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The Relationship Among Parent Knowledge of Special Education, Assertiveness, and Participation in Planning Their Handicapped Child’s Educational Program

Lynne Faxon Croxton

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THE RELATIONSHIP AMONG
PARENT KNOWLEDGE OF SPECIAL EDUCATION,
ASSERTIVENESS, AND PARTICIPATION
IN PLANNING THEIR HANDICAPPED CHILD'S EDUCATIONAL PROGRAM

A Thesis
Presented to
the Faculty of the Department of Psychology
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts

by
Lynne Faxon Croxton
August 1984
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THE RELATIONSHIP AMONG
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ASSERTIVENESS, AND PARTICIPATION
IN PLANNING THEIR HANDICAPPED CHILD'S EDUCATIONAL PROGRAM

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The Relationship Among
Parent Knowledge of Special Education, Assertiveness, and Participation
In Planning The Handicapped Child's Educational Program

Lynne F. Croxton
August, 1984 114 pages

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This study addressed the relationship among parent assertiveness, parent knowledge of special education and the handicapping condition of their child, and parent participation in the annual meeting of the School-Based Admissions and Release Committee (SBARC). Fifty-one (51) parents of learning disabled and mentally handicapped children in a suburban area of Kentucky participated in the study. The effects of the child's handicapping condition and the number of years the child had received special education on parent assertiveness, knowledge, and participation were also analyzed. Parents were given the Special Education Knowledge Survey, an experimenter-developed measure of knowledge of special education and various handicapping conditions, and the Rathus Assertiveness Schedule. These parents' interactions were observed during the annual SBARC meeting for their child and the amount of participation and topics of their
contributions were recorded by an observer. It was found that the degree of parent assertiveness was significantly predictive of total parent participation in planning the handicapped child's education, while parent knowledge (knowledge of special education and knowledge of the child's handicapping condition) did not predict the total amount of participation by the parent. Parent knowledge and the actual number of years the child had received special education were predictive of parent participation in the discussion of some topics regarding the child. The child's identified handicapping condition was also found to affect total parent participation in the SBARC meeting. The child's handicapping condition and the number of years the child had received special education were found to have an interactive effect on parent assertiveness and parent discussion of the child's past educational history.

Parents of mentally handicapped children classified for two years or less and parents of learning disabled children classified for more than two years were more assertive than parents of mentally handicapped children classified for more than two years and parents of learning disabled children classified for two years or less. The findings specified above were discussed as well as 1) topics in which parents were observed to participate most; 2) the relationship between parent participation and the request of information by professionals, the length of the conference, and the number of people present at the SBARC
meeting; 3) the correlation between knowledge and assertiveness; and 4) suggestions for further research.
CHAPTER I

Introduction

With the passage of Public Law 94-142, the Education for All Handicapped Children Act, handicapped children were guaranteed a free, appropriate education. One component of that law states the rights and responsibilities of parents to actively participate in planning the educational program for their handicapped child.

Lack of Parent Participation

While involvement by the parents is required, parents have continued to take a passive, rather than a active, role in the planning of their child's individualized educational program (IEP). Research reveals two main factors regarding this continued passiveness: 1) parents' lack of knowledge or skills presumed necessary for effective participation in the child's educational program and 2) the school's encouragement of passive roles for parents (Goldstein, Strickland, Turnbull, & Curry, 1980; Goldstein & Turnbull, 1982; Lynch & Stein, 1982; Tucker, 1980). These factors will be discussed in detail here.

Lack of Knowledge and Skills

One reason for parents' continued lack of involvement in planning the handicapped child's IEP is that parents do not have the appropriate knowledge or skills to become
active participants in their child's educational program (Grogan, 1980; Hamburg & others, 1980; Katz, Borten, Brasile, Meisner, & Parker, 1980; Koss, 1979; McDavis, Nutter, & Lovett, 1982; Muir, Milan, Branston-McClean, & Berger, 1982; Turnbull & Leonard, 1981; Turnbull, Strickland, & Goldstein, 1978). For example, parents are not aware of their rights and responsibilities mandated by the law (Goldberg & Goldberg, 1979; Hohenshil & Humes, 1979; Miltenberger, Kish, Hamburg, Nixon, Gring, Burgess, & O'Connor, 1981; O'Dell, 1978; Soffer, 1982; Tymchuk, 1978). Parents are not educated regarding their child's handicapping condition and, therefore, do not feel competent to participate in planning their child's educational program (Hohenshil & Humes, 1979; Tymchuk, 1978). Parents do not realize that they can contribute relevant information to the child's Individualized Educational Plan (IEP), such as information regarding the child's strengths and weaknesses, methods by which their child best learns, and what their goals and objectives are for the child (Grogan, 1980). Parents are not aware of the resources pertaining to their child's education that are available to them or organizations that can provide services to them or their child (Tymchuk, 1978), nor do they get the emotional support which will allow them to become advocates for their child (Gabel, 1981; Jellinck & Kasper, 1972; McDavis, Nutter, & Lovett, 1982; Murray & Cornell, 1981; Prescott & Hulnick, 1979).
Encouragement of Parents' Passive Role by the Schools

Consciously or unconsciously, the schools have encouraged a passive role for parents and desire to keep them in that role (Yoshida, Fenton, Kaufman, & Maxwell, 1978). Parents do not feel competent to deal with educators (Morgan, 1982), and educators do not encourage parent questions or participation in the IEP conference (Soffer, 1982). School personnel often ignore parent suggestions, and even when questions from the parents are encouraged, parents are so confused or intimidated by the professional jargon that they do not know what to ask (Canning, Thorpe, Ware, Granstrom, & Parham, 1979; Gilliam, 1979; Grogan, 1980). Research also indicates that many times the child's IEP is developed before the conference; thus the purpose of the conference becomes that of reviewing the IEP with parents and obtaining their signatures (Goldstein et al., 1980), a process that is contrary to P. L. 94-142.

Needs of Parents to Enhance Participation

In a literature review by Coakley (1981), it was found that parents need certain types of information and skills in order to become effective participants in their child's educational program. They need information related to the handicapping condition of the identified child; the legal mandates of state and federal law and what they mean for the child's education; the processes for assessment and placement; and the role parents should play in the
educational planning process. Parents need appropriate communication skills and assertiveness skills as well as emotional support and encouragement to become actively involved in the placement and review process. Finally, parents need information regarding access to the resources and outside personnel available to them and to their child.

If parents are given information and skills, it is assumed that parents could become better advocates for their child (Cansler & Martin, 1973; Goldberg & Goldberg, 1979; Katz et al., 1980; Koss, 1979; Miltenberger et al., 1981; Muir et al., 1982; Turnbull & Leonard, 1981; Tymchuk, 1978). P. L. 94-142 mandates that the schools provide the parents with these needed skills and information (Turnbull et al., 1978). Federal and state funds have been allocated to school systems and special interest agencies for the purpose of developing parent education programs which will give to parents the necessary skills and information which, it is hypothesized, they will need in order to become more effective participants in their child's educational program. Programs developed to provide parents with knowledge and skills have been implemented; however, very little follow-up research has been conducted to determine the effectiveness of these programs in increasing the parents' participation in the child's educational program. Objective information regarding the effectiveness of such programs in increasing parents' knowledge and skills,
therefore, is severely lacking. Furthermore, a review of
the literature reveals no research addressing a
relationship between parents' knowledge and skills and
their participation in the handicapped child's educational
program.

**Purpose of the Study**

The purpose of this study is to determine if there is
a relationship between the following factors: parents'
knowledge of Public Law 94-142, parents' knowledge of their
child's handicapping condition, parents' assertiveness
skills, and the degree that parents actively participate in
planning their child's educational program. The child's
handicapping condition and the number of years the child
has received special education services will be considered
as to the influence they have on the parents'
participation. The goals are  1) to develop a measure of
parents' knowledge regarding the handicapping condition of
their child and of Public Law 94-142, and to determine the
reliability of this questionnaire; 2) to administer to
parents of handicapped children this measure of knowledge
and skills as well as a measure of assertiveness; 3) to
observe the parent's participation in the School Based
Admissions and Release Committee's (SBARC) annual review
and rewriting of the handicapped child's IEP, or placement
and writing the IEP in the case of original placements of
the handicapped child; and finally 4) to determine through
statistical analysis the significance of relationship among
parent assertiveness, parent knowledge, and skills and the degree of parent's participation in the observed SBARC meeting. The findings of this study will provide information useful in determining how parents should be trained to become more effective participants in planning the handicapped child's educational program.
CHAPTER II
Literature Review

James A. Gallagher, the first director of the Bureau for the Education of the Handicapped, testified before the House and Senate committees regarding P.L. 94-142. He stated that parent participation in the child's educational program not only benefits the child, but also makes the parents feel more competent in dealing with their child and relieves much anxiety (Turnbull, Turnbull, and Wheat, 1982). Schulz (1982) stated that to benefit the child optimally, a cooperative relationship between the parent and teacher is required, allowing them to share information about the child and to share responsibility for the child's education. According to Grogan (1980) "an involved parent must be an informed parent" (p. 3). He stated that even though legislation has required that parents participate in the educational planning for their child, parents have not been provided with the knowledge which enables them to do so.

Although many "how-to" manuals and workshops have been developed to aid parents in obtaining the skills necessary for effective participation in the IEP process, "with few exceptions, ...data regarding the effectiveness of these materials on parents' knowledge and skills are conspicuously
absent" (Morgan, 1982, p. 36). Turnbull and Leonard (1981) stated that current methods of training parents as advocates had not proven to be effective.

This chapter will review the current state of affairs regarding parent involvement in the educational process. Past research considering the needs of parents of handicapped children which contributes to parent involvement or lack of involvement will be reviewed, and current research will be detailed. Finally, parent education program which have been developed and/or implemented to increase parent participation by increasing parent knowledge and skills will be reviewed. Information relating parent needs addressed by the programs, as well as available information on the programs effectiveness, will be covered.

Parent Involvement
Knowledge, Skills, Counseling, and Resources

A review of the literature by Coakley (1981) revealed four areas in which it appears that parents need to be knowledgeable or skillful before they can become active participants in the educational process. These are (1) knowledge, (2) skills, (3) counseling, and (4) resources.

Knowledge. Research reviewed by Coakley indicates that parents need more knowledge regarding: the handicapping condition of their child, the child's special needs and what parents can do to meet these needs, services which are available to the parents and child, the purpose
of the IEP meeting and the role parents are to play, and the issues and components of P.L. 94-142. It is intended that this information will enable parents to become effective participants in the educational programming of their child.

**Skills.** Parents need effective communication skills such as the ability to communicate clearly their concerns, feelings, or understandings (Hoff, Fenton, Yoshda, and Kaufman, 1978, cited by Coakley, 1981). Parents need assertiveness skills since they often comply with school recommendation without question or are treated as token members of the placement team, as well as the recognition that they have information which will be invaluable to those planning the child's educational program.

**Counseling.** Parents often need help in working through the stages of acceptance which they experience when finding that they have a handicapped child. They need comfort and emotional support from others who are experiencing the same or similar problems.

