result in fewer students enrolling in Holmes universities and threaten the existence of some school health programs. Seven of the universities in this study graduate ten or fewer school health teachers per year (see Table 4). If students choose universities with shorter programs, Holmes universities may not be able to support majors in school health due to lower enrollment. Other related effects identified in this study are stronger commitment to teaching (#5), students will major in community health rather than school health (#7), and the critical and creative thinking of preservice teachers will be enhanced (#14).
Context of teacher education is Cruickshank’s third variable. This includes characteristics of the university and the schools in which field experiences occur. It may involve physical characteristics, as well as the emotional climate and support (or lack of) for the program. Physical aspects are not addressed, but a number of effects relate to the emotional climate. The relationship between school and community health education is addressed (#12). One effect predicts that students will switch to community health (#7). Another predicts that teaching certification will take place after students earn degrees in community health (#12). A fourth predicts that conflicts between school and community health will occur because of differences in program length (#12). The potential exists for school and community health majors to follow similar curricula, but that students may see community health as a quicker means to enter the workforce. Faculty will have to be sensitive to these potential problems and encourage students to follow the paths for which they are best suited. If school and community health education faculty are competing for students; an unhealthy climate may result, and school health education may be the loser.

The fourth variable is the content of teacher education. Subjects ranked several related effects among the “most significant.” The third-ranked effect was that health education teachers would be better prepared in the content of health education. This is a real concern in a field in which the knowledge
base is increasing rapidly (Willcox, 1988). The subjects also believed that students would be better prepared to "deal with their students." Increased number of field experiences also ranked high (#8). Enhanced critical and creative thinking was ranked among the fifteen most significant (#14). It is clear that the subjects believe the students graduating from Holmes Group institutions will be better prepared for the classroom. Finally, the increased length of the program (#9) was perceived as a negative effect of The Holmes Group recommendations. The effects of The Holmes Group recommendations on the preparation of health education teachers are generally perceived to be positive.

The fifth variable in Cruickshank's model is instruction and organization. Increased practical experience was viewed as a positive effect by all subjects who ranked it (#8). The need for early field experience was also ranked high (#11) and was considered a positive effect by those who ranked it. Two effects related to field experience were among the fifteen highest ranked. It is evident that the subjects consider field experiences to be an important instructional method for training health education teachers.

In conclusion, the effects of The Holmes Group recommendations will affect all five of Cruickshank's (1984) variables of teacher education. Teacher education students and content of teacher education are the variables most often addressed
by the effects of this study. The effects of The Holmes Group recommendations on the preparation of health education teachers, as identified in this study, clearly relate to Cruickshank's model of teacher education.

Lack of agreement among subjects. One of the most pronounced results of this study is the lack of agreement among the subjects. Thirty-one (of 32) effects listed on the Round 3 questionnaire were ranked by at least one subject. The only effect which was not ranked was "workplace health promotion programs will emerge." It is interesting that this effect is one which is of special interest to health education. The subject who submitted this effect in Round 1 commented that "This will result from The Holmes Group goal of making schools better places for teachers to work." This was the only effect submitted by the respondents which related specifically to The Holmes Group goal to make schools better places to work.

Even more significant with regard to the lack of agreement among subjects is the fact that only one effect was ranked by all nine subjects who completed Round 3. That effect was ranked as the most significant: universities will redesign their curricula. Even though all subjects ranked it among the most significant, disagreement existed in their evaluation of the effect. Six thought it would be a positive effect and three believed it would be negative. A wide range of rankings also existed. Two subjects
ranked it as the most significant effect, but it was also ranked as low as number ten. These data provide examples of the lack of agreement among the subjects.

A further indication of that lack of agreement is the fact that most of the fifteen highest ranked effects were ranked by a majority of the subjects. Thirteen effects were ranked by a majority of the subjects. They are listed below:

1. Universities will redesign their curricula (9 votes).
2. Fewer students will select to go to schools offering Holmes versus a four-year degree (7 votes).
3. A stronger preparation of teachers of health education, in terms of content background, will result (7 votes).
4. School health education students will be better prepared to deal with their students (6 votes).
5. Students will be more committed to teaching (7 votes).
6. Fewer universities will continue to offer teacher education programs (5 votes).
7. Students will switch to community health (7 votes).
8. Health education majors will have more practical experience opportunities (5 votes)
9. Program length will be altered from 4 to 5 years (6 votes).
10. Certification requirements for teachers of health education will be enhanced (5 votes).
11. Early exposure to teaching will need to be retained (6 votes).

12(a). School health education majors will first receive a degree in community health (four years) (5 votes).

14(a). Health education faculty will need to work more closely with other faculty in the college of education (5 votes).

Three of these received five votes, a bare majority. They were unranked by four subjects.

In addition, not all of the fifteen highest ranked effects were ranked by a majority of the subjects. Two effects which ranked among the top fifteen were selected by less than five subjects:

12(b) The differences in program length will lead to conflicts between community and school health. This was ranked as high as number two, but was unranked by five subjects.

14(b). The critical and creative thinking of the health education majors will be enhanced. One subject ranked this as the most significant (#1) effect of The Holmes Group. However, six subjects did not rank it among the fifteen most significant.

Diverse perceptions of the significance of these effects exists among the subjects.

Among the fifteen highest ranked effects, six received some combination of positive, negative, and other votes as to the type of effect. The "other" response might indicate that it would be positive in some cases and negative in others or the respondent may
be undecided about the effect. These included the first- and third-ranked effects. The list of six effects (preceded by their ranks) follows:

1. Universities will redesign their curricula.
2. A stronger preparation of teachers of health education, in terms of content background, will result.
3. Fewer universities will continue to offer teacher education programs.
4. Students will switch to community health.
5. Program length will be altered from 4 to 5 years.
6. School health education majors will first receive a degree in community health (four years).

It is difficult to understand how mixed opinions about "a stronger preparation of teachers of health education" could exist. All university faculty should favor a better education for their students. However, the literature review in Chapter 2 indicates that diverse opinions about the effects of The Holmes Group recommendations do exist.

It is evident that the subjects have very different perceptions of what effects will really result from implementation of The Holmes Group recommendations and whether these effects will be positive or negative. This could be related to each subject's own interests and responsibilities. For example, an individual who supervises field experiences may be quite concerned about early
exposure to teaching (ranked # 11). The faculty member who ranked the effect, "The preservice program will focus more on research," as the fifth most significant may be an individual whose primary responsibilities and interests are conducting research. Another possible explanation is that the subjects are not well-informed about The Holmes Group goals and proposals. None of the nine subjects had read the original document, Tomorrow's Teachers (The Holmes Group, 1986). Very few articles about The Holmes Group have been published in the health education literature (see Chapter 2). Health educators may need to be better educated about The Holmes Group.

It may also be that it is difficult to predict how The Holmes Group recommendations will affect the preparation of health education teachers, or teachers of any discipline. The reaction to Tomorrow's Teachers (The Holmes Group, 1986) has been diverse. Chapter 2 of this study summarizes those reactions. The goals of The Holmes Group may be so broad that the effects of Holmes-based teacher education programs cannot be predicted.

Agreement among subjects. The preceding section highlights the diversity of responses among the subjects. However, some agreement does exist. Several of the highest ranked effects are related to program changes and abilities of individuals who complete Holmes-based programs. They are listed below (preceded by rank):
3. A stronger preparation of teachers of health education, in terms of content background, will result.

4. School health education students will be better prepared to deal with their students.

5. Students will be more committed to teaching.

8. Health education majors will have more practical experience opportunities

11. Early exposure to teaching will need to be retained.

14(b). The critical and creative thinking of the health education majors will be enhanced.

