ABSTRACT
        Research was conducted that initially focused on
identifying and synthesizing the large number of previously
identified vocational special needs teacher competencies into an
educational model. The model contained a matrix that organized all
these competencies into twelve domains of four performance phases
each. The Competency Matrix was the construct upon which a needs
assessment instrument was designed. A second project activity focused
on developing and pilot testing a needs assessment instrument to
measure individual educators' perceived needs for training within
each phase of twelve domains and their preferences for the delivery
of this training. The instrument was designed to provide data to
assist inservice planners/deliverers in decision-making efforts at
local, state, and/or national levels. A pilot test of the instrument
was conducted in six Minnesota schools to determine the extent to
which the instrument could be shown to exhibit face, content,
utility, and construct validity. Pilot test results indicated that
the instrument could give useful data for making inservice/preservice
planning decisions and that population subgroups had differing
training needs. This instrument can provide planning information, but
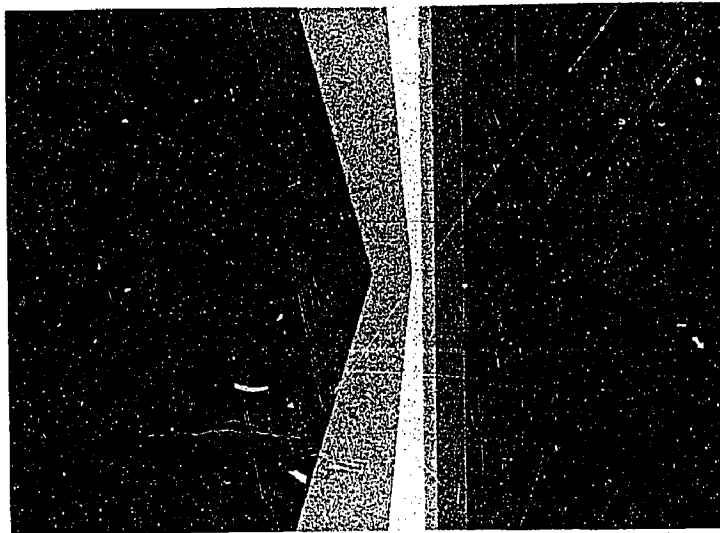may need to be tailored to various populations' levels of awareness
and expertise. (Author)

A Conceptual Framework And Process

For Identifying the Inservice
Needs of Vocational
Educators Serving
Special Needs Populations
Pilot Test Report

by Laurie Peak and James M. Brown

ACKNOWLEDGEMENTS

ABSTRACT

This research project initially focused on identifying and synthesizing the large number of previously identified vocational special needs teacher competencies into an educational model. The model contained a matrix that organized all these competencies into 12 domains of four performance phases each. The Competency Matrix was the construct upon which a needs assessment instrument was designed. The matrix also provides direction for other activities in the field of vocational special needs: research, development, demonstration, personnel preparation, and technical assistance.

A second project activity focused on developing and pilot testing a needs assessment instrument to measure individual educators' perceived needs for training within each phase of the 12 domains and their preferences for the delivery of this training. The instrument was designed to provide data to assist inservice planners/deliverers in decision making efforts at local, state, and/or national levels. A pilot test of the instrument was conducted in six Minnesota schools to determine the extent to which the instrument could be shown to exhibit face, content, utility, and construct validity.

Pilot test results indicated that the instrument could give useful data for making inservice/preservice planning decisions and that population subgroups had differing training needs. This instrument can provide planning information, but may need to be tailored to various populations' levels of awareness and expertise. Indications of the instrument's content, face, and utility validity were found, but construct validity has yet to be substantiated. It is recommended that further study be conducted to determine the validity of revised drafts of the instrument and the Competency Matrix.

TABLE OF CONTENTS

v

Chapter I

INTRODUCTION

Within the field of vocational education a demand has arisen for
specialized teacher training. The purpose of this training is to enhance
educators' abilities to facilitate the mainstreaming of special needs stu-
dents into regular vocational programs. National conferences have been
conducted to focus on this concern and professional organizations have
been established to support mainstreaming-related efforts. In addition,
numerous local, state, and national projects have been created to initiate
these training activities. Special needs teacher competencies are being
identified, needs assessment instruments developed, and teacher training
activities planned and conducted based upon the results of competency
identification and needs assessment projects. Whether or not this spe-
cialized teacher training is necessary or even makes a major contribution
to successful mainstreaming has yet to be documented.

There are thought to be several key factors affecting the mainstream-
ing of special needs students. The eventual outcome of any mainstreaming
effort will probably be affected by factors such as the individual student
involved, the other students in the program, the school environment,
the curriculum, the instructional materials, the special services avail-
able, and numerous other variables. The teacher and other educational
personnel comprise only one of the factors in the mainstreaming process.
Yet, educators may have a very significant impact since they have to
orchestrate much of the educational process. Therefore, if one is
selecting a place to begin advancing the mainstreaming movement, identifi-
cation and development of the required skills and knowledge of educators
seems a logical choice. The need for specialized teacher training as an
important primary ingredient is further supported by evidence that many
teachers have not been properly exposed to this issue in their initial
teacher preparation programs (Hamilton & Harrington, Note 1; Phelps,
1976; Reynolds, 1980).

This reasoning suggests that the response of the field, that is, to
focus on the competence of educators as a means to develop successful

mainstreaming programs, may be appropriate. While research is being conducted to determine what factors enhance mainstreaming programs, logical conceptually sound efforts to better prepare educators should be undertaken. This study was initiated as an effort to identify the additional skills and knowledge needed by vocational education teachers, coordinators, program supervisors/managers, and administrators in Minnesota in order to better prepare them to serve special needs students.

Statement of the Problem

If specialized training is to be provided to educators to help them effectively teach special needs students, two questions must be answered. First, how is working with special needs students different from working with "regular" students? And, second, since educators come from a variety of backgrounds and experiences, how can educators be assessed to determine if they have the specialized skills and knowledge required to effectively serve special needs students? This project provides initial answers to these questions. This new knowledge will provide better information with which to plan vocational teacher education activities focused on improved services for special needs students.

The specific study objectives were to:
1. Conduct a review and synthesis of the literature.
2. Develop a conceptual framework within which to consider the special skills and knowledge required when teaching mainstreamed special needs students.
3. Develop a process for assessing the skills and knowledge of educators.
4. Pilot test the assessment process.

Definition of Terms

A number of key terms have been utilized throughout this report. Some of these terms have been used extensively in the literature but without well-established, widely-accepted definitions. Also, some of the terms in this report were used in a specific manner to define new

constructs. Definitions for these key terms are provided below to clarify their use in this project.

Competency: The competency statements refer to those skills, understandings, and attitudes necessary to perform an activity successfully.

Domain: A specific area of influence or activities that is presumed to be important and necessary when educating special needs students. A domain includes and thus classifies all related activities and competencies with a specific focus or intended outcome. For example, Parents is one of the 12 domains identified in this study and refers to the skills and knowledge which enable educators to interact with the parents and/or legal guardians of special needs learners in order to enhance their child's learning experiences, both at school and at home.

Phase: The term "phase" refers to a step in the process of providing services and working within a domain. These steps are:

Assessment: The process of identifying and measuring needs that exist within a domain related to the education of a special needs student.

Planning: The process of specifying procedures and steps for meeting identified needs within a domain.

Implementation: The process of providing services and activities to meet identified needs within a domain.

Evaluation: The process of determining the adequacy, quality, and/or effect of the goals, objectives, inputs, procedures, and outcomes of the activities performed within a domain.

Regular Students: The term "regular students" refers to those students who can succeed in educational programs without additional or special assistance.

Special Needs Students: The term "special needs students" refers to individuals with characteristics that prevent them from succeeding in regular vocational education programs without additional or special assistance.

Teachers/Educators: These terms will be used interchangeably in this report to refer to those educational personnel: teachers, coordinators, program supervisors/managers, and administrators in vocational and special education, who directly or indirectly serve vocational special needs students.

8

REVIEW AND SYNTHESIS OF EXISTING STUDIES AND EXPERTISE

The purpose of this study was to develop a process with which to assess educators' needs for special needs-related inservice training. This assessment was based on the broad range of current knowledge concerning special needs inservice and utilized a conceptual framework to identify special needs inservice variables and their interrelationships. Therefore, before work began on the development of this process, a thorough review of the literature was conducted to determine which concepts and constructs are involved when training educators to teach special needs students. A conceptual framework was then created to depict how these concepts and constructs are related to general education models.

Review Criteria

The studies included in this review represent widely-accepted and often-utilized studies on the topic of vocational special needs teacher competencies. These studies have attempted to determine the differences, in terms of teaching competencies, between educating special needs students and regular students. The studies were examined to determine:

1. what competencies had been identified as necessary for working with special needs students;

2. how these competencies had been categorized;

3. what concepts were examined and how were they organized as constructs for use in the studies; and

4. how these constructs and competencies were validated.

In order to evaluate these studies, the following considerations were applied:

1. A competency identification study should include a thorough literature review.

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[1]Material in this chapter was developed concurrently with a research paper: Peak, L. *A content analysis study of special needs teacher training materials usable with vocational education personnel.* University of Minnesota, June 1980.

2. A categorization system based upon a classification principle
    should be established for the identified competencies.
3. All components of the categorization system should be represented
    in the list of competencies.
4. Face, construct, content, and predictive validity should be estab-
    lished for the competencies.

The purpose of this review was to identify common elements in current
competency studies so that a synthesis could be produced. · This synthesis
represents, as far as the research has determined to date, the differences
in teaching skills and knowledge required to teach special needs students
in addition to regular students.

Prior Competency Studies

Phelps (1976), from a review of several competency identification
studies, identified 32 tasks that teachers should be able to perform in
order to teach special needs students. He had a panel of 32 experts
(teacher educators, secondary school personnel, local program directors,
and state department of education personnel) from the fields of voca-
tional education, special education, and instructional development com-
plete two questionnaires to answer, "To what extent is successful perfor-
mance of each, or all, of the 32 preliminary competencies critical to
providing effective instruction and supportive services (to special needs
students)?" These experts rated the criticality of the competencies for
four separate groups: vocational teachers, special education teachers
and/or consultants, counselors, and cooperative or work experience coordi-
nators. Also, teachers and teacher coordinators from comprehensive high
schools, middle schools or junior high schools, and area vocational centers
were asked to indicate on a needs assessment instrument the relative amount
of time they spent using these instructional practices (competencies) with
special needs learners. As a result of these questionnaires and the needs
assessment, it was determined that all of the 32 teacher tasks or competen-
cies were critical to dealing with special needs students successfully.
The following list identifies the categories into which Phelps grouped the
32 competencies and the titles of teacher training modules he developed:
Learner Identification and Analysis, Cooperative Instructional Arrange-

ments, Instructional Resources, Cluster and Content Analysis, Instructional Planning, Instructional Implementation, and Evaluation of Learner Progress.

Albright et al. (1975) utilized two consultant committees to identify competencies necessary for vocational education teachers to successfully teach special needs students. The first committee consisted of 15 teachers representing the programs that were currently serving the majority of Ohio's disadvantaged and handicapped youth: Occupational Work Experience (OWE), Occupational Work Adjustment (OWA), and Special Needs Program. The second committee consisted of six state staff members representing Ohio's OWE, OWA, and Special Needs Program. Through a series of meetings, the first committee brainstormed and identified competencies necessary for effective performance in the following specific instructional areas: program management; remedial math; remedial reading; home, school, and work coordination; counseling; curriculum; and classroom management. The second committee reviewed this list of competencies, made suggestions for changes, and developed a survey questionnaire to be distributed to local teachers and supervisors. The two committees produced a list of 112 competencies that were grouped into the following categories: Program Management, Curriculum, Classroom Management, Coordination, Remediation, and Counseling.

The survey questionnaire was distributed to all of Ohio's OWA, OWE, and Special Needs Teachers and Supervisors. The questionnaire requested that each respondent rate each of the 112 competencies according to: (1) their need for the competency, and (2) how frequently they used the competency. The report states that both the teacher and the supervisor responses (a total of 718 questionnaires was returned) to the survey indicated that all 112 competencies were perceived as necessary and valid.

A state-wide Special Vocational Needs Endorsement Committee in Nebraska developed the following seven major headings for special needs teacher competencies: Program Planning, Curriculum Development, Method of Instruction, Evaluation, Guidance, Human Relations, and Management of Learning and Behavior. Then Meers (no date) developed a list of 102 competencies which were distributed among these headings. This competency list was designed by Meers to act as a guide for state-wide teacher training programs.

Marc Hull and William Halloran (1974) developed an Essential Teaching Competencies list of 200 competencies to be used in the preservice and in-

service training of teachers in vocational and practical arts education for the handicapped. This list was created by the project's staff based upon the studies of Brolin (1970), Batman (1969), Cotrell (1971), Kruppa (1973), and others on special needs teacher competencies. This list of Essential Teaching Competencies was grouped into the following competency areas: Designing Instruction, Direct Purposeful Instruction, Developing Instructional Materials, Evaluating Instruction, Providing Student Guidance, Conducting Research, Managing the Classroom, Commitment to Educational Profession, and Maintaining Community Relations.

Sheppard (1975) conducted a survey study to identify competencies, problems, and necessary resources vocational/technical education personnel perceived as being critical in working with disadvantaged and/or handicapped students. The survey questionnaire was administered during a graduate course to 108 vocational education personnel who were selected for participation as a result of being chosen as EPDA (the Educational Professional Development Act) scholarship awardees. The questionnaire asked respondents to rank order a list of programs and/or experiences according to which ones they felt had best prepared them for working with the disadvantaged and/or handicapped. The respondents were also asked to indicate, "What teaching techniques, resource persons, and/or curriculum materials have you found in general to be most helpful in working with the disadvantaged or handicapped youth?" and, also, the greatest problems they encountered when working with these students. Then the respondents were asked to rate 16 competencies according to their importance to the respondent in performing his/her job. The report states that from the list of 16 special needs teacher competencies created by the project staff, the majority of the respondents rated 13 of the competencies as very important and 3 as important to performing successfully in their position.

Phelps et al. (1976) reported upon a National Teacher Education Workshop where ten experienced and knowledgeable teams of university and state department vocational and special education teacher educators gathered to, among other activities, "identify a series of professional tasks needing to be performed by personnel involved in the vocational programming of special needs students." While attending the workshop, the participants completed a questionnaire where they rated each of 49 professional tasks on: "(1) What is the relative amount of time you would be likely to spend

conducting this task?, (2) How critical would successful performance of this task be to the overall effectiveness of your program?, and (3) As a local educator working with special needs students, to what extent would you need to know more about this task?" The participants were asked to answer each of the questions from a local educator's point of view (vocational teacher, special education teacher, or counselor).

The list of 49 professional tasks was assimilated by the workshop staff following a review of several competency identification studies from the fields of vocational and special education (Albright et al., 1975; Cotrell et al., 1970; Kruppa et al., 1973; Schoonmaker & Girard, 1975; Brock, 1975; and Phelps, 1976, were the main resources). The statements were designed to identify the critical components needed in effective vocational special needs programming. The tasks were classified "somewhat arbitrarily" into four major function categories: Assessing Program and Learner Needs, Planning Instruction, Implementing Instruction, and Evaluating Program and Instruction. As a pilot test of the tasks and the questionnaire, the Professional Task Analysis Questionnaire was also distributed to 26 secondary-level vocational and special education teachers and administrators in Illinois.

As a group, the teacher educators felt all of the tasks except one were at least "important." The local school personnel rated more than half of the tasks (28) below the important level on the criticality scale. Both of these populations had general agreement on the various tasks in which they felt they needed more training. No data were reported on the question of time spent on conducting the tasks.

Andreyka et al. (1976) identified 90 professional competencies, important to vocational teachers, administrators, and supervisors serving handicapped students, to use in the development of an exemplary competency-based vocational teacher education and leadership development program in Florida. This list of competencies was initially developed and categorized by a team of three persons selected by the Florida State University Vocational Education Department, following a review of the literature and personal interviews of Tallahassee-area teachers of the handicapped. The preliminary competency list was then reviewed and revised by a jury of five educators (a consultant to handicapped and work study programs, a special education director, two elementary teachers, and an associate

- 9 -

13

professor in industrial arts). The jury developed a survey instrument which asked respondents to rate each of the 90 competencies on an importance scale of 1 = very important to 6 = not important to their position. The survey was mailed to a sample of 165 persons including 22 county vocational directors, 22 county level administrators, 80 vocational teachers, and 41 participants of a workshop entitled Industrial Arts for Exceptional Youth. A total of 86 instruments was returned. It was found that of the 90 competency statements, only three had an average importance rating higher than the midpoint (3.5) on the 6-point scale.

Yung et al. (1978) conducted a needs assessment of vocational teachers of special needs students to determine what competencies should be included in preservice and inservice teacher education programs for this population in Arkansas. The competencies included in the needs assessment instrument were first identified by project staff through a review of ten special needs teacher competency studies and from suggestions of vocational special needs education experts in Pennsylvania and Arkansas. Forty-three tasks were selected from this information as being the most important tasks of vocational special needs education teachers. Several experts (faculty members and research assistants in the Division of Occupational and Vocational Teacher Education at the University of Arkansas, and Arkansas State Department Personnel) were selected to review these 43 tasks: Suggestions for adding, deleting, or reworking the competencies were made by the experts and resulted in the final list of 42 competencies to be used in the needs assessment questionnaires.

Two needs assessment questionnaires were developed. One questionnaire asked school superintendents to rate the importance of the 42 competencies using a 5-point scale (1 = unimportant to 5 = extremely important), and then to indicate on another 5-point scale (1= unconfident to 5 = extremely confident) "how confident their teachers were in performing each task." The second questionnaire asked teachers to rate the 42 competencies on the same two scales but to do so in terms of importance to them and their personal confidence. The questionnaires were pilot tested with 59 students attending classes in the Department of Vocational Teacher Education. An item analysis was conducted on the responses of the importance rating section. The report states that the coefficient alpha index reliability was 0.958, and the item total correlation coefficient ranged from 0.375 to

0.772. The report goes on to state that these results indicated that the scale was internally consistent and each item was contributing consistently to the total score.