**Resources.** Parents need to know about local, state, and national resource agencies and professionals where they can obtain information regarding their child's problems and other issues regarding their involvement in the educational process, such as their rights and responsibilities.
The Current State of Affairs in Parent Participation

Parent attendance at IEP meetings appears to be 75% or higher, with either or both parents attending. Little research, however, documents the amount of participation by parents, the quality or content of their participation, or what parental characteristics influence their participation (Morgan, 1982). Lynch and Stein (1982) conducted a survey of parents of handicapped children in a large, diverse school district in a metropolitan area of southern California. Seventy-one percent of 328 interviewed felt that they actively participated in the educational programming for their child. Parent explanations of how they had participated, however, did not suggest "active involvement" by the author's standards. Forty-seven percent indicated that they had made suggestions. The suggestions made most often were demands for "help or a specific placement for the child (33.8%)" and parent's expressions of feelings regarding "the child's capabilities, problems, and needs (9.6%)" (Lynch and Stein, 1982, p. 61).

Goldstein et al. (1980) conducted observations at the IEP conferences of parents of mildly handicapped, mainstreamed students to determine parental involvement in the conferences. Questionnaires were completed by parents immediately following the IEP conference to determine their satisfaction with the results of the conference. Observations were scheduled for 21 conferences, however,
parents did not attend seven of those. Of those observed, 11 were for first time placements.

The observer recorded who was speaking and what the topic of conversation was at two minute intervals. It was found that the resource teacher talked more than twice as often as the parents in most cases. Of the recorded parent speakings, 63% were accounted for by three of the parents. Parents, both fathers, talked most at two conferences and the same amount as the resource teacher at one conference. At only one of the 14 conferences was the purpose of the conference to develop goals and objectives. Generally, the conference consisted of the resource teacher reviewing an IEP which had been developed prior to the conference.

On the whole, it was found that parent satisfaction was surprisingly positive. The authors speculated that reasons for this could be a lack of understanding by the parents about the purpose of the conference, a feeling that this was more communication than they had received in the past, a feeling that the child was going to receive additional help, or relief that the child was not "in trouble." The authors felt that the results of their study indicated a need to provide parents with more information regarding their rights and responsibilities under P. L. 94-142 and a need for more research to determine what skills and information are needed for effective parental participation in the IEP conference (Goldstein et al., 1980).
Tucker (1980) distributed a survey to 14 Regional Resource Centers, ten model Demonstrations of Direct Service (DSD), and two national service agencies. The purpose was to determine the extent of parent involvement in the educational process as well as to obtain information on how to promote future parent involvement. A major finding was that there was a lack of active participation by parents in the educational planning process. There was a portion of parents who were attending IEP conferences and were involved in planning the IEP, however, these parents did not see themselves as being equal partners with educational professionals in the endeavor (Tucker, 1980).

Almost all of those parents interviewed by Tucker indicated a need for training to increase parent involvement, and Tucker felt that endeavors in parent training were inadequate. A review of the literature and current practices revealed the following.

1. "Parents and educators must acquire the knowledge and skills necessary to create and implement a productive partnership" (Tucker, 1980, p. 6).

2. Parents and educators "must develop an attitude of mutual trust and respect for each other's capabilities" (p. 6).

3. Parents "don't feel prepared for their new role as an equal partner with educators in the educational planning process. ... An attempt needs to be made to
involve parents who previously have not been involved" (p. 7).

4. "Functional resource sharing and communication strategies" (p. 7) must be implemented to help improve the parent-school partnership.

Research by Polifka (1981) yielded somewhat different information regarding parent participation in the educational planning process. He sent a questionnaire to the parent's of all handicapped children receiving special education services in a four and one-half county, rural, upper-middle class area of Iowa. The questionnaire consisted of 11 items. The first nine items related to procedural safeguards (consent for testing and placement, participating in the IEP conferences, etc.). One question allowed parents to rate their satisfaction with their child's educational program on a four point scale from "very satisfied" to "very dissatisfied." One item requested information which parents thought to be pertinent. An additional item asked parents if they preferred formal or informal conferences for placing a child in Special Education.

It should be noted that the response rate in this study was 39.4% and the respondents could represent a biased subgroup. The majority of the 258 parents responding believed the schools to be "in compliance with procedural safeguards" (p. 251). Seventy-six percent indicated that they had participated in planning their
child's IEP, and 88% preferred formal conferences. Most parents (94%) rated their satisfaction with their child's program as "satisfied" or "very satisfied." It was found that parent satisfaction was positively related to the parents' participation in developing their child's IEP, their feelings that their child was appropriately placed, being invited to the annual review of their child's IEP, and being informed of the right to appeal a decision with which they disagreed. This information supports other research concluding that parents need to be involved in planning their child's educational program and need to be informed of their rights under P. L. 94-142.

According to Hohenshil and Humes (1979), P.L. 94-142 mandates that parents be informed about "child development and ... their children's special needs" and "informed of their basic rights of participation and due process under this legislation" (p. 244). Hohenshil and Humes see this as the responsibility of the school.

Several studies (Gilliam, 1979; Soffer, 1982; Tucker, 1980; Turnbull & Leonard, 1981; Yoshida, Fenton, Kaufman, & Maxwell, 1978) support the hypothesis that parents have not been informed about the purpose of the IEP conference or their role in the conference. In a study conducted by the National Committee for Citizens in Education (cited in Turnbull & Leonard, 1979) of parent participation in IEP conferences, 66% of the parents who responded were satisfied with their child's IEP and felt informed about
it, however, 52% of the parents responding reported that the IEP had been completed before the meeting (cited in Turnbull & Leonard, 1981).

Soffer (1982) hypothesized that it was parents who were aware of their rights and responsibilities under P.L. 94-142 that were most dissatisfied with their participation in preparing their child's IEP. He conducted a study to determine the areas in which parents wished to have more input in the preparation of the IEP. The survey included 116 parents, all of whom were members of the National Association for Retarded Citizens (NARC). Stoffer selected this population because he felt that professionals see them as "more knowledgeable, more interested, more concerned, and more active relative to the child's education" (p. 68) when compared to nonmembers. They were also more aware of their rights than nonmembers. The parents rated ten areas of decision-making as to their actual extent of involvement. In all areas, the parents desired more involvement than they were allowed. The two areas in which they most wanted increased involvement were in determining when and how their child's progress would be evaluated.

In another study, Gilliam (1979) surveyed 130 participants in 27 IEP conferences. Prior to the conference, participants ranked all committee members as to the importance of their role in the conference to determine the committee members' perceived importance. Those rated
most important were the Special Education teacher, the psychologist, and the parent. Following the conference, participants rated the roles of committee members in order of their actual importance on the basis of their actual contributions to the conference. At this point, the rating of parents' importance slipped from third to a rating of 9 out of 12. One possible explanation according to the author was that those receiving high ratings of actual importance may have had more "hard data" to present at the conference such as test scores or diagnostic reports. Another explanation was that those ranking low in actual importance were intimidated by other participants (Gilliam, 1979).

Yoshida et al. (1978) hypothesized that the extent of parent involvement in planning the child's educational program was determined for the most part by what role team members felt parents should take. They distributed questionnaires to 1,372 planning team members in Connecticut. The members were to indicate which of 24 planning activities they felt parents should participate in. Only two activities were indicated by more than 50% of the raters as being activities which were appropriate for parents to participate in. These two items were "presenting information relevant to the case and gathering information relevant to the case" (p. 532).

Goldstein and Turnbull (1982) conducted a study with the parents of 45 Learning Disabled children, dividing the
parents into three equal groups. Prior to the IEP conference, one group received questions about the goals for their child. The parents in the second group were accompanied to the IEP conference by an advocate, the school guidance counselor. Parents in the third group received no intervention. The frequency and subject of parent contributions in the conference were recorded. More contributions judged to be relevant by the observers were made by parents in the first two groups than those in the third group. Parents who were accompanied by an advocate were most involved in the conference, while there was no significant difference in the amount of involvement between parents in the other two groups. In the group with the advocate, parental involvement depended on the role of the advocate as parents tended to model behaviors displayed by the advocate. The advocate introduced the parents, asked them questions, reinforced parent contributions, and summarized the conference for parents. Following the conference, parents were also given questionnaires in which they rated their satisfaction with the conference and the results. All parents, regardless of groups, were equally satisfied.

In summary, research indicates that knowledge, skills, counseling, and resources are the most prevalent needs of parents of handicapped children. According to Turnbull and Leonard (1981), P.L. 94-142 assigns to parents the role of advocate assuming that with parents
participating in planning the child's educational program, "the child's interests will be protected." Turnbull and Leonard state:

The role of advocate requires knowledge and decision-making skills. In representing their child's interests, parents must have knowledge pertaining to their child's particular educational need, to community and school resources, and to legal principles, rights and responsibilities. Although knowledge is essential for the advocate role, it is not sufficient. Effective advocacy also requires well refined decision-making skills including assertiveness, group process skills, values clarification, and conflict solution. Success with influencing educational decisions can depend substantially on "how" parents communicate in addition to what they say (Turnbull and Leonard, 1981, p. 37).

Turnbull and Leonard went on to say that "current research indicates a strong need to train parents and professionals related to the new parental roles and responsibilities associated with advocacy" (p. 39).

**Education Programs for Parents of Handicapped Children**

Four areas of need have been identified as influencing parent involvement in the educational process of handicapped children. These areas are knowledge, skills, support or counseling, and resources. Many "how-to"
manuals and parent education programs have been developed to teach parents these skills, yet little information is available on the effectiveness of these programs. Often information on effectiveness which is available is collected from self-reports rather than objective measures.

Of the programs reviewed by this experimenter, eight studies addressed the knowledge component alone (Espinoza, 1976; Goldberg and Goldberg, 1979; Hamburg et al., 1980; Jackson, 1980; Miltengerger et al., 1981; O'Dell, 1978; "PIE Project," 1978; "Preparing for the IEP," 1979); four addressed the support component alone (Becker, Bender and Kawabe, 1976; Donaldson, 1973; Huber, 1979; "Maryland State Implementation," 1978); one addressed the skills component alone (Alderlini, 1979); three addressed the knowledge and support components (Farrar and Widner, 1979; Gabel, 1981; Tymchuk, 1978); three addressed knowledge and skills (Canning et al., 1979; Geller, 1977; Turnbull, Strickland, and Goldstein, 1978); two addressed skills and support (Beck, 1973; The Parent Program, 1976); two addressed knowledge, skills and support (Adams, 1981; Katz et al., 1980); one addressed skills, support, and resources (Cansler and Martin, 1973); two addressed knowledge, skills, and resources (Kroth and Scholl, 1978; Muir et al., 1982); and only one addressed all four components of knowledge, skills, support, and resources (Koss, 1979).

In only two of the programs reviewed did the authors base their evaluations of the program's effectiveness on
objective measures or an increase in knowledge measured by pre- and posttests (Jackson, 1980; Tymchuk, 1978). The authors of ten of the programs reviewed used subjective measures such as participants' ratings or parent self-checks as the basis of their evaluations (Adams, 1981; Alderlini, 1979; Becker et al., 1976; Canning et al., 1979; Geller, 1977; Goldberg & Goldberg, 1979; Koss, 1979; Miltenberger et al., 1981; O'Dell, 1978; "PIE Project," 1978). In 12 parent education programs reviewed, the authors reported no measures of effectiveness. Four programs reviewed were manuals developed to guide parent training programs (Alderlini, 1979; Cansler and Martin, 1973; Hamburg et al., 1980 "Preparation for the IEP," 1979). The authors of these programs reported no information on the implementation of the program or program effectiveness.