Subjects agreed that these were positive effects. The number three-ranked effect (see above) received one "other" vote and six positive votes. The other five effects received positive votes from all subjects who ranked them. It seems clear that the subjects believe the effects of The Holmes Group will be positive in terms of abilities and characteristics of the teachers produced in Holmes-based programs. They believe that teachers will be more knowledgable about the subject matter of health education (#3), that teachers will be more committed to their profession (#5), and that increased practical and field experience will result in better teachers (#8 and #11). The "bottom line" for teacher education is producing effective teachers (Cruickshank, 1984). When the data collected in this study is examined from that perspective, near unanimous agreement exists that the teachers prepared in a
Holmes-based program will be better prepared than those produced in present programs at the same universities.

There is also agreement among the subjects that several of the effects are negative. They are listed below (preceded by rank):

2. Fewer students will select to go to schools offering Holmes versus a four-year degree.
7. Students will switch to community health.
9. Program length will be altered from 4 to 5 years.
12(b) The differences in program length will lead to conflicts.

All subjects who ranked effects 2 and 12b perceived them as negative. Effects 7 and 9 each received one "other" vote; the rest of the votes each received were negative. Twenty-four votes were cast for these four effects: 22 were negative and 2 were "other."

Two related themes are present in these effects. All are concerned with enrollment and/or program length. There is concern that enrollment in school health programs at Holmes universities will decline. Pigg (1984) found that such a trend already exists. More students are enrolling in community health programs and fewer are entering school health. The longer time commitment required by the Holmes model for teacher preparation may strengthen this trend.

Increased popularity of community health may also lead to conflicts between school and community health. School health faculty may feel a need to compete for students in order to
preserve their programs. It should be noted, however, that if school health students complete a degree in community health first (effect #12a), this conflict would be less. All students would complete the same baccalaureate curriculum. Preservice teachers would then continue and earn a Master's degree. This could create a situation in which it is relatively easy for community health majors to return to school and earn their teaching credentials.

The second concern related to enrollment is that prospective teachers will enroll at institutions, which still offer four-year programs leading to teaching certification (#2). This is the highest ranked effect of this group. Again, faculty are likely concerned about the future of their programs. They need to hope that the goals of The Holmes Group are achieved. If Holmes graduates are better prepared to teach, if they are sought out by school districts, and if they are paid better than graduates of four-year programs, one can reasonably assume that students will want to enroll in Holmes-based programs. If no evidence exists that the future of Holmes graduates is better, enrollment at Holmes universities will likely decline.

Background information. Most of the subjects received their information about The Holmes Group from The Holmes Group Forum, which is published three times per year by The Holmes Group. None of the subjects had read the original document, Tomorrow's Teachers (The Holmes Group, 1986). The number of publications in
which subjects had read about The Holmes Group ranged from one to four. Some of the publications listed have published numerous articles about The Holmes Group (e.g. Teachers College Record and Chronicle of Higher Education). One had read nothing but "segments" provided by the college of education. Six sources other than The Holmes Group publications were read by the subjects. This study identified curriculum redesign as the most significant effect of The Holmes Group recommendations. It is evident that individuals who are involved in curriculum revision should read the recommendations and goals for that revision.

The plans to implement programs based on The Holmes Group recommendations vary. Only one of the nine universities represented in this study will offer a Holmes-based program as the only route to certify health education teachers. Six of the universities have no specific plans to implement programs based on The Holmes Group. As a group the universities represented by the subjects in this study demonstrate a low level of commitment to a program based on The Holmes Group recommendations. A followup study might investigate opinions of The Holmes Group, how the decision to implement its recommendations was made, and how much input health educators had in that decision. At present, conclusions about the effects of The Holmes Group recommendations on the preparation of health education teachers are theoretical. The programs have not been implemented.
One reason for the apparent low commitment to a Holmes-based curriculum may be the timing of the proposed reform. Health education has recently begun its own competency-based program for certification of health educators (National Task Force, 1985). This program is already in operation, and the testing of entry-level health educators has begun. The professional literature reflects this certification. Authors list the initials CHES (certified health education specialist) along with academic degrees. It is natural that greater support exists for a program developed by health educators for health educators. Some schools have recently revised curricula in order to achieve the competencies (Breuss, Hendricks, Poehler, & Redford, 1987; McMahon, Breuss, & Lohrman, 1987).

A further concern relates to potential enrollment fluctuations. The small number of school health educators graduating each year is of some concern. The universities ranged in size from 5,000 to 30,000 undergraduates. However, seven of the programs graduate 10 or fewer school health teachers each year. These are not large programs. If students opt to attend universities which offer four-year programs, school health education at some Holmes universities may be discontinued. This is one explanation for the apparent lack of support for a Holmes-based curriculum. No one wants to jeopardize their programs. Lower enrollment in programs which are already small could result the elimination of some programs.
Recommendations

Several recommendations related to this study can be made. The recommendations which follow are divided into three categories: (1) improved methodology, (2) further related research, and (3) recommendations for health education.

**Improved methodology.** Several recommendations to improve this study can be made. These recommendations are based on the researcher's experience conducting this study.

1. Personally invite subjects to participate. Initial contact between the investigator and the subjects in this study was through the mail. Personal recruitment might have resulted in a larger number of subjects participating in the study. Several subjects originally identified should not have been included in the study; some institutions had dropped out of The Holmes Group or had eliminated their school health programs. A personal call to potential subjects would have screened them. It might also have resulted in a more committed group of subjects. Personal contact would have resulted in a higher number of participants in the study.

2. Type addresses on all correspondence. Dillman (1978) recommends that envelopes be hand-addressed to give them a personal touch. In Round 1 envelopes were hand-addressed. Several subjects did not receive the Round 1 packets, and delivery was slow. The United States Postal Service (1988) recommends that all
addresses be typed so that they can be read by automated equipment. Rejected envelopes are processed manually. This can slow delivery. All addresses in Rounds 2 and 3 were typed, and there were no further problems.

3. Instruments which require subjects to rank items should be limited to one page. One subject complained that it was difficult to rank items which were spread over six pages. She felt that she needed to view all the items at once in order to evaluate them. This change was made in the Round 3 instrument.

4. Rank fewer items. It is difficult to discriminate between items when ranking so many. Subjects might have been more likely to defend their choices if they had been forced to make fewer. In both Round 2 and 3 one subject was unable to rank the fifteen. One ranked nine, and the other ranked ten items.

5. Complete the study in a shorter time. The Round 3 instrument was mailed almost six months after the Round 1 instrument. The time between mailings may have resulted in a lack of continuity in the study. Subjects may have forgotten about the study between rounds.

6. Emphasize the comments related to the effects of The Holmes Group recommendations. It was hoped that these comments would be used to convince others of the significance of the effects. However, only three comments were made in Round 2. This may be blamed at least in part on the construction of the Round 2
questionnaire. Space for comments was at the end of the instrument. If each effect had its own space, more comments might have been submitted.

Further related research. Several related studies can be recommended based on this investigation.

1. A five-year follow-up using the same subjects or universities. None of the universities in this study have implemented a program based on The Holmes Group recommendations. This study required subjects to predict the effects of a Holmes Group-based curriculum. Five years from now the new programs should be in place. Subjects will have had time to implement and evaluate the programs. A follow-up study would describe the effects based on actual practice.

2. Identification of procedures used to plan and implement Holmes-based curricula. Subjects were asked when they expected to implement a Holmes-based program. Responses varied from as early as 1991-92 to never. This indicates that different universities are approaching implementation differently and at different rates. The study could identify timetables and procedures used to revise the curricula.

