To the Graduate Council:

I am submitting herewith a thesis written by Jenny Addington Vinson entitled "A Study of the Role of the Instructional Supervisor of Science Education Programs in Tennessee Secondary Public Schools." I recommend that it be accepted in partial fulfillment of the requirements for Specialist in Education, with a major in Curriculum and Instruction.

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A STUDY OF THE ROLE OF THE INSTRUCTIONAL SUPERVISOR OF SCIENCE EDUCATION PROGRAMS IN TENNESSEE SECONDARY PUBLIC SCHOOLS

A Thesis

Presented for the

Specialist in Education

Degree

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Jenny Addington Vinson

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ABSTRACT

The purpose of this investigation was to determine the nature and effectiveness of current and ideal supervisory practices of instructional supervisors of science programs in Tennessee secondary public schools.

The participants included all Tennessee public school instructional supervisors of secondary science programs. The data for the investigation were obtained from responses to a questionnaire compiled by the researcher and based on the seven supervisory functions as determined by John T. Lovell (1967). Upon completion each respondent mailed his/her questionnaire directly to the researcher. The tabulated data were reported in percentages.

The responses concerning the current supervisory practices and the ideal supervisory practices were analyzed. Finally, the responses concerning the current and ideal supervisory practices were compared.

Of the twenty-nine functions listed, it was found that only fourteen were currently being practiced always or often by instructional supervisors. The other fifteen functions were seldom or never practiced. However, the respondents agreed that all twenty-nine functions should be practiced always or often by instructional supervisors of science programs.

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CHAPTER I

INTRODUCTION

I. GENERAL INTRODUCTION

Education in America is a complex organization and business. According to Kathryn Feyereisen, John Fiorino, and Arlene Nowak, (1970, p. 5), today's schools are required to provide services far in excess of past expectations. Education is expected to help in the elimination of poverty, provide economic opportunity, aid in achieving racial equality, deter crime, help alleviate juvenile delinquency, retrain workers when jobs have been eliminated by automation, aid the national defense, help preschool children and the aged. These new demands for extended services have caused the need for many changes and adjustments in the educational system.

Among the changes has been the role of the instructional supervisor. These added services along with the evolving concepts of teacher education and the introduction of new methods, organization patterns and subject matter content make it imperative that the role and function of the instructional supervisor be clearly defined and understood.

II. THE PROBLEM

Statement of the problem. The problem to be investigated by this study was the nature and effectiveness of current practices of instructional supervisors of secondary science programs in the Tennessee

Public Schools. The purpose was to determine the attitudes and the effectiveness of instructional supervisors concerning the (a) current and (b) ideal role of the instructional supervisor.

Questions to be answered. Several questions had to be answered in order to determine the attitudes held by instructional supervisors concerning the current and ideal role of the supervisor and the effectiveness of supervisory practices of secondary science education programs in Tennessee Public Schools. The questions were: (1) What are the attitudes of supervisors in Tennessee Public Schools concerning the present supervisory practices of secondary science education programs? (2) What are the attitudes of supervisors in Tennessee Public Schools concerning the ideal supervisory practices of secondary science education programs? (3) Do the expressed attitudes concerning existing supervisory practices and ideal supervisory practices differ?

Importance of the study. The intent of the study was to determine the existing and the ideal supervisory program of secondary science education in Tennessee Public Schools. The need to determine the existing and the ideal supervisory program of science education in Tennessee Public Schools was due to four reasons as stated by Robert Leeper (1965, p. 57). They were (1) The continuous discovery of new knowledge, (2) The changing character of the school population, (3) The evolving concepts of teacher education, and (4) The introduction of innovations relating to content, methods and organizational patterns.

For the purposes of this study the functions of supervision had to be identified. The functions of supervision as designated by Lovell (1967, pp. 12-27), were used as the basis for analyzing existing practices. Lovell divided the functions of supervision wito seven major behavior areas. They were: (1) Goal development, (2) Program development (3) Control and Coordination, (4) Motivation, (5) Problem solving, (6) Professional development, (7) Evaluation of educational outcomes.

Assumptions of the study. The following assumptions were observed in conducting this study.

1. The seven supervisory functions as designated by John T. Lovell (1967) were representative of all supervisory functions.
2. The responses of participants represent an honest and candid reaction to items in the questionnaire.
3. The population responding was representative of the total population in structure.

Delimitations of the study. The following delimitations were observed in conducting this study.

1. All directors or supervisors of curriculum and/or instruction as listed in the 1975-76 Directory of Public Schools for the State of Tennessee were considered.
2. All science curriculum specialists as listed in the 1975-76 Directory of Public Schools for the state of Tennessee were considered.

3. Due to the purposes of this study, the supervisors in special education, adult education, and vocational education were not considered.
4. This study was confined to instructional supervisors of Tennessee secondary public schools (State Department of Education, 1975, pp. 26-143).

III. DEFINITION OF TERMS

Science education refers to a structured, broad area sequential program in science where interpretive generalizations essential to basic understanding of all science form the organizing core of study and where content is drawn in as needed regardless of subject matter boundaries (Good, 1973, p. 518).

Supervision identifies administrative behavior chosen by persons involved in supervisory responsibilities as they attempt to influence other persons and situations in achievement of major tasks (Good, 1973, p. 573).

Supervisor refers to the professional person responsible for the promotion, development, maintenance, and improvement of instruction in a given field (Good, 1973, p. 574).

Subject Matter Supervisor identifies the specialist in content, methods and materials of a particular discipline (Good, 1973, p. 574).

IV. PROCEDURES

The sample and its selection. The 122 instructional supervisors in the Tennessee Public School System for the school year 1975-76 participated in the study (State Department of Education, 1975, pp. 26-143).

Methods of gathering data. The primary sources of data included in this study were responses from questionnaires sent to supervisors of the Tennessee Public Schools. Upon completion each respondent mailed his/her questionnaire directly to the researcher. The questionnaires had prepaid postage and a self-addressed envelope to facilitate ease of handling by the respondents. The information concerning the names and addresses of the supervisors was obtained from the 1975-76 Directory of Public Schools published by the State Department of Education, State of Tennessee.

The questionnaire was formulated by compiling a list of supervisory responsibilities based on the seven functions of supervision identified by Lovell. The questionnaire was designed so that each participant could indicate the degree of occurrence of the existing practices of instructional supervisors as compared to the possible occurrence of the ideal practices. Each participant was asked to indicate whether each function does and should occur always, often, seldom, or never.

The idea for the construction of the questionnaire in this manner was adopted from a thesis presented to the University of Tennessee in 1971 by Martha Jean Bratton.