The results of this review indicated that not only are parents of handicapped children in need of parent education programs which contain the components of knowledge, skills, support, and resources, but also much information is needed on the effectiveness of these developed programs in meeting their objectives and increasing parent involvement in the educational process of the handicapped child.

**Summary**

A review of the literature reveals that although parents are attending the IEP conferences of their handicapped child, the role they have assumed has not been
one of active involvement or an equal partnership with educators. In order for parents to become equal partners in the educational process, they must be aware of the legal mandates and the role they are to play in planning their child's educational program, the process of assessment and placement, and resources which are available to them. They must also be equipped with assertiveness and communication skills to enhance the effectiveness of their involvement with professionals. Finally, they must be provided with emotional support and encouragement which will facilitate their growth toward accepting their handicapped child and strengthen their confidence in their own abilities to be effective participants in their child's educational process.

Programs have been designed to increase parent involvement in the handicapped child's education by providing the parents with knowledge, skills, support and resources. Research has not addressed a possible relationship between these components and actual parent involvement, and follow-up research has failed to support the effectiveness of these programs in increasing the parent's involvement.
CHAPTER III
Methodology

A developmental-normative approach was used to determine the predictive relationship between the knowledge and skills of parents of handicapped children and the parent's participation in the IEP conference. One predictor variable was the parent's knowledge of 1) the child's handicapping condition and 2) the legal mandates regarding the child's education. Knowledge in these two areas was measured using an experimenter-developed instrument, the Special Education Knowledge Survey (SEKS). A second predictor variable was parent assertiveness as measured by the Rathus Assertiveness Schedule (Rathus, 1973). These two variables were chosen for the study because they are considered to be the main variables which may influence parent participation in planning their child's educational program.

The criterion variable was the degree of parent participation in the IEP conference as measured by an observational instrument developed by Goldstein and Turnbull (1982). The handicapping labels of the children whose parents participated in the study (i.e. Mentally Handicapped or Learning Disabled) and the number of years
the child had been placed in special education (two years and less or more than two years) served as blocking variables.

The target population was parents whose school-aged children had been identified as being eligible for special education services according to Kentucky statutes. The parents all had residence in a suburban area (Fort Knox, Kentucky).

**Procedure**

A list of parents who had children identified as handicapped by Kentucky statutes was obtained from the school system where these children were being served. This experimenter was contacted by the school counselor or special education teacher when the annual meeting of the School-Based Admissions and Release Committee (SBARC) for a particular child was scheduled. The purpose of the SBARC meeting was to decide on the placement of the handicapped child and/or to plan the child's educational program. A phone call was made to that child's parents to explain the project and ask their participation. The project was explained as an effort to help parents be more effective in planning their child's education by investigating what knowledge and skills parents have regarding the handicapped child and the child's educational program and what information is provided to the parents at the annual meeting of the SBARC. A letter was then sent to the parents who agreed to participate in the project, again
explaining the project and asking them to sign an attached consent form and bring it to the meeting (see Appendix A). Parents who did not have phones were met prior to the SBARC meeting, the project was explained and they were asked to participate. The letter with an attached consent form was given to them at that time to sign if they were willing to participate.

Arrangements were made by phone or prior to the meeting for the observer to meet the parent 30 minutes before or after the conference. At this time the parents completed the SEKS and the Rathus Assertiveness Schedule. The observer then attended the meeting of the SBARC to record parent interactions using the observational instrument developed by Goldstein et al. (1982). Parents of 43 children qualifying for special education participated in the study. In eight conferences, both parents attended. In such cases, both parents completed the SEKS and the Rathus Assertiveness Schedule, and the participation of each parent was observed throughout the conference.

The Observers

All data were gathered by the experimenter, a School Psychology Intern. The experimenter was responsible for contacting parents, administering the Special Education Knowledge Survey and the Rathus Assertiveness Schedule and observing the SBARC conference. A second observer, a district School Psychologist, observed approximately every
tenth conference in addition to the experimenter. This was to ensure inter-rater reliability and avoid the possibility of experimenter bias. Both observers adhered to the rules of confidentiality and due process.

**Assessment of Knowledge and Skills**

**Component 1, Rathus Assertiveness Schedule**

The objective assessment of parent knowledge and skills consisted of two components. The first was the 30-item Rathus Assertiveness Schedule (see Appendix B). The Rathus Assertiveness Schedule has a test-retest reliability of .78 (p < .01) and split-half reliability of .77 (p < .01). When respondents' scores on the schedule were correlated with the impressions they made on others, validity coefficients ranged from .33 to .62 (p < .01). When the respondents' ratings were compared with their responses of how they would behave in situations in which assertive behaviors would be useful, the validity coefficient was .70 (p < .01). The Rathus Assertiveness Schedule was used to determine if assertiveness was predictive of parent involvement in the SBARC meeting.

**Component 2, The Special Education Knowledge Survey**

The second component of the assessment of parent knowledge and skills was developed by the experimenter, the Special Education Knowledge Survey (SEKS). This survey consists of 25 multiple-choice questions to measure the parents' knowledge of the handicapping condition of their child and the legal mandates. Questions from the
pretest/posttest developed by Coakley (1981) were used as well as additional questions developed by the experimenter. The survey was piloted by administering it to an Introduction to Psychology course, senior Special Education majors, and Clinical Psychology graduate students at Western Kentucky University. The pilot study was used to determine if SEKS discriminated between those hypothesized to have knowledge in these areas (i.e., senior Special Education majors and Clinical Psychology graduate students) and those who did not (i.e., students in an Introduction to Psychology course). A t test was conducted to determine the significance of the test's discriminant validity. The discriminant validity was found to be significant, \( t(2,1) = 15.12, p < .01 \) level. Internal consistency of the SEKS as measured by coefficient alpha and item analyses was examined so that items could be eliminated or revised. The subprogram reliability of the Statistical Package for the Social Sciences (SPSS) was utilized to determine coefficient alpha (Hull & Nie, 1981; Nie et. al., 1979). The total, revised scale (see Appendix C) yields a coefficient alpha of .79.

The subprogram reliability of the SPSS was also utilized to determine coefficient alpha on the scores yielded by administration of the SEKS to parents of handicapped children. With this administration, coefficient alpha dropped to .47 from .79 obtained during the pilot study. This drop may be attributed to the fact
that 51 subjects were utilized in the final administration while 101 subjects were utilized during the pilot study. Another factor contributing to the drop in coefficient alpha may be the difference in populations (college and graduate students as opposed to a more homogeneous group of parents of handicapped children). Items were modified so that the scale would be more readable possibly contributing to the reduced reliability of the scale.

The SEKS was broken down into components designed to measure knowledge of handicapping conditions, knowledge of due process, knowledge of the intent of Public Law 94-142, and knowledge of the purpose of the IEP. The four items designed to measure knowledge of the purpose of the IEP were the most internally consistent component of the scale with a coefficient alpha of .45, likely due to the fact that this is the area in which parents have the most experience -- since the IEP is reviewed with parents at least once per year.

Observational Instrument

The observational instrument used allowed the observer to record interactions among all participants during the SBARC. The speaker and topic of discussion were recorded at 30 second intervals for the entire conference on a coding sheet. The 30 second interval was chosen because it was felt that 30 seconds was a short enough period to allow for a good sampling of behavior, but long enough to facilitate paperwork. Thirteen topics were defined for the
purpose of recording the topic of discussion. Twelve were developed by Goldstein and Turnbull (1982) while the remaining one (Past Educational History) was developed by the experimenter. The topics were Curriculum, Behavior, Performance, Evaluation, Placement, Special Services, Instructional Materials, Future Plans, Individuals Responsible, Personal/Family, Future Contacts, Health, and Rights and Responsibilities. (See Appendix D for definitions of these topics.) Every 30 seconds the observer recorded the speaker and the topic of discussion. The topic was coded "Other" if not directly related to the child or the child's educational program. During the observation, requests for parent participation were recorded.

During the study, interrater agreement was measured during nine observations. Each observer observed the entire conference, recording the speaker and topic of discussion at 30 second intervals. Percentage of agreement on the speaker and category recorded was computed using the following formula:

\[
\frac{\text{number of interval in which observers agreed}}{\text{total number of intervals}} \times 100
\]

Agreement between raters on who was speaking at the end of the 30 second interval averaged 91.77% ranging from 86.4% to 96.2%. Agreement between the raters on the topic of discussion averaged 76.02% and ranged from 72.9% to 85.8%.
Lower average of agreement on the topic of discussion is attributed to the lack of clear definitions of the topics; therefore, findings related to the topics of the observational instrument should be interpreted with caution.

**Statistical Analysis**

A stepwise multiple regression was conducted using the Stepwise Procedure of the Statistical Analysis System (SAS) (SAS User's Guide, 1982) to determine the ability of parent knowledge and skills and/or the parent assertiveness schedule to predict parent involvement in planning the child's educational program. A Pearson product moment correlation coefficient was computed using the Pearson Corr subprogram of the Statistical Package for the Social Sciences (SPSS) to verify the results of the stepwise multiple regression.

Analyses of variance (ANOVAs) were conducted using the subprogram ANOVA of the SPSS to determine the effect of the handicapping condition of the child and the number of years the child had received special education of parent participation in planning the child's educational program. The handicapping condition of the child and the number of years the child had received special education were the blocking variables. Dependent variables were parent participation in each topic covered by the observational instrument as well as total parent participation in the conference. Tukey HSD tests were conducted on those
results which were found to be significant in order to determine where the significant effects existed.

The mean and standard deviation of parent and professional participation on each of the observational topics were computed separately so the amount of participation in each of these areas by parents could be compared to the amount of participation by professionals. A point bi-serial correlation was conducted to determine if there was a correlation between the amount of parent participation and whether or not input from the parent was requested by a professional during the conference. Two Pearson product moment correlation coefficients were computed to determine if there was a relationship between parent participation and the duration of the conference of parent participation and the number of people present at the conference.
CHAPTER IV
Results

Parent involvement in planning the handicapped child's Individualized Educational Plan is required by Public Law 94-142. Parents have, however, continued to take a passive role rather than an active role (Goldstein, Strickland, Turnbull, & Curry, 1980; Goldstein & Turnbull, 1982; Lynch & Stein, 1982; Tucker, 1980). It has been hypothesized that this passive role is the result of parental lack of knowledge about the child's handicapping condition and the special education process, and parental lack of assertiveness (Canning, Thorpe, Ware, Granstrom, & Parham, 1979; Gilliam, 1979; Grogan, 1980; Hamburg & others, 1980; Katz, Borten, Brasile, Meisner, & Parker, 1980; Koss, 1979; McDavis, Nutter, & Lovett, 1982; Muir, Milan, Branston-McClean, & Berger, 1982; Turnbull & Leonard, 1981; Turnbull, Strickland & Goldstein, 1978; Soffer, 1982). If it can be determined that this is true, parent education programs designed to provide parents with the knowledge and assertiveness skills they need may be implemented to increase parent participation in the special education process. The purposes of this study were to determine the 1) predictive relationship between the knowledge and skills of parents of handicapped children and
the degree of parent's participation in the IEP meeting; 2) effect of the child's handicapping condition and the number of years the child has received special education on the parents participation in the IEP meeting; and 3) effect of the child's handicapping condition and the number of years the child has received special education on the parents' assertiveness and knowledge of their child's handicapping condition and Public Law 94-142. Parent knowledge was measured by the SEKS while assertiveness was measured by the Rathus Assertiveness Schedule. Parent participation was measured by a time sampling observational instrument, developed by Goldstein and Turnbull (1982), during the SBARC's annual review meeting.