3. Achievement of The Holmes Group goals. A study at Holmes Group universities would ask subjects to evaluate their programs in relation to the five goals of The Holmes Group.
4. Changes in school health programs. Earlier research indicated that more students are choosing to major in community health rather than school health (Pigg, 1984). Five of the 34 universities originally included on the list of subjects had no school health program or were about to discontinue them. One questions whether the number of universities offering school health programs is declining along with the number of students.

5. A followup study might investigate health educators opinions of The Holmes Group, how the decision to implement its recommendations was made, and how much input health educators had in that decision. The lack of support for The Holmes Group recommendations evident in this study may be related to the amount of input health educators had in the university's decision to implement a Holmes-based curriculum.

**Recommendations for health education.** The results of this study lead to some recommendations for the preparation of health education teachers. First, health education faculty must be informed about reform proposals which will impact their programs. The responses of the subjects in this study indicate that they have not read the publications of The Holmes Group. It is difficult to make informed judgments without investing time studying and considering the topic in question.

Second, health education must be concerned about potential divisions within the discipline. Community and school health
education are more similar than different. Emphasizing the commonalities can strengthen the discipline. Divisions within will weaken the field. Much of this work has already been done in the formulation of the *Framework for the Development of Competency-based Curricula for Entry Level Health Educators* (National Task Force on the Preparation and Practice of Health Educators, 1985). Integration between these competencies and the goals of The Holmes Group (1986) must be achieved by institutions which belong to The Holmes Group. If Holmes-based programs become widespread, this will be important for more universities preparing school health teachers.

Third, preparation of health education teachers must focus on preparing better teachers. One area of agreement among the subjects of this study is that graduates of Holmes-based programs will be better prepared. The subjects agreed that those individuals would have stronger backgrounds in health, be better able to deal with students, possess better critical and creative thinking skills, and be more committed to teaching. If this is true, Holmes programs must be able to demonstrate the success of their programs via objective evaluation. This documentation must be available to other universities and interested groups and individuals.

The fourth recommendation is related. Holmes universities will need to aggressively recruit students. Institutions which offer
four-year programs will likely use the shorter programs to attract students. Holmes universities must be able to justify the additional training required in their programs.

**Conclusion**

Health education department chairs were willing to identify predicted effects on the preparation of health education which would result from implementation of The Holmes Group recommendations. Opinions varied regarding the "significance" of the effects and whether those effects would be positive or negative. Further research regarding the effects of The Holmes Group recommendations is needed as the programs are redesigned and implemented.

It appears that health educators, if the subjects are representative, are not convinced that the Holmes-group recommendations should be implemented. Their opinions are mixed, much like my own. I applaud the goals of The Holmes Group: (1) to make the education of teachers intellectually more solid; (2) to recognize differences in teachers' knowledge, skill, and commitment, and their education, certification, and work; (3) to create standards of entry to the teaching profession which are professionally relevant and intellectually defensible; (4) to connect schools of education with the public schools; and (5) to make schools better places for teachers to work and learn (The Holmes
Group, 1986). However, I fear some of the unanticipated or side effects of the program.

One potential side effect is declining enrollment (ranked #2). If fewer students choose school health education, opting for a community health major, less qualified teachers will be forced to teach health classes in the schools. It is not unusual for health education to exist as part of the science or physical education curriculum. This may become the rule if there are not sufficient specialists in health education.

Another potential side-effect is that fewer universities will offer teacher education programs (ranked #6). This may result in the elimination of smaller programs. Students would have fewer options available. There would be less diversity in the programs available.

Holmes-based curricula will also have positive effects. When examined in relation to Cruickshank's (1984) model of teacher education, The Holmes Group has much to offer. Specific recommendations for improved teaching of preservice teachers is one component of Tomorrow's Teachers (1986). This aspect was not addressed in the effects identified in this study, but the authors of the report express concern about this "explanatory variable" of teacher education. The believe that future teachers must study with "instructors who model fine teaching and who understand the
pedagogy of their material." Such experience will provide teachers with teachers they can emulate when they enter the workforce.

The content and instructional methods of Holmes-based programs will improve the knowledge and abilities of their graduates. These three variables (content, instruction, and preservice teachers) are all included in Cruickshank's model. The additional training should result in teachers who know more about the field of health education (ranked #3). A longer program will allow more time to study the content or knowledge base of health education. This is important in a field which is expanding as rapidly as health. One example of that expansion is the HIV (AIDS) epidemic. Fifteen years ago this was not part of the curriculum. However, the four-year program in community health may be more attractive for a number of reasons. First, students will be able to enter the workforce earlier. Second, their education will be less expensive. This is a real concern in an age where tuition costs are escalating rapidly and many students are forced to take loans to pay for their education. Third, health education majors may view community health education as a field with a variety of job opportunities which still provide opportunities to teach.

The increased field experiences predicted by subjects (#8) will result in entry level teachers who are more aware of the realities of the classroom. They will be better prepared to "deal with their students" (#4). The predictions regarding the
characteristics of Holmes graduates are positive. Cruickshank's sixth variable is an outcome variable: the goal of teacher education is to produce "sufficient and effective teachers." The effects of The Holmes Group recommendations on the preparation of health education teachers are perceived by the subjects to be positive. If these predictions are accurate, better teachers will graduate from Holmes-based programs than from traditional programs. This is an exciting possibility. It could lead to more widespread reform of teacher education. Other universities will be "forced" to redesign programs in order to compete with the Holmes Group universities. Competition will lead to stronger programs. Teachers will benefit, and public school students will, too.

The Holmes Group has purposely outlined a broad agenda. Its members felt that minor changes to the system would not be sufficient. From *Tomorrow's Teachers* (The Holmes Group, 1986): "We have found ourselves willing to argue for radical improvements that most of us would have dismissed as impractical just a few years ago. We have decided that we must work for the changes that we believe to be right, rather than those that we know can succeed." It may be that their evaluation of teaching and teacher education has brought them to a point which others have not yet reached. In any case, the publication of *Tomorrow's Teachers* has brought reform into the consciousness of both academia and the general public. This examination of teaching and teacher education can do
nothing but help, even if the proposals of The Holmes Group are implemented only in part, or not at all. Some improvement is better than none. Critical evaluation is better than blind acceptance of the status quo.

Individuals who support the goals of The Holmes Group, but question the specific recommendations, may be prodded to devise alternate ways to achieve those goals. Some, for example, have argued that the education of preservice teachers can be improved within the traditional four-year program (Mehlinger, 1986; Tom, 1986).

This investigator suspects that the actual number of Holmes-based programs which are actually implemented will be small. In that sense, some will consider The Holmes Group to have failed. However, it will have contributed to the improvement of teacher education by forcing those with a stake in teacher education to evaluate their own beliefs and programs. Changes will result from such evaluations. Individuals who support The Holmes Group recommendations welcome the presence of allies in education reform. It is hoped that individuals who disagree with the goals or recommendations will be motivated into action to promote their own agendas. In both instances, teacher education will be stronger simply due to the critical attention it receives.
APPENDICES
Reviewers - Field Test

Dr. Patricia A. Connard, Program Coordinator
Special Education
The Ohio State University

Dr. M. Eugene Gilliom, Program Coordinator
Social Studies Education
The Ohio State University

Dr. Charles R. Hancock, Program Coordinator
Foreign Language Education
The Ohio State University

Dr. Shirley F. Heck, Program Coordinator
Elementary Education
The Ohio State University

Dr. Maia P. Mertz, Program Coordinator
English Education
The Ohio State University

Dr. Aaron J. Miller, Program Coordinator
Vocational Education
The Ohio State University

Dr. Alan R. Osborne, Program Coordinator
Mathematics Education
The Ohio State University

Dr. Arthur L. White, Program Coordinator
Science Education
The Ohio State University
July 3, 1990

Enclosed is a mail survey which has been developed for use in a Delphi study of the effects of The Holmes Group recommendations on the preparation of health education teachers. This instrument will be sent to health education department chairs at Holmes Group members.