Packages of questionnaires, one questionnaire for the superintendent and the others for the vocational and special education personnel, were sent to 45 school districts in Arkansas. A total of 29 superintendents and 317 special needs education personnel in 36 school districts responded to the study. In the results, 24 out of 42 tasks had mean importance scores of 4.00 or above and only three tasks had mean scores of 3.70 or less as rated by superintendents and teachers as a group. The teachers' confidence scores on the 42 tasks ranged from 2.86 to 3.83.

Schoonmaker and Girard (1975) identified competencies for habilitation personnel, particularly public school secondary-level special education personnel. Rather than using the popular "role-analysis" method of identifying competencies, they analyzed the basic functions or processes used by habilitation personnel in different roles in providing their services to students. This functional analysis indicated that the following five steps are found in some form in virtually all habilitation roles: select target population, define need, specify implementation plan, implement plan, and evaluate effects. Although there are significant differences between habilitation roles, these differences are primarily a matter of applying the same habilitation process but to different types of needs in different target populations. Schoonmaker and Girard used a lattice systems analysis approach to identify the competencies that would be required of habilitation personnel in performing each of these five steps. The almost innumerable number of competencies that were contained in each of these steps were then used as the basis for the development of 29 instructional modules for habilitation personnel.

Kruppa et al. (1973) reviewed the competency lists from the studies of Brolin and Thomas (1972), Melby and Regal (1972), and Cotrell et al. (1970), and used these lists as the primary sources in the development of a list of 330 competency statements needed by individuals preparing to become mainstream or special industrial education teachers. A jury of experts (faculty members from the departments of industrial and special education at Trenton State College) evaluated this list of competencies and then classified them into the following categories: Program Development,

- 11 -

Instruction, Knowledge of Learner, Community Resources, Professional Role and Development, Management, Personality, and Guidance.

In a final project report describing an eight-year project that began in 1970 and included the teacher competency identification work and publications of Brolin (1970), Brolin and Thomas (1972), Brolin (1973), and Brock (1975) -- Robert Brock (1978) presented the activities that eventually led to the identification of 18 competencies to be used as the basis for a new teacher training program at the University of Wisconsin-Stout. In 1970, a Curriculum Planning Conference was held at the University of Wisconsin-Stout to determine the needs of EMR students and formulate teaching competencies based upon the special needs of secondary (ages 12-21) special education students. Many national leaders (including Charles Kokaska, James Bitter, Rex Priegar, Jack Dinger, Gary Clark, and Marc Gold) along with 30 professional and lay people representing parent groups, employment agencies, training schools, public schools, vocational schools, vocational rehabilitation agencies, universities, work experience program coordinators, community service centers, state department of public instruction, cooperative educational service agencies, and others helped develop the primary need and competency statements. These participants identified 90 secondary EMR student needs and 113 teacher competencies. This list of 203 was then reduced to a list of 31 competencies through the Delphi technique.

The 31 competencies were divided into four curriculum areas: occupational information and preparation curriculum area, activities of daily living curriculum area, psycho-social curriculum area, and academic curriculum area. Project staff then developed a questionnaire upon which respondents would rate each of the 31 competency statements according to the (1) importance (1 = not important to 5 = very important) of the competency in the EMR curriculum, (2) who they felt should ideally perform the competency, and (3) who in practice currently performed the competency. The questionnaire also asked respondents to indicate the percentage of emphasis they felt should be spent in each of the four curriculum areas during the overall three-year high school program. This questionnaire was mailed to all 251 secondary EMR teachers and 31 randomly selected supervisors in the state. Of the 282 questionnaires mailed, 205 (73%) were returned. The results indicated that the respondents perceived the

curriculum area of occupational information and preparation to be of crucial importance to the secondary EMR student. Only one of the 31 competencies received a total group mean "importance" rating of less than 3.50 (the mean rating was 3.45). Twenty-three of the competencies received a mean "importance" rating of 4.00 or above, and seven competencies had mean "importance" ratings from 3.84 to 3.98. Based upon these findings, the project staff proceeded to develop a model program for secondary EMR students and a teacher training model directed to the needs of students.

In 1972, the project staff determined that the 31 previously identified and validated competencies "were not instructional competencies; in fact, they were not competencies at all...they represented vague generalities difficult to translate into educational outcomes." Therefore, they decided to develop a new set of teacher competencies. With the help of several additional experts (including Richard Brady and M. Steven Lilly) and field-based instructors, the project staff defined specific competencies needed by the vocational educator of the handicapped. An analysis of the project's previously developed "description (role definition) of the idealized vocational educator for the handicapped," yielded a list of 18 competencies necessary for the vocational educator of the handicapped to function effectively in the secondary school setting. This new list of 18 competencies then became the basis of the project's teacher training model.

Goldhammer et al. (1977) compiled a listing of mainstreaming teacher competencies from lists of competencies that had been previously identified by fourteen Deans' Projects[2] at the following institutions: University of Alabama, University of Alabama-Birmingham, California State University-San Francisco, University of Colorado, Edinboro State College, University of Hawaii-Manoa, University of Kansas, Michigan State University, University of Minnesota, University of Missouri-Columbia, University of North Carolina, the Pennsylvania State University, Tennessee State University, and Wichita State University. This compilation contains 464 general teacher competencies needed by all teachers working in mainstream-

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[2]Deans' Grant Projects, supported by the Bureau of Education for the Handicapped (now the Office of Special Education and Rehabilitative Services), are projects run through colleges of education to infuse training for mainstreaming into current preservice teacher training curricula.

ing classrooms in the public schools. As the competencies from the vari-
ous Deans' Projects were reviewed and the complete list compiled, the com-
petencies were grouped into 13 categories. These categories were identi-
fied by grouping the competencies according to similarities: Nature of
Mainstreaming, Nature of the Handicapped, Attitudes, Resources, Teaching
Techniques, Learning Environments, Learning Styles, Classroom Management,
Curriculum, Communication, Assessing Student Needs, Evaluating Student
Progress, and Administration.

Fowler (1978) identified 58 teacher competencies through a "needs sur-
vey" of Colorado's secondary teachers and prospective secondary teachers.
The competencies were identified as "being essential areas for providing
appropriate background necessary for general secondary teachers to work
with handicapped students in regular secondary classes." These teacher
competencies were grouped into the following units for incorporation into
a teacher inservice/preservice special needs training guide: An Overview
of Handicapping Conditions; Mainstreaming Legislation, and Teacher Respon-
sibilities; Assessing Secondary Student Needs; Planning and Providing for
Individual Differences at the Secondary Level; Promoting Appropriate Stu-
dent Behaviors; Secondary Teachers' Role and Involvement with Parents;
Secondary Subject Area Instructional Modifications and Adaptations; and
Preparing Students for Mainstreaming. The guide was designed for college
faculty or inservice instructors to use in courses or workshops.

Hamilton and Harrington (Note 1) conducted a review and synthesis of
special needs-related teacher competencies that had been identified
through previous studies. The intended outcome of this activity was to
be the development of performance-based teacher education modules to train
vocational educators in "nondiscriminating practices." The studies that
were reviewed were identified through computer searches of the Educational
Resources Information Center (ERIC) and Council for Exceptional Children
data bases.

After reviewing and synthesizing more than 20 studies in the teacher
competency literature, several problems were identified regarding the cur-
rent state-of-the-art in teacher competency identification. The authors
found that the competencies in the literature: (a) did not encompass
those needed to serve all of the special needs groups who are being
enrolled in regular vocational classes; (b) often lacked the specificity

needed to give direction to teacher trainers; and (c) had a high level of
duplication of competencies across the various competency listings, re-
gardless of which special population was being addressed. Based upon
these observations, the project staff felt it was necessary to go beyond
the efforts made in the studies identified in the literature in order to
identify competencies for their training modules.

The project utilized the DACUM (Developing A Curriculum) process to
identify 384 competencies. This process was described as a modified
brainstorming process using small groups of expert practitioners to analyze
an occupational area and reach consensus on the skills needed. A DACUM
panel was formed for each of eight special needs groups that had been
identified by the project staff. The panels were to analyze the role of
the teacher in serving the special needs group the panel represented.
After all eight DACUM panels had met, the staff analyzed all eight lists
to identify broad competency areas. The report states that each group
produced, essentially, the same broad competency areas. The competencies
from each of the eight lists were combined into the appropriate competency
areas and these lists were analyzed to screen out overlap and repetition
in competency statements. This resulted in a single list of competencies
needed by vocational teachers working with students with special needs.
This list was compared to 25 other existing lists from the literature re-
view to determine if any critical competencies had been overlooked.
These 384 competencies were further tested using a questionnaire with 80
persons who had expertise in the eight special needs groups. These people
were asked to rate each competency according to its importance to the voca-
tional teacher of the special needs group they represented. These people
also ranked the importance of the 15 broad competency areas. The fifteen
areas, as listed below, are being used as the topics for the development
of the training modules: Instructional Planning; Preparation of Students
for Employability; Materials Selection/Development; Special Instructional
Techniques; Counseling/Student Self-Awareness, Self-Concept, Self-Image,
Self-Actualization; Identification/Diagnosis of Students; Communication/
Language/Vocabulary; Development of Students' Career Planning Skills;
Student Evaluation; Program Evaluation; Professional Development; Develop-
ment of Students' Life-Role Competencies; Modification of Learning Envi-
ronment/Physical Setting; Promotion of Peer Acceptance; and Program Promo-
tion.

Literature Summary and Conclusions

From this literature review, it is evident that there are large variations among the special needs educator competencies that have thus far been identified. The number of competencies varied from 16 to 384. Some of the differences in the number of competencies identified is obviously due to the level of specificity with which the competencies were stated or the manner in which they were defined. Hamilton and Harrington (Note 1) found through their literature review and synthesis that "...the level of competency specificity varies widely as the the number of competency statements identified" (p. 5). There also is disagreement between studies on whether some specific competencies should be taught.

Details of studies' competency identification and validation procedures were provided in the literature review. No one study stands out as more valid than the others. Competencies were generally identified by analyzing the role of a teacher working with special needs students. Only one study identified competencies by analyzing the process of serving students with special needs. The five techniques that were reportedly used to develop competency lists are as follows:

1. Compile lists of competencies from other studies.
2. Ask practicing educators to identify competencies.
3. Ask "experts" to identify competencies.
4. Conduct a systems analysis to identify competencies.
5. Conduct a needs survey to identify competencies.

The first three techniques were the most often used, the last two were each used in only one of the studies examined. When experts were used, no "expertise" criteria were reported for the expert selection process. Various methods were used to validate the competencies identified in these studies. These validation techniques are listed below:

1. Teachers rated the importance of each competency.
2. Administrators rated the importance of each competency.
3. Experts rated the importance of each competency.
4. Teachers indicated how much time they spend performing each competency.
5. Administrators indicated how much time they spend performing each competency.

6. Experts indicated how much time educators spend performing each
   competency.

These identification and validation techniques provide indications of
face validity for the competencies. In those studies that rated the compe-
tencies for importance, limited content validity may also have been estab-
lished. None of the identified studies addressed the construct or predic-
tive validity of the competencies. Only one study reported that the relia-
bility of the instrument used to validate the competencies had been examined.
Also, none of the studies attempted to establish the validity of the con-
structs presented as means of classifying the competencies into various
categories. The sets of categories identified were not derived from a clas-
sification principle. Within a set of categories, some of the categories
would represent exhaustive areas of working with special needs students
while other categories would represent the process (phases) of working with-
in these areas.

Of the competency lists that were reviewed, no list included all the
competencies or concepts identified in the other studies; yet, there was
much duplication among the lists. The one common characteristic was that
most of the studies grouped competencies into similar categories. However,
none of the studies created a model for organizing the universe of skills
and knowledge in the special needs educator competencies. What exists in
the literature is not well validated but seems to represent the best think-
ing of those professionals who have worked in this problem area. The
approach taken in this study was to extract common elements from the litera-
ture and define, through a classification system or matrix, the domains and
phases of competencies for working with special needs students. This syn-
thesis of the literature is, therefore, assumed to represent the state-of-
the-art of educating vocational special needs students as described by the
current literature.

A Synthesis of the Literature

The purpose of the compilation and synthesis of the competency state-
ments and concepts identified through the literature review was to develop
a classification system for the special needs educator competencies. If
a conceptually sound set of competency domains could be established for

all skills and knowledge required to serve special needs students, then those constructs would delineate the areas for preparing educators to work with special needs students. The following steps outline the procedure used to create a matrix of competency domains and phases.

Procedures

All of the special needs educator competencies identified in the literature review were compiled into a 50 page master list. An advisory committee of 12 educators (see Appendix A for the list of committee members) was organized to review the master list to minimize the possibility that competencies had been overlooked. Each member of the advisory committee was asked to read through the master list of special needs educator competencies and perform the following three activities:

1. List any special needs educator competencies which they felt had been excluded from the master list.
2. Identify any competencies thought to be inappropriate.
3. Note any related competency studies or prior research efforts, not included in the list of references, that might further enhance the master list.

The input from the advisory committee (6 out of 12 advisory committee members responded) resulted in no additions to, or deletions from, the master list.

The master list was then analyzed to determine whether certain categories or domains of competencies were evident. After a thorough analysis, 12 distinct and exhaustive domains whose focuses are mutually exclusive were identified within the master list. This analysis was conducted by identifying the concepts and skills being presented in each of the competencies and then grouping the competencies according to similarity of focus or intended outcome. These domains were compared and contrasted with the categories and domains that had been identified in the studies in the literature review. The 12 domains were found to include all categories found in the literature. The appropriateness of the categories represented by the 12 domains was examined by again analyzing each competency statement in the master list to determine if the competency logically fit into one of the 12 domains and which one.

As the competencies from the master list were grouped in the domains,

it became apparent that there were specific performance phases within each of these domains. The competencies in each of the domains outlined a sequence or steps required to function successfully in that domain. The steps described by the competencies were: assessing the needs within the domain, planning activities to meet those needs, implementing the activities, and evaluation of the adequacy and effect of the activities. Schoonmaker and Girard (1975, pp. 9-11) made a similar observation when they were identifying competencies for habilitation personnel. They found that all habilitation personnel, regardless of their role, perform the same sequence of steps in providing their services: "...(1) select target population, (2) define need, (3) specify implementation plan, (4) implement plan, and (5) evaluate effects."

After analyzing the contents of the master list, the Special Needs Teacher Competency Matrix (see Figure 1) was developed. Each of the competencies in the master list were placed in the most appropriate matrix cell. Thus, the matrix represents a classification system believed to encompass all competencies related to educating special needs students.

The Special Needs Conceptual Framework[3]

The Conceptual Framework is presented at this point to explain how the Special Needs Teacher Competency Matrix provides a conceptually sound system for classifying the unique activities involved when educating special needs students. Since the relationship between the matrix and general education concepts has been demonstrated by this framework (see Figure 3), this relationship enhances the matrix's construct and content validity and justifies use of the matrix as a mechanism for determining the training required by educators in order to work effectively with special needs students.

The Framework can best be understood if a model of an educational concept/process is considered first. Cronbach and Gleser (1965) and Cronbach and Snow (1977) defined and documented the education concept/process of Aptitude-Treatment Interaction (ATI), also referred to as

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[3]Material in this section also reflects work done by: Russo, R.P. *Toward understanding and evaluating special needs programs.* Minneapolis: University of Minnesota, Minnesota Research and Development Center, 1980.

PHASES

DOMAINS[a]	Assessment	Planning	Implementation	Evaluation
1. Educational Needs of the Student				
2. Personal Needs of the Student				
3. Classroom Social Environment				
4. Classroom Physical Environment				
5. The Individualized Education Plan				
6. Course Curriculum				
7. Instructional Materials				
8. Special Needs Support Services				
9. Parents				
10. Community Resources				
11. Legislation and Funding				
12. Continuing Professional Development of the Teacher				

Figure 1. The Special Needs Teacher Competency Matrix

[a] Domain titles are referred to in later tables by number only.

Trait-Treatment Interaction (TTI) by other educators. ATI represents how the process of education results from, and is influenced by, the interaction of two factors. These factors are the aptitudes or charac- teristics of an individual and treatment(s) for those aptitudes.

The "aptitudes" of a student are defined as "any characteristics of a person that forecasts his probability of success under a given treatment" (Cronbach & Snow, 1977, p. 6). Cronbach and Snow also stated that person- ality as well as ability and other variables such as social class, ethnic background, educational history, etc., all can serve as characteristics that may influence the learner's response to a treatment. The term "treat- ment" also has a broad meaning: "...it covers any manipulable variable," such as classroom environment, teacher characteristics, and the pace, method, or style of instruction (Cronbach & Snow, 1977, p. 6). To quote Cronbach and Snow (1977):

> Aptitude-Treatment interactions exist. To assert the opposite is to assert that whichever educational procedure is best for Johnny is best for everyone else in Johnny's school. Even the most commonplace adaptation of instruction, such as choosing different books for more and less capable readers of a given age, rests on an assumption of ATI that it seems foolish to challenge. (p. 492)

A variation in either the aptitude or treatments may change the type of interaction that results. There are many possible variables in the aptitudes of students and numerous possible treatments. As one approach to the categorization of these variables, Stufflebeam, Foley, Gephart, Guba, Hammond, Merriman and Provus (1971, p. 125) have classified the in- puts to an educational system into six categories: pupils, staff, com- munity, curriculum, finance, and facility. These categories organize and classify the input variables to the ATI, as presented in Figure 2. Thus,
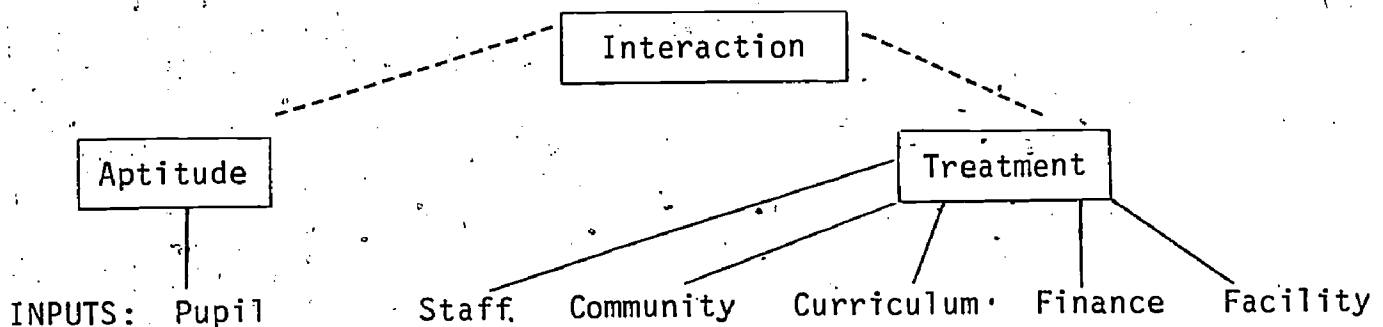
Figure 2. The Education Model

the variables in the interaction process can come from six different inputs: the pupil's inherent capabilities determine the aptitudes, and the other inputs determine the availability of treatments.