Knowledge

Knowledge, as indicated by the SEKS, was found to be the best predictor of parent participation in discussing the child's past educational history during the SBARC annual review meeting, $F(2, 1) = 20.84$, $p < .001$ (see Table 1). Knowledge was also the best predictor of parent participation on topics coded as "other" during the observation, $F(2, 1) = 56.28$, $p < .001$ (see Table 2). Knowledge alone was not found to be an effective predictor of parent participation in any of the other 13 topics observed. These findings are based on the stepwise multiple regression procedure.

The Pearson product moment correlation coefficient supported the positive relationship between knowledge and
parent participation in topics coded as "other,"
$r = .29, p < .05$, but did not support the correlation
between knowledge and parent participation in discussion of
the child's past educational history (see Table 3).
Table 1
Stepwise Regression Procedure for Criterion Variable Past Educational History, Predictor Variables Knowledge and Assertiveness

<table>
<thead>
<tr>
<th>Source</th>
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<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
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<td>Regression</td>
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<td>42.97</td>
<td>21.49</td>
<td>10.26</td>
<td>.001</td>
</tr>
<tr>
<td>SEKS&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1</td>
<td>42.77</td>
<td>42.77</td>
<td>20.84</td>
<td>.001</td>
</tr>
<tr>
<td>Rathus&lt;sup&gt;b&lt;/sup&gt;</td>
<td>1</td>
<td>0.20</td>
<td>0.20</td>
<td>0.09</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>92.16</td>
<td>2.09</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
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<td>135.13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> SEKS = Knowledge

<sup>b</sup> Rathus = Assertiveness
Table 2
Stepwise Regression Procedure for Criterion Variable Other, Predictor Variables Knowledge and Years in Special Education

<table>
<thead>
<tr>
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<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
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<td>Regression</td>
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<td>.001</td>
</tr>
<tr>
<td>SEKS(^a)</td>
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<td>530.18</td>
<td>56.28</td>
<td>.001</td>
</tr>
<tr>
<td>Years(^b)</td>
<td>1</td>
<td>25.45</td>
<td>25.45</td>
<td>2.81</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
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<td>389.50</td>
<td>9.06</td>
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</tr>
<tr>
<td>Total</td>
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<td>954.13</td>
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</tr>
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</table>

\(^a\)SEKS = Knowledge

\(^b\)Years = Years in Special Education
Table 3
Pearson Correlation Coefficient—Correlation between SEKS Score, Rathus Score, and Years in Special Education and Participation in Each Observation Category

<table>
<thead>
<tr>
<th>Observation Category</th>
<th>SEKS</th>
<th>Rathus</th>
<th>Years in Sp. Ed.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum</td>
<td>.16</td>
<td>-.12</td>
<td>.15</td>
</tr>
<tr>
<td>Behavior</td>
<td>.15</td>
<td>.23</td>
<td>-.02</td>
</tr>
<tr>
<td>Performance</td>
<td>-.22</td>
<td>-.03</td>
<td>.10</td>
</tr>
<tr>
<td>Evaluation</td>
<td>.16</td>
<td>.11</td>
<td>-.11</td>
</tr>
<tr>
<td>Placement</td>
<td>.08</td>
<td>.16</td>
<td>-.12</td>
</tr>
<tr>
<td>Special Services</td>
<td>-.11</td>
<td>-.14</td>
<td>.02</td>
</tr>
<tr>
<td>Instructional Materials</td>
<td>-.16</td>
<td>-.10</td>
<td>-.05</td>
</tr>
<tr>
<td>Future Plans</td>
<td>-.08</td>
<td>.09</td>
<td>.35**</td>
</tr>
<tr>
<td>Individuals Responsible</td>
<td>not computed\textsuperscript{a}</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal/Family</td>
<td>-.11</td>
<td>.29*</td>
<td>-.08</td>
</tr>
<tr>
<td>Future Contacts</td>
<td>-.13</td>
<td>.07</td>
<td>-.20</td>
</tr>
<tr>
<td>Health</td>
<td>.16</td>
<td>-.19</td>
<td>-.25*</td>
</tr>
<tr>
<td>Rights/Responsibilities</td>
<td>.06</td>
<td>-.03</td>
<td>.05</td>
</tr>
<tr>
<td>Past Educational History</td>
<td>.07</td>
<td>.01</td>
<td>.04</td>
</tr>
<tr>
<td>Other</td>
<td>.29*</td>
<td>.03</td>
<td>.11</td>
</tr>
<tr>
<td>Total</td>
<td>.10</td>
<td>.21</td>
<td>-.03</td>
</tr>
</tbody>
</table>

\*p < .05 \quad **p < .01

\textsuperscript{a}Correlations not computed due to 0% participation by parents in the topic of Individuals Responsible
Assertiveness

Based on the stepwise multiple regression procedure, assertiveness was found to be a significant predictor of total parent participation in the SBARC meeting, $F(2, 1) = 34.57, p < .001$ (see Table 4). Assertiveness was also found to be the best predictor of parent participation in the discussion of the evaluation of the child $F(2, 1) = 14.15, p < .001$ (see Table 5); discussion of instructional materials to be used with the child, $F(2, 1) = 15.21, p < .001$ (Table 6); and personal and family issues relating to the child's education, $F(2, 1) = 15.25, p < .001$ (Table 7). The Pearson product moment correlation coefficient supported the positive relationship between assertiveness and parent participation in the discussion of personal and family issues relating to the child's education, $r = .29, p < .05$, but did not find assertiveness to be correlated with parent participation in any other areas (see Table 3).

Knowledge and Assertiveness

Based on the stepwise multiple regression procedure, overall, knowledge and assertiveness combined was found to be the best predictor of parent participation in the discussion of the curriculum for the handicapped child, $F(3, 1) = 99.94, p < .001$ (Table 8). They were also found to be the best predictor of the parent participation in discussing the child's performance at home and at school, $F(3, 1) = 7.56$ with assertiveness being significant at the.
p < .001 level and knowledge being significant at the p < .05 level (Table 9).

**Actual Years In Special Education**

The actual number of years a child had received special education services was found to be predictive of parent discussion of future contacts $F(2, 1) = 4.19$, $p < .05$, based on the stepwise multiple regression procedure (Table 10). The Pearson product moment correlation coefficient did not support the stepwise multiple regression procedure, but rather indicated that actual number of years was significantly correlated with parent participation in the discussion of future plans related to the child, $r = .35$, $p < .001$. A significant negative correlation was found between the actual number of years the child had received special education and parent participation in the discussion of the child's health, $r = -.25$, $p < .05$, meaning that the longer the child has received special education, the less parents discuss the child's health.
Table 4
Stepwise Regression Procedure for Criterion Variable Total Participation, Predictor Variables Assertiveness and Knowledge

<table>
<thead>
<tr>
<th>Source</th>
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<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
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<tbody>
<tr>
<td>Regression</td>
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<td>5607.88</td>
<td>2803.94</td>
<td>18.93</td>
<td>.001</td>
</tr>
<tr>
<td>Rathus(^a)</td>
<td>1</td>
<td>5268.50</td>
<td>5268.50</td>
<td>34.57</td>
<td>.001</td>
</tr>
<tr>
<td>SEKS(^b)</td>
<td>1</td>
<td>339.37</td>
<td>339.37</td>
<td>2.29</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>6518.25</td>
<td>148.14</td>
<td></td>
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</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>12126.13</td>
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<td></td>
</tr>
</tbody>
</table>

\(^a\)Rathus = Assertiveness

\(^b\)SEKS = Knowledge
Table 5

Stepwise Regression Procedure for Criterion Variable Evaluation, Predictor Variables Assertiveness and Knowledge

<table>
<thead>
<tr>
<th>Source</th>
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<tbody>
<tr>
<td>Regression</td>
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<td>2.11</td>
<td>1.06</td>
<td>8.99</td>
<td>.001</td>
</tr>
<tr>
<td>Rathus(^a)</td>
<td>1</td>
<td>1.74</td>
<td>1.74</td>
<td>14.15</td>
<td>.001</td>
</tr>
<tr>
<td>SEKS(^b)</td>
<td>1</td>
<td>0.37</td>
<td>0.37</td>
<td>3.15</td>
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</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>5.17</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>7.28</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Rathus = Assertiveness  
\(^b\)SEKS = Knowledge
Table 6
Stepwise Regression Procedure for Criterion Variable
Instructional Materials, Predictor Variables Assertiveness and Knowledge

<table>
<thead>
<tr>
<th>Source</th>
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<th>p</th>
</tr>
</thead>
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<tr>
<td>Regression</td>
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<td>223.23</td>
<td>111.61</td>
<td>9.75</td>
<td>.001</td>
</tr>
<tr>
<td>Rathus a</td>
<td>1</td>
<td>183.68</td>
<td>183.68</td>
<td>15.21</td>
<td>.001</td>
</tr>
<tr>
<td>SEKS b</td>
<td>1</td>
<td>39.55</td>
<td>39.55</td>
<td>3.45</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>503.88</td>
<td>11.45</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>727.11</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

*aRathus = Assertiveness

*bSEKS = Knowledge
Table 7
Stepwise Regression Procedure for Criterion Variable
Personal/Family, Predictor Variables Assertiveness and Knowledge

<table>
<thead>
<tr>
<th>Source</th>
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<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
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<td>280.25</td>
<td>140.13</td>
<td>8.36</td>
<td>.001</td>
</tr>
<tr>
<td>Rathus a</td>
<td>1</td>
<td>257.63</td>
<td>257.63</td>
<td>15.25</td>
<td>.001</td>
</tr>
<tr>
<td>SEKS b</td>
<td>1</td>
<td>22.62</td>
<td>22.62</td>
<td>1.35</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>737.70</td>
<td>16.77</td>
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<td>Total</td>
<td>46</td>
<td>1017.96</td>
<td></td>
<td></td>
<td></td>
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</table>

aRathus = Assertiveness
bSEKS = Knowledge
Table 8
Stepwise Regression Procedure for Criterion Variable Curriculum, Predictor Variables Assertiveness, Knowledge, and Years in Special Education

<table>
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<tr>
<th>Source</th>
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<td>Regression</td>
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<td>33450.48</td>
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<td>.001</td>
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<tr>
<td>Rathus a</td>
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<td>82565.35</td>
<td>82565.35</td>
<td>115.47</td>
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<tr>
<td>SEKS b</td>
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<td>16960.99</td>
<td>16960.99</td>
<td>49.04</td>
<td>.001</td>
</tr>
<tr>
<td>Years c</td>
<td>1</td>
<td>825.11</td>
<td>825.11</td>
<td>2.47</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>43</td>
<td>14391.95</td>
<td>334.70</td>
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</tr>
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<td>Total</td>
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<td>114743.40</td>
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</table>

aRathus = Assertiveness
bSEKS = Knowledge
cYears = Number of Years in Special Education
Table 9
Stepwise Regression Procedure for Criterion Variable
Performance, Predictor Variables Assertiveness, Knowledge, and Years in Special Education