Before I can use this instrument, I need to check its validity for this study. I have sent the instrument to several experts who were recommended by Dr. Donald Anderson, Dean of the College of Education at The Ohio State University. I am requesting your assistance as a Program Coordinator at a Holmes Group university in determining the validity of the instrument in the following ways: (1) item clarity, (2) wording, (3) format, and (4) overall appearance.

Please complete the questionnaire as if your specialty (e.g. English, mathematics) was the subject of the study. Make comments and recommendations in the margins. Then complete the enclosed evaluation form.

Your response to this request is needed by July 10, 1990. Please return the instrument with your comments in the enclosed, stamped envelope.

Thank you in advance for your assistance with this study. Please accept the enclosed coupon as a token of my appreciation. If you have any questions, please call me at 614-895-6962.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit
Professor, Health Education
July 10, 1990

Dear

Last week you received a request to evaluate an instrument developed to study the effects of The Holmes Group recommendations on the preparation of health education teachers.

If you have already completed and returned the materials, please accept my sincere thanks. If not, please take a few minutes to do so today. It was sent to only nine professionals with the appropriate expertise.

If you did not receive the packet, if it was misplaced, or if you have questions concerning the instrument, please call me at 614-895-6962.

Sincerely,

John R. Hjelm
Ph.D. Candidate
The Ohio State University
July 26, 1990

Dear [Name]

About three weeks ago, I wrote to you concerning an important study about the effects of The Holmes Group recommendations on the preparation of health education teachers. As of today, I have not received your evaluation of the instrument developed for that study.

As a program coordinator at The Ohio State University, I realize that your schedule is busy. Only a few minutes of your time is required to complete the questionnaire. In order for the study to proceed, it is important for each reviewer to return the completed questionnaire.

I have enclosed a replacement questionnaire in case yours was lost or misplaced. Complete the instrument as if your specialty was the subject of the study. Please return the materials by August 2, 1990. A stamped, addressed return envelope has been included for your convenience. If you have already responded to this request, please disregard this letter and accept my sincere thanks for your participation.

Sincerely,

John R. Hjelm
Ph.D. Candidate
EFFECTS OF THE HOLMES GROUP RECOMMENDATIONS ON THE PREPARATION OF HEALTH EDUCATION TEACHERS, AS PERCEIVED BY HEALTH EDUCATION DEPARTMENT CHAIRS AT HOLMES GROUP MEMBERS.

Abstract

A modified Delphi technique will be used to identify the most significant effects of The Holmes Group recommendations on the preservice preparation of health education teachers. Health education department chairs at Holmes member universities will serve as subjects for the study.

Round 1 will consist of an open-ended questionnaire. Subjects will be asked to list the most significant effects of the Holmes Group recommendations. Round 1 data will be used to generate a list of effects.

The Round 2 questionnaire will be composed of a list of the effects generated in Round 1. Subjects will be asked (1) to rank the items in terms of their significance for the preparation of health education teachers and (2) to indicate whether they perceive each effect to be positive or negative. Comments related to responses will also be solicited. Composite rankings will be calculated based on the Round 2 data.

The Round 3 questionnaire will ask subjects (1) to review their Round 2 responses in relation to the summarized data from Round 2 and (2) respond to the Round 3 questionnaire in the same manner as the second round. Based on the data gathered in Round 3, the most significant effects and whether they are perceived to be positive or negative will be identified. Subjects will also be asked to provide background data as part of the Round 3 questionnaire.
HOLMES GROUP QUESTIONNAIRE

Instructions: List as many as seven significant effects the recommendations of The Holmes Group will have on the preparation of health education teachers. Space is provided for comments related to your responses.

1. __________________________________________________________________________
   Comments: __________________________________________________________________

2. __________________________________________________________________________
   Comments: __________________________________________________________________

3. __________________________________________________________________________
   Comments: __________________________________________________________________

4. __________________________________________________________________________
   Comments: __________________________________________________________________

5. __________________________________________________________________________
   Comments: __________________________________________________________________

6. __________________________________________________________________________
   Comments: __________________________________________________________________

7. __________________________________________________________________________
   Comments: __________________________________________________________________
Holmes Group Questionnaire
Round 3

Part 2 - Background Information

1. What is your specialty in health education? (circle number)
   1 SCHOOL HEALTH
   2 COMMUNITY HEALTH
   3 PUBLIC HEALTH
   4 OTHER (specify) _________________

2. What is the highest degree you have earned? (circle number)
   1 MASTERS DEGREE
   2 DOCTORAL DEGREE
   3 OTHER (specify) ___________

3. How long have you served as department chair? ___ YEARS

4. How long have you worked as a health educator? ___ YEARS

5. How long have you worked at your present university?
   ___ YEARS

6. Which of the following Holmes Group publications have you read? (circle numbers of all that apply)
   1 TOMORROW'S TEACHERS
   2 TOMORROW'S SCHOOLS
   3 THE HOLMES GROUP FORUM
7. Which of the following publications do you read regularly? (circle numbers of all that apply)

1. THEORY INTO PRACTICE
2. JOURNAL OF NEGRO EDUCATION
3. SOCIAL EDUCATION
4. PHI DELTA KAPPAN
5. TEACHERS COLLEGE RECORD
6. JOURNAL OF TEACHER EDUCATION
7. CHRONICLE OF HIGHER EDUCATION

8. When do you anticipate that you will implement a program based on The Holmes Group recommendations? (circle number)

1. 1990-91
2. 1991-92
3. 1992-93
4. OTHER (specify) __________

9. How many students with a teaching certificate in health education graduate each year?

____ STUDENTS

10. What is the undergraduate population of your university?

____ STUDENTS
Holmes Group Questionnaire
Evaluation Form

Instructions: After completing the instrument, answer each of the following questions by filling in the blank or circling the number to the left of your response to the question.

How long did it take to complete Part 1 of the instrument?

______ MINUTES

How long did it take to complete Part 2 of the instrument?

______ MINUTES

Were any questions too vague to answer?

1 YES (specify) ____________
2 NO

Were any questions too precise to answer?

1 YES (specify) ____________
2 NO

Were any questions biased toward specific responses?

1 YES (specify) ____________
2 NO

Were any questions too demanding to answer?

1 YES (specify) ____________
2 NO

Were answer choices mutually exclusive?

1 YES (specify) ____________
2 NO

Did any questions assume too much knowledge?

1 YES (specify) ____________
2 NO
APPENDIX B

ROUND 1
September 18, 1990

Dear

In one week you will have the opportunity to participate in an important study concerning the impact of The Holmes Group recommendations on the preparation of school health education teachers. Only 34 individuals from around the country have been selected to participate in this study. All are health education department chairs at universities which are members of The Holmes Group. Your opinions are essential because of your unique position. Please take advantage of this opportunity to have an impact on the preparation of health education teachers in the future.

Sincerely,

John R. Hjelm
Ph.D. Candidate
The Ohio State University
Dear «surname»:

Many important issues face school health education today. One of these is how best to prepare health education teachers. The Holmes Group has proposed a model which is intended to improve teacher education.