The adequacy of the questionnaire was evaluated by four educators in the fields of supervision and science education selected from the

University of Tennessee faculty and the Tennessee public schools. These four educators were asked to examine the questionnaire for the following considerations: (1) Does this questionnaire encompass the important areas of instructional supervision of science education programs? (2) Are all of the questionnaire items clear and comprehensible? On the basis of their recommendations, the questionnaire was modified by the writer. The questionnaire was field-tested with a population comparable to that considered for the study. No revisions were made after it was field-tested. A copy of the questionnaire is included in Appendix B.

Treatment of the data. Responses to the questionnaires were recorded and rankings were made for the supervisory functions listed on the questionnaire in relation to the importance and the degree of implementation of the supervisory functions. The data were reported in percentages. For simplication in the treatment of the data, the researcher combined the "always-often" responses into a single column and the "seldom-never" responses into a single column. Tables were prepared to illustrate the responses for each item.

V. ORGANIZATION OF THE STUDY

Chapter I has been devoted to the presentation of a general introduction, the statement of the problem, the definition of terms, and the procedures of the study. Chapter II is a review of the related literature. The data are presented and analyzed in Chapter III. Chapter IV includes a summary of the findings, conclusions that may be reached from the findings, and recommendations for futher research.

CHAPTER II

REVIEW OF RELATED LITERATURE

Throughout the history of American education the term instructional supervisor has meant different things to different people. According to Wiles and Lovell (1975) each person interprets the functions of the instructional supervisor in terms of his past experiences, his needs, and his purposes. Robert Goldhammer discussed the attitudes of educators toward supervision in the following quote:

> Despite some efforts by professional writers to free it from its watchdog origins, supervision remains a bugaboo for many teachers, an experience to be avoided at all costs. Besides the inherent risks of having one's professional behavior examined, the supervisee must generally mobilize himself against a dozen extrinsic dangers associated with the supervisor's presence. Because it generally counts for so much, supervision often counts for nothing. (Goldhammer, 1969, p. 62)

The role of the instructional supervisor has changed during the past fifty years. In the 1910's and 1920's, the instructional supervisors ordered and directed teachers in their activities. During the 1930's the educational system was subject to 'democratic supervision' or indirect supervision of the teachers. 'Cooperative enterprise' or peer supervision engulfed instructional supervision in the 1940's. In the latter half of the 1950's supervisors were hired to improve the curriculum programs. Thus supervisors saw their role as being one of a change agent (Wiles and Lovell, 1975). Robert Leeper summarizes the present status of supervision in the following quote:

> Today supervision itself is being challenged both from within and from outside the profession. (Leeper, 1965, p.55)

James R. Ogletree explains the concept of changing supervision in a changing era:

> Experienced supervisors are well aware that changes in their schools and districts have been so varied and so rapid that their roles and responsibilities are less clear today than a decade ago. Equally true is the recognition by supervisors of the reality that the pressures and demands made upon them require knowledges and skills for which many are not prepared by either formal preparatory programs or experience. (Ogletree, 1972, p. 507)

Some of the ways in which the supervisor's role is changed are explained by Ogletree (1972, pp. 507-508):

1. Increase in teacher knowledge of and skill in a particular curriculum area above that held by the supervisor.
2. Increased emphasis on innovation.
3. Increased complexity of school organization thus a reduction in clarification of job assignments and responsibilities.
4. Teacher professionalism and its resultant militancy.

Kathryn Feyereisen, John Fiorino, and Arlene Nowak discussed the nature and the need of supervision in the following quote:

> The substance of supervision in educational organizations is curriculum improvement. That is, its main concern is with the design and operation of quality programs. Supervision includes expert services in both tractive (maintaining) and dynamic (innovating) aspects of curriculum planning and instructional leadership. Supervisory personnel, regardless of their designations, engage in processes of planning, organizing, coordinating, creating, and communicating, with a focus on educational programs . . . the curriculum. (Feyereisen, Fiorino, and Nowak, 1970, p. 115)

Hughes and Achilles view the instructional supervisor as a facilitator of the change process. Hughes and Achilles briefly list

the responsibilities of the supervisor's role as a change agent. They are:

> 1. Analyze where the school and the teachers are in terms of a change process.
> 2. Remove road blocks hindering orderly progress to the next step of the change process.
> 3. Develop strategies to assist an orderly progression through the remaining change process steps to the insertion of the change into the ongoing system. (Hughes and Achilles 1971, p. 842)

In 1971 James Exposito conducted a study in the state of Florida to determine those functions which 'experts' in the field of educational supervision and practicing supervisors believed to be most important in contributing to educational change. They were asked to rank from one to ten Ben Harris' (1963) ten tasks of instructional supervision. (One being most important and ten being the least important.) The following is how the participants ranked the functions in regard to educational change.

1. Developing Curriculum.
2. Staffing.
3. Arranging for In-Service Education.
4. Evaluating.
5. Providing Materials.
6. Organizing for Instruction.
7. Orienting New Staff Members.
8. Developing Public Relations.
9. Relating Special Services.
10. Providing Facilities (Esposito and Comfort, 1971, p.131).

According to Bowen and Comfort (1974), Abrell (1974), and Toepfer (1973), the purpose of instructional supervision is to improve instruction thru educational changes. Bowen and Comfort (1974) along with Wiles and Lovell (1975) state that instructional supervision is a catalyzing role rather than a directing role.

According to Abrell (1974) and Wiles and Lovell (1975), the instructional supervisor is a helper, facilitator, supporter, and learner. Ronald Abrell lists and explains what he considers as the important functions of the instructional supervisor:

> 1. Assessing-Diagnosing function. Helping co-workers assess and diagnose their needs for the specific situation in which they are working.
> 2. Planning function. Assisting colleagues in planning goals, objectives, and experiences that will produce maximum results.
> 3. Motivating function. Helping co-workers establish and maintain a climate that will precipitate the best in all parties.
> 4. Strategic function. Choosing and using those strategies which will produce intended outcomes.
> 5. Resource function. Making available those resource persons and materials needed to accomplish objectives and carry out experiences.
> 6. Appraising or Progress Reporting function. Helping those with whom one works to appraise and evaluate the results of their efforts to achieve goals . . . to assess the outcomes of a given set of experiences. (Abrell, 1974, pp. 213-214)

Educational systems generally hire instructional supervisors as professional resource people to aid principals and teachers with the expanding curriculum and new developments within the system. Stanley Williams summarized one concept of the role of the supervisor as he works with principals and teachers:

> In brief, he emphasizes the human-relations aspect of professional guidance as well as giving leadership to the interpretation of content and method; he uses the team approach with the principal, teacher, and consultants working cooperatively in small group conferences, workshops, and in-service classes for the improvement of classroom instruction; he contributes a resource team from the central office as needed; he serves as an interpreter and coordinator of the district's approved curriculum; he interprets desirable and necessary change in relation to new concepts, materials and research; and he an energizer who releases the potentialities of others and develops leadership among the teaching faculty. (Williams, 1972, pp. 87-88)

