The document summarizes results of a project to help design effective in-service training programs for regular and special class teachers dealing with students with learning disabilities (LD). Feedback from participants in inservice programs offered by the Learning Centre in Alberta (Canada) suggests the importance of better identification of individual needs of regular and special education teachers in planning inservice programs. A literature review revealed a lack of empirical data on the knowledge, skills and competencies needed by teachers of LD students and suggested that regular class teachers may need different competencies than special class teachers. A needs assessment survey revealed consistencies across school systems, grade levels taught, and regular and special education in terms of preferences for inservice delivery. Survey questions tapping self-ratings of competence indicated that special education personnel were more confident than regular class teachers in their competence and training in general information, assessment and instruction/remediation of students with LD. Seven recommendations are offered, including suggestions for follow-up studies to validate the relevance of the knowledge, skills, and competencies targeted in inservice programs and consideration of several planning and delivery issues (such as scheduling and incentives) to maximize participation in in-service training.
Inservice Evaluation Project

Summary Report

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Under contract to Alberta Education, Edmonton, Alberta

December 5, 1986
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I. Introduction

The Learning Centre, a non-profit organization operated by the Calgary Society for Students with Learning Difficulties, opened in 1979 with the primary goal of improving services to students with learning difficulties. Each aspect of the Learning Centre's three-fold mandate—Research, Client Services, Professional Development— Touches upon improving the effectiveness of teachers of learning disabled students in the belief that it is through the providers of services for students with learning difficulties that change and improvement will result.

The Professional Development activities of the Learning Centre include extensive inservice training for educators of learning disabled students including regular class teachers, special education teachers, and resource personnel. Inservice education is recognized as essential in the field of education where college training represents the minimum prerequisite for entry into the teaching profession (Korinek, Schmid & McAdams, 1985).

The need for ongoing inservice education regarding learning disabilities is particularly important. The field of learning disabilities is rapidly changing and relatively new. In a review of special education in Canada, Bunch (1984) noted that few classes existed for teaching learning disabled students prior to 1970. Limited undergraduate and graduate programs in learning disabilities were available at universities across Canada. Although research and awareness about learning disabilities have increased dramatically in
the past decade, Bunch (1984) argues that few changes have occurred in
teacher training programs.

Many teachers rely on inservice training to gain knowledge about
learning disabilities and effective inservice programs are essential.
Reviews examining best practices in inservice education consistently
identify the importance of planning inservice in response to assessed
needs regarding content and delivery procedures (Hutson, 1981; Korinek,
Schmid & McAdams, 1985; Wilen & Kindsvatter, 1978). It is important to
respond to local concerns (Parish & Arends, 1983), and to differentiate
the needs of each teacher based on varying levels of experience in a
particular area (Neil, 1985). In focusing on inservice needs in the
area of learning disabilities, it is important to permit differentiation
of interests and of self-perceived training and competence expressed by
regular school personnel and special educators (McGinty & Keogh, 1975).

The purpose of the present project was to gather information to
contribute to designing effective inservice programs in the area of
learning disabilities to meet the needs of educators in different
contexts, such as regular versus special education, or elementary grades
versus junior high or senior high. The information was derived from
three major sources: 1) feedback from participants in inservice
presentations offered by the Learning Centre; 2) content of inservice
suggested by a survey of the literature relevant to determining the
knowledge, skills and competencies required for effective teaching of
learning disabled students; 3) a needs assessment survey assessing
procedural preferences, areas of interest for inservice programs in
learning disabilities and areas of self-perceived weakness in the area of learning disabilities as indicated by teachers' self-ratings of competence.

II. LEARNING CENTRE INSERVICE PROGRAMS

Between September of 1985 and March 31, 1986, Learning Centre staff offered a wide range of professional development opportunities to persons involved in the education of students with learning disabilities. Three hundred and twenty-five educators in Southern Alberta made the commitment to voluntarily attend courses/workshops initiated by the Learning Centre, most of which were held outside of school hours (272 hours of instruction).