As a department chair at a university which is a member of The Holmes Group, you are faced with the reality of implementing the recommendations of The Holmes Group. Only 34 Holmes Group universities offer programs leading to teacher certification in health education. You are therefore in a unique position to provide input related to reform in teacher education. You are able to evaluate the curricular changes recommended by The Holmes Group and assess their long-term effects on the preservice preparation of health education teachers.

I am asking you to complete the enclosed questionnaire and return it by October 2, 1990. Your response will remain strictly confidential. The instrument has an identification number for mailing and follow-up purposes only. Your name and the name of your university will not appear on the questionnaire.

This study will utilize a modified Delphi technique, which will include two rounds in addition to this one. The second and third questionnaires will be mailed separately. Each questionnaire will: (1) summarize the responses to the previous questionnaire, (2) report your previous response, (3) report a summary of data collected in the previous round, and (4) ask you to review your responses considering the new data.

Thank you in advance for your assistance with this study. Please accept the enclosed coupon as a token of my appreciation. If you have any questions about the study, call me collect at 708-918-7431 after 6:00 pm.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit
Professor, Health Education
Dear

Last week you received an invitation to participate in an important study of the effects of The Holmes Group recommendations on the preparation of health education teachers. The response rate has been excellent, but as of today I have not yet received your completed questionnaire.

If you did not receive the packet, if it was misplaced, or if you have questions concerning the instrument, please call me collect at 708-918-7431 after 6:00 pm.

If you have already returned the questionnaire, please disregard this request, and thank you for your participation.

Sincerely,

John R. Hjelm
Ph.D. Candidate
The Ohio State University
Dear «surname»

About two weeks ago, I wrote to you concerning an important study about the effects of The Holmes Group recommendations on the preparation of health education teachers. As of today, I have not received your questionnaire.

As a leader in health education, I realize that your schedule is busy. Only a few minutes of your time is required to complete the questionnaire. In order for the study to proceed, it is important for each individual to return the completed questionnaire.

I have enclosed a replacement questionnaire in case yours was lost or misplaced. Please return the materials by October 16, 1990. A stamped, addressed return envelope has been included for your convenience. If you have already responded to this request, please disregard this letter and accept my sincere thanks for your participation.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit
Professor, Health Education
HOLMES GROUP QUESTIONNAIRE
Round 1

Instructions: State as many as seven significant effects which you predict the recommendations of The Holmes Group will have on the preservice preparation of health education teachers. These effects may be positive or negative. State each effect as succinctly as possible and be sure each response contains only one effect. Be specific! Space is provided for comments related to the effects you have listed.

1. ___________________________________________________________________

Comments: ____________________________________________________________________________

2. ___________________________________________________________________

Comments: ____________________________________________________________________________

3. ___________________________________________________________________

Comments: ____________________________________________________________________________
January 8, 1991

Dear «surname»:

I want to thank you for your participation in Round 1 of this study concerning the effects of The Holmes Group recommendations on the preparation of health education teachers. The responses have been excellent, and the input valuable. Your continued participation is critical to obtain maximum value from this study.

Based on the first round data, a second questionnaire has been prepared. The purpose of this communication is to allow you to reevaluate your first round responses in light of the information gathered in the first round. Care has been taken to summarize responses from the first questionnaire. This will allow you to compare your opinions with those of your colleagues.

Please return the completed questionnaire by January 22, 1991. If you have any questions regarding the second round, please call me collect at 708-918-7431 after 6:00 pm (CST) Monday through Friday.

Thank you again for your efforts on behalf of this important study. Please accept the enclosed bookmark as a token of my appreciation.

Sincerely,

John R. Hjelm               Philip Heit
Ph.D. Candidate             Professor, Health Education

P.S. If you would like to return your questionnaire by FAX, the number is 312-583-0858.
January 15, 1991

Dear

A week ago you should have received the second round of the Delphi study concerning the effects of The Holmes Group recommendations on the preparation of health education teachers. The study is important for the future of teacher preparation in health education.

In order for the study to be of maximum value, it is important that all individuals who responded in round one also respond in round two. The response has been excellent, but I have not yet received your round two questionnaire.

Please return the completed questionnaire as soon as possible. If the packet has been lost or misplaced, please call me collect at 708-918-7431 after 6:00 pm.

If you have already returned the questionnaire, please disregard this request. Thank you so much for your assistance.

Sincerely,

John R. Hjelm
Ph.D. Candidate
The Ohio State University
Holmes Group Questionnaire
Round 2

Listed below in random order are all the effects (32) and comments submitted in Round 1 of the study. The effects are in bold print, and each comment is preceded by an asterisk (*). Both are in Column 1 headed "Effect." Column 2 ("Percent") indicates the percent of respondents who listed each effect. Column 3 ("Rank") provides space for you to rank the significance of the effects. Column 4 ("Pos/Neg") refers to whether you perceive each effect to be positive or negative.

Instructions:
1. Read the list of effects and related comments in Column 1. Your Round 1 responses are highlighted in blue.
2. Note in Column 2 the percent of respondents which listed each comment in Round 1.
3. Rank the 15 most significant effects in Column 3 (1 = most significant, 2 = second most significant, etc.).
4. Indicate in Column 4 whether each of the effects which you ranked in the top 15 is a positive or negative effect.
5. Use the space at the end of the questionnaire for comments related to your responses.

<table>
<thead>
<tr>
<th>Column 1 Effect</th>
<th>Column 2 Percent</th>
<th>Column 3 Rank</th>
<th>Column 4 Pos/Neg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Effect 1: It will be difficult for Health Education to find field experiences for students.</td>
<td>8</td>
<td></td>
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<tr>
<td>Effect 2: Fewer students will select to go to schools offering Holmes versus a four-year degree.</td>
<td>42</td>
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<tr>
<td>• This is due to differential in time and cost for the same credentials.</td>
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<td>• This could hurt enrollment.</td>
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<td>• This is due to the financial impact; other areas only require 4 years for better pay.</td>
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<tr>
<td>• Unless all programs move to this system, there will be a major shift. Many programs will drop teacher education.</td>
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<td>Column 1</td>
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<td>Effect 3: Students will switch to community health.</td>
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<td>* Students in school Health Education would have to wait one more year</td>
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<td>to take on fulltime employment.</td>
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<td>* Jobs are already scarce for a straight school Health Education major.</td>
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<tr>
<td>Effect 4: Fewer universities will continue to offer teacher education</td>
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<tr>
<td>programs.</td>
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<td>* Programs with too much emphasis on generic education courses</td>
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<td>and weak on health content courses might be eliminated.</td>
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<td>* University priorities will be reorganized due to resources.</td>
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<td>Effect 5: School Health Education students will be better prepared to</td>
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<td>deal with their students.</td>
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<td>* With the experience of creative and critical thinking, they will be</td>
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<td>better able to transfer the dynamics of teaching in the classroom.</td>
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<td>Effect 6: The critical and creative thinking of the Health Education</td>
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<td>majors will be enhanced.</td>
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<td>* Organizing and implementing creative project learning will allow this</td>
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<td>Effect 7: Certification requirements for teachers of Health Education</td>
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<td>will be enhanced.</td>
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<td>Effect 8: A sense of &quot;profession&quot; will be instilled.</td>
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<td>Effect 9: Students will be more committed to teaching.</td>
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<td>* Positive.</td>
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</table>
Effect 10: A stronger preparation of teachers of Health Education, in terms of content background, will result.
* Less generic education hours leaves more room for health content courses.
* Positive.
* The Holmes Group will need to make a major impact on state certifying agencies- since most allow Physical Education with a health minor to teach Health Education.