According to Helen Hale improved classroom instruction is the ultimate purpose of curriculum development. The role of the instructional supervisor is very important in the development of a new subject area curriculum sequence. Hale summarized the supervisor's responsibilities and relations in developing a new science curriculum in the following quote:

> evaluating present programs . . . observing classroom practice . . . examining new materials . . . encouraging new approaches . . . providing needed equipment and supplies . . . contacting scientists . . . selecting consultants . . . selecting workshop personnel . . . preparing bibliographies . . . collecting curriculum materials . . . attending conferences and conventions . . . visiting other systems . . . articulating programs . . . supervising production of curriculum bulletins . . . designing system-wide in-service programs . . . implementing new curricula. (Hale, 1969, p. 325)

According to Minor Gwynn experienced secondary teachers are secure in their subject matter area and in their teaching. Thus the supervisor is pressured to show each secondary teacher that he is familiar enough with the teaching area to give help and suggestions. Gwynn stated:

> The supervisor has to take steps like these to make himself more competent in the subject-matter area or to see that a specialist is available to help him and the teacher:
>
> 1. . . . By such study and application, taking one subject matter area at a time, the supervisor gradually becomes familiar again with subjects in which he was not specially trained later in college.
> 2. He asks the teacher to allow him to "sit-in" so that he can bring himself up to date on the subject matter area as he listens to the teacher and students.
> 3. He requests the teacher's lists of references, so that he can examine closely any with which he is not familiar.
> 4. He examines materials and supplementary sources available in the high school library and among the audio-visual aids.
> 5. He attends departmental meetings to familiarize himself with the special problems of that subject area.

> 6. He accompanies the teacher and pupils upon field trips and excursions, as opportunity arises.
> 7. In case he knows nothing about a subject - for example, he has never had Latin, or studied physics - he makes arrangements for teachers competent in these areas to visit and help his teachers. (Gwynn, 1961, pp. 230-231)

Stanley Williams stated that educators, including instructional supervisors, will never agree on all of the functions and responsibilities of supervisors. Thus the supervisor should provide periodic opportunities for the fellow educators with which he is in frequent contact to discuss what they feel are the expectations for his leadership role. Williams summarized the role of the instructional supervisor in relation to improved instruction through curriculum development:

> As the educational setting gradually shifts toward a new base of operations, the supervisory leader will require greater assistance from members of the faculty in aligning the school with the social forces that increasingly impinge upon it. He must weigh any opportunity to improve the school with its capabilities, both human and material, and be able to synthesize the development of the school's total program with that of other formal and informal groups in the community. His vision and foresight should be his only limitations for accomplishing the task that he sets out to do. (Williams, 1972, p. 32-33)

Since very little recent research has been done concerning supervisory practices, there is a need for more studies in the field. Most of the literature cited in this chapter emphasized the importance of supervisory functions in improving instruction, thus it reinforces the notion that research into current and ideal supervisory practices is needed to determine the status of supervision.

CHAPTER III

PRESENTATION AND ANALYSES OF DATA

I. INTRODUCTION

The purpose of this study was to examine the role of the instructional supervisor of science education programs in the Tennessee secondary public schools. In February 1976, a questionnaire (see Appendix B) was mailed to instructional supervisors in the Tennessee secondary public schools. Upon completion of the questionnaire each respondent mailed his/her questionnaire directly to the researcher. The questionnaires had pre-paid postage and a self-addressed envelope to facilitate ease of handling by the respondents. The number and percent of return are presented in Figure 1. The tabulated data from the returned questionnaires are presented and analyzed in this chapter according to the seven supervisory functions designated by J. T. Lovell (see Chapter I, page 3). First the attitudes of supervisors concerning their supervision of Tennessee secondary science programs are presented. Second, the supervisors' attitudes concerning what they should be doing are presented. Third, the supervisors' attitudes concerning what supervisors should and should not do are compared. For simplication in the treatment of the data, the researcher combined the "always-often" responses into a single column and the "seldom-never" responses into a single column (see Appendixes C and D.) The data are reported in percentages.

	Number Mailed	Number of Responses	Percentage of Return
Supervisors	122	95	79

Figure 1. Number of Questionnaires Sent and Percentage of Responses

II. WHAT SUPERVISORS DO

The questionnaire items listed in Table I are ranked according to the percent of implementation of the function by the practicing instructional supervisor. The percentages of "always-often" responses ranged from 20 to 83 percent. The percentages of "seldom-never" responses ranged from 15 to 78 percent. Only fourteen of the twenty-nine functions listed were answered "always-often" by a majority of the participants.

Implementation of goal development functions. It is interesting to note that over half of the participants responded "seldom-never" concerning current implementation of items four (facilitates the planning of goals or job targets for science teachers); and five (provides teaching guidelines including performance objectives for science teachers). Item sixteen (provides opportunities for teacher participation in goal development for the science program system-wide) and item twenty-seven (provides the staff with the opportunity to explain their professional goals) held a slight majority of "always-often" responses.

It is apparent that practicing supervisors are divided in opinion concerning the importance of goal development functions. The majority of supervisors said they want teachers to participate in planning goal developments and explain their professional goals, but they "seldom-never" help teachers develop these goals.

Implementation of program development functions. Only two functions received majority responses in the "always-often" column. Items two (involves science teachers in planning changes in the science program)

TABLE I

CURRENT SUPERVISORY PRACTICES RANKED
ACCORDING TO IMPLEMENTATION

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
20. encourages creative and innovative teaching in the science classroom	83	15	2
2. involves science teachers in planning changes in the science program	77	21	2
22. develops professional interest among science teachers	67	31	2
28. observes science instruction in classes for children of various abilities and interests at all grade levels	67	30	3
21. provides assistance to the beginning teacher in orienting him/her to the science facilities	65	32	3
24. acceptance of supervisor by science teachers as a necessary member of the instructional staff	64	33	3
19. counsels individual science teachers	62	36	2
26. involves the staff in establishing the criteria by which the teachers are evaluated	62	36	2
27. provides the staff with the opportunity to explain their professional goals and ways of achieving these goals	59	39	2

TABLE I (continued)

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
13. provides a seminar or workshop concerning some problem(s) or interest(s) of the teachers	58	40	2
23. provides psychological and technological support for science teachers	55	43	2
29. develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program	53	44	3
8. facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers	51	47	2
16. provides opportunities for teacher participation in goal development for the science program system-wide	51	47	2
15. facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers	50	48	2
25. supervisor facilitates self-evaluation by establishing job goals and measuring personal performance by these goals	45	52	3
7. provides the opportunities for teachers and students to engage in science field trips and laboratory experiences	44	54	2