<table>
<thead>
<tr>
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<td>4524.18</td>
<td>1508.24</td>
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<tr>
<td>Rathus&lt;sup&gt;a&lt;/sup&gt;</td>
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</tr>
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<td>8576.12</td>
<td>199.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>13100.84</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Rathus = Assertiveness

<sup>b</sup>SEKS = Knowledge

<sup>c</sup>Years = Number of Years in Special Education
Table 10

Stepwise Regression Procedure for Criterion Variable Future Contacts, Predictor Variables Years in Special Education and Assertiveness

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
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<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
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<td>0.42</td>
<td>1.21</td>
<td>2.13</td>
<td>ns</td>
</tr>
<tr>
<td>Years(^a)</td>
<td>1</td>
<td>0.40</td>
<td>0.40</td>
<td>4.19</td>
<td>.05</td>
</tr>
<tr>
<td>Rathus(^b)</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.15</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>44</td>
<td>4.32</td>
<td>0.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>4.74</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Years = Number of Years in Special Education

\(^b\)Rathus = Assertiveness
Handicapping Condition and Years in Special Education

Based on an Analysis Of Variance (ANOVA), the handicapping condition of the child was determined to have a significant effect on total parent participation in the SBARC meeting, \( F(2, 1) = 6.56, p < .01 \) (Table 11). Tukey post hoc analysis (Kirk, 1968) showed that a critical difference in the degree of parent participation exists between parents of mentally handicapped students who have received special education for two years or less and parents of learning disabled students who have received special education for two years or less with parents of the learning disabled children being most participative.

Handicapping condition of the child was also determined to have a significant effect on parent participation in the discussion of the child's behavior at school and at home based on ANOVA, \( F(2, 1) = 6.67, p < .01 \) (Table 12). While examination of cell means reveals that parents of children classified as learning disabled were more participative in this area than parents of mentally handicapped children, the Tukey post hoc analysis was too conservative to indicate where the significant effect lies.

The number of years the child had received special education services (two years or less or more than two years) did not have a significant effect on parent participation in the discussion of any topical categories observed. A significant interaction effect (\( p < .05 \)) was found between the number of years a child had received
special education and the handicapping condition of the child on the parent's discussion of the child's past educational history based on ANOVA, F(2, 1) = 4.77, p < .05 (Table 13). Again, the Tukey post hoc analysis was too conservative to indicate the location of the significant effect. An examination of cell means revealed that parents of learning disabled children classified for two years or less were most participative in this area. Parents of mentally handicapped children and learning disabled children classified for more than two years participated some while parents of mentally handicapped children classified for two years or less did not participate at all in discussions of the child's past educational history.

ANOVA indicated that there was a significant interaction effect between the number of years the child had received special education and the child's handicapping condition on the parent's score on the Rathus Assertiveness Schedule, F(2, 1) = 4.46, p < .05 (Table 14). Examination of cell means revealed that parents of mentally handicapped children who had been classified for two years or less and parents of learning disabled children who had been classified for more than two years were more assertive than parents of mentally handicapped children classified for more than two years and parents of learning disabled children classified for two years or less. The Tukey post hoc analysis, however, was too conservative to support these differences.
Table 11
Analysis of Variance - Total Participation by Years and Condition

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>50</td>
<td>11420.68</td>
<td>228.41</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>1677.40</td>
<td>559.13</td>
<td>2.70</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>316.63</td>
<td>316.63</td>
<td>1.53</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>1360.30</td>
<td>1360.30</td>
<td>6.56</td>
<td>.01</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>2.93</td>
<td>2.93</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>1360.77</td>
<td>680.69</td>
<td>3.28</td>
<td>.05</td>
</tr>
</tbody>
</table>

*Sum of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
Table 12

Analysis of Variance - Behavior by Years and Condition

<table>
<thead>
<tr>
<th>Source</th>
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<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
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<td>127.33a</td>
<td>63.66</td>
<td>3.37</td>
<td>.05</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>3.64</td>
<td>3.64</td>
<td>0.19</td>
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</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>125.93</td>
<td>125.93</td>
<td>6.66</td>
<td>.01</td>
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<tr>
<td>Interaction</td>
<td>1</td>
<td>0.15</td>
<td>0.15</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>127.48</td>
<td>42.49</td>
<td>2.25</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>889.19</td>
<td>18.92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>1016.67</td>
<td>20.33</td>
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</tr>
</tbody>
</table>

*aSums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
Table 13
Analysis of Variance - Past Educational History by Years and Condition

<table>
<thead>
<tr>
<th>Source</th>
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<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>2.77&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.38</td>
<td>0.56</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.32</td>
<td>0.32</td>
<td>0.13</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
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<td>2.32</td>
<td>2.32</td>
<td>0.94</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>11.82</td>
<td>11.82</td>
<td>4.77</td>
<td>.05</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>14.58</td>
<td>4.86</td>
<td>1.96</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>116.42</td>
<td>2.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>131.00</td>
<td>2.62</td>
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</table>

<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table 14

Analysis of Variance - Rathus by Years and Condition

<table>
<thead>
<tr>
<th>Source</th>
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<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
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<td>808.31</td>
<td>404.15</td>
<td>1.08</td>
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</tr>
<tr>
<td>Years</td>
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<td>409.98</td>
<td>409.98</td>
<td>1.09</td>
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</tr>
<tr>
<td>Condition</td>
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<td>345.94</td>
<td>345.94</td>
<td>0.92</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>1673.76</td>
<td>1673.76</td>
<td>4.46</td>
<td>.05</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>2482.07</td>
<td>827.36</td>
<td>2.21</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>17638.38</td>
<td>375.28</td>
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<tr>
<td>Total</td>
<td>50</td>
<td>20120.45</td>
<td>402.41</td>
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</tbody>
</table>

*Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
The Relationship Between Knowledge and Assertiveness

A Pearson product moment correlation coefficient, computed between the parents' scores on the SEKS and the Rathus Assertiveness Schedule, revealed a nonsignificant correlation of $r = .008$, indicating that knowledge of handicapping conditions and Public Law 94-142 are not related to parent assertiveness.
CHAPTER V
Discussion and Summary

Discussion of Results

The results of this study reveal the following: 1) assertiveness is predictive of total parent participation in the annual SBARC meeting; 2) knowledge, assertiveness and the actual number of years a child has received special education are predictive of parent participation in some specific topics discussed at the annual SBARC meeting; 3) a child's handicapping condition affects total parent participation and parent participation in discussion of the child's behavior; and 4) the child's handicapping condition and the number of years a child has received special education have a positive interactive effect on the parent's participation in discussion of the child's past educational history and the parent's assertiveness.

It was hypothesized by the experimenter that assertiveness and knowledge of special education and the child's handicapping condition would both be predictors of total parent participation in the SBARC meeting. The findings support the hypothesis that more assertive parents are more participative in the SBARC meetings than nonassertive parents. It fails to support the hypothesis that parents who are knowledgeable about special education
and their child's handicapping condition are more participative overall in the SBARC meetings than parents who are not knowledgeable in these areas. They do, however, appear to participate more in discussion of specific topics more than parents who are not knowledgeable.

Assertiveness and Knowledge

Total parent participation. Assertiveness appears to be predictive of the total amount of parent participation in the annual SBARC meeting, while knowledge and the number of years a child receives special education are not. Assertive parents may feel more competent in dealing with educators, be more expressive of their feelings and desires, and be more insistent that their suggestions be taken into consideration than nonassertive parents. According to Canning et. al. (1979), Gilliam (1979), Grogan (1980), Morgan (1982), and Soffer (1982), the lack of such communication skills attribute to the passive role of parents in the SBARC meeting, therefore, possession of these skills may contribute to more active parent participation in the SBARC meeting.

Topics of parent participation predicted by knowledge, assertiveness and actual number of years. Knowledge and assertiveness, together and alone, are predictive of parent participation in certain of the observed topics during the SBARC meeting. The relationship among these variables (parent knowledge, parent assertiveness, and parent...
participation) should be interpreted with caution due to the broad nature of the topic definitions. Knowledge proves to be the best predictor of parent participation in discussing the child's past educational history. Parents who are knowledgeable about their child's handicapping condition and P. L. 94-142 may also be more aware of, or familiar with, characteristics of their child's educational history which are relevant to the child's present education than are parents who are less knowledgeable about their child's handicapping condition and P. L. 94-142.

The study also finds that assertiveness is predictive of parent participation in the discussion of instructional materials to be used by the child. Parents who are not intimidated by professionals may be comfortable inquiring about specific materials, methods, or interventions being used with the child or requesting suggestions for materials, methods, or interventions which they may use with their child.

Assertiveness also appears to be predictive of the parents' discussion of personal and family issues related to the child's education. Personal and family issues are topics about which parents are more knowledgeable than professionals. It is possible that parents who are assertive are also more capable of recognizing their expertise in this area and recognize the significant contributions which they can make to help school professionals come to know the handicapped child better.
Assertiveness appears to be predictive of parent input into the discussion of formal evaluation of the child, and knowledge and assertiveness are predictive of parent input into the discussion of the curriculum for the handicapped child. These findings are not considered significant since the analyses in both cases are based on the contributions of only one parent.

Knowledge and assertiveness together appear to be predictive of parent participation in discussing the handicapped child's academic performance and curriculum which consists of goals and objectives for the child. Parents who are knowledgeable about their child's handicapping condition and P.L. 94-142 are able to recognize their child's strengths and weaknesses and the areas in which remediation is needed; and if the parents are assertive, they may be more confident in the importance of their observation.

The actual number of years a child has received special education is predictive of parent participation in the discussion of future contacts between the parent and school professional. Discussion coded "Future Contact" consists of parents and professionals arranging to meet in the future to discuss the child's educational program. It is possible that the more years a child receives special education services, the more familiar parents become with the routine of annual reviews and follow-up meetings, and so participate or question more than parents whose children
are new to the special education system. It is also possible that parents who have been involved with Special Education for several years are aware of the need for parents and professionals to remain in touch regarding the handicapped child's education.

The actual number of years a child has received special education is also positively correlated with parent participation in discussing future plans for the handicapped child. Statements coded "Future Plans" consist of questions or comments pertaining to plans for the child more than one year in the future, usually regarding classes at the middle or high school or occupational possibilities for the child. Parents having children who have received special education for several years are probably more realistic about their child's strengths and weaknesses and see more need to consider special needs of the child for the future than parents who have had little experience with some of the limitations of handicapped children.

A significant negative correlation exists between the actual number of years a child has received special education and parent participation in discussion of the child's health. As a child becomes more familiar to school professionals that work with him or her, there is probably less need to discuss special health considerations of the child.
The handicapping condition of a child has a significant effect on total parent participation in the SBARC meeting. Tukey post hoc analysis shows that a critical difference exists between parents of mentally handicapped students who have received special education for two years or less and parents of learning disabled students who have received special education for two years or less. Parents of the learning disabled students are more participative than the parents of mentally handicapped students. One possible explanation is that learning disabled children tend to approach normalcy more than mentally handicapped children. Parents of learning disabled children have a difficult time adjusting to the idea that their child is handicapped because they see the child as normal in so many ways. Therefore, parents tend to push for services they feel their child needs, so that their learning problems may be remediated, whereas parents of mentally handicapped students may feel that less can be done for their child.