Effect 11: The Holmes Group will have no effect whatsoever on Health Education.
* Nowhere in Health Education mentioned in the Holmes report.
* With the limited number of generic education hours in teacher preparation program as proposed by Holmes there should be no major effect on health content and methods courses taken by teachers.

Effect 12: Students will be better prepared to pass the National Teachers Exam.

Effect 13: There will be a failure to balance theoretical knowledge and practical application.
* The professional dominance by either common schools or higher education may lead to failure of marrying inquiry to practice.

Effect 14: Universities will redesign their curricula.
<table>
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<tr>
<th>Column 1</th>
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<tbody>
<tr>
<td>Effect 15: Universities will alter their programs to be general studies</td>
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<td>and/or liberal arts majors.</td>
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<td>* Teacher certification in health will be accomplished by a fifth year</td>
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<td>program.</td>
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<td>Effect 16: School Health Education majors will first receive a</td>
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<td>degree in community health (four years).</td>
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<td>* Elective hour during community health and a fifth year will be</td>
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<td>required for certification.</td>
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<td>Effect 17: More of the curriculum and instruction courses will be</td>
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<td>taught by faculty in curriculum and instruction.</td>
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<td>* Health Education faculty will teach one 4-hour course in health</td>
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<td>curriculum and instruction and a basic health services course.</td>
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<td>Effect 18: General education will be separate from professional</td>
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<td>education.</td>
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<td>Effect 19: A new more general Health Education degree will be</td>
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<td>developed.</td>
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<td>* This may attract many new majors not interested in teacher education</td>
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<td>or community health.</td>
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<td>Effect 20: Health Education majors will have more practical</td>
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<td>experience opportunities.</td>
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<td>* This has implications for faculty loads.</td>
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<td>Effect 21: General education/liberal arts requirements will be</td>
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<td>increased.</td>
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<td>Effect 22: Students will have trouble scheduling the required courses.</td>
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<td>* The program is almost lockstep.</td>
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<td>Effect 23: Health Education faculty will need to work more closely with other faculty in the college of education.</td>
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<td>* This is a positive outcome.</td>
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<td>Effect 24: Students will work with a master teacher during the fifth year.</td>
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<td>* Any extra guidance or practice is always worthwhile.</td>
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<tr>
<td>Effect 25: Health Education will be put on the nation's education reform agenda.</td>
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<td>Effect 26: Workplace health promotion programs will emerge.</td>
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<td>* This will result from The Holmes Group goal of making schools better places for teachers to work.</td>
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<tr>
<td>Effect 27: More challenging career paths will develop for health education teachers due to the need for a &quot;differentiated&quot; teaching profession.</td>
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<td>Effect 28: The different graduation times will lead to conflicts between community and school health.</td>
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<td>* A combined major will be designed. Community health majors will complete an internship and teacher education will complete student teaching.</td>
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<td>Effect 29: Early exposure to teaching will need to be retained.</td>
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<td>* Otherwise how will people discover if teaching is really for them?</td>
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<td>Effect 30: The preservice program will focus more on research.</td>
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<tr>
<td>Effect 31: Undergraduate preparation of teachers will be eliminated.</td>
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<tr>
<td>Effect 32: Program length will be altered from 4 to 5 years.</td>
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<tr>
<td>* Students should be better prepared, but fewer students may enter.</td>
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</tbody>
</table>

Comments: Please make comments related to any of the effects listed above. Be sure to indicate the number of each effect to which you are referring.
March 5, 1991

Dear «surname»:

Thank you for your continued participation in this study on the effects of The Holmes Group recommendations on the preparation of health education teachers. Response rate for Round 2 was excellent. All subjects who completed Round 1 also competed Round 2. Your continued participation is vital for the successful completion of this study.

Enclosed is the final questionnaire of the study. This questionnaire has been developed based on the data collected in Round 2. Second round responses have been summarized in the document titled Round 2 Results. This will be your final opportunity to reevaluate your previous responses in relation to those of the group.

Please return the completed questionnaire by March 19, 1991 in the stamped, addressed envelope which has been provided. If you have any questions, call me collect at 708-918-7431 after 6:00 pm, Monday through Friday.

Thank you again for the time and effort you have contributed to this study. Please use the enclosed dollar to treat yourself while completing the Round 3 questionnaire. I am anxious to receive the final data.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit
Professor, Health Education

P.S. If you would like to return your questionnaire by FAX, the number is 312-583-0858.
March 12, 1991

Dear

A week ago you should have received the third and final questionnaire of the Delphi study concerning the effects of The Holmes Group recommendations on the preparation of health education teachers.

Your round 1 and 2 responses were greatly appreciated. However, I have not yet received your round two questionnaire. Successful completion of the study requires Round 3 responses from all participants.

Please return the completed questionnaire as soon as possible. If the packet has been lost or misplaced, please call me collect at 708-918-7431 after 6:00 pm.

If you have already returned the questionnaire, please disregard this request. Thank you so much for your assistance.

Sincerely,

John R. Hjelm
Ph.D. Candidate
The Ohio State University
<table>
<thead>
<tr>
<th>Effect</th>
<th>Rank</th>
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<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>1. It will be difficult for Health Education to find field experiences for students.</td>
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<tr>
<td>2. Fewer students will select to go to schools offering extended Holmes programs versus a four-year degree.</td>
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<td>3. Students will switch to community health.</td>
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<tr>
<td>4. Fewer universities will continue to offer teacher education programs.</td>
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<tr>
<td>5. School Health Education students will be better prepared to deal with their students.</td>
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<tr>
<td>6. The critical and creative thinking of the Health Education majors will be enhanced.</td>
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<tr>
<td>7. Certification requirements for teachers of Health Education will be enhanced.</td>
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<tr>
<td>8. A sense of &quot;profession&quot; will be instilled.</td>
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<td>9. Students will be more committed to teaching.</td>
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<tr>
<td>10. A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
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<tr>
<td>11. The Holmes Group will have no effect whatsoever on Health Education.</td>
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<tr>
<td>12. Students will be better prepared to pass the National Teachers Exam.</td>
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<tr>
<td>13. There will be a failure to balance theoretical knowledge with practical application.</td>
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<td>14. Universities will redesign their curricula.</td>
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<td>15. Universities will alter their programs to be general studies and/or liberal arts majors.</td>
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<tr>
<td>16. School Health Education majors will first receive a degree in community health (four years).</td>
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<td>17. More of the curriculum and instruction courses will be taught by faculty in curriculum and instruction.</td>
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<td>18. General education will be separate from professional education.</td>
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<tr>
<td>19. A new more general Health Education degree will be developed.</td>
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<td>20. Health Education majors will have more practical experience opportunities.</td>
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<td>21. General education/liberal arts requirements will be increased.</td>
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<td>22. Students will have trouble scheduling the required courses.</td>
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<td>23. Health Education faculty will need to work more closely with other faculty in the college of education.</td>
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<td>24. Students will work with a master teacher during the fifth year.</td>
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<td>25. Health Education will be put on the nation's education reform agenda.</td>
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<td>26. Worksite health promotion programs will emerge.</td>
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<td>27. More challenging career paths will develop for health education teachers due to the need for a &quot;differentiated&quot; teaching profession.</td>
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<td>28. The differences in program length will lead to conflicts between community and school health.</td>
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<td>29. Early exposure to teaching will need to be retained.</td>
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<td>30. The preservice program will focus more on research.</td>
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<td>31. Undergraduate preparation of teachers will be eliminated.</td>
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<td>32. Program length will be altered from 4 to 5 years.</td>
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Background Information

1. What is your specialty in health education? (circle number)
   1 SCHOOL HEALTH
   2 COMMUNITY HEALTH
   3 PUBLIC HEALTH
   4 OTHER (specify) ______________