TABLE I (continued)

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
1. shares responsibility in selecting those who will serve as science teachers	41	55	4
12. develops a system-wide policy to permit teacher participation in educational programs outside the system	40	56	4
5. provides teaching guidelines including performance objectives for science teachers	36	58	6
3. facilitates the development of a science sequence program based on behavioral objectives	35	62	3
6. develops a format for new science courses to be taught such as earth science	35	63	2
14. provides teachers with the opportunity to visit, observe, or participate in a model science class	35	63	2
10. organizes, promotes, or directs local science symposiums, science fairs or scientific conferences	34	62	4
4. facilitates the planning of goals or job targets for science teachers	32	64	4
9. provides demonstrations which allow teachers to evaluate new ideas effectively	25	72	3

TABLE I (continued)

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
11. attends state and/or national science symposiums, science fairs, or scientific conferences	25	73	2
17. facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other	22	75	3
18. provides opportunities for members of the local community to visit science classes	20	78	2

and eight (facilitates the use of new teaching strategies in the classroom) were viewed as current supervisory practices. However, items three (facilitates the development of a science sequence program based on behavioral objectives); six (develops a format for new science courses to be taught, such as earth science); seven (provides the opportunities for teachers and students to engage in science field trips and laboratory experiences); and nine (provides demonstrations which allow teachers to evaluate new ideas effectively) were viewed as seldom or never taking place.

This is noteworthy because supervisors responded that teachers were involved in changing the curriculum, but the supervisors did not provide demonstrations, facilitate programs based on behavioral objectives or develop new science courses. Thus it would seem that many teachers were left on their own at times.

Implementation of control and coordination functions. From the responses to these items it was apparent that the supervisors seldom to never practiced functions concerning control and coordination. Only 50 percent of the participants said that they "always-often" perform item fifteen (facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers). But a substantial majority said that they "seldom-never" practiced items one (shares responsibility in selecting those who will serve as science teachers); seventeen (facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other);

and eighteen (provides opportunities for members of the local community to visit science classes).

From the responses it was evident that supervisors seldom communicate with the local community concerning the activities of the science classes. If communication between the local community and the science classes was the responsibility of the supervisor solely, then it seems that there was very little knowledge of science activities being presented to the local community.

Implementation of motivation functions. The majority of the supervisors felt that they were a motivating force behind their teachers as evidenced by the responses to these functions. Only item fourteen (provides teachers with the opportunity to visit, observe, or participate in a model science class) received less than 50 percent "always-often" response. Items nineteen (counsels individual science teachers) and twenty (encourages creative and innovative teaching in the science classroom) received overwhelming "always-often" response, while item twenty-three (provides psychological and technological support for science teachers) received a slight majority.

Supervisors were optimistic in their attitudes concerning the motivation of their science teachers. It is apparent that supervisors felt that motivation of teachers is of prime importance in the improvement of the curriculum and instruction.

Implementation of problem solving functions. The responding supervisors were confident that they provided assistance in solving

problems. Item twenty-one (provides assistance to the beginning teacher in orienting him/her to the science facilities) received a substantial majority response of "always-often," while items thirteen (provides a siminar or workshop concerning some problem(s) or interest(s) of the teachers) and twenty-nine (develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program) received a moderate positive response.

By the responses, supervisors viewed problem solving functions as major duties they performed. They felt that it was important to alleviate potential problems before they arose by orienting beginning teachers and keeping abreast of strengths, weaknesses and needs of the existing science program.

Implementation of professional development functions. It seems ironic that the responding supervisors felt that they developed professional interest among science teachers (item twenty-two) when they substantially responded "seldom-never" to items ten (organizes, promotes, or directs local science symposiums, science fairs, or scientific conferences); eleven (attends state and/or national science symposiums, science fairs, or scientific conferences); and twelve (develops a system-wide policy to permit teacher participation in educational programs outside the system).

Responding supervisors felt that the development of professional interest was important enough to include this as an "always-often" duty, but they did not include the attendance or promotion of scientific affairs as an important function in professional development.

Implementation of evaluation functions. The majority responded that they "seldom-never" facilitate self-evaluation by establishing job goals and measuring personal performance by there goals (item twenty-five). However, they overwhelmingly responded "always-often" to items twenty-four (acceptance of supervisor by science teachers as a necessary member of the instructional staff); twenty-six (involves the staff in establishing the criteria by which the teachers are evaluated); and twenty-eight (observes science instruction in classes for children of various abilities and interests at all grade levels).

It is evident that supervisors view teacher evaluation as an important supervisory function. It is noteworthy to find that the supervisors encouraged teacher participation in teacher evaluation, but responded negatively to self-evaluation.

III. WHAT SUPERVISORS SHOULD DO

Table II contains the percentage responses of the participants concerning functions supervisors should perform. The functions are presented in the table according to the importance of the function as determined by the majority percentage in the "always-often" "seldom-never" columns. The percentages in the "always-often" column ranged from 77 to 97 percent, while the "seldom-never" percentages ranged from 0 to 20 percent.

Implementation of goal development functions. Even though all of these functions received "always-often" majority responses, it was evident that the supervisors viewed some to be more important than others. Item

TABLE II

IDEAL SUPERVISORY PRACTICES RANKED ACCORDING TO IMPORTANCE AS DETERMINED BY MAJORITY COUNT

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
15. facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers	97	0	3
16. provides opportunities for teacher participation in goal development for the science program system-wide	97	0	3
20. encourages creative and innovative teaching in the science classroom	97	0	3
21. provides assistance to the beginning teacher in orienting him/her to the science facilities	97	0	3
24. acceptance of supervisor by science teachers as a necessary member of the instructional staff	97	0	3
27. provides the staff with the opportunity to explain their professional goals and ways of achieving these goals	97	0	3
23. provides psychological and technological support for science teachers	96	1	3
26. involves the staff in establishing the criteria by which the teachers are evaluated	95	1	4

TABLE II (continued)

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
28. observes science instruction in classes for children of various abilities and interests at all grade levels	95	1	4
29. develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science programs	95	1	4
22. develops professional interest among science teachers	94	3	3
25. supervisor facilitates self-evaluation by extablishing job goals and measuring personal performance by these goals	94	2	4
13. provides a seminar or work-shop concerning some problem(s) or interest(s) of the teachers	92	4	4
17. facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other	92	5	3
19. counsels individual science teachers	91	4	5
4. facilitates the planning of goals or job targets for science teachers	89	7	4
2. involves science teachers in planning changes in the science program	88	7	5

