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The Expanded Role of Regular Class Teachers

Implications for teacher education

Man proposes; God — and in this case the teacher — disposes. It is plain that the ambitions conceived for mainstreaming will only be achieved if regular teachers in fact manifest the kinds of competence and attitude that are assumed. The Semmels review the literature looking for evidence concerning the status among teachers of the appropriate competencies and attitudes, and discuss the implications the findings have for programs of teacher education. They find low self-esteem among teachers who take part with other professionals in joint planning; a promising if too general level of expertise in making assessments of pupils; and a potential challenge from the computer to the quality of their input into the formulations of objectives. The attitudes of teachers towards individualization and to having handicapped pupils in class suggest a major re-examination of some assumptions. Each of these situations has clear implications for the kind of education teachers should receive.

The revolutionary, ethical commitments to the education of handicapped children throughout North America, which are so significantly affecting educational practice, have particular relevance for the training of personnel to work effectively with such pupils. Contemporary special education focuses on the right of all handicapped children to be educated in the "least restrictive environment." The clear trend toward the integration of handicapped pupils within the context of the regular classroom is buttressed by federal and state legislation in the USA and by provincial mandates in Canada. This significant educational movement is metaphorically referred to as *Mainstreaming.* The components of the trend toward mainstreaming include a focus on due process guarantees in the testing and placement of handicapped pupils; on non-biased, multidisciplinary evaluation and placement; and on educational planning based on individual pupil needs.

As a relatively new educational practice in the schools, mainstreaming is expanding and redefining the role definition of the regular elementary and

secondary teacher. It is creating new and expanding roles for special education personnel through the inauguration of administrative support systems for regular teachers who have responsibility for integrated handicapped pupils. Thus various school personnel are being required to work cooperatively toward maximizing the educational opportunities for handicapped pupils within integrated contexts. The trend implies the need for regular teachers to have competencies in assessing pupil abilities, individual educational planning, interdisciplinary communication, and individualized instruction and evaluation. It assumes that teachers of regular classes will adopt attitudes consistent with the principles underlying mainstreaming, both as an ethical-legal mandate and as a viable pedagogical approach to the education of children.

While contemporary trends are imposing these new demands on teachers, it is not clear that they are prepared to meet the challenges. From a teacher education point of view, it is first necessary to determine what empirical evidence if any exists which would identify the state of knowledge, skills, and attitudes necessary for complying effectively with the implicit demands of mainstreaming. Once such a needs assessment has been completed, teacher training efforts can then be intelligently and effectively planned and implemented.

Problems of definition

In a review of the literature on the effects of alternative educational environments on the academic and social adjustment of handicapped children, M. Semmel, Gottlieb, and Robinson (1979) described the varying definitions of mainstreaming and the obstacles that this variety presents to any evaluation and comparison of mainstreaming studies; the same caveat may be applied to teacher education programs. Kaufman, Gottlieb, Agard and Kukic's (1975) definition centers on temporal integration, educational planning and programming, and clarification of responsibility. Semmel, Gottlieb and Robinson described mainstreaming as an educational synonym for the legal concept of placement in the least restrictive environment (LRE), and suggested that temporal integration alone was the "necessary", although not sufficient, criterion for mainstreaming.

The operating principle of LRE is the maximization of interaction between handicapped and nonhandicapped pupils. Lowenbraun and Affleck (1978) operationalized a definition of mainstreaming by describing the administrative program alternatives most often employed in the public schools. These administrative arrangements were grouped as follows: (1) *Special class placement:* the primary placement is in a self-contained classroom, with some provision for a limited integration with non-handicapped pupils. (2) *Resource room model:* the primary placement is in the regular class, but pupils are placed in special education for some portion of the day. (3) *Special services model:* the pupil receives direct services either in or out of the regular class setting (speech and hearing, counseling, small group remedial instruction, tutoring, etc.). (4) *Support services*

model: services are provided to the regular class teacher to aid in the accommodation of the pupil within the regular class.

It should be noted however that various combinations of these basic administrative models are frequently found in the public schools, making generalizations about a single model impossible. One implication emerging from these administrative alternatives however is that the involvement of regular grade teachers in the integration of handicapped pupils will be considerable — regardless of which of the administrative variations is adopted.

Both the conceptual framework for mainstreaming and the administrative alternatives which describe current practices bear directly upon the objectives and methods for teacher education. Given that the concept is fraught with ambiguity and the administrative alternatives are many and complex, how can a rational, empirical determination be made of the teacher competencies needed in special education?

This paper explores some of the important questions relative to the competencies and attitudes needed by regular teachers of handicapped pupils in the mainstream. The selection of these facets of the regular teacher's expanded role in mainstreaming programs follows a deductive process of reasoning from our knowledge of contemporary practices in the USA as well as from our previous studies of the issues (Semmel, Semmel, & Morrisey, 1976; M. Semmel, Gottlieb, & Robinson, 1979; D. Semmel & Morgan, 1978; M. Semmel & Heinmiller, 1977). The paper does not claim to be exhaustive of the important teacher competencies that are implied by the mainstreaming trend; space limitations demanded some selectivity with regard to the inclusion of issues. After identifying these issues we review selected literature in order to examine their empirical basis. The literature review directs the reader to certain implications for the training of regular class teachers for work in mainstreaming programs.