2. How long have you served as department chair or its equivalent?
   ______ YEARS

3. How long have you worked as a health educator?
   ______ YEARS

4. How long have you worked at your present university?
   ______ YEARS

5. Which of the following Holmes Group publications have you read? (circle numbers of all that apply)
   1 TOMORROWS TEACHERS
   2 TOMORROWS SCHOOLS
   3 THE HOLMES GROUP FORUM
   4 WORK IN PROGRESS: THE HOLMES GROUP ONE YEAR ON

6. List professional publications in which you have read about The Holmes Group.

   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________
   ____________________________________________________________

7. During what academic year do you anticipate that your department will implement a program based on The Holmes Group recommendations?
   _____ (year)

8. Will routes other than the Holmes-based program be available for certification of health education teachers? (circle number)
   1 YES (specify)
   2 NO

9. How many students graduate each year from your university with a teaching certificate in health education?
   ______ STUDENTS

10. What is the current undergraduate enrollment of your university?
    ______ STUDENTS
Holmes Group Questionnaire
Round 2 Results

A summary of the Round 2 results is presented below. It is organized as follows:

Column 1 ("Effect"): The effects submitted in Round 1 are printed in bold print. Comments from Rounds 1 (*) and 2(#) follow each effect.

Column 2 ("Rank"): The composite rank of the effect based on the means.

Column 3 ("#/Score"): The number of subjects who ranked that effect among the 15 most significant, followed by the total score (#1 rank = 1 points, #2 rank = 2 points, ... unranked = 16 points).

Column 4 ("Pos/Neg"): The number of subjects who believe the effect is positive, followed by the number who believe it is a negative effect.

Column 5 ("Indiv"): Your Round 2 response.

Instructions for Round 3:

1. Read the list of effects and related comments in Column 1.
2. Compare the composite results in Columns 2, 3, and 4 to your Round 2 responses in Column 5.
3. Using the gold Round 3 questionnaire, rank the 15 most significant effects in the Column headed "Rank" (1 = most significant, 2 = second most significant, etc.).
4. Using the gold Round 3 questionnaire, indicate whether you believe the effect will be positive (+), negative (-), or other (0).
5. On page 2 of the gold Round 3 questionnaire, complete the background information section.
Effect 1: It will be difficult for Health Education to find field experiences for students.

Effect 2: Fewer students will select to go to schools offering Holmes versus a four-year degree.
* This is due to differential in time and cost for the same credentials.
* This could hurt enrollment.
* This is due to the financial impact; other areas only require 4 years for better pay.
* Unless all programs move to this system, there will be a major shift. Many programs will drop teacher education.

Effect 3: Students will switch to community health.
* Students in school Health Education would have to wait one more year to take on fulltime employment.
* Jobs are already scarce for a straight school Health Education major.

Effect 4: Fewer universities will continue to offer teacher education programs.
* Programs with too much emphasis on generic education courses and weak on health content courses might be eliminated.
* University priorities will be reorganized due to resources.

Effect 5: School Health Education students will be better prepared to deal with their students.
* With the experience of creative and critical thinking, they will be better able to transfer the dynamics of teaching in the classroom.

# Same as number 10.
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<tr>
<th>Column 1</th>
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<tr>
<td><strong>Effect 6:</strong> The critical and creative thinking of the Health Education majors will be enhanced.</td>
<td>Rank: 10</td>
<td>Score: 5/116</td>
<td>Pos: 5/0</td>
<td>Index:</td>
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<td>* Organizing and implementing creative project learning will allow this.</td>
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<td><strong>Effect 7:</strong> Certification requirements for teachers of Health Education will be enhanced.</td>
<td>Rank: 12</td>
<td>Score: 6/150</td>
<td>Pos: 5/0</td>
<td>Index:</td>
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<td><strong>Effect 8:</strong> A sense of &quot;profession&quot; will be instilled.</td>
<td>Rank: 28</td>
<td>Score: 3/180</td>
<td>Pos: 3/0</td>
<td>Index:</td>
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<td><strong>Effect 9:</strong> Students will be more committed to teaching.</td>
<td>Rank: 7</td>
<td>Score: 7/134</td>
<td>Pos: 7/0</td>
<td>Index:</td>
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<td>* Positive.</td>
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<td><strong>Effect 10:</strong> A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
<td>Rank: 3</td>
<td>Score: 9/86</td>
<td>Pos: 9/0</td>
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<td>* Less generic education hours leaves more room for health content courses.</td>
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<td>* Positive.</td>
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<td>* The Holmes Group will need to make a major impact on state certifying agencies since most allow Physical Education with a health minor to teach Health Education.</td>
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<td><strong>Effect 11:</strong> The Holmes Group will have no effect whatsoever on Health Education.</td>
<td>Rank: 17</td>
<td>Score: 5/159</td>
<td>Pos: 1/3</td>
<td>Index:</td>
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<td>* Nowhere is Health Education mentioned in the Holmes report.</td>
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<td>* With the limited number of generic education hours in teacher preparation program as proposed by Holmes there should be no major effect on health content and methods courses taken by teachers.</td>
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<td><strong>Effect</strong></td>
<td><strong>Rank</strong></td>
<td><strong>#/Score</strong></td>
<td><strong>Pos/Neg</strong></td>
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<td>Effect 12: Students will be better prepared to pass the National Teachers Exam.</td>
<td>12</td>
<td>5/150</td>
<td>5/0</td>
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<td>Effect 13: There will be a failure to balance theoretical knowledge and practical application. * The professional dominance by either common schools or higher education may lead to failure of marrying inquiry to practice.</td>
<td>29</td>
<td>1/184</td>
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<td>Effect 14: Universities will redesign their curricula.</td>
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<td>12/47</td>
<td>8/2</td>
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<td>Effect 15: Universities will alter their programs to be general studies and/or liberal arts majors. * Teacher certification in health will be accomplished by a fifth year program.</td>
<td>14.5</td>
<td>4/152</td>
<td>2/2</td>
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<td>Effect 16: School Health Education majors will first receive a degree in community health (four years). * Elective hour during community health and a fifth year will be required for certification.</td>
<td>22</td>
<td>4/166</td>
<td>2/2</td>
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<td>Effect 17: More of the curriculum and instruction courses will be taught by faculty in curriculum and instruction. * Health Education faculty will teach one 4-hour course in health curriculum and instruction and a basic health services course.</td>
<td>20.5</td>
<td>5/165</td>
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<td>Effect 18: General education will be separate from professional education.</td>
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Effect 26: Workplace health promotion programs will emerge.
* This will result from The Holmes Group goal of making schools better places for teachers to work.

Effect 27: More challenging career paths will develop for health education teachers due to the need for a "differentiated" teaching profession.

Effect 28: The different graduation times will lead to conflicts between community and school health.
* A combined major will be designed. Community health majors will complete an internship and teacher education will complete student teaching.

Effect 29: Early exposure to teaching will need to be retained.
* Otherwise, how will people discover if teaching is really for them? # Already a necessity, but by adding another year definitely a must.

Effect 30: The preservice program will focus more on research.

Effect 31: Undergraduate preparation of teachers will be eliminated.