TABLE II (continued)

Questionnaire Item and Number	Percentages of Response		
	Always-Often	Seldom-Never	No Response
1. shares responsibility in selecting those who will serve as science teachers	86	11	3
7. provides the opportunities for teachers and students to engage in science field trips and laboratory experiences	86	11	3
8. facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers	86	10	4
3. facilitates the development of a science sequence program based on behavioral objectives	85	13	2
9. provides demonstrations which allow teachers to evaluate new ideas effectively	85	13	2
10. organizes, promotes, or directs local science symposiums, science fairs, or scientific conferences	83	14	3
11. attends state and/or national science symposiums, science fairs, or scientific conferences	83	14	3
14. provides teachers with the opportunity to visit, observe, or participate in a model science class	83	13	4

TABLE II (continued)

Questionnaire Item and Number	Percentages of Responses		
	Always-Often	Seldom-Never	No Response
12. develops a system-wide policy to permit teacher participation in educational programs outside the system	82	13	5
18. provides opportunities for members of the local community to visit science classes	80	16	4
6. develops a format for new science courses to be taught, such as earth science	79	19	2
5. provides teaching guidelines including performance objectives for science teachers	77	20	3

four (facilitates the planning of goals or job targets for science teachers) received substantial positive response, while item five (provides teaching guidelines including performance objectives for science teachers) received 11 percent less. However, items sixteen (provides opportunities for teacher participation in goal development for the science program system-wide) and twenty-seven (provides the staff with the opportunity to explain their professional goals and ways of achieving these goals) received 97 percent.

Supervisors felt that all of these functions should be performed "always-often." However, responding supervisors viewed teacher participation in goal development and providing opportunities for teacher explanation of personal professional goals as most important.

Implementation of program development functions. It was evident that responding supervisors agreed that functions concerning program development are important. Only item six (develops a format for new science courses to be taught, such as earth science) failed to receive greater than 80 percent "always-often" response. Items three (facilitates the development of a science sequence program based on behavioral objectives) and nine (provides demonstrations which allow teacher to evaluate new ideas effectively) received equal response of 85 percent while items seven (provides the opportunities for teachers and students to engage in science field trips and laboratory experiences) and eight (facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers) received 1 percent

greater. Item two (involves science teachers in planning changes in the science program) was viewed as most important.

As evidenced by the responses, supervisors felt that program development functions should be performed "always-often." However, these functions ranked in the eighty percentile level of responses. Thus it is apparent that supervisors felt other functions should be performed more than program development functions.

Implementation of control and coordination functions. Even though the participants agreed that these functions should be implemented, they varied in their attitudes concerning the importance of each function. Items one(shares responsibility in selecting those who will serve as science teachers) and eighteen (provides opportunities for members of the local community to visit science classes) received 80 percent or greater "always-often" response, while items fifteen (facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers) and seventeen (facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other) received 97 and 92 percent respectively.

It was evident from the responses that the supervisors felt that communication among teachers and between the school and community should be important. Supervisors selection of science teachers and community member visitation of science classes ranked second in importance.

Implementation of motivation functions. Only item fourteen (provides teachers with the opportunity to visit, observe, or participate in a model science class) received less than 90 percent " always-often" response. Clearly, the supervisors agreed that counseling of individual teachers (item nineteen); encouraging creative and innovative teaching (item twenty); and providing psychological and technological support for science teachers (item twenty-three) were important.

These respondents felt that motivation should be an important function of supervision. Respondents said that provision of support for science teachers and encouragement of innovative teaching should be the most important functions concerning control and coordination.

Implementation of problem solving functions. The supervisors substantially agreed that problem-solving should be a supervisory function. Item thirteen (provides a seminar or workshop concerning some problem(s) or interest(s) of the teachers) received 92 percent positive response, while items twenty-one (provides assistance to the beginning teacher in orienting him/her to the science facilities) and twenty-nine (develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program) received as much as 5 percent greater.

Implementation of professional development functions. By a 94 percent majority response, the supervisors felt that development of professional interest among science teachers (item twenty-two) should be a supervisory function. However, as much as a 12 percent drop was evidenced when items ten (organizes, promotes, or directs local science symposiums,

science fairs, or scientific conferences); eleven (attends state and/or national science symposiums, science fairs, or scientific conferences); and twelve (develops a system-wide policy to permit teacher participation in educational programs outside the system) were evaluated.

It is noteworthy that only 83 percent said that supervisors should organize, promote, direct or attend scientific functions. However, they felt that professional interest should be encouraged.

Implementation of evaluation functions. As evidenced by the majority, supervisors felt evaluation should be a major supervisory function. Item twenty-four (acceptance of supervisor by science teachers as a necessary member of the instructional staff) received 97 percent, while items twenty-six (involves the staff in establishing the criteria by which the teachers are evaluated) and twenty-eight (observes science instruction in classes for children of various abilities and interests at all grade levels) received 95 percent. Item twenty-five (supervisor facilitates self-evaluation by establishing job goals and measuring personal performance by these goals) received 1 percent less. The respondents were in agreement concerning teacher and supervisor evaluation.

IV. COMPARISON OF DO AND SHOULD DO RESPONSES

Implementation of goal development functions. Even though a minority of supervisors responded "always-often" to the planning of goals or job targets for science teachers (item four) 89 percent said it should be practiced "always-often." While over half of the respondents said providing teaching guidelines (item five) was a "seldom-never" current practice, only

20 percent said it should "seldom-never" occur. Slightly over 50 percent said they currently provide for teacher participation in system wide goal development (item sixteen) but a 97 percent said it should be done "always-often." Ninety-seven percent said teachers should "always-often" be provided the opportunity to explain their goals (item twenty-seven) but only 59 percent currently practice this "always-often."

Implementation of program development functions. A substantial majority felt that all items concerning program development should be practiced "always-often." However, it is evident by the responses that most program development functions are "seldom-never" practiced. Only items two (involves science teachers in planning changes in the science program) and eight (facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers) are currently practiced by a majority of supervisors. Items three (facilitates the development of a science sequence program based on behavioral objectives); six (develops a format for new science courses to be taught, such as earth science); seven (provides the opportunities for teachers and students to engage in science field trips and laboratory experiences); and nine (provides demonstrations which allow teachers to evaluate new ideas effectively) are currently "seldom-never" practiced.

Implementation of control and coordination functions. It was apparent from the responses that supervisors currently do not facilitate communication among science teachers (item fifteen); between science teachers and the local community (item seventeen); and between the local

community and the science classes (item eighteen). However, the majority responded by saying that these functions should "always-often" be practiced. Over double the percentage of supervisors said that supervisors should "always-often" help select science teachers (item one) as currently do.