In addition, Learning Centre staff were invited to offer 28 inservice presentations within the surrounding urban area and six presentations in other districts. A total of 737 educators participated in the 80 hours of inservice instruction regarding general strategies for teaching students with learning disabilities, particularly strategies applicable in the regular class, behavior management, program planning for students with learning disabilities and descriptions of specific programs and approaches. The positive voluntary response to courses/workshops and the volume of requests provided evidence that information about learning disabilities is a priority item for teachers and for inservice programs in Southern Alberta.

Descriptive information was compiled for participants in 19 presentations offered between September of 1984 and December of 1985. Three hundred and ninety-seven of the 513 participants completed an
Evaluation Form for a return rate of 77%. The largest groups represented were classroom teachers (36%) and special education personnel (33%). Counsellors (7%) also appeared to want information about learning disabilities. These descriptive data together with the wide range of inservice topics suggested by participants pointed to the need to better identify individual needs of regular education and special education teachers in planning inservice programs in learning disabilities.

III. LITERATURE REVIEW: KNOWLEDGE, SKILLS AND COMPETENCIES NEEDED BY TEACHERS OF STUDENTS WITH LEARNING DISABILITIES

As one approach to selecting content and specifying objectives of inservice programs in learning disabilities, relevant literature and research were reviewed to determine the essential knowledge, skills and competencies required for effective teaching of learning disabled students.

Method of Review

Several approaches were adopted to yield a comprehensive review of relevant literature. A computer search (ERIC) was conducted using suitable descriptors, namely, learning disabilities, teacher competencies, teacher effectiveness. In addition, manual searches were made for the years 1980 through 1986 in the indexes of Exceptional Children, Exceptional Education Quarterly, Journal of Learning Disabilities, Topics in Learning and Learning Disabilities, Remedial and Special Education, Teacher Education and Special Education (1982 and 1984), Teaching Exceptional Children, Special Education in Canada. Relevant textbooks were examined for reference to knowledge, skills and
competencies appropriate for educators of learning disabled students.

Summary of Literature Review

The review of the literature indicated that there is a dearth of empirical data identifying the knowledge, skills and competencies required by teachers of LD students. It appears that regular class teachers may need different competencies than special education personnel but little information is available to assist in describing what these teachers need to know to effectively instruct LD students in their regular classes. There are indications that regular class teachers lack confidence in their ability to effectively teach LD students (McGinty & Keogh, 1975).

Although much more attention has been devoted to identifying the competencies required by special education personnel, the competencies are derived from professional consensus. The ultimate test of the validity of specific teacher competencies is to show a relationship between their demonstration and gains in student achievement, but such studies are rare in special education.

The available data do suggest that many LD professionals lack confidence in their competence in several areas which they consider to be important in the effective educational management of LD students (e.g., oral language, written expression, mathematics, consulting). LD professionals at the elementary and secondary levels may differ in areas they perceive to be important and in their training (e.g., language remediation, reading, career/vocational). Some areas are not consistently emphasized in practice but are stressed by experts in learning disabilities, such as consulting, cognition (problem-solving,
learning strategies, metacognition), behavior management, career/vocational education at young ages, and measurement issues in assessment.

In view of the lack of empirically validated competencies for teachers of LD students, it is important to assess the self-perceived competence of local educators and their areas of interest to determine directions for planning in-service to meet their needs.

IV. LEARNING DISABILITIES: NEEDS ASSESSMENT SURVEY

The feedback from participants in Learning Centre in-service presentations and the literature reviewed indicated the importance of directly determining local needs for in-service training in learning disabilities of regular and special education personnel at the elementary, junior high and senior high school levels. The Learning Disabilities: Needs Assessment Survey permitted differentiation of interests and of self-perceived training and competence expressed by teachers varying in teaching roles and in experience in the area of learning disabilities. The survey of content was combined with descriptive and procedural information to provide a basis for planning more effective in-service to better meet the needs of regular and special education personnel.

METHOD

The Learning Disabilities: Needs Assessment Survey contained three major sections: A) background and identifying information including position, grade level, content areas taught, sex, age range, educational background, and training in the area of learning disabilities; B) questions on the planning and presentation of
in-service training which tapped preferences for the scheduling of in-service, the personnel to be included in planning, the presentation format, and the reasons and incentives most likely to encourage attendance at an in-service training program; C) a section tapping teachers' self-ratings of competence in areas related to general information about learning disabilities, assessment, and instruction/remediation and questions directed at determining the topics of most interest for an in-service program in learning disabilities.