In the event that the pupil has special educational needs, these six inputs may change somewhat. Some variables within each input area receive more emphasis than others; also, additional variables may be added. This may result from requirements in the special needs legislation, or because of certain student disabilities. These variables and emphases are contained within 12 distinct domains of working with special needs students. The relationship between ATI and the special needs competency domains is displayed as the Special Needs Conceptual Framework (see Figure 3).

The Conceptual Framework is useful when examining all activities in the field of vocational special needs: research, development, demonstration, personnel preparation, and technical assistance. The Framework, although still in the development stage, potentially may provide a standard by which to organize, plan, and evaluate activities in the field of vocational education as they focus on educating special needs students as well as those normally served. Future research efforts will, hopefully, focus on more thorough examinations, testing, and refinement of the Conceptual Framework. Only through such efforts will the Framework's applications and implications be adequately understood.
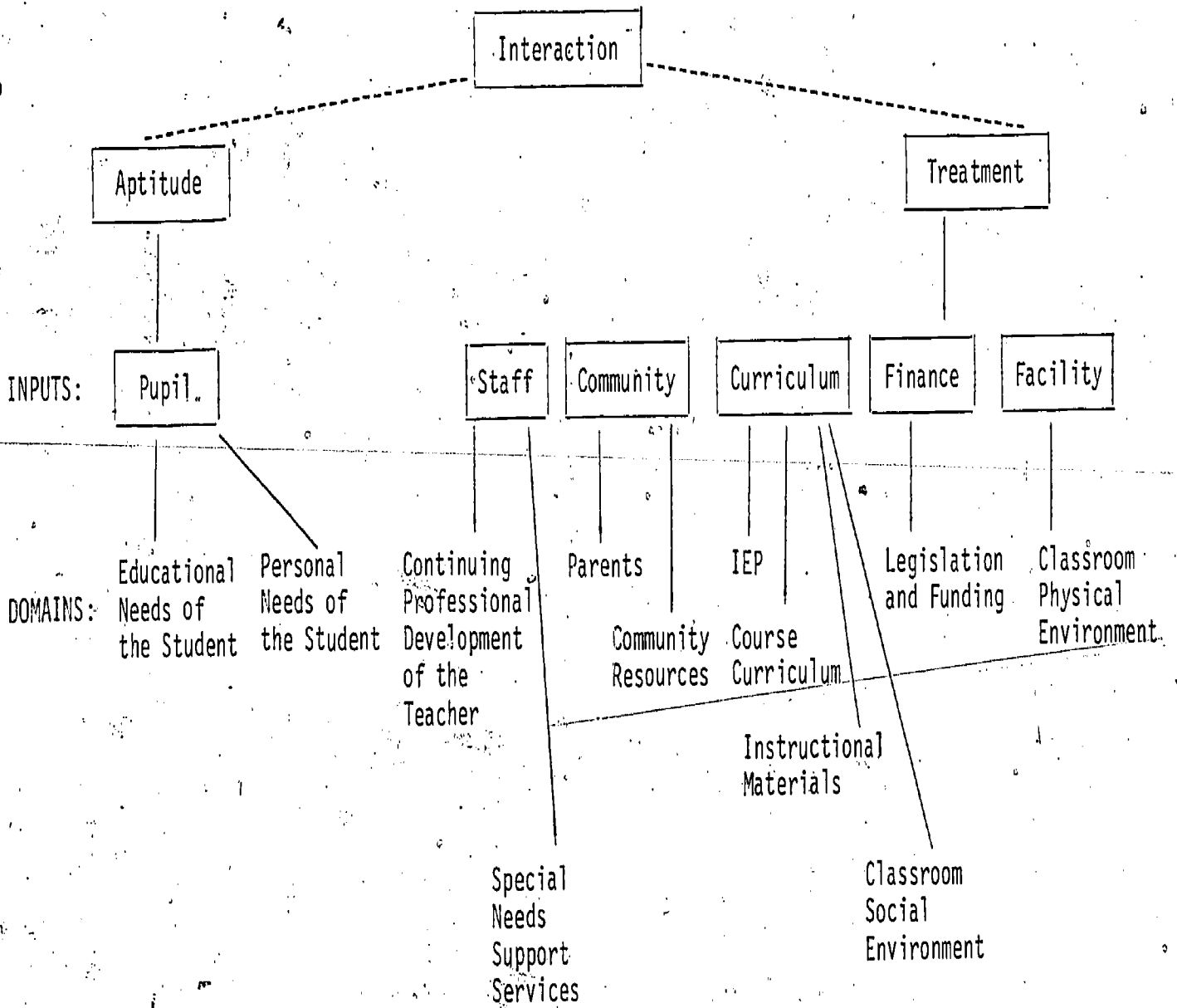
26