Implementation of motivation functions. While a majority said all of these functions should be practiced "always-often," only items nineteen (counsels individual science teachers); twenty (encourages creative and innovative teaching in the science classroom); and twenty-three (provides psychological and technological support for science teachers) are currently being practiced "always-often" by the majority. Item fourteen (provides teachers with the opportunity to visit, observe, or participate in a model science class) received only 35 percent "always-often" for current practice.

Implementation of problem solving functions. A majority of supervisors said that items thirteen (provides a seminar or workshop concerning some problem(s) or interest(s) or the teachers); twenty-one (provides assistance to the beginning teacher in orienting him/her to the science facilities); and twenty-nine (develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program) should "always-often" be performed and a majority of supervisors reported that they currently were.

Implementation of professional development functions. Over 80 percent of the responding supervisors said that the professional development functions should occur "always-often," but only item

twenty-two (develops professional interest among science teachers) is currently being practiced "always-often," by a majority. The results showed that very little is being done by supervisors concerning organizing, promoting, or attending scientific affairs (items ten and eleven). Item twelve concerning a policy to permit teacher participation in programs outside the system showed little current involvement by the supervisors.

Implementation of evaluation functions. Ninety-seven percent felt that they should be accepted by the teachers as a part of the staff (item twenty-four), but only 64 percent saw it as a current practice "always-often." While only 45 percent of the supervisors "always-often" facilitated self-evaluation by establishing job goals (item twenty-five), 94 percent thought supervisors should "always-often." Only 62 percent involved the staff in developing evaluation criteria (item twenty-six), but 95 percent said it should be practiced "always-often." Ninety-five percent said supervisors should "always-often" observe various classes of children, but only 67 percent said that they currently do.

CHAPTER IV

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FURTHER STUDY

I. SUMMARY

A study of the current and ideal role of instructional supervisors of science programs in Tennessee secondary public schools as viewed by supervisors was conducted in the spring of 1976. All instructional supervisors of Tennessee secondary public schools participated in the study.

The first part of the chapter is a summary of the findings. The second part of the chapter identifies conclusions drawn from the study. The third section presents recommendations for additional research.

Even though supervisors were divided concerning what they currently do, they were in agreement about activities supervisors ought to perform. A majority of the supervisors agreed that all twenty-nine functions should be practiced by supervisors.

Of the twenty-nine functions that supervisors felt should take place, less than 50 percent (fourteen) of the functions received a majority response as currently being performed. They were equally undecided on the current practice of one item, but felt that it should be practiced. A majority of the supervisors felt that there were fourteen other functions not being performed that should be.

II. CONCLUSIONS

1. Since a majority of the participants agreed that supervisors ought to perform "always-often" all twenty-nine functions listed on the questionnaire, one might conclude that Tennessee instructional supervisors view the supervision of secondary science programs with a single objective in mind.

2. It was evident from the responses that the supervisors felt that they should be doing more than they were at the time the study was conducted. The conclusion is made that the supervisors need additional supervisory help, or that their time is being spent performing other unnamed tasks, or that the supervisor is inefficient in his role.

3. Even though the supervisors were divided concerning the functions supervisors are currently performing, they were divided by degree of performance and not by kind of performance. Thus one might conclude that the supervisors recognize the functions that they are currently performing.

4. Fourteen items were viewed as currently taking place "seldom-never" and opinion was equally divided on one item. However, a substantial majority of the participants felt that these functions should take place. Thus a study should be directed toward these fifteen functions.

5. Because a majority of the participants felt that all of the functions should be performed, the conclusion is made that the supervisors want to improve supervision of science programs by adding functions rather than by dropping existing functions.

III. RECOMMENDATIONS FOR FURTHER RESEARCH

The review of related literature in Chapter II and the conclusions derived from this study indicate the need for further research concerning the role of the general instructional supervisor and the science specialist. The recommendations reflect concerns discussed or implied in previous chapters of this study.

1. Further research concerning the role of general instructional supervisors and science specialists should be conducted. One study could investigate the amount of time per week spent by general instructional supervisors improving the curriculum and instruction of science education programs vs. the amount of time spent by science specialists.
2. Since this study concluded that many instructional supervisors felt that they were not functioning ideally, a study should be conducted to determine other unnamed tasks that supervisors are performing.
3. As evidenced by the control and coordination functions listed in previous chapters, that communication among supervisors, teachers, and the local community is not ideal. Thus a state-wide study should be conducted to determine the perceptions of teachers, principals, and superintendents concerning supervisory functions.
4. Because of recent innovations and curriculum changes, a study should be conducted to determine the qualifications that are needed by supervisors to perform competently their assignments.

5. As evidenced by the responses, a study should be conducted to determine the job description of the instructional supervisor as related to the goals of the individual and the organization.

BIBLIOGRAPHY

BIBLIOGRAPHY

Abrell, Ronald. "The Humanistic Supervisor Enhances Growth and Improves Instruction." Educational Leadership, XXXII (December, 1974), 212-216.

Bowen, Larry, and Ronald Comfort . "The Supervisor vs. Institutional Constraints on Professional Growth." Educational Leadership, XXXI (April, 1974), 627-629.

Bratton, Martha Jean. A Study of the Role of the Instructional Supervisor in the Knox County School System. (Thesis presented to the University of Tennessee, 1971)

Esposito, James, and Ronald Comfort. "Supervision: Fostering Instructional Change through Curriculum Development." Education, L (November, 1973), 132-133.

Feyereisen, Kathryn, John Fiorine, and Arlene Nowak. Supervision and Curriculum Renewal: A Systems Approach. New York: Meredith Corporation, 1970.

Goldhammer, Robert. Clinical Supervision. New York: Holt, Rinehart, and Winston, 1969.

Good, Carter V. (ed.) Dictionary of Education. New York: McGraw-Hill Book Company, 1973.

Gwynn, Minor J. Theory and Practice of Supervision. New York: Dodd, Mead, and Company 1961.

Hale, Helen. "Developing an Articulated Science Curricula." Readings In Science Education for the Secondary School. by Hans O. Anderson (ed.), New York: Macmillan Company, 1969, 318-325.

Hughes, L. W. and C. M. Achilles, "The Supervisor as a Change Agent." Educational Leadership, XXVIII(May, 1971), 840-843.

Leeper, Robert (ed.) Role of Supervisor and Curriculum Director in a Climate of Change. Washington: Association for Supervision and Curriculum Development, NEA, 1965.

Leeper, Robert (ed.) Supervision: Emerging Profession. Washington: Association for Supervision and Curriculum Development, NEA, 1969.

Lovell, John T. "A Perspective for Viewing Instructional Supervisory Behavior," In Supervision: Perspectives and Propositions, W. H. Lucio (ed.).Washington: Association for Supervision and Curriculum Development Development, 1967.