A total of 1010 questionnaires were distributed to regular and special education class teachers across elementary, junior high and high school levels, and to selected special services personnel in two school systems in a large urban centre as follows:

A) School System A

- 10% random sample of all regular classroom teachers generated by selecting every tenth name from a computerized alphabetical listing of professional staff excluding administrators and special education personnel (438 personnel);
- special education personnel including all teachers of classes for students with learning disabilities, all Resource Teachers and Program Specialists (330 personnel);

B) School System B

- 10% random sample of all regular classroom teachers generated by selecting every tenth name from a computerized alphabetical listing of professional staff teaching in Regular Classrooms (193 personnel);
- Special education personnel including all Resource Room teachers, Remedial Language Arts teachers and Guidance Consultants (49 personnel).

The data were analyzed using the Statistical Package for Social Sciences (SPSS).

**MAJOR FINDINGS**

The final return rate for the questionnaires was 293 for System A (38%) and 104 for System B (43%) for a total return rate of 39%. Regular class teachers comprised 45% of the total sample, special education personnel comprised 46%, and 9% were miscellaneous "special services".

Few regular class teachers at any grade level had training in the area of learning disabilities (28%). In contrast, 83% of special class teachers and 74% of Resource teachers reported having received training. Of the special education personnel, Resource teachers at the junior high level reported the least training in learning disabilities (62%). Regular class teachers who had training in the area of learning disabilities had received this training in their undergraduate university program (22%), but few had pursued graduate training (3%) or inservice training (6%). In contrast, many special education personnel participated in inservice training in learning disabilities (54% of special class teachers and 65% of Resource teachers). Special class teachers and Resource teachers were similar in graduate training in learning disabilities (29% and 22%, respectively); however, more of the special class teachers reported undergraduate training (57%
versus 21% of Resource teachers).

There were consistencies across school systems, grade levels taught and regular and special education in preferences for the delivery of inservice programs. Teachers prefer formal half to full day inservice programs offered during the school year and during the school day. Provisions for teacher input into the planning of inservice should be considered and important incentives include release time, payment of fees and salary increments. An integrated well-planned inservice program using a workshop format which provides participant practice and opportunities for follow-up would appear to best meet the needs of the majority of teachers surveyed. The selection of content for an inservice program should be guided by the reasons teachers attend inservice, namely, to acquire current information which they can apply directly in their teaching assignments.

Survey questions tapping self-ratings of competence indicated that special education personnel were more confident than regular class teachers in their competence and training in general information, assessment and instruction/remediation of students with learning disabilities. For regular class teachers, feelings of competence varied across grade levels taught. Senior high school teachers reported an overall lack of information across all topics related to learning disabilities. Junior high teachers also lacked confidence in their competence and training to meet the needs of LD students. Although elementary regular class teachers lacked general information about learning disabilities, they felt competent in assessment and
instruction in most basic skill areas. The self-identified weaknesses of regular class teachers in knowledge about learning disabilities, particularly screening, identification and individualization of instruction, have important implications for teaching practice as there are increasing demands put on regular class teachers to identify and effectively manage LD students within their regular classrooms.

While special education personnel expressed overall confidence in their knowledge about learning disabilities, junior and senior high personnel self-identified more areas of weakness than personnel teaching at the elementary level, and areas of self-perceived competence tended to vary across school systems.

In selecting content for in-service programs in learning disabilities, areas of self-identified weakness suggest important areas of need. However, teachers' interest in topics must also be considered as the teachers surveyed did not always select areas of self-perceived weakness as priorities for in-service. Although preferences for in-service topics varied across grade levels and regular and special education, there was consistently high interest in learning strategies, problem-solving/thinking and assessment of attention problems, and considerable interest in memory, methods of identification and screening procedures. These topics appear to be highly relevant to teachers in many contexts and could provide a core content for in-service training programs in learning disabilities.