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                              ┌──────────────┐
                              │ Interaction  │
                              └──────────────┘
                        ·····/                \·····
              ┌──────────┐                      ┌──────────┐
              │ Aptitude │                      │ Treatment│
              └──────────┘                      └──────────┘
                   │                                  │
INPUTS:      ┌──────────┐   ┌───────┐┌─────────┐┌──────────┐┌────────┐┌──────────┐
             │  Pupil   │   │ Staff ││Community││Curriculum││ Finance││ Facility │
             └──────────┘   └───────┘└─────────┘└──────────┘└────────┘└──────────┘
```

DOMAINS:

Educational Needs of the Student   Personal Needs of the Student   Continuing Professional Development of the Teacher   Parents   IEP   Legislation and Funding   Classroom Physical Environment

Community Resources   Course Curriculum

Instructional Materials

Special Needs Support Services

Classroom Social Environment

Figure 3. The Special Needs Conceptual Framework.

- 23 -

27

28

Chapter III

METHODOLOGY AND RESULTS

Two of this study's objectives have now been explored and discussed: (a) a review of the literature which identified educator competencies believed to be essential to the effective education of special needs students and (b) the organization of those competencies into the Conceptual Framework. The next phase of this report focuses on the remaining project objectives: (c) the development of a process for assessing the special needs-related skills and knowledge of educators and (d) the pilot testing of that assessment process.

After the Competency Matrix reached a level of development at which it was believed to reflect the wide range of competencies in the literature, the Conceptual Framework was developed based upon that Matrix and became a standard which could be used to guide the development of a broad range of special needs-related activities. The needs assessment instrument developed during this study contains items related to each competency area contained in the Conceptual Framework.

The eventual result of this research will be a valid and reliable needs assessment process. However, the immediate goal of this pilot test phase of the project was to develop a questionnaire for the assessment process and to examine the questionnaires' validity. The literature revealed that no assessment instruments with adequate evidence of their validity exist. Therefore, it was deemed important that this instrument be examined for content, face, construct, and utility validity in order to avoid the validity related limitations of existing instruments. Based upon the results of this study, the instrument will be revised and then investigated to determine its reliability and predictive validity.

The initial pilot test instrument was designed to assist planners of special needs-related inservice training programs. The instrument is intended to be of value to local, state and national educational personnel in their efforts to determine inservice needs among teachers, administrators, coordinators, and other support service personnel. The assessment process is designed to provide information about areas in which these professionals believe they have training needs and will identify the

types of training programs which they feel are worthwhile, appropriate, and desirable. With this general information, inservice planners can then identify the specific skills and knowledge that they feel need to be presented as inservice activities for the population surveyed.

Instrumentation

The pilot test instrument was constructed to test the feasibility of determining educator training needs in each of the domains and phases of the Teacher Competency Matrix. The results of the pilot test will be used to guide revisions, and additional field testing and development of the instrument.

The instrument was divided into three parts. Part I collected specific information about each respondent's educational background, qualifications, and experiences. Part II examined respondents' inservice training needs and Part III explored respondents' preferences for receiving this training (see Appendix B for a copy of the instrument).

Part I of the pilot test instrument collected biographical background information from each respondent. These data were used in the one way analysis of variance, with the data from Part II of the instrument, to analyze the instrument's validity and to determine characteristics of the respondent population.

Part II of the pilot test instrument allowed respondents to examine their perceptions of their training needs in each phase of the 12 domains. This information was used as an indication of respondents' need for inservice training. The instrument contained a description of the 12 domains and the four phases in those domains. Respondents were asked to read the domain descriptions and to select the number on the *Likert Scale* that best indicated the amount of additional training they needed to effectively work with special needs students. Each respondent circled one response for each phase of each domain as shown in the example in Figure 4. Limitations of time and cost precluded methods which would have measured respondents' actual special needs-related abilities instead of their self-perceptions of those abilities.

To determine respondents' preferences for receiving this training, Part III of the instrument asked respondents to select and rank their

Domain: Continuing professional development of the teacher	Your need for training				
	No need	Low	Mod-erate	High	
Those procedures (formal and in-formal) by which an educator con-tinues to seek to improve his/her ability to educate all students	**Phase:** Assessment	* 1 2 3 ④ 5
	Planning	* ① 2 3 4 5
	Implementation	* 1 2 3 4 ⑤
	Evaluation	⊛ 1 2 3 4 5

Figure 4. Example of possible responses on the needs assessment instrument

three most preferred choices from lists of possible alternatives. This part contained three questions which examined how respondents would like to receive the training, when they would prefer to receive the training, and from whom (see Appendix B).

An addendum, the Comments Page, was attached to the back of the instru-ment to assist in meeting the pilot test objectives. The Comments Page consisted of a set of open-ended questions soliciting respondents' comments on the format of the instrument and whether they felt this was a good way to assess their training needs for serving special needs students (this Comments Page is included in Appendix B).

Procedures

Sample

A sample of three secondary and three postsecondary vocational schools in Minnesota was selected for pilot testing the instrument. Approximately 20 vocational teachers were randomly selected from each school. There were a total of 110 participating teachers. The distribution of the 110 participants by their school affiliation and sex is shown in Table 1.

The institutions were representative of each of the types of public school vocational education programs in Minnesota. The secondary level group contained a comprehensive vocational program, a vocational center that is affiliated with a postsecondary Area Vocational-Technical Institute (AVTI), and a vocational center that is not affiliated with an AVTI. The postsecondary level group contained a metropolitan AVTI with an established vocational special needs program, a metropolitan AVTI with a developing special needs program, and an AVTI in a non-metropolitan region of Minnesota.

Table 1

Sample Population: Sex and Institutional Affiliation

| | Type of vocational program | | | | | | |
| | Secondary | | | Postsecondary | | | |
Sex	Compre-hensive	Non-AVTI affiliated center	AVTI affiliated center	Out-state AVTI	Estab-lished AVTI[a]	Emerg-ging AVTI[b]	Totals
Male	15	5	11	17	12	14	74
Female	6	4	9	3	8	6	36
TOTALS	21	9	20	20	20	20	110

[a]An AVTI with an established, well respected commitment to serving special needs students.
[b]An AVTI with a recently developed, still emerging commitment to serving special needs students.

Data Collection

Administrators at each of the six schools were contacted and requested to encourage the pilot test participants to complete and return the forthcoming questionnaires. Each member of the sample population was mailed a copy of the instrument and a Comments Page to complete. A cover letter asked that the completed forms be returned within a week in self-addressed, stamped envelopes which were enclosed with the questionnaires. Two weeks following the return deadline, non-respondents were mailed follow-up post cards requesting that they complete and return their instrument. Of the sample population, 65 percent (71 of 110) returned their questionnaires but four instruments were not complete and, thus, not usable. Therefore, the respondent population data used in this study represents 61 percent of the sample population (67 of 110).

Data Analysis

The data generated by the pilot test were examined and analyzed with regard to the validity of the inservice needs assessment instrument. The remainder of this chapter is divided into sections which examine the

content, face, construct, and utility validity of the instrument.

Content validity. Content validity is a measure of the extent to which an instrument's items represent the content that the instrument is designed to measure (Borg & Gall, 1979, p. 212). This study's inservice needs assessment instrument contains items designed to measure respondent's inservice needs which correspond to the set of knowledge and skills required for success in each cell in the Competency Matrix (see Figure 1). Therefore, the instrument is believed to reflect the universe selected for measurement: all areas represented by the Competency Matrix. That Matrix contains the 12 domains of knowledge and skills involved when serving special needs learners.

Since the Competency Matrix was developed after considering the content of competency studies drawn from the literature, the face and content validity associated with those previous studies were also supportive of the Competency Matrix. The Matrix categorized educator competencies into domains. The Conceptual Framework (see Figure 3) related those domains to general education models. Thus, the Conceptual Framework further establishes the basis for the content validity of the Matrix. The Matrix and Conceptual Framework define the universe of skills and knowledge into 12 domains which are considered essential when effectively serving special needs students. By using these 12 domains as the bases for developing items for the instrument, the instrument's content validity was established.

In addition, drafts of this instrument were reviewed by other researchers, teachers, project advisory committee members, and vocational teacher educators, who verified that the instrument did represent the Conceptual Framework and the competencies represented by that Framework. Therefore, the content validity of this instrument seems to have been adequately established at this point.

Face validity. The Comments Page was attached to each pilot test instrument (see Appendix B) in order to obtain each respondent's reaction to the following aspects of the instrument: (a) appropriateness as an inservice needs assessment device, (b) level of reading difficulty, (c) physical layout and size, (d) length, (e) competency domains selected, and (f) clarity of instructions. The instrument's face validity, a subjective

judgment that the instrument appears to cover relevant content (Borg &
Gall, 1979, p. 212) was high among most respondents, especially those with
special needs-related job titles. However, among some of the respondents
who had little or no prior contact with special needs learners there were
numerous comments which indicated that the instrument was too complex in
format, used too many technical terms, and not necessary for persons who do
not serve special needs learners. Although persons in this group represented
fewer than 20% of the respondents, their concerns must be considered when
the instrument is revised.

It was concluded, therefore, that most respondents' comments indicated
that they believed the instrument could measure inservice needs and that the
instrument had moderate to high levels of face validity. However, in order
to gain higher face validity with a broader range of respondents, the in-
structions, item content, and format of the instrument will need to be
simplified, reorganized, and the objectives made more obvious.

Construct validity. Construct validity is defined as the extent to which
an instrument can be shown to measure a hypothetical construct (Borg &
Gall, 1979, p. 216) and the instrument's ability to produce results consis-