Ogletree, James. "Changing Supervision in a Changing Era." Educational Leadership XXIX (March, 1972); 507-509.

Toepfer, Conrad. "The Supervisor's Responsibility for Innovation." Educational Leadership XXX (May, 1973); 740-743.

Wiles, Kimbell, and Lovell, John. Supervision for Better Schools. New Jersey: Prentice-Hall, Inc., 1975.

Williams, Stanley. New Demensions in Supervision. Scranton, Pennsylvania: International Textbook Company, 1972.

1975-76 Directory of Public Schools. Nashville: Tennessee State Department of Education, 1975.

APPENDIXES

APPENDIX A

Route 2, Box 13-F-1
Kingston, Tennessee 37763
February 20, 1976

Dear Fellow Educator:

Under the supervision of Dr. A. Paul Wishart of The University of Tennessee, a survey of science supervisory practices in the Tennessee Public Schools is being conducted as a graduate research study.

The problem to be investigated is the nature and effectiveness of current practices of instructional supervisors of science programs. The intent of the study is to improve the supervisory program of secondary sciences in Tennessee. When the study is completed, the results will be available for loan from the Graduate Library at The University of Tennessee, Knoxville.

As part of this survey, a questionnaire has been constructed to collect data regarding perceptions of science supervision. These questionnaires are being sent to all instructional supervisors in Tennessee, including those solely responsible for science programs.

Please fill in the accompanying questionnaire. The questionnaire has been designed so that you may express your opinion as to whether or not you think these activities should be practiced in your system. No attempt will be made to associate individual responses with any particular person.

Thank you for taking time to help with this survey. For your convenience, a self-addressed, stamped envelope is enclosed.

Sincerely,

Jenny A. Vinson

Dr. A. Paul Wishart
Professor,
The University of Tennessee

APPENDIX B

INSTRUCTIONS

There are many functions of an instructional supervisor of science programs, some of which are listed below. On the left please check (√) your perception of what supervisors are now doing. On the right please check (√) what you think supervisors should do.

WHAT SUPERVISORS DO					WHAT SUPERVISORS SHOULD DO			
Always	Often	Seldom	Never		Always	Often	Seldom	Never
				1. shares responsibility in selecting who will serve as science teachers				
				2. involves science teachers in planning changes in the science program				
				3. facilitates the development of a science sequence program based on behavioral objectives				
				4. facilitates the planning of goals or job targets for science teachers				
				5. provides teaching guidelines including performance objectives for science teachers				
				6. develops a format for new science courses to be taught, such as earth science				
				7. provides the opportunities for teachers and students to engage in science field trips and laboratory experiences				
				8. facilitates the use of new teaching in the classroom, such as team teaching, teaching modules, or learning centers				

APPENDIX B (continued)

WHAT SUPERVISORS DO					WHAT SUPERVISORS SHOULD DO			
Always	Often	Seldom	Never		Always	Often	Seldom	Never
				9. provides demonstrations which allow teachers to evaluate new ideas effectively				
				10. organizes, promotes, or directs local science symposiums, science fairs, or scientific conferences				
				11. attends state and/or national science symposiums, science fairs, or scientific conferences				
				12. develops a system-wide policy to permit teacher participation in educational programs outside the system				
				13. provides a seminar or workshop concerning some problem(s) or interest(s) of the teachers				
				14. provides teachers with the opportunity to visit, observe, or participate in a model science class				
				15. facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers				
				16. provides opportunities for teacher participation in goal development for the science program system-wide				
				17. facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other				

APPENDIX B (continued)

WHAT SUPERVISORS DO					WHAT SUPERVISORS SHOULD DO			
Always	Often	Seldom	Never		Always	Often	Seldom	Never
				18. provides opportunities for members of the local community to visit science classes				
				19. counsels individual science teachers				
				20. encourages creative and innovative teaching in the science classroom				
				21. provides assistance to the beginning teacher in orienting him/her to the science facilities				
				22. develops professional interest among science teachers				
				23. provides psychological and technological support for science teachers				
				24. acceptance of supervisor by science teachers as a necessary member of the instructional staff				
				25. supervisor facilitates self-evaluation by establishing job goals and measuring personal performance by these goals				
				26. involves the staff in establishing the criteria by which the teachers are evaluated				
				27. provides the staff with the opportunity to explain their professional goals and ways of achieving these goals				

APPENDIX B (continued)

WHAT SUPERVISORS DO					WHAT SUPERVISORS SHOULD DO			
Always	Often	Seldom	Never		Always	Often	Seldom	Never
				28. observes science instruction in classes for children of various abilities and interests at all grade levels				
				29. develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program				

APPENDIX C

SUMMARY OF RESPONSES

WHAT SUPERVISORS DO						WHAT SUPERVISORS SHOULD DO				
Always	Often	Seldom	Never	No Response		Always	Often	Seldom	Never	No Response
12	27	38	14	4	1. shares responsibility in selecting those who will serve as science teachers	44	38	8	2	3
33	40	19	1	2	2. involves science teachers in planning changes in the science program	53	30	6	1	5
2	31	46	13	3	3. facilitates the development of a science sequence program based on behavioral objectives	37	44	7	5	2
5	26	46	14	4	4. facilitates the planning of goals or job targets for science teachers	33	51	5	2	4
8	26	40	15	6	5. provides teaching guide-lines including performance objectives for science teachers	42	31	14	5	3
6	27	38	22	2	6. develops a format for new science courses to be taught such as earth science	34	41	13	5	2
11	30	41	11	2	7. provides the opportunities for teachers and students to engage in science field trips and laboratory experiences	30	51	8	3	3

APPENDIX C (continued)

WHAT SUPERVISORS DO						WHAT SUPERVISORS SHOULD DO				
Always	Often	Seldom	Never	No Response		Always	Often	Seldom	Never	No Response
8	40	40	5	2	8. facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers	34	47	8	2	4
2	22	52	16	3	9. provides demonstrations which allow teachers to evaluate new ideas effectively	23	58	10	2	2
4	28	36	23	4	10. organizes, promotes, or directs local science symposiums, science fairs, or scientific conferences	18	61	7	6	3
2	22	38	31	2	11. attends state and/or national science symposiums, science fairs, or scientific conferences	19	60	9	4	3
7	31	27	26	4	12. develops a system-wide policy to permit teacher participation in educational programs outside the system	26	52	9	3	5
12	43	33	5	2	13. provides a seminar or work-shop concerning some problem(s) or interest(s) of the teachers	31	56	4	0	4
9	25	41	11	2	14. provides teachers with the opportunity to visit, observe, or participate in a model science class	26	53	12	0	4