V. RECOMMENDATIONS

The following recommendations are made on the basis of the information gathered from Learning Centre in-service programs, the
literature survey and the Needs Assessment Survey:

1) University teacher training programs should offer courses in learning disabilities to regular education students and insure that information about learning disabilities is included in regular education courses for elementary level, junior high and secondary level Education students.

2) Research is needed to examine effective teaching in special education and to provide empirical validation of competencies for teachers of LD students which are currently derived from professional consensus.

3) Validation of the relevance of the knowledge, skills and competencies targeted in inservice programs in learning disabilities should be addressed through follow-up studies of the effects of the teacher training on classroom practice and on student outcomes. This research could contribute to identifying critical variables in the effective teaching of LD students in a variety of contexts.

4) School systems should continue to organize formal inservice in learning disabilities for special education personnel, particularly at the junior and senior high school levels.

5) School systems should initiate formal inservice in learning disabilities for regular class teachers at all grade levels.

6) To maximize participation in inservice training, several planning and delivery issues must be considered:
   a) Teachers should be involved in planning inservice programs.
   b) Inservice should be offered early in the school year and during the school day.
c) Incentives for inservice participation should be offered, such as, release time and payment of fees.

d) An inservice program should be integrated and well-planned using a workshop format which provides participants practice and opportunities for follow-up.

e) Formal inservice presentations should be a half-day to a full-day in length.

f) Flexibility is recommended in recognizing that teachers in some contexts may require inservice opportunities involving one-to-one consultation.

7) The content of inservice programs in learning disabilities must be selected to meet the varying needs of teachers in regular and special education, and of teachers of different grade levels. Areas of weakness and areas of interest identified by teachers should be combined with the professional consensus of experts in learning disabilities to develop effective inservice programs. On the basis of the needs identified in the present project, it is recommended that decisions about inservice consider the following areas of need and interests identified for teachers in varying teaching contexts:

a) Elementary regular class teachers expressed particular interest in several areas which they perceived as areas of weakness in terms of their competence and training: methods of identification, characteristics, screening procedures, assessment of oral language and attention problems and instruction/remediation areas involving learning strategies, problem-solving/thinking, individualization of instruction.
b) Junior high regular class teachers reported lack of confidence in almost all general information, assessment and instruction/remediation areas. Of these, they expressed particular interest in learning strategies, problem-solving/thinking, social skills, characteristics, methods of identification and screening; assessment of attention problems, study skills and intelligence; individualization of instruction and integration of students.

c) Senior high regular class teachers felt competent in only two areas related to learning disabilities namely, behavior management and communicating with other teachers. Primary interest areas included methods of identification and screening, learning strategies and thinking/problem-solving, attention problems, behavior management, instruction in mathematics, and assessment of study skills, reading and social skills.

d) Both elementary and junior/senior high special class teachers reported interest in three topics in which they lacked confidence in their current knowledge: neuropsychology, computer-assisted learning and assessment of intelligence. Special class teachers felt competent in instruction/remediation areas but expressed interest in further information regarding problem-solving/thinking, learning strategies, oral language, social skills and study skills. Differences across grade levels and across the school systems surveyed must be considered in identifying other topic areas.
e) Elementary resource teachers did not express interest in inservice in the few areas of self-reported weakness which they may not have perceived to be important to their role. Areas of interest included learning strategies, attention problems, thinking/problem-solving, memory, metacognition, social skills, study skills, behavior management, screening procedures and oral language assessment.

f) Junior high resource teachers were interested in inservice in several areas in which they perceived weaknesses: metacognition, screening procedures, and attention problems. Other interest areas were learning strategies, memory, thinking/problem-solving, methods of identification, assessment and remediation of language, assessment of written expression and social skills, and developing individual education plans.

g) Senior high resource teachers expressed interest in opportunities to increase competence in the following self-perceived areas of weakness: metacognition, computer-assisted learning, assessment of intelligence, and instruction in social skills. Other interest areas included learning strategies, memory, screening procedures; assessment and instruction of reading, written expression and social skills; assessment of intelligence; thinking/problem-solving instruction, behavior management strategies and integration of students.