tent with a particular theory or concept (Nunally, 1978, p. 85). Construct
validity, therefore, would suggest that the instrument is generating data
from the respondent population that are consistent with general theories
about the characteristics of specific groups of educators and their types
of training needs. Theories which would enable educational planners to
hypothesize about the extent and nature of special needs-related inservice
needs do not currently exist. Theories about educators' characteristics
and their training needs corresponding to competency ratings in the do-
mains and phases of the Matrix must be developed and validated. The Matrix
and related theories, once adequately validated, can be used as a standard
with which the construct validity of special needs-related inservice needs
assessment processes can be examined. In the absence of these theories,
hypotheses were developed for this project that were based upon general
assumptions often made about educators' biographical characteristics and
levels of skills and knowledge. This grossly investigated the idea of
construct validity in this pilot test analysis. The hypotheses were
based upon the assumption that educators' training needs vary in relation

- 30 -

34

to the following: (a) respondents' job categories, (b) respondents' levels of educational preparation, (c) the number of special needs students served by respondents, and (d) employment at the secondary or postsecondary level.

It was acknowledged beforehand that these biographical measures have not been found to be highly correlated with self-perceived needs in previous competency studies with vocational education teachers (Geigle, 1978). Therefore, only limited expectations existed regarding the feasibility of establishing construct validity using biographical measures. In spite of these limitations, the attempt was made to use biographical measures to establish construct validity as a means to begin the validation process since this procedure represented the only available approach for examining the instrument's construct validity. It was realized, however that much more work will remain to be accomplished in future inquiries of this type. The logic of examining construct validity in the above context was to hypothesize that if the respondent self-ratings effectively measure the inservice needs of vocational educators and possess an acceptable level of construct validity, this might be indicated by differences ($p \leq .10$) in the mean self-ratings of training needs.

Job categories might be expected to be sensitive indicators of inservice needs. Persons associated with support services and work experience program coordinator roles are normally in contact with special needs students and are also required to have extensive professional preparatory experiences (e.g., coursework, internships) prior to being certified to serve special needs students. Persons in these job categories and those in the teacher, administrator, and other job categories have generally had differing prior educational program experiences. Thus, inservice needs could be expected to differ for persons in the various job categories.

Educational preparation, as normally indicated by the level of education attained, was selected as a characteristic likely to be associated with self-ratings of inservice needs. Educators with more education were expected to have been exposed to more extensive educational experiences in regard to serving the educational needs of divergent types of learners. Therefore, respondents with more education might express different self-ratings of inservice needs.

Respondents who have served special needs students were expected to have learned more about the educational needs of such students than have

those respondents who have not had such experiences. Therefore, persons who have not interacted extensively with special needs learners were expected to indicate different inservice need levels than persons with extensive contact with special needs learners.

There is a tendency among Minnesota AVTI's to hire a majority of staff members with extensive work experience within their fields of specialization. However, many of these staff members do not hold college degrees. At the secondary level, with the exception of some secondary vocational centers, instructors must hold appropriate degrees in order to be certified to teach. Since, until recently, there has been no mandate or major policy commitments in many postsecondary vocational programs to serve special populations, those populations have been served predominantly at the secondary level. This tendency has limited the financial and programmatic commitments of many vocational educators in postsecondary programs to prepare themselves to effectively serve special needs learners. Therefore, respondents in the secondary schools could be expected to have previously experienced more extensive, more appropriate educational preparation for serving special needs learners and to indicate different special needs-related inservice needs than respondents in postsecondary institutions.

An analysis of variance procedure (ANOVA) was used to test differences between respondent's self-ratings of their need for special needs related inservice among: (a) job categories, (b) type of educational preparation, (c) the number of special needs students served; and (d) persons in secondary and postsecondary programs. Differences in means were tested at the .10 level of significance ($p \leq .10$).

The following formal hypotheses were established to assess the instrument's initial construct validity for educators' self-ratings of inservice needs:

1. Educators' self-ratings of inservice needs reflect differences between respondents' job categories: (a) administrator, (b) teacher, (c) work experience program coordinator, and (d) support service personnel as measured by mean scores.

2. Educators' self-ratings of inservice needs reflect differences between the respondents' type of educational preparation: (a) less than a bachelor's degree, (b) bachelor's degree, (c) master's degree, (d) specialist degree, (e) doctoral degree,

- 32 -

36

(f) journeyman, (g) technical specialist, and (h) bachelor's
equivalent, as measured by mean scores.

3. Educators' self-ratings of inservice needs reflect differences
between the respondents' <u>number of special needs students served</u>.

4. Educators' self-ratings of inservice needs reflect differences
between the respondents' <u>place of employment</u>: (a) secondary-
level programs and (b) postsecondary-level programs.

Tables 2 through 5 present ANOVA generated F ratio values which indi-
cate the extent of the relationships between respondents' inservice needs
ratings and selected characteristics of the respondent population. Each of
these tables contains a column on the left which identifies each of the 12
domains specified earlier in Figure 1 of this report. The four phases of
each domain are represented by the four columns to the right of the domain
column. The data presented are F values based on the mean inservice need
ratings within the competency areas. The F values correspond to the phases
listed at the top of the table and the domains noted at the left of the
table. Those F values with a level of significance equal to or less than
10% ($p \leq .10$) were judged to support the hypothesis in question. Such
findings would support the initial, grossly conceived notion of construct
validity of the instrument. The .10 level was selected because this was
a pilot test of the instrument rather than an effort to collect descriptive
inservice needs data where the .05 criterion level would normally be ac-
cepted as the standard among educational researchers.

With only five F ratio values in Table 2 having a "p" value less than
or equal to .10, the hypothesis that job categories are related to mean
inservice ratings is clearly not generally supported. These data, there-
fore, are not supportive of the instrument's construct validity, at least
using the measures employed in this analysis.

Table 3 presents the ANOVA analysis of the relationships between
respondents' level of prior education and their inservice need ratings.
Of the 48 F values in this table, only six meet the $p \leq .10$ criterion.
Clearly these data do not strongly support the hypothesis that respondents
with different levels of educational preparation have significantly dif-
ferent inservice needs.

Table 4 contains the ANOVA produced F ratio values which, when $p \leq .10$,
support the hypothesis that respondents who have served large numbers of

Table 2

F Ratio Values for Comparison of Inservice Needs Ratings
of Educators in Different Job Categories

Domain[a]	Phase			
	Assessment	Planning	Implementation	Evaluation
1	.21	.18	.66	1.18
2	.46	**4.31	1.76	**2.71
3	.30	.20	.07	.17
4	1.26	1.91	1.54	1.32
5	.54	.86	.76	1.42
6	.79	1.25	.55	1.11
7	1.24	.40	.84	1.70
8	.82	1.81	1.12	1.83
9	1.04	1.13	1.44	.79
10	1.12	.36	.34	.97
11	1.16	.69	.93	.67
12	**3.62	1.81	*2.56	**3.17

* $p \leq .10$

** $p \leq .05$

[a]Domains 1 through 12 correspond to the domain headings shown in Figure 1.

Table 3

F Ratio Values for Comparison of Inservice Needs Ratings of
Educators with Differing Educational Preparation

Domain	Phase			
	Assessment	Planning	Implementation	Evaluation
1	1.77	.57	.59	.59
2	.46	1.12	.39	**2.65
3	1.63	.95	.42	.98
4	1.13	**2.60	1.50	*2.04
5	.35	1.08	.84	1.31
6	*2.09	.98	1.43	1.58
7	1.74	1.42	1.37	1.18
8	.34	.39	.42	.40
9	1.37	1.04	.99	.62
10	.97	1.12	.94	1.12
11	1.34	1.24	1.38	1.73
12	1.98	*2.30	1.62	**3.70

* $p \leq .10$

** $p \leq .05$

Table 4

F Ratio Values for Comparison of Inservice Needs Ratings of Educators Serving Differing Numbers of Special Needs Students

Domain	Phase			
	Assessment	Planning	Implementation	Evaluation
1	.25	.57	1.15	1.35
2	.90	1.47	**3.61	.81
3	.98	2.00	.88	1.19
4	.25	.32	.34	.20
5	.86	.96	.79	1.25
6	1.64	.07	.19	.36
7	1.38	.72	.28	1.77
8	.61	.90	.92	1.12
9	1.14	1.38	.58	.87
10	1.92	*2.34	1.13	2.00
11	.84	1.25	1.40	1.17
12	.29	.51	.64	1.50

* $p \leq .10$

** $p \leq .05$

special needs students have significantly different self-rated inservice needs as compared to respondents who have served smaller numbers of special needs students. Only two of the F ratio values in Table 4 meet the criterion of $p \leq .10$, thus failing to support the hypothesis that respondents who have served large numbers of special needs students have significantly different self-rated inservice needs than respondents who have served smaller numbers of special needs students. These data have also failed to provide support for the instrument's construct validity.

Table 5 contains the ANOVA produced F ratio values which, when $p \leq .10$, support the hypothesis that respondent's employed in secondary-level programs have self-rated inservice needs which are significantly different from the inservice needs of respondents employed in postsecondary-level programs. The F ratio data contained in Table 5 do not support the hypothesis and this failure to support the hypothesis also fails to substantiate the

Table 5
F Ratio Values for Comparison of Inservice Needs Ratings of Educators at the Secondary and Postsecondary Levels

Domain	Phase			
	Assessment	Planning	Implementation	Evaluation
1	2.21	.03	.74	.20
2	.46	1.72	.71	.001
3	.01	.14	.003	.05
4	.15	.30	.03	.01
5	.002	.87	.08	.25
6	.03	.001	.12	.56
7	.06	1.76	.35	.001
8	.08	1.32	.87	.94
9	.30	.71	1.32	.24
10	.62	.04	.02	.37
11	.00	.07	.02	.04
12	1.28	.12	1.08	.45

* $p \leq .10$
** $p \leq .05$

construct validity of the instrument.

In an attempt to determine if the instrument was functioning, but at a low sensitivity level, an effort to identify additional indications of construct validity was conducted by examining another characteristic of the respondent population. This analysis was based upon the hypothesis that respondent groups (e.g., work experience program coordinators) known to be homogeneous in terms of their job duties should also tend to rate their inservice needs differently than the remaining portion of the respondent population. This difference would have been apparent when the standard deviations of ratings among the two groups were examined.

This effort to examine construct validity was conducted by analyzing mean inservice needs ratings in each competency domain and by examining the consistency of those responses within a subgroup of respondents. That

- 36 -

subgroup of respondents; work experience program coordinators, was assumed to be homogeneous in terms of the similarity of their job duties. If members of that subgroup were to respond in a similar manner, the standard deviations of ratings within the subgroup should be lower than those in the more heterogeneous total group. Such a tendency would provide evidence which would support the hypothesis that the instrument is sensitive to more refined measures of job categorization.