Parents of learning disabled children are also more participative in discussion of the child's behavior. Again, it may be that these parents see their child as "normal" and, therefore, expect the child to behave the same as nonhandicapped children. The behaviors of the child concern the parent; therefore, they wish to discuss them and find suggestions for remediation.
Parents of learning disabled children receiving special education for two years or less also tend to be most participative in discussing their child's past educational history. Parents of mentally handicapped children and learning disabled children receiving special education for more than two years participate some, while parents of mentally handicapped children receiving special education for less than two years participate least in the discussion of their child's past educational history. This finding may be a result of children classified as mentally handicapped having been identified early in their educational career and therefore not having a past educational history as extensive as do learning disabled children, who may be indentified later in their educational career, or mentally handicapped children who have been receiving special education for more than two years.

A significant interaction effect exists between the number of years the child has received special education and the child's handicapping condition on the parent's score on the Rathus Assertiveness Schedule. Parents of learning disabled children receiving special education for more than two years and parents of mentally handicapped children receiving special education for two years or less appear to more assertive than parents of learning disabled children receiving special education for two years or less and parents of mentally handicapped children receiving special education for more than two years. This
interesting finding suggests that parents of learning disabled children tend to become more assertive the more years they are involved with special education, while parents of mentally handicapped children tend to become less assertive with an increase in the number of years that they are involved in special education. Further research of parental attitudes might help to explain why some parents become more assertive while others become less assertive.

Discussion of Additional Analyses

Other interesting information was gathered during this study and will be discussed here. Included are 1) topics in which parents were observed to participate most will be discussed, 2) the relationship between parent participation and the request of information by professionals, 3) the relationship between parent participation and the length of the conference and the number of people present at the SBARC meeting, and 4) components of knowledge measured by the SEKS in which parents appear to be most and least knowledgeable.

Parent Participation as Compared to Participation by Professionals

The mean and standard deviation of parent and professional participation have been computed (see Table 15). The average of total parent participation is 23.8%, while the average participation by professionals is 77.3%. Parents participate most on the topics of Behavior (5.8%), Other (5.6%), Personal/Family (4.1%), Performance (2.3%),
and Past Educational History (1.0%). It seems logical that parents will participate most in these areas because these are the aspects of their child with which they are most familiar. Professionals contribute most in the areas of Other (12.5%), Performance (11.7%), Curriculum (9.4%), and Evaluation (8.4%). It is interesting that "Behavior" and "Performance" are among the topics most often discussed by parents and professionals. This may be the result of both parents and professionals finding a common ground on which they were equally knowledgeable.
Table 15
Percentage and Standard Deviation of Parent and Professional Participation in Observational Topics

<table>
<thead>
<tr>
<th>Observational Topic</th>
<th>Parents</th>
<th></th>
<th>Professional</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>SD</td>
<td>%</td>
<td>SD</td>
</tr>
<tr>
<td>Curriculum</td>
<td>.04</td>
<td>.28</td>
<td>9.37</td>
<td>7.16</td>
</tr>
<tr>
<td>Behavior</td>
<td>5.8</td>
<td>5.27</td>
<td>12.5</td>
<td>8.68</td>
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<tr>
<td>Performance</td>
<td>2.27</td>
<td>3.59</td>
<td>11.68</td>
<td>8.31</td>
</tr>
<tr>
<td>Evaluation</td>
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<td>.38</td>
<td>8.39</td>
<td>7.42</td>
</tr>
<tr>
<td>Placement</td>
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<td>.72</td>
<td>6.34</td>
<td>4.7</td>
</tr>
<tr>
<td>Special Services</td>
<td>.17</td>
<td>1.13</td>
<td>3.25</td>
<td>6.64</td>
</tr>
<tr>
<td>Instructional Materials</td>
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<td>1.25</td>
<td>4.07</td>
<td>4.53</td>
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<tr>
<td>Future Plans</td>
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<td>1.37</td>
<td>2.49</td>
<td>3.84</td>
</tr>
<tr>
<td>Individuals Responsible</td>
<td>0</td>
<td>0</td>
<td>.86</td>
<td>1.82</td>
</tr>
<tr>
<td>Personal/Family</td>
<td>4.13</td>
<td>4.84</td>
<td>1.27</td>
<td>2.23</td>
</tr>
<tr>
<td>Future Contacts</td>
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<td>.99</td>
<td>.73</td>
<td>1.74</td>
</tr>
<tr>
<td>Health</td>
<td>.86</td>
<td>2.27</td>
<td>.61</td>
<td>1.78</td>
</tr>
<tr>
<td>Rights/Responsibilities</td>
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<td>.53</td>
<td>.90</td>
<td>1.69</td>
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<tr>
<td>Past Educational History</td>
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<td>1.76</td>
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<td>2.10</td>
</tr>
<tr>
<td>Other</td>
<td>5.63</td>
<td>4.75</td>
<td>12.54</td>
<td>7.12</td>
</tr>
<tr>
<td>Total</td>
<td>23.77</td>
<td>16.63</td>
<td>77.27</td>
<td>28.03</td>
</tr>
</tbody>
</table>
Parent Participation and the Request of Input by Professionals

Of the 43 SBARC meetings observed, parent input was requested in 34 of those by the special education teacher or the counselor. A point bi-serial correlation yields a significant correlation coefficient of \( r = -0.57, p < 0.01 \) between the professional's request of parent input and the total amount of parent participation in the SBARC meeting. The negative correlation suggests that parents participate more when input is not requested. A correlation does not indicate cause and effect of the relationship, however, this experimenter suggests that input is not requested when parents are perceived to be comfortable in participating. Most likely professionals realize when parents need to be urged to participate. When they sense that parents are comfortable contributing to the discussion, they do not feel the need to request input from the parent.

Parent Participation as Related to the Number of Professionals Present and Conference Duration

A Pearson product moment correlation coefficient was computed to determine the relationship between parent participation and the number of professionals present at the conference. The analysis yields an nonsignificant correlation of \( r = -0.21, p > 0.05 \). Although this relationship is not significant, it does suggest that parents tend to be less participative when there are more people present at the conference than when there are fewer.
people at the conference. If parents are intimidated by professionals as was suggested by Canning et. al. (1979), Gilliam (1979), Morgan (1982), and Soffer (1982), it is likely that they become further intimidated when more professionals are present.

The relationship between parent participation and the duration of the SBARC meeting is found to be $r = -0.06$, $p > 0.05$ by the Pearson product moment correlation coefficient. This is not a significant relationship indicating that the total amount of parent participation is not related to the duration of the meeting.

Special Education Knowledge Survey

A review of item means from the SEKS reveals that parents are most knowledgeable about their roles in planning the handicapped child's educational program. Although most are aware that the intent of P.L. 94-142 is to "ensure a free appropriate education for the handicapped child," they do not indicate awareness that the handicapped child's education is provided at no expense to parents. Parents surveyed also are generally unaware of the meaning of low incidence handicaps (i.e. visual handicaps, hearing impairment, and emotionally disturbed), however, this finding is expected since they have limited contact with low incidence handicapping conditions as their children are classified as mentally handicapped or learning disabled.
Generalizability of the Results

Generalizability of this study is somewhat limited. The sample size of only 51 parents of 43 children limits the ability to generalize the results of the study to the general population of learning disabled and mentally handicapped children in other geographic locations. The population is very homogeneous, and characteristics of the population may also limit generalizability. First, parents participating in the study constitute a very transient population as they live on a military base. Most of these parents move at least once every two years. When parents are new to a school system, the special education process is usually explained in detail so these parents receive explanations more often than parents who do not move frequently. Also, parents who move often may make an effort to learn more about their child's education so they can provide school officials with information about their child's educational history when they move.

Implications of the Study for Future Research

The findings of this study indicate that assertiveness is the most important skill parents need for increasing their participation in planning their child's educational program. Therefore, to increase parent participation in planning the educational program for their handicapped child, it appears that teaching them assertiveness skills will be sufficient. It is the opinion of this experimenter, however, that knowledge is also important
because it makes parents more aware of their rights and responsibilities as well as services that are available for their child. Providing knowledge alone is not enough however; educating parents about their child's handicapping condition and P. L. 94-142 gives them additional support for their assertiveness. Parent education programs should not, therefore, disregard the knowledge component, but should have as their main goal teaching parents assertiveness skills.

The major problem with suggesting that the schools educate parents in regard to assertiveness skills lies in the fact that unassertive parents may be easier for the schools to work with. School systems which are not in compliance with P. L. 94-142 may prefer parents who accept what they are given and are grateful. Therefore, the schools may not be open to educating parents with regard to the law, the handicapping conditions of their child, or effective communication skills (Coakley, 1981).

As has been revealed by this study, more information is needed on why parents of Learning Disabled students who have been receiving special education for two years or less are more participative than parents of mentally handicapped students who have received special education for two years or less. More information is also needed on why parents tend to become less participative as the years that their child receives special education services increases. It would be interesting to determine how parent attitudes
toward special education and their child change as the years the child receives special education increases. Parent education programs have been reviewed which address parent's counseling needs and resources available for the child and parent. Further research might address the effects of these programs on parent participation in the IEP conference.

For the purpose of further research, this experimenter suggests that the observation instrument be revised. Observation categories should be clarified and additional categories could be created (i.e., procedural matters). Further researchers may also wish to address the quality of parental participation during the IEP conference. In this study, any parent contribution was recorded. The form of the contribution (question, statement, or suggestion) was not recorded, nor was the quality or significance of the contribution judged.

The Rathus Assertiveness Schedule measures assertiveness in social situations. For the purpose of future research, the experimenter may wish to develop a scale which measures assertiveness in educational situations.

**Summary**

With the passage of Public Law 94-142, parent participation in planning the educational program of the handicapped child became a requirement. Parents have continued, however, to take a passive role rather than an
active role in planning their child's educational program. A review of current literature suggests that parents' passiveness results from their lack of knowledge about special education and the handicapping condition of their child and parent lack of assertiveness.

A response to such research has been the development of parent education programs designed to provide parents with assertiveness skills and knowledge regarding special education and the handicapping condition of their child. Follow-up studies on such programs, however, is lacking; therefore, it is not known whether the programs are effective in increasing parent participation in the annual SBARC meeting.

This study was designed to determine the relationship among parent assertiveness, parent knowledge of special education and the handicapping condition of their child, and parent participation in planning the handicapped child's educational program. The handicapping condition of the child and the number of years the child had received special education were studied as to their impact on parent assertiveness, parent knowledge of special education and the handicapping condition of the child, and parent participation in the annual SBARC meeting.

The target population consisted of parents of children identified as Learning Disabled or Mentally Handicapped, according to Kentucky statutes, in a suburban area of Kentucky. Parents completed an experimenter-developed
scale, the SEKS, which measured their knowledge of special education and various handicapping conditions. The degree of their assertiveness was measured by the Rathus Assertiveness Schedule. They were also observed during the SBARC meeting and their participation was recorded at 30 second intervals using a time-sampling observational instrument developed by Goldstein and Turnbull (1982).