APPENDIX C (continued)

WHAT SUPERVISORS DO						WHAT SUPERVISORS SHOULD DO				
Always	Often	Seldom	Never	No Response		Always	Often	Seldom	Never	No Response
14	33	38	8	2	15. facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers	46	46	0	0	3
15	33	38	7	2	16. provides opportunities for teacher participation in goal development for the science program system-wide	43	49	0	0	3
3	18	57	14	3	17. facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other	30	57	5	0	3
6	13	50	24	2	18. provides opportunities for members of the local community to visit science classes	17	59	15	0	4
12	47	30	4	2	19. counsels individual science teachers	29	57	4	0	5
19	60	14	0	2	20. encourages creative and innovative teaching in the science classroom	52	40	0	0	3
18	44	28	2	3	21. provides assistance to the beginning teacher in orienting him/her to the science facilities	62	30	0	0	3

APPENDIX C (continued)

WHAT SUPERVISORS DO						WHAT SUPERVISORS SHOULD DO				
Always	Often	Seldom	Never	No Response		Always	Often	Seldom	Never	No Response
15	48	27	3	2	22. develops professional interest among science teachers	56	33	3	0	3
13	39	39	2	2	23. provides psychological and technological support for science teachers	39	52	1	0	3
19	42	28	3	3	24. acceptance of supervisor by science teachers as a necessary member of the instructional staff	54	38	0	0	3
8	35	37	12	3	25. supervisor facilitates self-evaluation by establishing job goals and measuring personal performance by these goals	42	47	1	1	4
22	37	30	4	2	26. involves the staff in establishing the criteria by which the teachers are evaluated	50	40	1	0	4
17	39	32	5	2	27. provides the staff with the opportunity to explain their professional goals and ways of achieving these goals	49	43	0	0	3
13	50	25	4	3	28. observes science instruction in classes for children of various abilities and interests at all grade levels	36	54	1	0	4

APPENDIX C (continued)

WHAT SUPERVISORS DO						WHAT SUPERVISORS SHOULD DO				
Always	Often	Seldom	Never	No Response		Always	Often	Seldom	Never	No Response
9	41	34	8	3	29. develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program	50	40	1	0	4

APPENDIX D

PERCENTAGE SUMMARY OF RESPONSES

WHAT SUPERVISORS DO				WHAT SUPERVISORS SHOULD DO		
Always-Often	Seldom-Never	No Response		Always-Often	Seldom-Never	No Response
41	55	4	1. shares responsibility in selecting those who will serve as science teachers	86	11	3
77	21	2	2. involves science teachers in planning changes in the science program	88	7	5
35	62	3	3. facilitates the development of a science sequence program based on behavioral objectives	85	13	2
32	62	4	4. facilitates the planning of goals or job targets for science teachers	89	7	4
36	58	6	5. provides teaching guidelines including performance objectives for science teachers	77	20	3
35	63	2	6. develops a format for new science courses to be taught, such as earth science	79	19	2
44	54	2	7. provides the opportunities for teachers and students to engage in science field trips and laboratory experiences	86	11	3
51	47	2	8. facilitates the use of new teaching strategies in the classroom, such as team teaching, teaching modules, or learning centers	86	10	4

APPENDIX D (continued)

WHAT SUPERVISORS DO				WHAT SUPERVISORS SHOULD DO		
Always-Often	Seldom-Never	No Response		Always-Often	Seldom-Never	No Response
25	72	3	9. provides demonstrations which allow teachers to evaluate new ideas effectively	85	13	2
34	62	4	10. organizes, promotes, or directs local science symposiums, science fairs, or scientific conferences	83	14	3
25	73	2	11. attends state and/or national science symposiums, science fairs, or scientific conferences	83	14	3
40	56	4	12. develops a system-wide policy to permit teacher participation in educational programs outside the system	82	13	5
58	40	2	13. provides a seminar or workshop concerning some problem(s) or interest(s) of the teachers	92	4	4
35	63	2	14. provides teachers with the opportunity to visit, observe, or participate in a model science class	83	13	4
50	48	2	15. facilitates communication among science teachers to assure that each teacher will be aware of contributions and expectations of other science teachers	97	0	3
51	47	2	16. provides opportunities for teacher participation in goal development for the science program system-wide	97	0	3

APPENDIX D (continued)

WHAT SUPERVISORS DO				WHAT SUPERVISORS SHOULD DO		
Always-Often	Seldom-Never	No Response		Always-Often	Seldom-Never	No Response
22	75	3	17. facilitates communication between the science teachers and the local community to assure that all will be aware of the unmet needs and the expectations of each other	92	5	3
20	78	2	18. provides opportunities for members of the local community to visit science classes	80	16	4
62	36	2	19. counsels individual science teachers	91	4	5
83	15	2	20. encourages creative and innovative teaching in the science classroom	97	0	3
65	32	3	21. provides assistance to the beginning teacher in orienting him/her to the science facilities	97	0	3
67	31	2	22. develops professional interest among science teachers	94	3	3
55	43	2	23. provides psychological and technological support for science teachers	96	1	3
64	33	3	24. acceptance of supervisor by science teachers as a necessary member of the instructional staff	97	0	3
45	52	3	25. supervisor facilitates self-evaluation by establishing job goals and measuring personal performance by these goals	94	2	4
62	36	2	26. involves the staff in establishing the criteria by which the teachers are evaluated	95	1	4

APPENDIX D (continued)

WHAT SUPERVISORS DO				WHAT SUPERVISORS SHOULD DO		
Always-Often	Seldom-Never	No Response		Always-Often	Seldom-Never	No Response
59	39	2	27. provides the staff with the opportunity to explain their professional goals and ways of achieving these goals	97	0	3
67	30	3	28. observes science instruction in classes for children of various abilities and interests at all grade levels	95	1	4
53	44	3	29. develops an ongoing account of the strengths, areas of weakness, and unmet needs of the existing science program	95	1	4

VITA

Jenny Lynn Addington Vinson was born in Camden, Tennessee, on January 24, 1952. She attended elementary school in Sheffield, Alabama. She graduated from Mars Hill Bible School, Florence, Alabama, in May of 1970. She attended Florence State University, Florence, Alabama and later transferred to the University of Tennessee. In May of 1973 she was honored by being chosen as one of the Outstanding Seniors graduating from the teacher education program for that year. In August, 1973 she received the Bachelor of Science degree with a major in science education.

She entered Graduate School at the University of Tennessee in September of 1973 and received the Master of Science degree with a major in science education in August of 1974. She continued her education at the University and received the Specialist in Education degree in Curriculum and Instruction with science education as her area of concentration in June, 1976.

She is married to Gary Joel Vinson of Killen, Alabama.