Table 6 displays the mean and standard deviation scores for the homogeneous job group: work experience program coordinators. Also included are non-homogeneous job groups: (a) all respondents except the work experience program coordinators and (b) the combined total respondent population. The data in Table 6 indicate that 10 of 12 (83%) of the standard deviation scores of the average domain inservice need self-ratings were lower among respondents within the homogeneous job group than for the non-homogeneous groups and the standard deviations in the two remaining domains were equal in both groups. Thus, in this special analysis, the construct validity of the instrument seemed to have been supported but more evidence was sought.

In order to verify that the differences in these scores are statistically significant, a two tailed t-test was applied. Table 7 shows the results of the analysis of differences between the most divergent groups: work experience coordinators versus all other members of the respondent population. The analysis indicates that only three of the differences found in the domain score comparisons were great enough to exceed the criterion level of $p \leq .10$. Therefore, these differences cannot be claimed as strong evidence of the instrument's construct validity.

No conclusive evidence has been generated by this form of analysis that could support a conclusion that the instrument has construct validity. These findings can be interpreted as follows: (a) the instrument, in its current form, does not have adequate construct validity; (b) the biographically based hypotheses could not effectively assess construct validity; (c) the instrument is not sensitive enought to analyze the constructs in question; (d) the respondent population may typically have had little or no special needs-related inservice or preservice training and, thus, had no discernable differences in their inservice needs; and/or (e) some respondents may have lacked sufficient motivation to provide accurate self-ratings of their special needs-related inservice needs.

Table 6

Numbers, Means, and Standard Deviations Within
Homogeneous and Non-Homogeneous Job Groups

Average domain rating[a]	Work experience program coordinator		All others		Total group[b]	
	Mean (N=22)	Standard deviations	Mean (N=44)	Standard deviations	Mean (N=67)	Standard deviations
Domain 1 average	2.6	.9	2.7	1.2	2.6	1.1
Domain 2 average	2.3	1.2	2.8	1.2	2.6	1.2
Domain 3 average	2.5	1.2	2.5	1.4	2.5	1.3
Domain 4 average	1.5	1.0	2.0	1.3	1.8	1.2
Domain 5 average	3.1	1.4	2.8	1.8	2.9	1.6
Domain 6 average	2.1	1.4	2.7	1.4	2.4	1.4
Domain 7 average	2.2	1.3	2.8	1.5	2.6	1.5
Domain 8 average	2.0	1.3	2.1	1.7	2.1	1.6
Domain 9 average	2.9	1.4	2.2	1.6	2.5	1.6
Domain 10 average	2.3	1.3	2.6	1.5	2.5	1.4
Domain 11 average	2.6	1.5	2.8	1.7	2.8	1.6
Domain 12 average	2.4	1.3	3.2	1.4	2.9	1.4

[a]Average inservice need ratings ($\bar{X}$) within each domain were calculated by adding the ratings for each of the four phases and dividing that sum by four (e.g., $\bar{X}_A = \frac{A1 + A2 + A3 + A4}{4}$).

[b]One respondent did not identify their job title. Therefore, the total group is larger (N = 67) than the sum of the two subgroups (N = 66).

Table 7

Relationships Between Inservice Needs Ratings Among Work
Experience Coordinators and All Other Respondents[a]

Domain	Two-tailed t probability level
1	.84
2	.14
3	.92
4	*.097
5	.54
6	.11
7	.11
8	.67
9	*.086
10	.49
11	.61
12	**.027

*p $\leq$ .10
**p $\leq$ .05
aWork experience program coordinators (N=22), other respondents (N=44).

Utility validity. By determining the utility validity of an instrument, it
is possible to establish the usefulness of the instrument in terms of the
costs and benefits of the information generated by the instrument (Brown,
1976, p. 112). The utility derived from the pilot testing of this instru-
ment was the economical generation of useful descriptive information that
could aid planners in their attempts to better understand the inservice
needs of persons within selected populations and to plan inservice acti-
vities to meet those needs.

The inservice needs assessment instrument's utility value is also
demonstrated by the respondent rating frequency figures (see Appendix C
for all 12 frequency charts) which show respondents' inservice needs
levels in each of the 12 domains. Figure 5 and 6 are displayed as
examples of those frequency figures to show how self-ratings of inservice
needs from Part II of the instrument can be aggregated and graphically de-
picted. The frequency profiles produced by the aggregated responses at

- 39 -
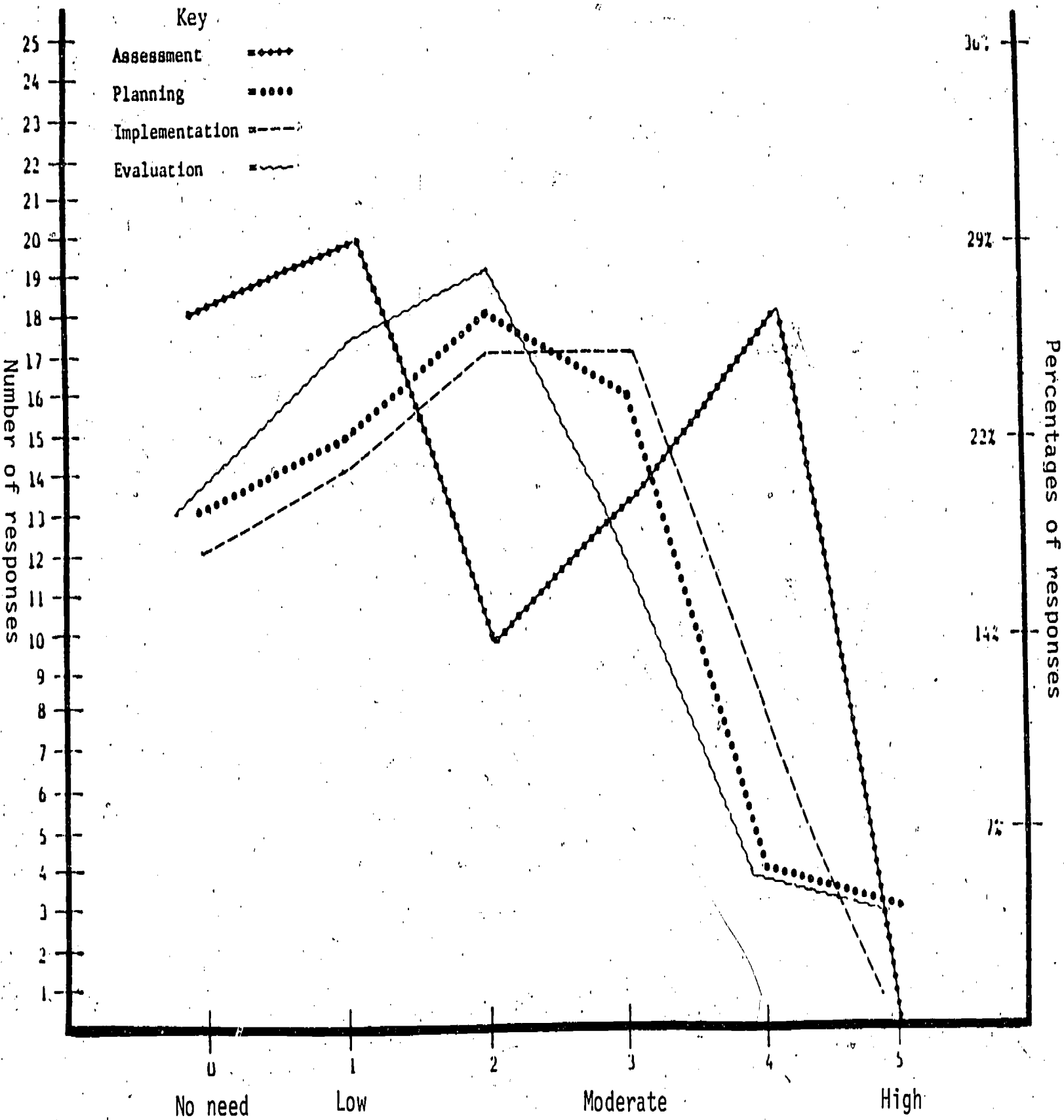
Figure 5. The Classroom Physical Environment: Levels of Need for Training

44
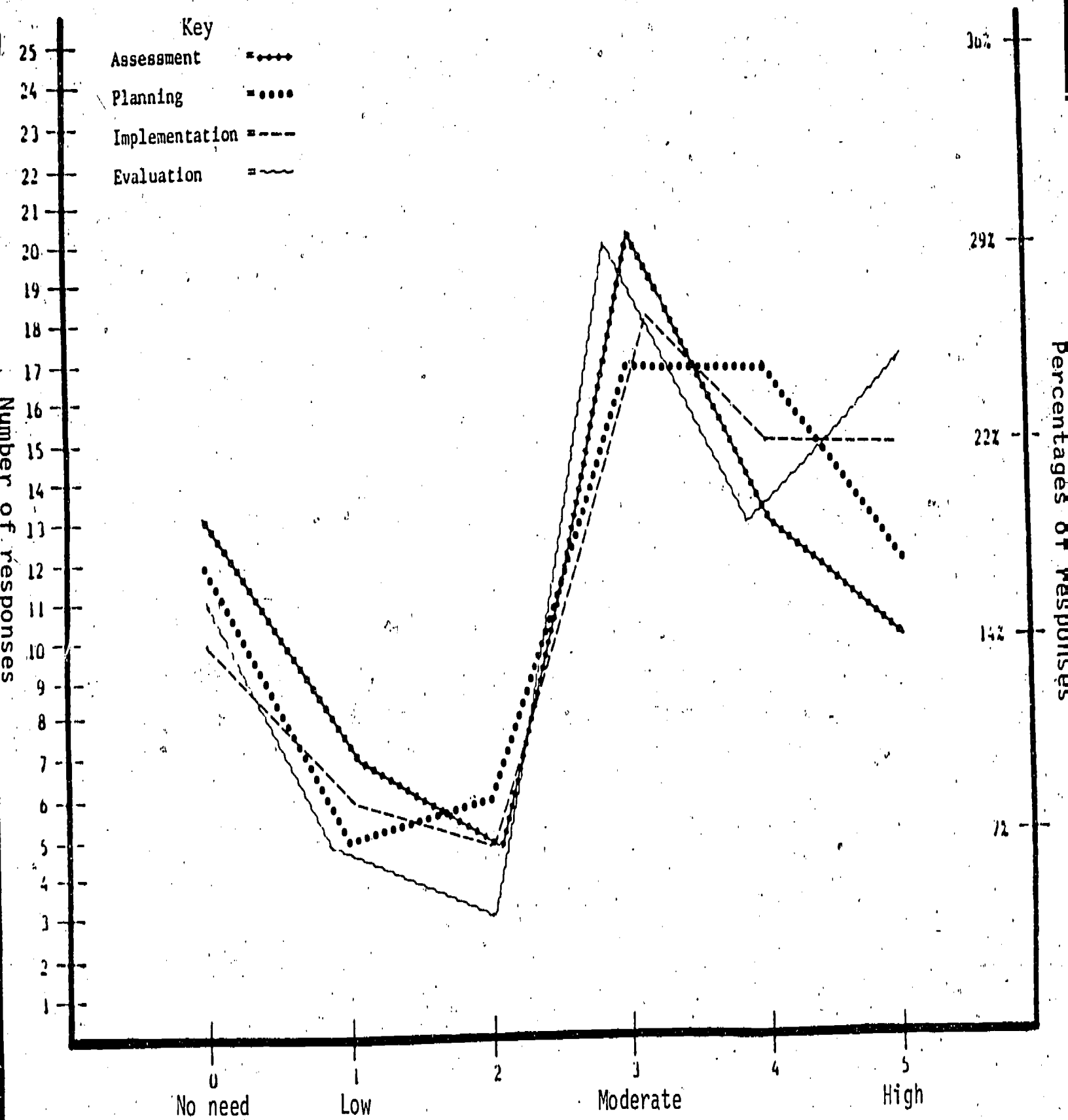
Figure 6. The Individualized Education Plan: Levels of Need for Training

each level of need provide useful information to inservice planners.

Figure 5, which display inservice needs related to the Classroom Physical Environment Domain, gives a clear indication that many of the respondents feel they have "no need" (approximately 18%) or "low need" (approximately 25%) for inservice focused on how to effectively alter or adjust the classroom physical environment in order to accommodate special needs students. It also seems apparent that respondents view their needs in the assessment phase differently than their needs in the other three phases. Persons analyzing the implications of Figure 5 can readily surmise that only a small proportion of the respondent population feel moderate to high levels of need for inservice in the planning, implementation, and evaluation phases of this competency domain. However, a larger group did indicate moderate or moderate-high needs for inservice focused on the assessment of the classroom physical environment.

The frequency profiles contained in Figure 6 are very different from those contained in the previous figure. It seems apparent that the respondents' ratings of their inservice needs in all four phases of the Individualized Education Plan domain are similar. Although approximately 30% of the respondents indicated "no" or "low" inservice need levels in this domain, 70% indicated "moderate" to "high" need levels. Obviously, these figures indicate that subgroups exist within the population with differing perceptions of their inservice needs in these two competency domains.

The usefulness of the aggregated inservice needs data displayed in frequency figures is readily apparent. Planners of inservice can examine these displays and note: (a) homogeneity vs. heterogeneity of population needs, (b) similarities or differences in inservice needs among the four phases within each domain, and (c) differences and similarities of inservice needs in one competency domain when compared with those in other domains. From these types of information it is possible to make planning decisions and establish priorities than can enhance and guide final inservice planning efforts. These frequency data may also identify areas where major and/or unexpected areas of inservice need exist, thus setting directions for additional investigations and analysis.

Part III of the instrument polled respondents regarding their "How, When, and By Whom" inservice delivery preferences (see Table 8). When

Table 8

Inservice Delivery Preferences

Form of inservice	First choices[a] (N=67)
How	
Workshops	34.3%
Individual help from "experts"	19.4%
Observing exemplary teachers and successful programs	13.4%
Higher education courses	10.4%
Individualized training modules, workbooks, films, etc.	7.5%
When	
Professional days during school hours	77.6%
After school: late afternoons	9.0%
Summer: weekdays	7.5%
After school: evenings	4.5%
By Whom	
Other expert teachers	25.4%
University experts from <u>both</u> vocational education and special education departments	22.4%
Nationally recognized vocational special needs experts	19.4%
Vocational special needs experts from university departments of vocational education.	17.9%

[a]Percentage values indicate the number of respondents who indicated that a particular form of inservice was their first choice among the options, divided by 67 (the number of respondents).

asked how inservice activities should be delivered, respondents indicated strong preference (34.3%) for the workshop format. However, substantial numbers of respondents also chose each of the following delivery options: (a) individual help from experts (19.4%), (b) observing exemplary teachers and exemplary programs (13.4%), and (c) higher education courses (10.4%).

When asked when inservice activities should be provided, respondents overwhelmingly (77.6%) selected professional days as the most desirable time to participate. Finally, when respondents were asked who they most preferred as providers of inservice activities, their choices were somewhat equally distributed among four options: (a) other expert teachers (25.4%), (b) university experts from both vocational education and special education departments (22.4%), (c) nationally recognized vocational special needs experts (19.4%), and (d) vocational special needs experts from university departments of vocational education (17.9%).

The pilot test results from Part III of the instrument have provided definite indications that preferences for specific forms and time for inservice activities exist among the respondents. There is also evidence that a variety of inservice deliverers will be acceptable to many respondents. The feasibility of generating information, the potential usefulness of information created by using this instrument, and the limited amounts of time, effort, and funds required for this process have, thus, substantiated the instrument's high level of utility validity.

In order to evaluate the usefulness of assessing respondents' inservice needs in each of the four phases of each competency domain, respondents' ratings of their inservice needs in each of the four phases within each of the 12 domains were correlated. Table 9 displays those correlation values vertically in relation to the phases listed at the top of the table and horizontally from the domains noted at the left of the table. Approximately 92% of the correlation values exceeded .60. It is also important to note that correlation levels between inservice needs ratings in the four phases in dissimilar domains were much lower, typically between .10 and .40. These data indicate a definite tendency among respondents to rate their inservice needs similarly in the phases within a given domain, while their ratings in the phases of different domains tended to vary much more extensively. These data also provide supportive evidence that the instrument is sensitive to differing levels of inservice needs among

Table 9
Correlations Between the Phases Within Each Competency Domain

Domain	Phase	Assessment	Planning	Implementation	Evaluation
1	Assessment	1.00			
	Planning	.50*	1.00		
	Implementation	.19	.68*	1.00	
	Evaluation	.13	.52*	.63*	1.00
2	Assessment	1.00			
	Planning	.76*	1.00		
	Implementation	.70*	.80*	1.00	
	Evaluation	.48*	.67*	.74*	1.00
3	Assessment	1.00			
	Planning	.70	1.00		
	Implementation	.60*	.86*	1.00	
	Evaluation	.70*	.82*	.83*	1.00
4	Assessment	1.00			
	Planning	.73*	1.00		
	Implementation	.74*	.89*	1.00	
	Evaluation	.63*	.77*	.83*	1.0C
5	Assessment	1.00			
	Planning	.88*	1.00		
	Implementation	.86*	.91*	1.00	
	Evaluation	.77*	.87*	.90*	1.00
6	Assessment	1.00			
	Planning	.64*	1.00		
	Implementation	.76	.89*	1.00	
	Evaluation	.67*	.85*	.86*	1.00

* $p \leq .001$

Note: Correlations between inservice need ratings related to phases in different domains were typically at low levels (i.e., -.10 to .40).

Table 9 (Continued)
Correlations Between the Phases Within Each Competency Domain

Domain	Phase	Assessment	Planning	Implementation	Evaluation
7	Assessment	1.00			
	Planning	.64*	1.00		
	Implementation	.76*	.89*	1.00	
	Evaluation	.67*	.85*	.86*	1.00
8	Assessment	1.00			
	Planning	.77	1.00		
	Implementation	.71*	.90*	1.00	
	Evaluation	.81*	.81*	.81*	1.00
9	Assessment	1.00			
	Planning	.81*	1.00		
	Implementation	.79*	.96*	1.00	
	Evaluation	.87*	.95*	.93*	1.00
10	Assessment	1.00			
	Planning	.87*	1.00		
	Implementation	.74*	.92*	1.00	
	Evaluation	.84*	.95*	.92*	1.00
11	Assessment	1.00			
	Planning	.92*	1.00		
	Implementation	.91*	.95*	1.00	
	Evaluation	.91*	.93*	.91*	1.00
12	Assessment	1.00			
	Planning	.87*	1.00		
	Implementation	.80*	.91*	1.00	
	Evaluation	.83*	.87*	.86*	1.00

* $p \leq .001$

Note: Correlations levels between inservice need ratings related to phases in different domains were typically at low levels (i.e., -.10 to .40).

the various domains and that respondents' ratings within those domains are indicating that inservice needs do differ by domain.

Limitations