Analysis of the data collected revealed five major findings. First, parent assertiveness is predictive of total parent participation in the annual SBARC meeting, more assertive parents being more participative. This supports the experimenter's hypothesis that assertiveness is a vital skill for parents if they are to be more participative in planning their child's educational program. Knowledge alone, on the other hand, is not predictive of total parent participation. This finding does not support the hypothesis, since the experimenter expected that knowledge would also be a significant predictor of parent participation in the annual SBARC meeting.

Second, knowledge, assertiveness, and the actual number of years a child has received special education are predictive of parent participation in specific areas discussed in the annual SBARC meeting. Knowledge was found to be predictive of parent participation in discussing the child's past educational history. Assertiveness was found
to be predictive of total parent participation in the IEP conference, parent participation in discussion of the evaluation of the child, instructional materials to be used with the child, and personal and family issues related to the child's education. Knowledge and assertiveness together were found to be predictive of parent discussion of curriculum for the handicapped child and the child's performance at home and at school. The actual numbers of years the child had received special education was found to be predictive of the parent's discussion of future contacts.

The third major finding is that the child's handicapping condition affects total parent participation in the annual SBARC. Parents of learning disabled children who have received special education for two years or less are more participative than parents of mentally handicapped children who have received special education for two years or less.

Fourth, the child's handicapping condition and the number of years the child has received special education interact to effect parent participation in discussing the child's past educational history, with parents of learning disabled children who have received special education for two years or less being most participative, and parents of mentally handicapped children who have received special education for two years or less did not participate at all.
The fifth major finding is an interaction of handicapping condition and the number of years the child has received special education which affect parent assertiveness. Parents of mentally handicapped children receiving special education for two years or less, and parents of learning disabled children receiving special education for more than two years are more assertive than parents of mentally handicapped children receiving special education for more than two years and parents of learning disabled children receiving special education for two years or less.

Overall, assertiveness seems to be the most important skill for parents of handicapped children to possess in promoting increased parent participation in the annual SBARC meeting. Therefore, parent education programs should have as their main goal teaching parents assertiveness skills. Knowledge of special education and the child's handicapping condition influence the parent's participation in discussion of specific topics regarding their child. Such knowledge is also important to parents. It gives them information to support their assertiveness and possibly enhances the quality of parent participation. Knowledgeable parents are more aware of their rights and responsibilities and more aware of services available to their child, and so may be more assertive. Therefore, parent education programs should address knowledge and
assertiveness but have as a main goal teaching parents assertiveness skills.
References


Appendix A
Dear PARENT NAME,

On DATE I spoke to you on the phone about a project I would like you to be involved in. As I explained, I want to get some information so the schools can help parents of special children become more involved in planning their child's educational program.

I am pleased to have your cooperation in this project to help the school determine what the parents of special children need. In MONTH you will have a meeting at SCHOOL with CHILD'S NAME teacher and the counselor to discuss HIS/HER educational program for the following year. Helping me in this project involves you meeting with me 30 minutes before this meeting so that I may get some information from you about your child and your understanding of special education. Then I will observe the meeting between you, the teacher, and the counselor.

As I told you, all information will be confidential. Your name and your child's name will never be used or recorded.

If you are still interested in helping the school help parents, please sign the consent form below. This form must be returned to me as soon as possible. If you have any questions or concerns, please feel free to call me.

Your meeting with the teacher and counselor will be DATE AND TIME. Please meet me at TIME

Thank you,

Lynne Croxton
Phone 624-6228

------------------------------------------------------------
I, ________________________________, agree ____do not agree to
(Please check one) participate in the project to help parents of special children. Should I decide to participate, I understand that I will be meeting with Lynne Croxton 30 minutes before or after my child's annual review conference to answer questions, and that she will be observing the conference. I may withdraw from this project at anytime and if I wish, I may have access to the information collected during this project. I understand that my name or my child's name will never be used in reporting information.

SIGNED: _____________________________
Appendix B
Appendix B

The Rathus Assertiveness Schedule

Directions: Indicate how characteristic or descriptive each of the following statements is of you by using the code given below.

+3 very characteristic of me, extremely descriptive
+2 rather characteristic of me, quite descriptive
+1 somewhat characteristic of me, slightly descriptive
-1 somewhat uncharacteristic of me, slightly nondescriptive
-2 rather uncharacteristic of me, quite nondescriptive
-3 very uncharacteristic of me, extremely nondescriptive

1. Most people seem to be more aggressive and assertive than I am.
2. I have hesitated to make or accept dates because of "shyness."
3. When the food served at a restaurant is not done to my satisfaction, I complain about it to the waiter or waitress.
4. I am careful to avoid hurting other people's feelings, even when I feel that I have been injured.
5. If a salesman has gone to considerable trouble to show me merchandise which is not quite suitable, I have a difficult time in saying "No."
6. When I am asked to do something, I insist upon knowing why.
7. There are times when I look for a good, vigorous argument.
8. I strive to get ahead as well as most people in my position.
9. To be honest, people often take advantage of me.
10. I enjoy starting conversations with new acquaintances and strangers.
11. I often don't know what to say to attractive persons of the opposite sex.
12. I will hesitate to make phone calls to business establishments and institutions.
13. I would rather apply for a job or for admission to college by writing letters than by going through with personal interviews.
14. I find it embarrassing to return merchandise.
15. If a close and respected relative were annoying me, I would smother my feeling rather than express my annoyance.
16. I have avoided asking questions for fear of sounding stupid.
17. During an argument I am sometimes afraid that I will get so upset that I will shake all over.
18. If a famed and respected lecturer makes a statement which I think is incorrect, I will have the audience hear my point of view as well.

19. I avoid arguing over prices with clerks and salesman.

20. When I have done something important or worthwhile, I manage to let others know about it.

21. I am open and frank about my feelings.

22. If someone has been spreading false and bad stories about me, I see him (her) as soon as possible to "have a talk" about it.

23. I often have a hard time saying "No."

24. I tend to bottle up my emotions rather than make a scene.

25. I complain about poor service in a restaurant and elsewhere.

26. When I am given a compliment, I sometimes just don't know what to say.

27. If a couple near me in a theatre or at a lecture were conversing rather loudly, I would ask them to quiet or take their conversation elsewhere.
Appendix C

The Special Education Knowledge Survey

Directions: For the following three questions, please circle the number of the answer which best describes your child.

A. What is your child's handicapping condition?
   1. Learning Disabled
   2. Mentally Handicapped
   3. Other
   4. I don't know.

   If you circled number 3 please describe your child's handicapping condition: __________________________

B. How many years has your child been receiving Special Education services?
   1. 2 years or less
   2. more than 2 years

C. When did you first find that your child had a handicap?
   1. At birth.
   2. Not at birth but before he/she entered school.
   3. After he/she was in school. (Please specify what grade the child was in when the handicap was discovered.

D. How did you find out that your child had a handicap?
   1. Told by a professional (doctor, teacher, ...).
   2. Suspect for yourself.

For the following questions, please circle the letter in front of the answer that you think is best. Answer ALL questions. If you are not sure of an answer, guess.

1. The biggest difference between handicapped children and other children is
   A. looks or appearance.
   B. speed or method of learning.
   C. ability to make friends.
   D. I don't know.

2. Many parents of handicapped children
   A. do not benefit from talking with parents of handicapped children.
   B. sometimes wish their handicapped child was different.
   C. completely accept their handicapped child.
   D. I'm not sure how I feel.
3. Mental retardation means  
A. a child has a hard time learning.  
B. a child has behavior problems.  
C. a child has poor adaptive behavior.  
D. both A and B.  
E. both A and C.  

4. A visual handicap means  
A. a child's vision without glasses is so bad that he/she has trouble learning.  
B. a child's vision with glasses is so bad that he/she has trouble learning.  
C. a child has difficulty learning because he/she is retarded.  
D. both B and C.  

5. Learning disabilities are due primarily to  
A. mental retardation.  
B. emotional disturbance.  
C. problems in understanding what is heard or read.  
D. all of the above.  

6. Emotional disturbance is primarily associated with  
A. slow learning.  
B. problems understanding.  
C. a lot of inappropriate behavior.  
D. both A and B.  

7. Hearing impairment means  
A. a child has trouble understanding what he/she hears with a hearing aid.  
B. a child has trouble understanding what he/she hears without a hearing aid.  
C. a child may or may not be able to speak.  
D. all of the above.  

8. In general the evaluation of a student  
A. cannot be done without the parent's consent.  
B. must be done by a team of people trained in different specialty areas.  
C. must include at least one expert in the suspected handicap.  
D. all of the above.  

9. Parent permission is not required for  
A. any test given to all children in the school.  
B. placing the child in special education.  
C. giving the child psychological tests.  
D. taking the child out of special education.
10. The role of the parents at the annual review meeting is to
   A. provide information to the school for planning a good education for their child.
   B. to sign whatever forms the school wants them to.
   C. to make sure that at least three people are at the meeting.
   D. I don't know.

11. The intent of Public Law 94-142 is
   A. to ensure a free and appropriate education for the handicapped child.
   B. to see that only mildly handicapped children are given an education.
   C. to keep severely disturbed children in institutions.
   D. to provide all of the above.

12. The cost of educating a handicapped child is
   A. the responsibility of the family.
   B. shared by the family and the school.
   C. a public expense.
   D. none of the above.

13. Public Law 94-142 is a law about
   A. employment of handicapped people.
   B. the education of handicapped children.
   C. the education of all children.
   D. I don't know.

14. The law requires that handicapped children receive an education
   A. at no cost to their parents.
   B. within the public school system whenever possible.
   C. that is appropriate for each child's educational needs.
   D. all of the above.

15. Referring a child for special services
   A. means the child will be placed in a special education class.
   B. means the child will be evaluated only after parent consent.
   C. is always done by a regular classroom teacher.
   D. requires parent consent.

16. The Individual Educational Plan or IEP
   A. is provided for every school-age child.
   B. covers all areas of a child's education.
   C. covers only the parts of the child's education that require special services.
   D. I don't know.
17. The Individual Educational Plan or IEP may not include
   A. the child's present level of educational performance.
   B. what the child will be working on in the coming year.
   C. what special education and related services will be provided.
   D. a list of all materials the child will be using.

18. The annual review meeting
   A. helps parents and educators communicate with each other.
   B. gives parents and teachers an opportunity to discuss the child's educational needs.
   C. gives parents and teachers an idea of what the child is expected to learn.
   D. all of the above.

19. Which of the following is true?
   A. A child can receive special education services without an Individualized Education Plan or IEP.
   B. A new Individualized Education Plan (IEP) is needed to change a student's educational placement.
   C. The Individualized Education Plan (IEP) covers only academic areas of the child's education.
   D. I don't know.

20. An Individualized Education Plan (IEP) is
   A. a test of children's knowledge.
   B. a plan for referring a child for special education.
   C. a plan for the education of a handicapped child
   D. I don't know.

21. Due process refers to
   A. a parent's right to an impartial hearing.
   B. the school's right to an impartial hearing.
   C. both A and B.
   D. none of the above.