Effect 32: Program length will be altered from 4 to 5 years.
* Students should be better prepared, but fewer students may enter.
APPENDIX E

REVIEWS
Review Panel

Ms. Nancy Berggren  
Education Department  
North Park College  
Chicago IL

Ms. Katie Cardina  
Health Education  
Ohio State University  
Columbus OH

Dr. Leona Mirza  
Education Department  
North Park College  
Chicago IL

Ms. Barbara Phillips  
Education Department  
North Park College  
Chicago IL

Ms. Jill Wettersten  
Education Department  
North Park College  
Chicago IL

Mr. David Willcox  
Health Education  
Ohio State University  
Columbus OH
November 8, 1990

Dear «first name»:

Thank you for your willingness to review the enclosed instrument. The study concerns the effects of The Holmes Group recommendations on the preparation of health education teachers. The instrument will be sent to health education department chairs at Holmes Group members. Each subject has already completed the Round 1 questionnaire.

This packet contains an abstract of the study, an executive summary of The Holmes Group report, and the Round 2 questionnaire. I am requesting you to evaluate the questionnaire in the following ways: (1) item clarity, (2) wording, (3) format, and (4) overall appearance. Also note whether any of the effects listed seem redundant. Please make comments and suggestions in the margins of the questionnaire.

Your response to this request is needed by November 15, 1990. Please return the questionnaire in the enclosed envelope.

Thanks again for your assistance with this study. If you have any questions, please call me at 708-908-7431.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit, Ed.D.
Professor, Health Education
February 6, 1991

Dear «first name»:

Thank you again for your willingness to review the enclosed instrument. The study concerns the effects of The Holmes Group recommendations on the preparation of health education teachers. The instrument will be sent to health education department chairs at Holmes Group members. Each subject has already completed the Rounds 1 and 2 questionnaires.

This packet contains the Round 2 results and the Round 3 questionnaire. I am requesting you to evaluate them in the following ways: (1) item clarity, (2) wording, (3) format, and (4) overall appearance. Additionally, please examine the Round 2 results to determine whether any of the information provided is redundant or if more information is needed. Please make comments and suggestions in the margins.

Your response to this request is needed by February 15, 1991. Please return the questionnaire in the enclosed envelope.

Thanks again for your assistance with this study. If you have any questions, please call me at 708-918-7431.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit, Ed.D.
Professor, Health Education
April 16, 1991

Dear <surname>:

Our study on the effects of The Holmes Group recommendations on the preparation of health education teachers is now complete. Thank you for your participation. The commitment required to return all three questionnaires was greatly appreciated. Your efforts were vital for the successful completion of this study.

Enclosed is the Executive Summary of the study. I hope it will be informative. It will be interesting to discover whether these effects occur as the new programs are implemented.

Thank you again for your willingness to help us examine the preparation of health education teachers.

Sincerely,

John R. Hjelm
Ph.D. Candidate

Philip Heit, Ed.D.
Professor, Health Education
EFFECT OF THE HOLMES GROUP RECOMMENDATIONS ON THE PREPARATION OF HEALTH EDUCATION TEACHERS

Executive Summary

A modified Delphi study was used to identify the most significant effects of The Holmes Group recommendations on the preservice preparation of health education teachers. Health education department chairs at nine Holmes member universities completed all three rounds of the study.

Round 1 consisted of an open-ended questionnaire. Subjects were asked to list the most significant effects of The Holmes Group recommendations. The list of thirty-two effects generated in Round 1 was used to develop the Round 2 questionnaire.

The Round 2 questionnaire listed the effects submitted in Round 1, as well as the related comments. Subjects were asked to (1) rank the fifteen most significant effects and (2) indicate whether they perceived each effect to be positive or negative. Comments related to the ranked items were also solicited. Composite rankings were calculated and Round 2 comments were added to the instrument.

The Round 3 questionnaire asked subjects to (1) review their Round 2 responses in relation to the summarized data from Round 2 and (2) respond to the Round 3 questionnaire in the same manner as the second round. A summary of the 15 most significant effects identified in this study accompanies this summary.

The responses indicated a lack of agreement among the subjects. Thirty-one (of 32) effects listed on the questionnaire were ranked by at least one subject. Only the #1-ranked effect was ranked by all subjects, and it was perceived as a positive effect by 6 subjects and negative by three subjects. Among the fifteen most significant effects, six were perceived differently in terms of the type of effect (i.e. positive, negative, or other).

There were also differences regarding expected year of implementation of the new program. Two subjects were unsure, one guessed 1995, and three indicated they did not expect to actually implement a Holmes-based program. The responses of those who indicated an implementation date ranged from 1991 to 1993.

Six subjects indicated that alternate routes to certify health education teachers would be available. Routes specified were a four-year curriculum, a state competency program, CHES, and AAHE (?). These results may indicate a lack of support for programs based on the recommendations of The Holmes Group.
## Fifteen Most Significant Effects as Ranked in Round 3

<table>
<thead>
<tr>
<th>Rank</th>
<th>Effect</th>
<th>Mean</th>
<th>Median</th>
<th>+/0/-</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Universities will redesign their curricula.</td>
<td>5.44</td>
<td>6</td>
<td>6/0/3</td>
</tr>
<tr>
<td>2</td>
<td>Fewer students will select to go to schools offering Holmes versus a four-year degree.</td>
<td>7.00</td>
<td>6</td>
<td>0/0/7</td>
</tr>
<tr>
<td>3</td>
<td>A stronger preparation of teachers of Health Education, in terms of content background, will result.</td>
<td>8.00</td>
<td>8</td>
<td>6/1/0</td>
</tr>
<tr>
<td>4</td>
<td>School Health Education students will be better prepared to deal with their students.</td>
<td>8.78</td>
<td>5</td>
<td>6/0/0</td>
</tr>
<tr>
<td>5</td>
<td>Students will be more committed to teaching.</td>
<td>9.67</td>
<td>9</td>
<td>7/0/0</td>
</tr>
<tr>
<td>6</td>
<td>Fewer universities will continue to offer teacher education programs.</td>
<td>10.44</td>
<td>11</td>
<td>1/1/3</td>
</tr>
<tr>
<td>7</td>
<td>Students will switch to community health.</td>
<td>10.67</td>
<td>11</td>
<td>0/1/6</td>
</tr>
<tr>
<td>8</td>
<td>Health Education majors will have more practical experience opportunities.</td>
<td>11.33</td>
<td>12</td>
<td>5/0/0</td>
</tr>
<tr>
<td>9</td>
<td>Program length will be altered from 4 to 5 years.</td>
<td>11.44</td>
<td>14</td>
<td>0/1/5</td>
</tr>
<tr>
<td>10</td>
<td>Certification requirements for teachers of Health Education will be enhanced.</td>
<td>11.56</td>
<td>12</td>
<td>5/0/0</td>
</tr>
<tr>
<td>11</td>
<td>Early exposure to teaching will need to be retained.</td>
<td>11.78</td>
<td>13</td>
<td>6/0/0</td>
</tr>
<tr>
<td>12</td>
<td>School Health Education majors will first receive a degree in community health (four years).</td>
<td>12.00</td>
<td>13</td>
<td>3/0/2</td>
</tr>
<tr>
<td>12</td>
<td>The differences in program length will lead to conflicts between community and school health.</td>
<td>12.00</td>
<td>16</td>
<td>0/0/4</td>
</tr>
<tr>
<td>14</td>
<td>Health Education faculty will need to work more closely with other faculty in the college of education.</td>
<td>12.22</td>
<td>12</td>
<td>5/0/0</td>
</tr>
<tr>
<td>14</td>
<td>The critical and creative thinking of the Health Education majors will be enhanced.</td>
<td>12.22</td>
<td>16</td>
<td>3/0/0</td>
</tr>
</tbody>
</table>
REFERENCES


Association for the Advancement of Health Education. (1990). AAHE directory of institutions offering specialization in undergraduate and graduate professional preparation programs in school, community, and public health education addendum. *Health Education, 21*(1), 60.