The basic premise of this study is an assumption that the training of educators to effectively serve special needs students will have a positive impact on the success levels of those students. The value of this research project and its findings are based upon the validity of this assumption.

There is also potential bias in the survey generated pilot test data. Since only 61% of the sample population actually returned completed instruments, the self-rated inservice needs of 39% of that population are not represented in the data base. Although all major types of secondary and postsecondary vocational programs were represented among the respondents' employing institutions, there currently is no assurance that the non-respondents are not divergent in their inservice needs and would have significantly changed the resulting data analyses.

The limited sample population of 110 persons was comprised entirely of persons employed as vocational educators in Minnesota. Not only would it currently be inappropriate to attempt to make gross generalizations beyond the Minnesota institutions involved, but implications must also be currently limited only to vocational educators. Additional investigations must begin to substantiate or refute similarities of inservice needs among vocational, general, and special educators in a variety of types of institutions and at differing locations.

It was also very difficult to establish substantive indications of construct validity in a realm for which no other direct measures exist. No other special needs-related vocational inservice needs assessment instruments with established reliability and validity currently exist for comparison purposes. Theories about the special needs inservice training requirements of vocational educators and the Conceptual Framework must be developed and validated. Data must then be collected specific to those theories in order to establish the construct validity of the instrument(s) used to collect the data. The construct validity of the pilot test instrument in this study had to be examined indirectly by means of comparing inservice need ratings derived from groups of respondents hypothesized to have divergent inservice needs.

Chapter IV

CONCLUSIONS AND RECOMMENDATIONS

This study has proposed that: (a) special needs-related educator competencies can be identified and classified into domains through a special needs conceptual framework and matrix, (b) an instrument can be developed that provides valid and reliable assessments of educator's needs for training in the various competency domains, (c) a pilot test of that instrument can establish the instrument's present levels of validity, and (d) an analysis of the pilot test results can provide guidance as to how the instrument should be revised. After conducting a thorough review and synthesis of the current literature, a needs assessment instrument was developed and pilot tested.

Discussion and Conclusions

As stated in the introduction to this report, there are many studies currently being conducted to identify special needs-related educator competencies, develop and conduct educator training needs assessments, and provide training activities to facilitate the mainstreaming of special needs students into regular vocational programs. This study has attempted to go beyond the research efforts reported in the review of literature. This was accomplished through the development of a conceptual framework that enhanced the construct and content validity for the Matrix domains utilized by the needs assessment instrument to assess educators' training needs and the analysis of pilot test data to examine the validity of information collected with the instrument.

Part I of the needs assessment instrument was used to generate evidence of whether or not respondents' self-ratings of their inservice needs varied in relation to their biographical characteristics in a statistically meaningful manner. No strong evidence was found that would support claims that responses varied in accordance with any of the biographically based hypotheses. The open-ended response items in Part I would also have been easier to analyze if specific answers had been provided for selection by respondents instead of allowing them to generate their own answers which

varied widely among respondents and were often difficult to categorize.

Part II of the instrument focused on educators' self-ratings of inservice needs and was designed to identify areas of educational competencies which should be examined in order to assist educational planners to select and develop specific special needs-related inservice activities. The analyses of data generated by Parts I and II of the instrument did not indicate that the instrument had high levels of construct validity. However, due to the complexity of the variables which were interacting when the instrument was pilot tested, it is possible that inadequate hypotheses were selected to examine construct validity and, thus, may have produced misleading results.

The frequency charts, which depicted the number of persons selecting each inservice need level in the four phases of each domain, indicated that members of the respondent population had vastly differing needs. This may mean that respondents were actually very different in their inservice needs and/or it may reflect respondents' differing motivation levels and attitudes related to whether or not it is appropriate to serve mainstreamed students in vocational education programs. The influence of such attitudes would have greatly distorted the results produced by the instrument. However, all of this information is useful and must be considered by persons planning inservice training activities.

The instrument's utility validity was clearly established by the manner in which frequency charts, produced from the aggregated responses for each level of inservice need in all phases of each of the 12 domains, can be utilized to analyze respondents' inservice needs. These frequency charts give clear visual indications of areas which inservice planners may choose to investigate further in order to design useful, effective inservice activities.

The instrument's content validity was assured in Part II by utlizing items, for rating inservice need levels, which correspond to each of the 48 cells in the Competency Matrix. Since the Competency Matrix was designed to represent all special needs-related educational competencies drawn from the literature, the instrument was felt to reflect the universe selected for measurement.

A correlational study of the ratings within domains and across domains indicated that the four phase-related responses in each domain are very

similar. However, the ratings by phase in different domains tended to be somewhat different. Therefore, after the next revision and testing of the instrument, there may be no need for four inservice needs ratings in each domain, one rating per domain may be sufficient for the final version of the instrument.

Part III of the instrument examined respondents' preferences related to "How-When-By Whom" inservice activities should be delivered. Although as many as 11 choices were provided, only four or five were selected by substantial numbers of respondents. Therefore, those unused or seldom used choices should be deleted from future versions of the instrument.

The Comments Page, attached to the back of the instrument during pilot testing, collected information about the organization and physical characteristics of the instrument. The size and style in which the instrument was produced were generally acceptable to respondents. However, the amount of time required to read, interpret, and complete the instrument was often felt to be excessive. Many respondents indicated that the instructions and level of terminology were too complex to allow easy completion of the instrument. Also, many comments seemed to indicate that the actual purpose of the instrument was misunderstood; some respondents thought the instrument was designed only for use by educators who are currently providing services directly to special needs populations.

The Comments Page provided useful indications of the instrument's face validity. Respondents overwhelmingly agreed that the instrument was an appropriate approach to the assessment of their inservice needs. It was also established that the 12 domains seemed to thoroughly exhaust the possible areas of special needs-related educational competencies.

Recommendations

This report has presented the conceptualization, design, and pilot test of an instrument for use in the process of assessing the inservice training needs of educators working with special needs students. The results of this pilot test have indicated that the process requires specific modifications in order to enhance the validity of data collected in the future.

The following recommendations are presented for consideration:

1. The instruments' reading level and physical format should be simplified. More concise conceptual definitions should also be developed for the domains in order to make the instrument more easily understood.

2. New approaches to studying the instrument's construct validity, through the use of the Competency Matrix and Conceptual Framework, should be studied and developed. Efforts to examine the instrument's reliability and other forms of validity should also be initiated.

3. A revised draft of the instrument should be used to collect inservice needs data from a population known to be competent educators of vocational special needs students. Data should also be collected from educators who have had no special training related to special needs students and who have had no educational experience with such persons. These data should be utilized to more thoroughly examine the revised instrument's validity and reliability.

4. After the revised instrument's validity and reliability have been more thoroughly examined based on data from divergent competency groups, inservice needs ratings should be collected from a national sample of vocational educators in order to expand the population with which the instrument can be utilized to collect meaningful inservice planning information.

5. The value of rating inservice levels in all four phases of each competency domain should be examined. If ratings vary according to each domain but are very similar ($r \geq .80$) within the phases of each domain, the phases should be deleted and only one rating obtained for each competency domain.

6. Efforts should be focused on determining whether or not other existing and future special needs-related assessment processes have acceptable levels of validity and reliability. Until such characteristics have been demonstrated, educational planners cannot, in good

conscience, use those processes to examine educators'
inservice needs and to plan to accommodate the professional
development needs of those persons.

7. The Competency Matrix and Conceptual Framework should be
the object of additional research and development efforts.
In particular, it is recommended that the domains should be
examined to determine if competence in a given domain is
related to success when serving special needs learners.
Also, the Framework's ability to delimit the areas related
to educating vocational students with special educational
needs should be examined by a variety of approaches such
as conferences, symposiums, workshops, and well designed
research and development efforts.

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APPENDIX A
MEMBERS OF THE COMPETENCY IDENTIFICATION ADVISORY COMMITTEE

MEMBERS OF THE COMPETENCY IDENTIFICATION
ADVISORY COMMITTEE

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APPENDIX B
THE VOCATIONAL SPECIAL NEEDS EDUCATOR INSERVICE NEEDS
ASSESSMENT INSTRUMENT, AND COMMENTS PAGE

VOCATIONAL SPECIAL NEEDS

EDUCATOR INSERVICE

NEEDS ASSESSMENT INSTRUMENT

DEVELOPED BY

Minnesota Research and Development Center
for Vocational Education
Department of Vocational and Technical Education
University of Minnesota
Minneapolis, Minnesota 55455

1980

I. BACKGROUND INFORMATION

[Please Print]

1/1 ☐☐☐☐☐

A. What is the title of your present position? _____

B. How many years have you been employed in your present position? _____   ☐☐

C. How many total years have you been employed as an educator? _____   ☐☐

D. What grade level(s) do you currently serve [circle all that apply]?   ☐☐☐☐

   7   8   9   10   11   12   Post Secondary   Other [Specify]: _____   ☐☐☐

E. Which of the following best describes your educational preparation [select only one]?   ☐

   _____ Less than a Bachelors Degree   _____ Doctoral Degree

   _____ Bachelor Degree   _____ Journeyman

   _____ Masters Degree   _____ Technical Specialist

   _____ Specialist Degree   _____ Bachelor Equivalent

F. In what field was your most recent degree granted? _____   ☐