22. The best placement for a handicapped child depends on
   A. what the child needs.
   B. how the child can learn best.
   C. what placements the school has to offer.
   D. all of the above.
   E. only A and B.

23. An impartial due process hearing is held
   A. to decide whether or not a child should be evaluated.
   B. so educators and parents may write the child's IEP.
   C. when parents and the school cannot agree on the child's evaluation or educational program.
   D. I don't know.
24. An independent evaluation
A. may be requested by the child's parents.
B. is an evaluation completed by an employee of the school system.
C. both A and B.
D. Neither A or B.

25. Parents of handicapped children
A. should decide on their child's educational program.
B. should leave their child's education to the teachers who are experts.
C. can provide a lot of useful information to educators about their child.
D. only A and B above.
Appendix D
Appendix D
Definitions of Observation Topics

1. Curriculum - subject areas, the subjects students will be or has been working in, objectives and goals for subject areas.

2. Behavior - pertaining to child's conduct in school or home, management of conduct, i.e. distractibility, work/study habits, homework.

3. Academic Performance - skills student can and cannot do in specific subject areas (informal assessment—not testing) strengths and weaknesses.

4. Evaluation - discussion of formal test results.

5. Placement - specific placement for child, e.g. resource room 1/3 time, classroom 2/3 or self-contained special class, special school, etc.

6. Special Services - services offered to the child that are not offered routinely, such as speech therapy, counseling, physical therapy.

7. Instructional Materials - discussion of specific materials that will be or have been used with child; also instructional methods, activities, interventions.

8. Future Plans - discussion of child's future more than one year hence, e.g. problems in junior high, career possibilities, college.

9. Individual Responsible - person responsible for carrying out a specific objective, task related to obtaining services for the child by a particular person.

10. Personal/Family - directly related to child and his/her home life, siblings neighborhood, parent/child relations. Topics which are about parents, e.g. their sport preference, their job problems should be categorized under OTHER.

11. Future Contacts - plans mentioned to meet again, telephone, written notes pertaining to child.

13. Rights and Responsibilities - discussion of parents' rights pertaining to their child's education plan, evaluation, placement, records, and the school's responsibilities for educating the child.

14. Other - any topic that is not pertinent to the child or his/her IEP. This includes procedural matters such as introductions and form signing.

15. Past School History - other programs or schools the child has attended; behaviors, performance, or evaluation in past grades when not being used to compare present performance.

If a participant is just answering "yes" or "no" during coding, code it by the topic of the question asked.
Appendix E
### Table E-1

Stepwise Regression Procedure for Criterion Variable Behavior, Predictor Variables Knowledge and Assertiveness

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\(^a\)SEKS = Knowledge

\(^b\)Rathus = Assertiveness
Table E-2
Stepwise Regression Procedure for Criterion Variable Placement, Predictor Variables Knowledge and Assertiveness

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\(^a\)SEKS = Knowledge
\(^b\)Rathus = Assertiveness
Table E-3
Stepwise Regression Procedure for Criterion Variable
Special Services, Predictor Variables Knowledge and Years

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$^a$SEKS = Knowledge

$^b$Years = Number of Years in Special Education
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Stepwise Regression Procedure for Criterion Variable Future Plans, Predictor Variables Assertiveness and Knowledge

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a Rathus = Assertiveness  
b SEKS = Knowledge
Table E-5
Stepwise Regression Procedure for Criterion Variable
Individuals Responsible, Predictor Variables Assertiveness and Knowledge

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*a Rathus = Assertiveness
b SEKS = Knowledge
Table E-6

Stepwise Regression Procedure for Criterion Variable Health, Predictor Variables Assertiveness and Years

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*a Rathus = Assertiveness  
*b Years = Number of Years in Special Education
Table E-7
Stepwise Regression Procedure for Criterion Variable
Rights/Responsibilities, Predictor Variables Years and Knowledge

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<td>1</td>
<td>0.05</td>
<td>0.05</td>
<td>0.42</td>
<td>ns</td>
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<tr>
<td>SEKS $^b$</td>
<td>1</td>
<td>0.01</td>
<td>0.01</td>
<td>0.06</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>4</td>
<td>5.65</td>
<td>0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>46</td>
<td>5.71</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$^a$Years = Number of Years in Special Education

$^b$SEKS = Knowledge
Appendix F
Appendix F

Source Tables for Non-Significant Analyses of Variance

Tables F-1 Through F-13

Table F-1
Analysis of Variance - Curriculum by Years and Condition

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>0.14a</td>
<td>0.70</td>
<td>0.99</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.05</td>
<td>0.05</td>
<td>0.76</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>0.08</td>
<td>0.08</td>
<td>1.09</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.07</td>
<td>0.07</td>
<td>0.94</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>1.21</td>
<td>0.07</td>
<td>0.97</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>3.33</td>
<td>0.07</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>3.63</td>
<td>0.07</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
### Table F-2
Analysis of Variance - Performance by Years and Condition

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>8.46^a</td>
<td>4.23</td>
<td>0.44</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.45</td>
<td>0.45</td>
<td>0.05</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>8.23</td>
<td>8.23</td>
<td>0.86</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
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<td>24.28</td>
<td>24.28</td>
<td>2.54</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>32.74</td>
<td>10.91</td>
<td>1.14</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>448.76</td>
<td>9.55</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>480.50</td>
<td>9.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

^a Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-3

Analysis of Variance - Evaluation by Years and Condition

<table>
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<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>0.22</td>
<td>0.11</td>
<td>0.91</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.12</td>
<td>0.12</td>
<td>1.00</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>0.09</td>
<td>0.09</td>
<td>0.70</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.10</td>
<td>0.10</td>
<td>1.81</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>0.32</td>
<td>0.11</td>
<td>0.87</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>5.80</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>6.13</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(a\) Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-4

Analysis of Variance - Placement by Years and Condition

<table>
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<th>p</th>
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</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>0.11</td>
<td>0.06</td>
<td>0.11</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.08</td>
<td>0.08</td>
<td>0.17</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>0.03</td>
<td>0.03</td>
<td>1.17</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.04</td>
<td>0.04</td>
<td>0.09</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>0.15</td>
<td>0.05</td>
<td>0.11</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>22.56</td>
<td>0.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>22.72</td>
<td>0.45</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
Table F-5
Analysis of Variance - Special Services by Years and Condition

<table>
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<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>2.02</td>
<td>1.01</td>
<td>0.92</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>1.11</td>
<td>1.11</td>
<td>1.00</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>1.04</td>
<td>1.04</td>
<td>0.93</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.90</td>
<td>0.90</td>
<td>0.81</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>2.92</td>
<td>0.97</td>
<td>0.87</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>52.23</td>
<td>1.11</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>55.15</td>
<td>1.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
### Table F-6

Analysis of Variance - Instructional Materials by Years and Condition

<table>
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<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>2.85&lt;sup&gt;a&lt;/sup&gt;</td>
<td>1.42</td>
<td>1.01</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.98</td>
<td>0.98</td>
<td>0.69</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>2.04</td>
<td>2.04</td>
<td>1.44</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.26</td>
<td>0.26</td>
<td>0.18</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>3.11</td>
<td>1.04</td>
<td>0.73</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>66.61</td>
<td>1.39</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>69.72</td>
<td>1.39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-7

Analysis of Variance - Future Plans by Years and Condition

<table>
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<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>4.76(^a)</td>
<td>2.38</td>
<td>1.06</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.60</td>
<td>0.60</td>
<td>0.27</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>4.35</td>
<td>4.35</td>
<td>1.94</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.21</td>
<td>0.21</td>
<td>0.10</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>4.97</td>
<td>1.66</td>
<td>0.74</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>105.47</td>
<td>2.24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>110.44</td>
<td>2.21</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\)Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-8

Analysis of Variance - Personal/Family by Years and Condition

<table>
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<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>36.96&lt;sup&gt;a&lt;/sup&gt;</td>
<td>18.48</td>
<td>0.92</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>2.65</td>
<td>2.65</td>
<td>0.13</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>35.42</td>
<td>35.42</td>
<td>1.76</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.03</td>
<td>0.03</td>
<td>0.00</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>36.99</td>
<td>12.33</td>
<td>0.61</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>944.91</td>
<td>20.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>981.90</td>
<td>19.64</td>
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<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-9
Analysis of Variance - Future Contacts by Years and Condition

<table>
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<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>1.20$^a$</td>
<td>0.60</td>
<td>0.68</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.34</td>
<td>0.34</td>
<td>0.38</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
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<td>0.79</td>
<td>0.79</td>
<td>0.89</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
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<td>0.43</td>
<td>0.43</td>
<td>0.48</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>1.63</td>
<td>0.54</td>
<td>0.61</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>41.84</td>
<td>0.89</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>43.47</td>
<td>0.87</td>
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<td></td>
</tr>
</tbody>
</table>

$^a$Sums of Squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-10

Analysis of Variance - Health by Years and Condition

<table>
<thead>
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<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>1.32</td>
<td>0.66</td>
<td>0.19</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>1.09</td>
<td>1.09</td>
<td>0.31</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>0.17</td>
<td>0.17</td>
<td>0.05</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.03</td>
<td>0.03</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>1.35</td>
<td>0.45</td>
<td>0.13</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>166.68</td>
<td>3.55</td>
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</tr>
<tr>
<td>Total</td>
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<td>168.03</td>
<td>3.36</td>
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</table>

*Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.*
### Table F-11

Analysis of Variance - Rights and Responsibilities by Years and Condition

<table>
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<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>0.08&lt;sup&gt;a&lt;/sup&gt;</td>
<td>0.04</td>
<td>0.15</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.03</td>
<td>0.03</td>
<td>0.10</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>0.06</td>
<td>0.06</td>
<td>0.21</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>0.12</td>
<td>0.12</td>
<td>0.47</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>0.20</td>
<td>0.07</td>
<td>0.26</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>12.05</td>
<td>0.26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>12.25</td>
<td>0.25</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-12

Analysis of Variance - Other by Years and Condition

<table>
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<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Main Effects</td>
<td>2</td>
<td>24.59&lt;sup&gt;a&lt;/sup&gt;</td>
<td>12.30</td>
<td>0.59</td>
<td>ns</td>
</tr>
<tr>
<td>Years</td>
<td>1</td>
<td>0.11</td>
<td>0.11</td>
<td>0.01</td>
<td>ns</td>
</tr>
<tr>
<td>Condition</td>
<td>1</td>
<td>24.59</td>
<td>24.59</td>
<td>1.19</td>
<td>ns</td>
</tr>
<tr>
<td>Interaction</td>
<td>1</td>
<td>7.07</td>
<td>7.07</td>
<td>0.34</td>
<td>ns</td>
</tr>
<tr>
<td>Explained</td>
<td>3</td>
<td>31.66</td>
<td>10.55</td>
<td>0.51</td>
<td>ns</td>
</tr>
<tr>
<td>Error</td>
<td>47</td>
<td>973.33</td>
<td>20.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>50</td>
<td>1004.98</td>
<td>20.10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.
Table F-13
Analysis of Variance - Knowledge by Years and Condition

<table>
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<th>MS</th>
<th>F</th>
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<sup>a</sup>Sums of squares for each effect do not total the Main Effect sums of squares because the experimental approach for unequal cell sizes as described by Nie, et. al. (1979) was used.