   ☐☐

G. Are you currently vocationally certified?

   _____ No

   _____ Yes -- If yes: What type of certification do you now hold?

                          _____ Regular

                          _____ Temporary

                          _____ Provisional

   ☐☐

H. Are you currently special education certified?

   _____ No

   _____ Yes -- If yes: In which special education area(s) are you certified? _____

   _____

I. Of which department are you a member?   ☐

   _____ Vocational Education

   _____ Special Education

J. What is your __estimate__ of the number of special needs students* that you now typically serve   ☐☐☐
   in a school year? _____

---

*The phrase "special needs students" refers to individuals with characteristics which prevent them from
succeeding in vocational education programs without additional or special assistance.

II. INSERVICE NEEDS ASSESSMENT

ABOUT THE INSTRUMENT:

The twelve domains used in this instrument represent areas of competencies needed by educators in order to serve vocational special needs students. These domains were identified following a thorough review of prior competency related research and the creation of a conceptual model for identifying special needs teacher competencies. Each domain is divided into four phases of performance or development. These phases are:

ASSESSMENT: The process of identifying and measuring those needs related to the students, staff, community, curriculum, finance and facilities that exist within a domain.

PLANNING: The process of outlining the procedures and steps for meeting selected needs within a domain.

IMPLEMENTATION: The process of providing services and activities to meet the selected needs within a domain.

EVALUATION: The process of determining the adequacy, quality and/or effect of the goals, objectives, inputs, procedures and outcomes within a domain.

The purpose of this instrument is to assess educators' training needs within each phase of the twelve domains. The instrument will also determine educators' inservice training delivery preferences. The results of this needs assessment will be used to plan future vocational special needs inservice activities and programs.

DIRECTIONS:

Below is a list of the twelve competency domains, including a brief definition of each domain title. After reading each of the definitions, please indicate the amount of additional training that YOU need in each domain phase to better serve your special needs students. CIRCLE one response for each domain phase.

YOUR NEED FOR TRAINING

EXAMPLE:

		No Need	Low	Moderate			High
DOMAIN: COURSE CURRICULUM	Phase: Assessment	⊛	1	2	3	4	5
	Planning	*	1	②	3	4	5
	Implementation	*	1	2	3	④	5
	Evaluation	*	1	2	3	4	⑤

DOMAIN: EDUCATIONAL NEEDS OF THE STUDENT

Those concepts and abilities which must be enhanced or mastered by students in order to succeed within a given area of study. These needs may be of a cognitive, affective, and/or psychomotor nature.

Phase: Assessment ..... * 1 2 3 4 5
Planning ..... * 1 2 3 4 5
Implementation .... * 1 2 3 4 5
Evaluation ..... * 1 2 3 4 5

DOMAIN: PERSONAL NEEDS OF THE STUDENT

Those interpersonal abilities and attitudes which, when developed and demonstrated by students, can enhance their sense of well-being and maximize their effective interaction with other people.

Phase: Assessment ..... * 1 2 3 4 5
Planning ..... * 1 2 3 4 / 5
Implementation .... * 1 2 3 4 5
Evaluation ..... * 1 2 3 4 5

DOMAIN: CLASSROOM SOCIAL ENVIRONMENT

The development and maintenance of those attitudes and interactions between educators and students which must exist in the learning environment to help all students' achieve their educational, social, and emotional potential.

Phase: Assessment ..... * 1 2 3 4 5
Planning ..... * 1 2 3 4 5
Implementation .... * 1 2 3 4 5
Evaluation ..... * 1 2 3 4 5

DOMAIN: CLASSROOM PHYSICAL ENVIRONMENT

Those physical characteristics of an educational facility which affect access to and movement through a building and the utilization of the various equipment, materials, and services within the building.

Phase: Assessment ..... * 1 2 3 4 5
Planning ..... * 1 2 3 4 5
Implementation .... * 1 2 3 4 5
Evaluation ..... * 1 2 3 4 5

	No Need	Low		Moderate		High
	*	1	2	3	4	5

DOMAIN: THE INDIVIDUALIZED EDUCATION PLAN (IEP)

A written plan which specifies processes, procedures, and instructional activities to be implemented by local education agencies, in order to insure that all identified special needs learners are provided with "appropriate" educational experiences within their "least restrictive environment".

Phase:	No Need	Low				High
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: COURSE CURRICULUM

Those goals, objectives, activities, and/or procedures that determine which topics will be presented, how, when, and what achievement levels will be expected of students within a course.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: INSTRUCTIONAL MATERIALS

The wide range of materials, commercial and teacher made (e.g., books, handouts, A-V equipment, consummables, etc.), which can be utilized during instructional activities in order to focus on and/or enhance the effectiveness of the educational process.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: SPECIAL NEEDS SUPPORT SERVICES

Those specialists and supplemental educational personnel who are available to enhance the educational experiences of students with special learning needs that cannot be sufficiently fulfilled by a teacher alone in a regular classroom setting.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: PARENTS

Those ways in which the parents and/or legal guardians of special needs learners can best be utilized in order to enhance their child's learning experience (both at school and at home) and actively participate in the planning and delivery of those experiences with the child and his/her teacher(s).

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: COMMUNITY

Those persons, agencies, and/or services at the local, state and national levels which can supplement and enhance the value and effectiveness of school experiences for students.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: LEGISLATION AND FUNDING

Those legal mandates that specify: 1) which persons are eligible for educational services beyond those typically provided to students in regular classrooms; 2) who is responsible for the administration, funding, and delivery of these services; and 3) certain rights of educators, special needs learners and their parents.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

DOMAIN: CONTINUING PROFESSIONAL DEVELOPMENT OF THE TEACHER

procedures (formal and informal) by which ucator continues to seek to improve his/her ty to educate all students.

Phase:						
Assessment	*	1	2	3	4	5
Planning	*	1	2	3	4	5
Implementation	*	1	2	3	4	5
Evaluation	*	1	2	3	4	5

III.   INSERVICE DELIVERY

A. How would you like to receive this inservice training?

(Read the entire list below. Select the three (3) that you prefer <u>most</u>, and rank them: 1 = first choice;
2 = second choice; 3 = third choice)

_____ Higher Education Courses

_____ Individualized Training Modules, Workbooks, Films, Etc.

_____ Workshops

_____ Observing Exemplary Teachers and Successful Programs

_____ Internship Experiences

_____ Attending Conventions and/or Professional Meetings

_____ Individual Help from "Experts" (Curriculum Writers, Counselors, Project Directors,
                        Special Coordinators, Etc.)

_____ Other (specify): _____

Comments:

B. When would you like to receive this inservice training?

(Select <u>all</u> acceptable choices and rank them: 1 = first choice; 2 = second choice; etc.)

_____ Weekends During the School Year

_____ "Professional" Days During School Hours

_____ After School - Late Afternoon

_____ After School - Evenings

_____ Summer - Weekdays

_____ Summer - Weedends

_____ Summer - Evenings

_____ Other (specify): _____

Comments:

6.7

Who would you like to provide and organize this inservice training?

(Select all acceptable choices and rank them: 1 = first choice; 2 = second choice; etc.)

_____ Yourself

_____ Other Expert Teachers

_____ Other Staff From the Local School District

_____ Nationally Recognized Vocational Special Needs Experts

_____ Community Agencies

_____ Parent Groups

_____ Professional Education Organizations (MEA, MVA, Etc.)

_____ Vocational Special Needs Experts from University Departments of Vocational Education

_____ Vocational Special Needs Experts from University Departments of Special Education

_____ University Experts from Both Vocational Education and Special Education Departments

_____ Vocational Special Needs Experts from the Minnesota State Department of Education

_____ Other (specify): _____

Comments:

. Which would you prefer to receive for participating in these inservice activities?

_____ College Credit

_____ Licensure and/or Relicensure Clock Hour Credit

Comments:

68

IV.   COMMENTS

Since this instrument is still in the development stage, we encourage you to answer the following questions and provide your name and telephone number so that a member of the research project staff may contact you to discuss your comments. Also, to insure the confidentiality of your prior responses please detach this sheet and return to us separately.

Name: _____

Phone: (_____)_____

A. Please explain whether you thought this was a good way to assess your inservice training needs for serving special needs students:

B. Please list any comments or suggestions that might be useful in the improvement of the content and/or construction of this questionnaire.

1. The level of reading difficulty:

2. The physical layout and size of the questionnaire:

3. The length of the questionnaire:

4. The choice of competency domains:

5. The clarity of instructions:

6. Other:

69

APPENDIX C
## RESPONDENT RATING FREQUENCY CHARTS
FOR THE TWELVE DOMAINS
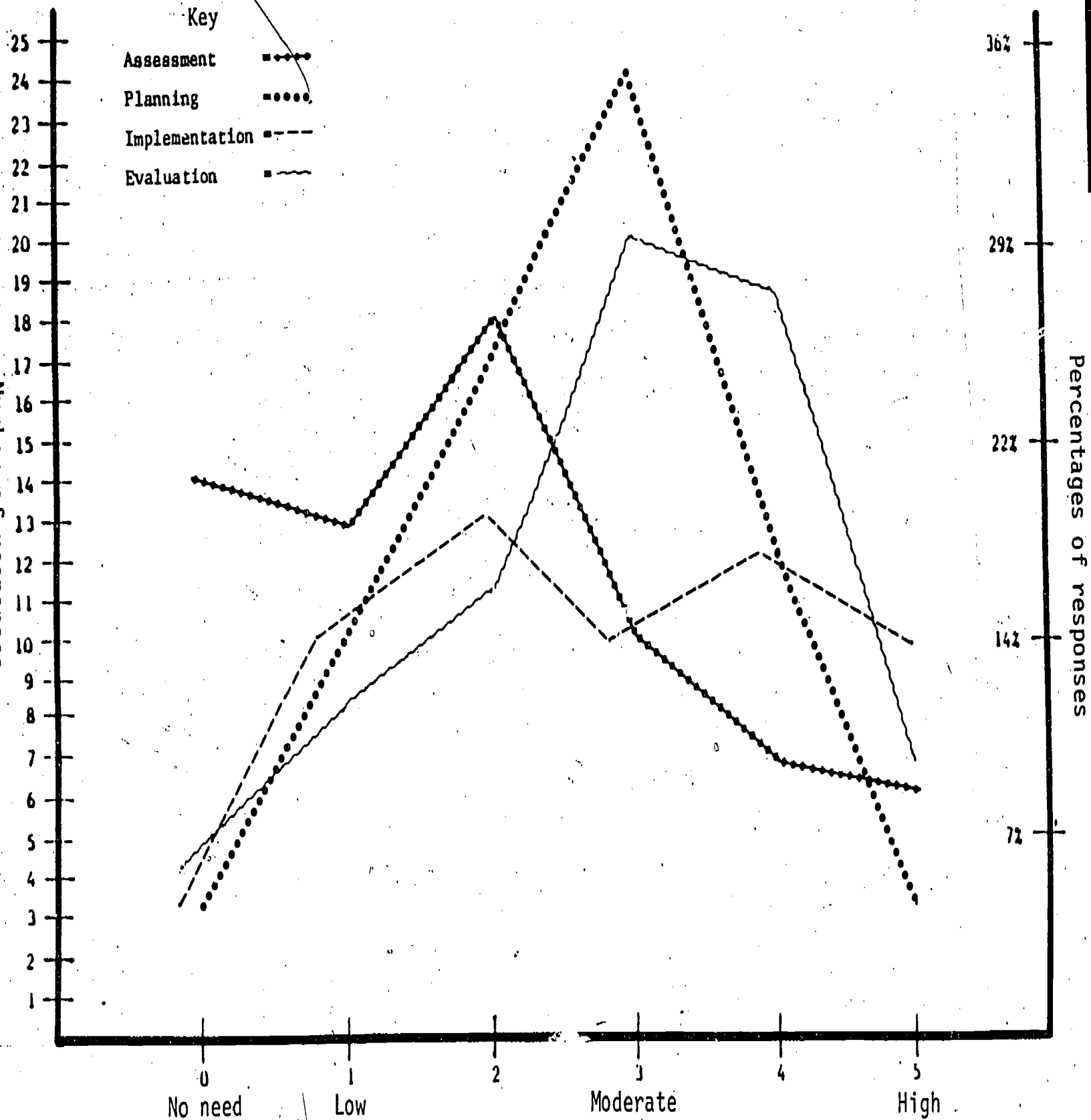
The Educational Needs of the Student: Levels of Need for Training

71

Key
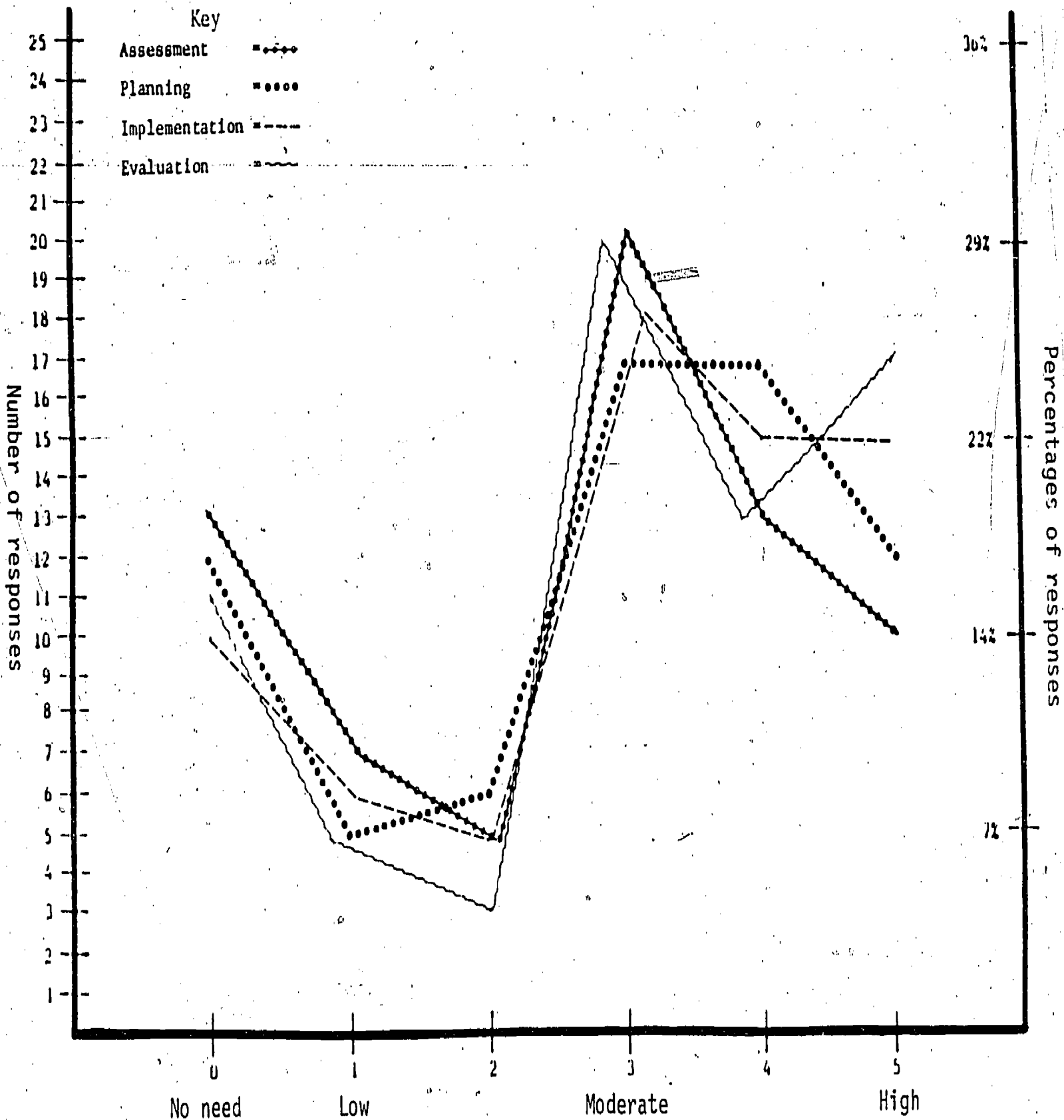Assessment   ●●●●●
Planning   ●●●●●
Implementation ─────
Evaluation   ═════

No need   Low   Moderate   High

The Personal Needs of the Student: Levels of Need for Training

Key
Assessment ∎◆◆◆
Planning ∎••••
Implementation ∎----
Evaluation ∎⌒⌒

Number of responses

No need   Low   Moderate   High
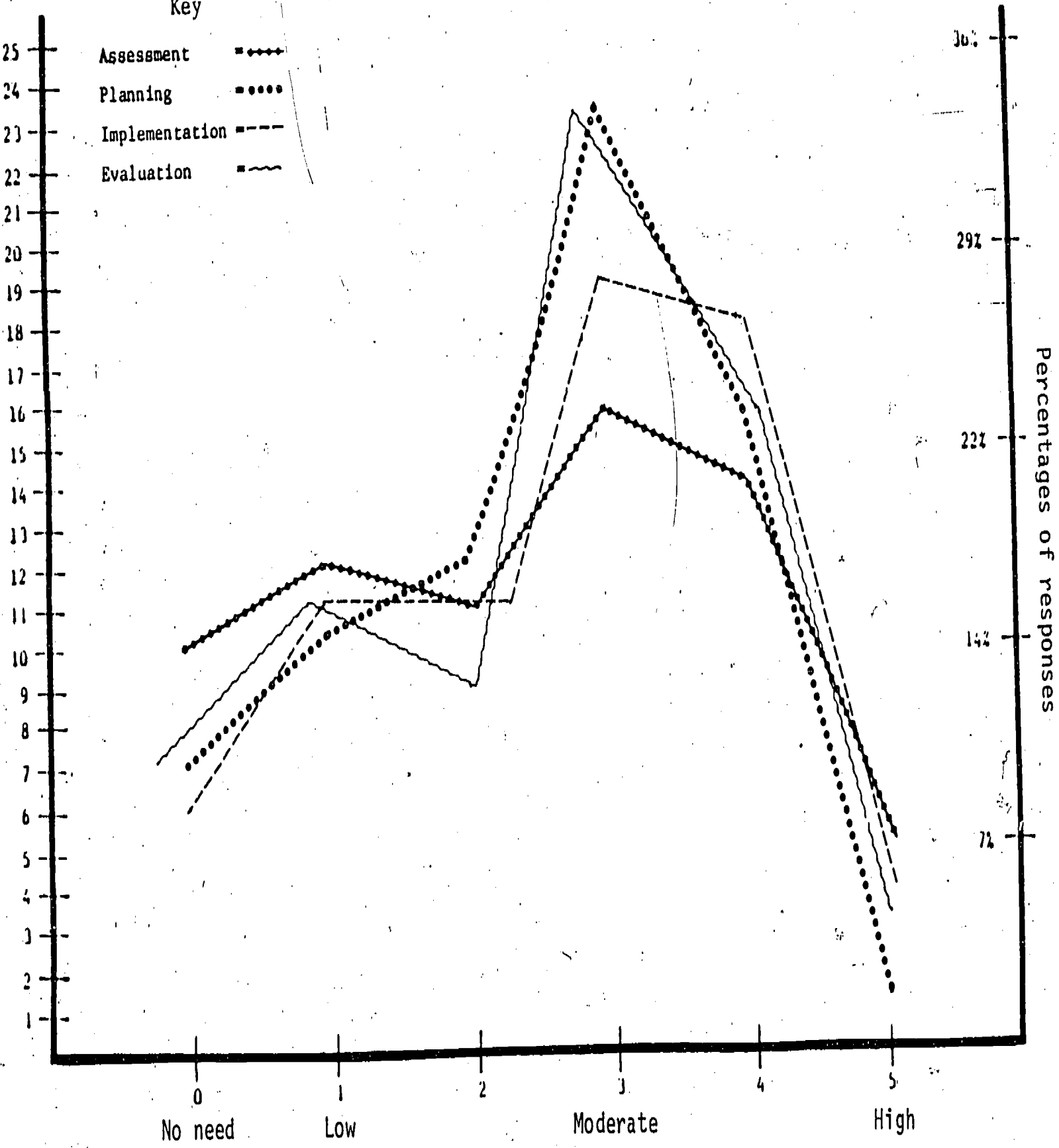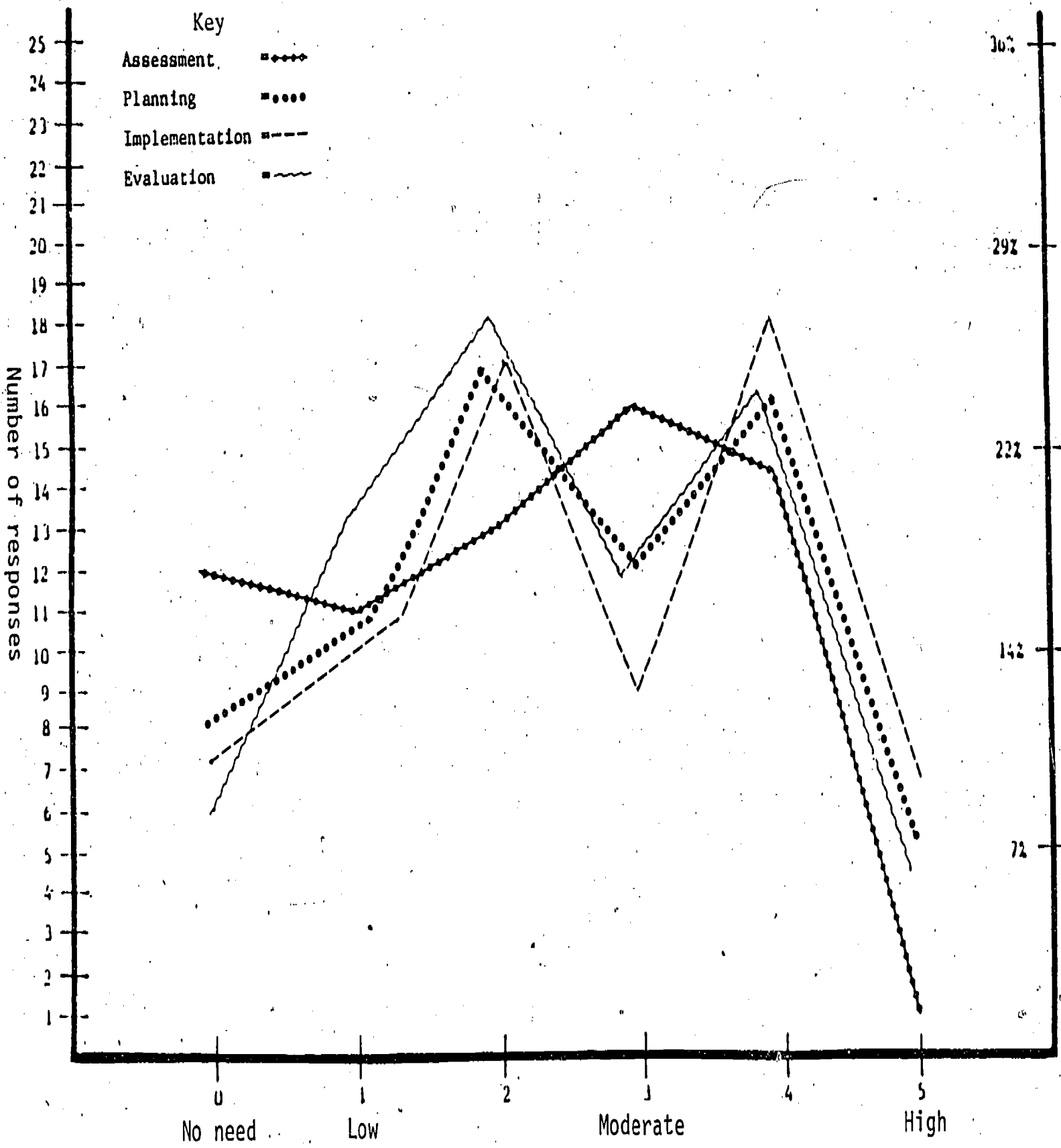
The Classroom Social Environment: Levels of Need for Training

The Classroom Physical Environment: Levels of Need for Training
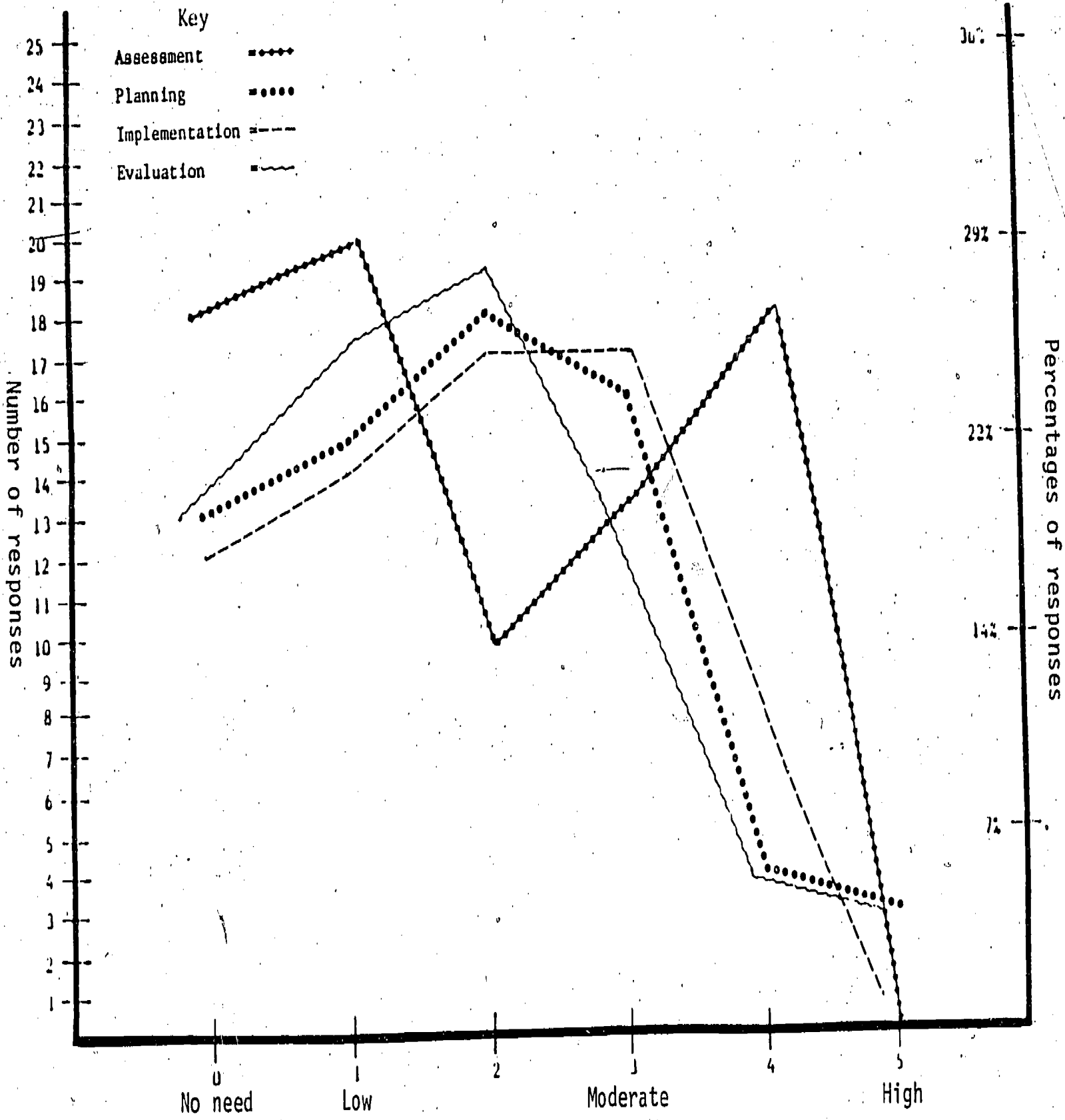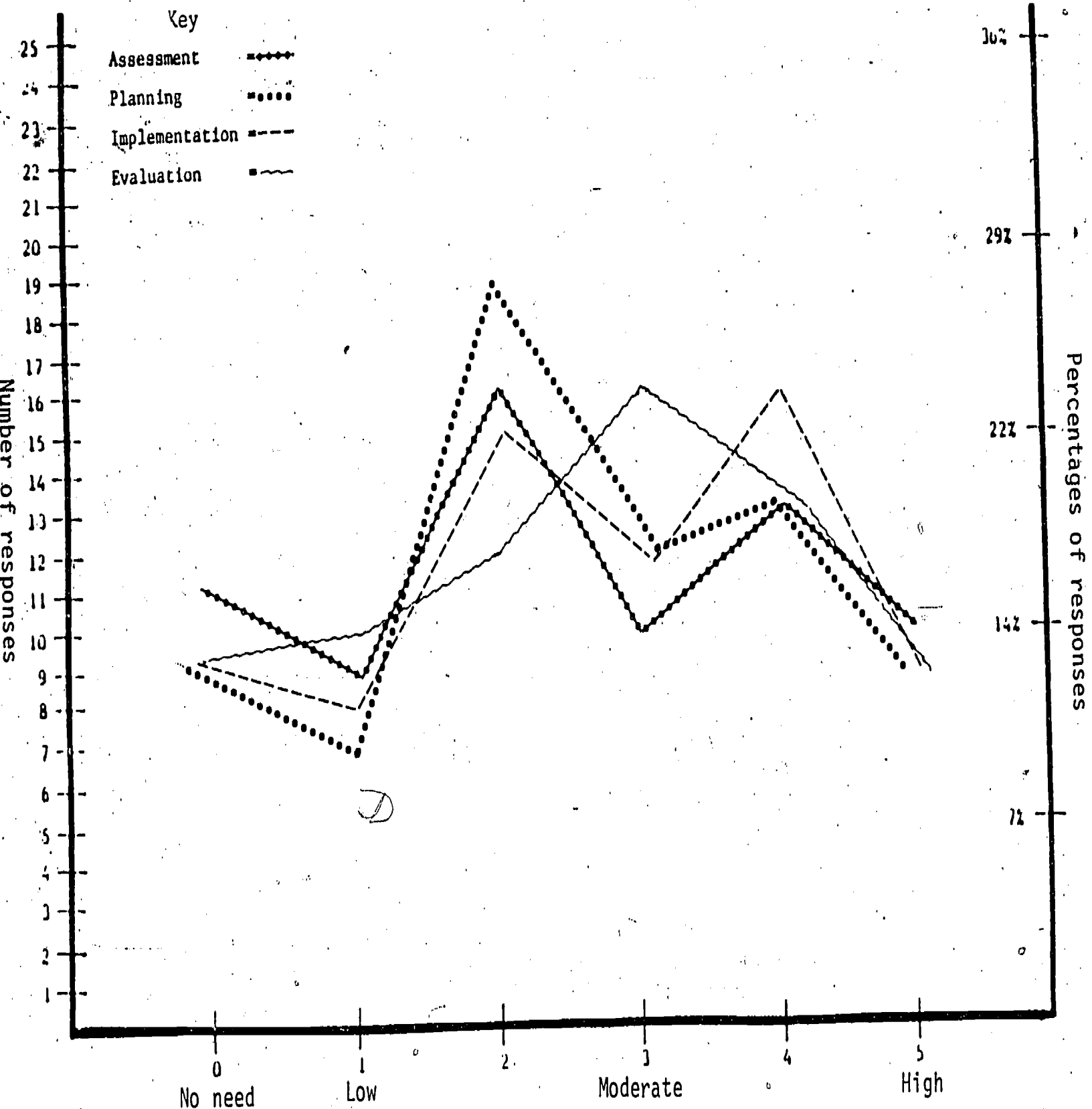
74

Key
Assessment ■◆◆◆◆
Planning ■●●●●
Implementation ■————
Evaluation ■——

The Individualized Education Plan: Levels of Need for Training

Number of responses

Percentages of responses

25 24 23 22 21 20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

30% 29% 22% 14% 7%

0 — No need   1 — Low   2   3 — Moderate   4   5 — High
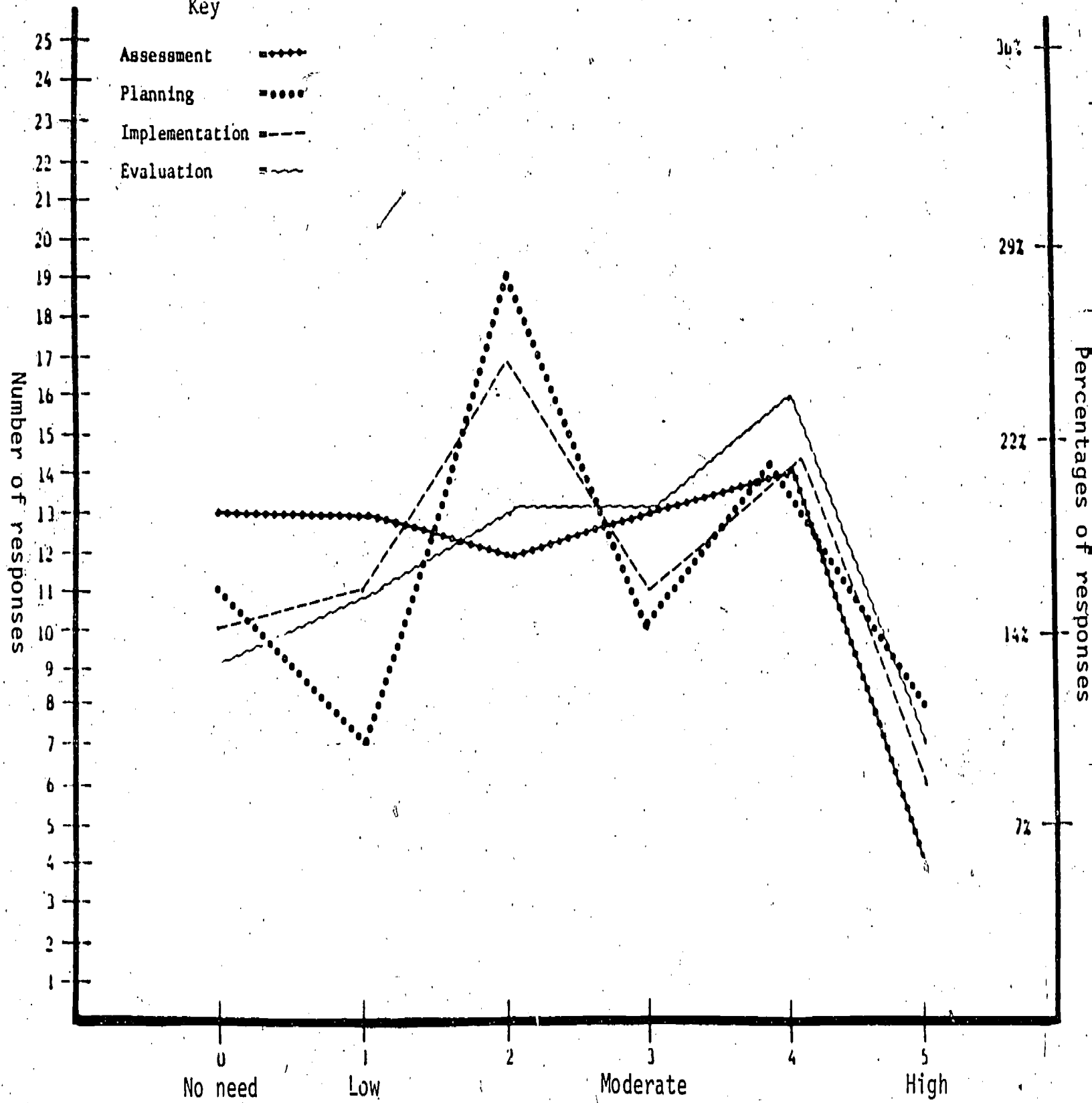
The Course Curriculum: Levels of Need for Training

Key

Assessment ◆◆◆◆
Planning ■●●●●
Implementation ■————
Evaluation ■～～～

Number of responses

25
24
23
22
21
20
19
18
17
16
15
14
13
12
11
10
9
8
7
6
5
4
3
2
1

0 No need 1 Low 2 3 Moderate 4 5 High

The Instructional Materials: Levels of Need for Training

Percentages of responses

30%
29%
22%
14%
7%

77
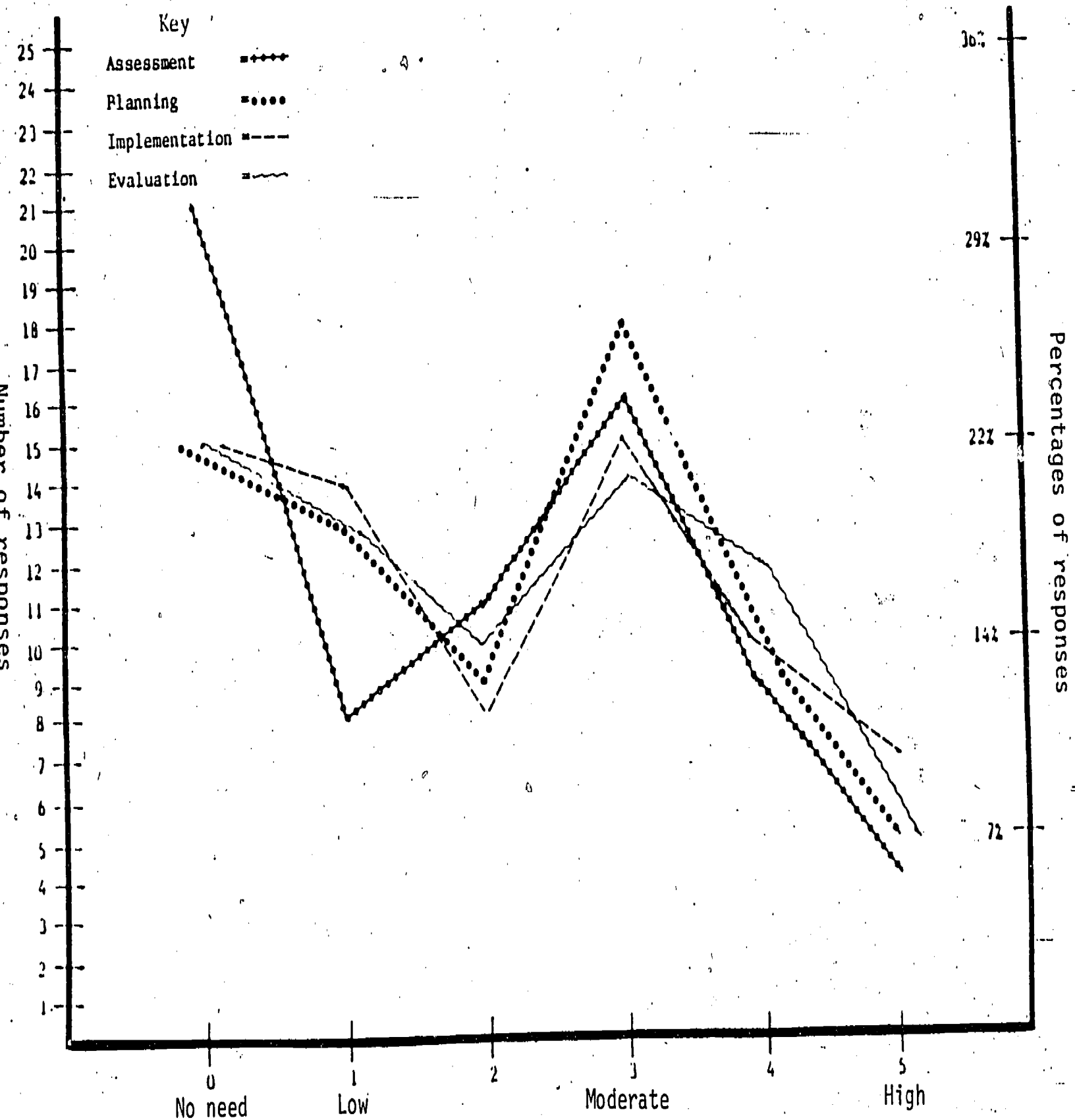
The Special Needs Support Services: Levels of Need for Training

78

Key
Assessment
Planning
Implementation
Evaluation

The Parents: Levels of Need for Training

No need   Low   Moderate   High

Number of responses

Percentages of responses

Key
Assessment   ■♦♦♦♦
Planning   ■●●●●
Implementation ■————
Evaluation   ■——

Number of responses

25
24
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21
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12
11
10
9
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7
6
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4
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2
1

Percentages of responses

36%
29%
22%
14%
7%

0   1   2   3   4   5
No need Low   Moderate   High
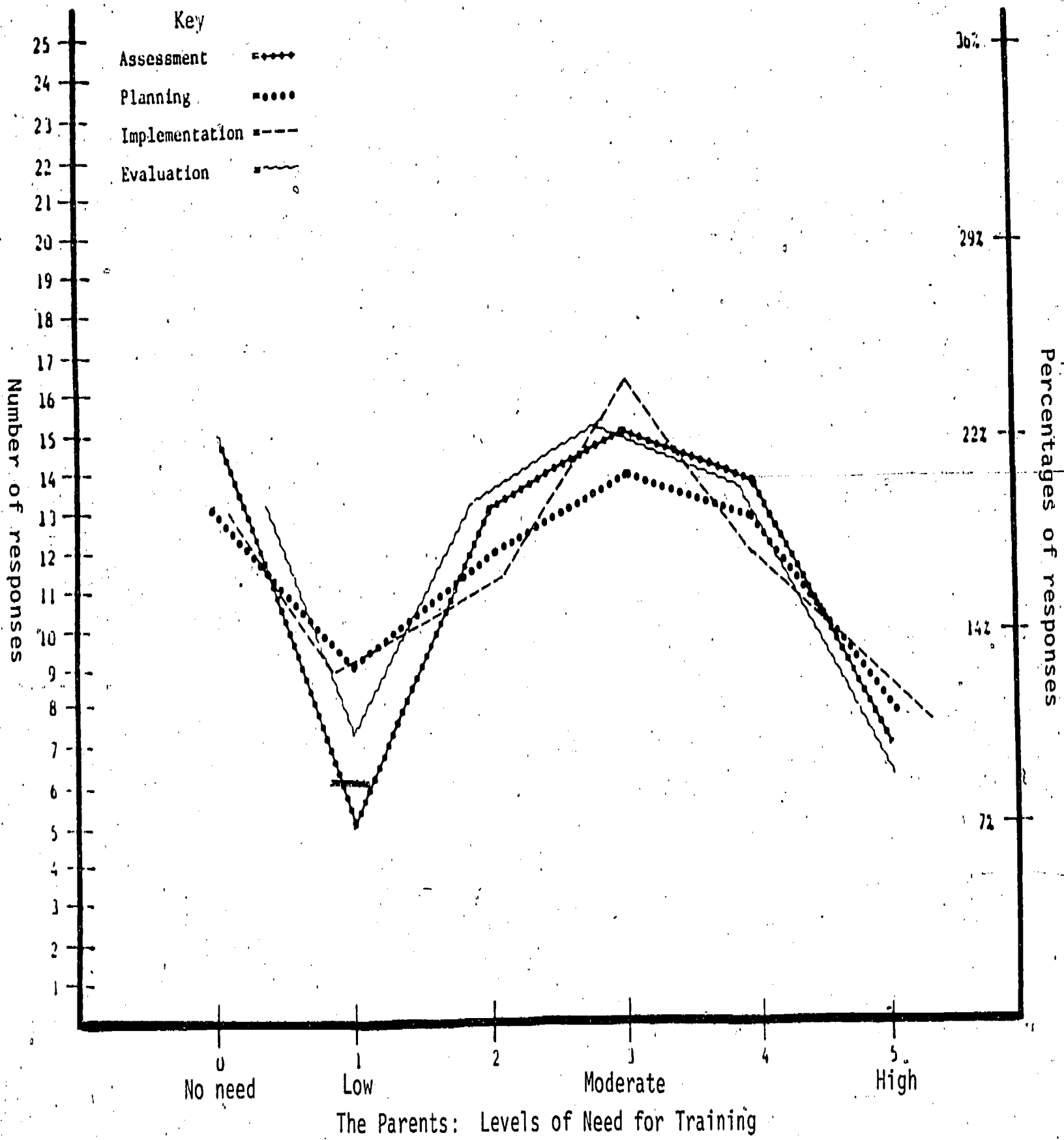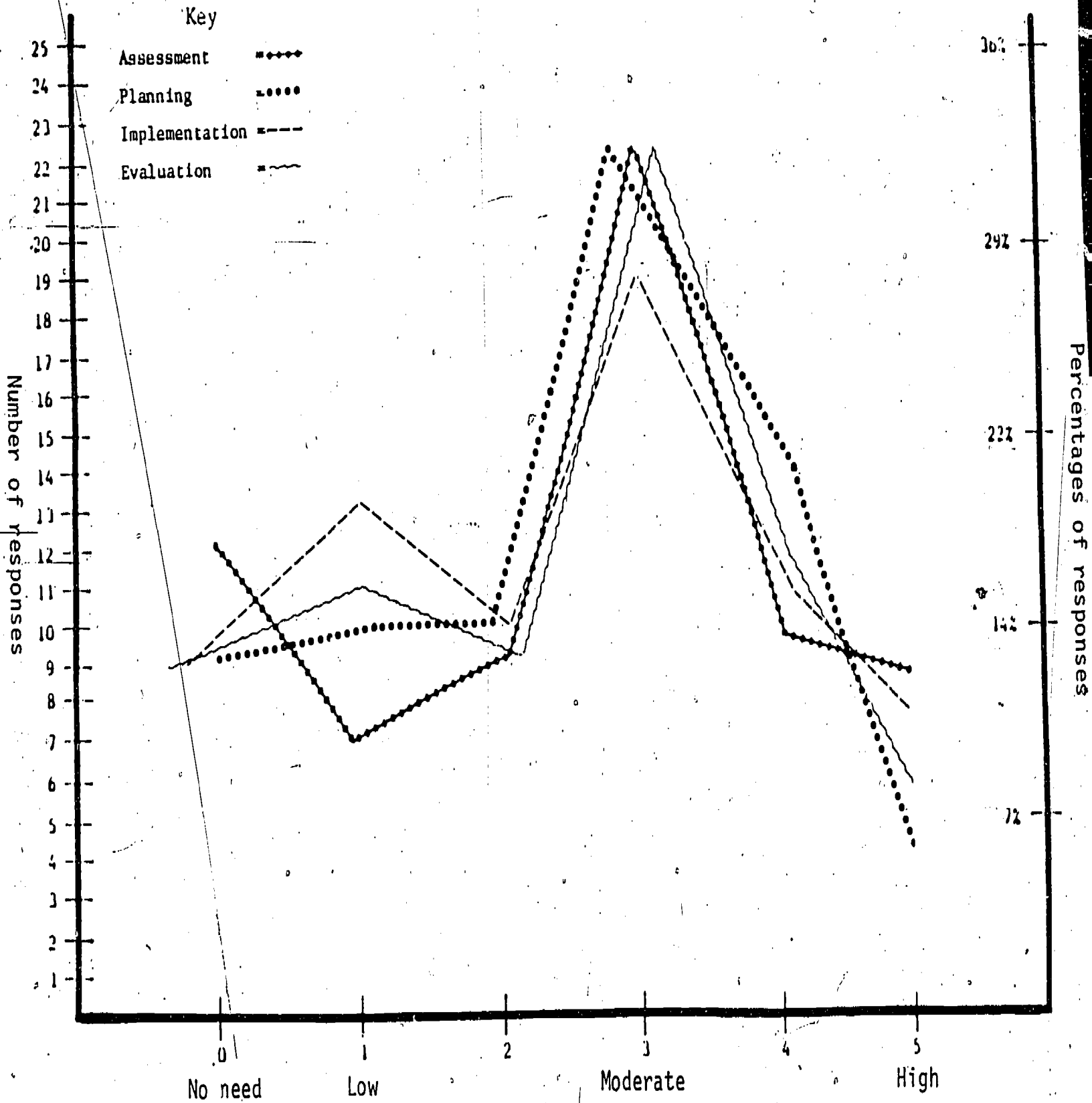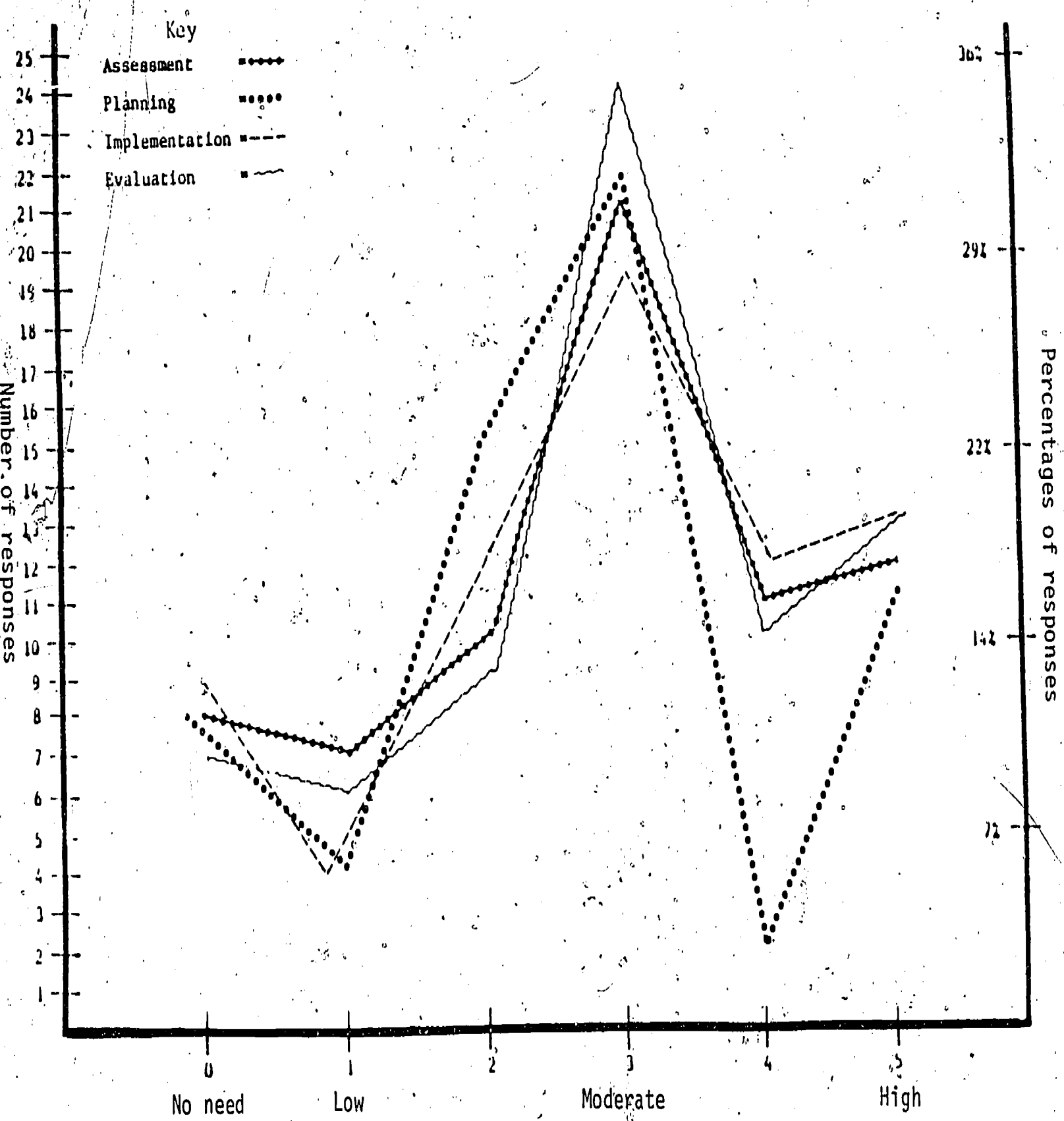
The Community Resources: Levels of Need for Training

80
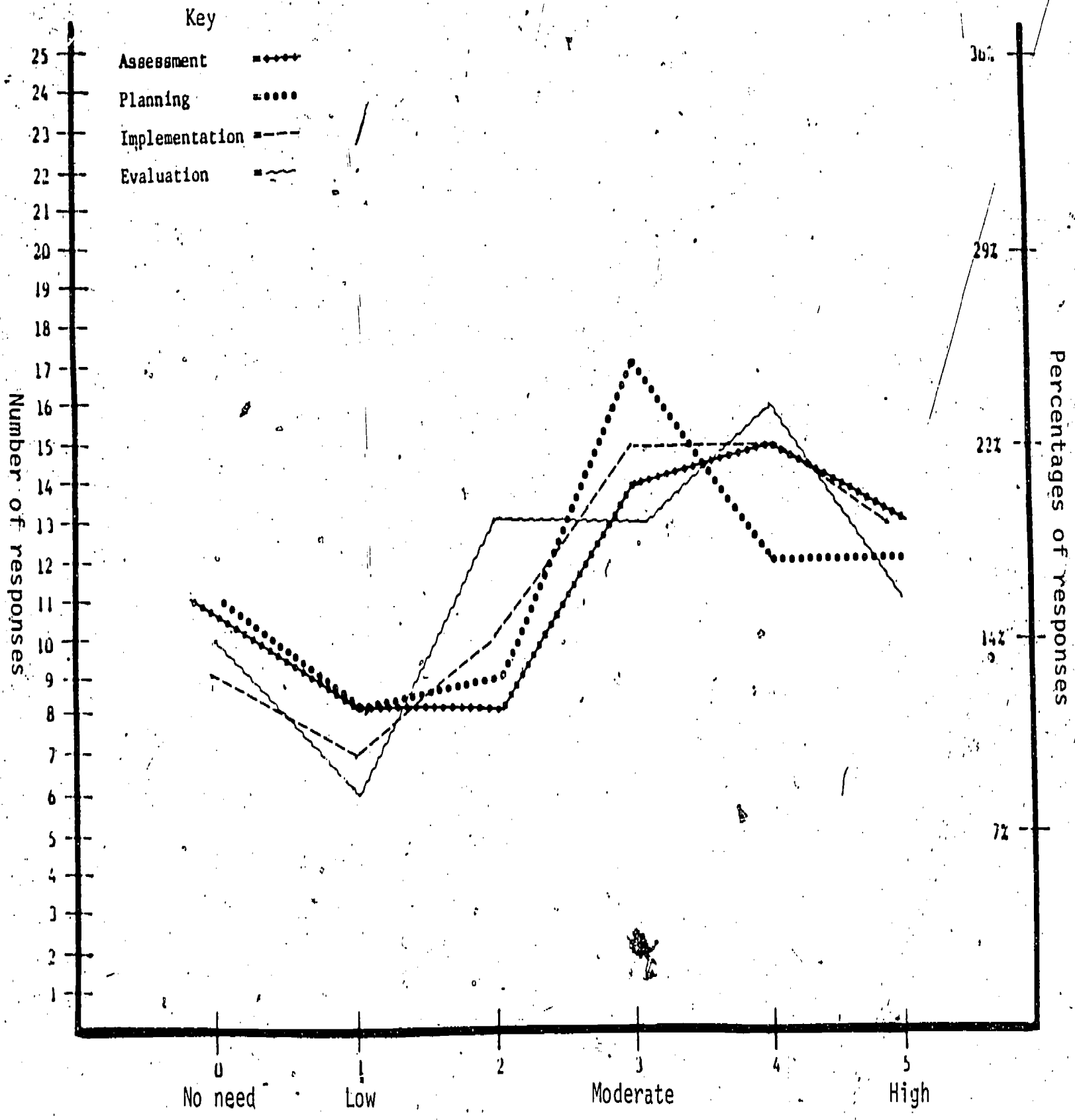
The Legislation and Funding: Levels of Need for Training

Key
Assessment ■■♦♦♦
Planning ■■●●●
Implementation ■----
Evaluation ■~~~

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13
12
11
10
9
8
7
6
5
4
3
2
1

Number of responses

36%
29%
22%
14%
7%

Percentages of responses

0   1   2   3   4   5
No need   Low   Moderate   High

The Continuing Professional Development of the Teacher: Levels of Need for Training