Teacher competencies and mainstreaming

A major concept inherent in the goals of mainstreaming is that special education and related services be provided to meet the unique needs of *each* handicapped child. Thus individualization is a central educational ideology of the new movement in the education of handicapped pupils. The thrust of this proposition is to negate the categorical, norm-based classification of the learning or behavioral characteristics of handicapped children. For a variety of historical reasons, both professional and social, the importance of norm-referenced testing as a basis for the evaluation and placement of the handicapped has diminished (cf. Mercer, 1970; Dunn, 1968).

The categorical approach to special education has also been supplanted by an increasing attention to the learning and social characteristics of handicapped

children, which have been found to cut across traditional special education classifications (Blackhurst, et al., 1973; Christopholous & Valletutti, 1972; Schwartz, 1971). In addition, research into the negative consequences of the labeling associated with placement in special classes (Guskin, 1974; Jones, 1972; Rowitz, 1974) has contributed to the emphasis on individual needs rather than on diagnostic categories as the basis for educational placement and planning for handicapped children.

In the USA, the individualized educational program (IEP) provision of Public Law 94 - 142 was designed to serve as the mechanism whereby the goal of individualization of assessment, placement, and programming could be realized. Each of the substantive requirements of IEP also infer particular educational values and assumptions about teacher behaviour and competencies. The stipulation that the IEP include a statement of the child's present level of performance, and a statement of instructional goals and objectives together with evaluation procedures for determining whether objectives are being achieved, assumes that the teacher will adopt this framework in conceptualizing and programming for each handicapped child in his or her class. Implicit in these requirements is that an accurate determination of a child's level of academic and social-emotional functioning is possible (and desirable), and that educational goals can be selected that are systematically related to the pupil's present functional level.

The teacher competency needed for a reasonable determination of a pupil's present level of educational performance is skill in assessment. This, in turn, assumes a knowledge of standardized achievement and aptitude tests, and a facility with informal observation and the criterion-referenced assessment of pupil performance. The prescriptive aspects of IEP — setting annual goals and short-term instructional objectives — presume that teachers know about and have the skills to select and match educational goals to assessment data. In addition, teachers are assumed to have the knowledge and the skills for operationalizing long-term (that is, annual) educational goals through task analysis, in order to formulate relevant short-term objectives. There is the further assumption that teachers can take the IEP for a handicapped pupil and integrate the implementation of that individual plan into the instructional plan for an entire class or subgroup of a class.

The expectation that the IEP will be prepared by a multidisciplinary professional team which also includes parents carries with it the additional assumption that both regular and special education teachers can effectively participate in a cooperative assessment and in educational planning meetings. The skills required are primarily skills of interpersonal and group communication, which have not traditionally been part of the classroom teacher's role (Lortie, 1975).

The educational assumptions underlying individualized educational planning that directly relate to teacher behaviour and teacher competencies may be summarized as follows:

Teachers either have or can gain competence in individual pupil assessment, in the preparation of instructional objectives related to assessment outcomes, and in participating in and contributing to multidisciplinary pupil planning.

Teachers either have or can gain competencies in effectively accommodating and instructing handicapped pupils within the social and educational milieu of the "regular" class.

Teachers either have or can develop facilitative attitudes toward the mainstreaming of handicapped pupils.

How tenable are these assumptions? Some indications may be found in the literature of teacher behaviour reviewed in the next section.

Are teachers prepared for multidisciplinary planning?

Lortie (1975) described the typical teacher's isolation in the classroom and the negative consequences of such isolation for the professionalism of the teacher role. The multidisciplinary planning process may thus prove to be an ideal mechanism for professional growth, through educational problem solving in a collegial forum.

Several studies have recently been completed on the problems of teacher participation in group decision-making and IEP planning (Fenton, Yoshida, Hoff & Kaufman, 1978; D. Semmel, Yoshida, Fenton & Kaufman, 1978; Yoshida, Fenton, Maxwell & Kaufman, 1977). Among the findings is the recurrent observation that regular class teachers differ significantly from special education teachers in their perception of the importance of their contribution to IEP decision-making (Yoshida, Fenton, Maxwell & Kaufman, 1977). Regular education teachers rated themselves lowest compared to other participants on both participation and satisfaction. Under simulated case-conference conditions, regular class teachers failed to influence the group decision-making in any eductionally significant manner (D. Semmel, Yoshida, Fenton & Kaufman, 1978). The findings of these studies indicate a pattern of passivity on the part of regular class teachers in group decision-making processes. One explanation offered for these findings was that the expectations which team members have for their own role and for the roles of others reflect the patterns of influence which are associated with the team members' hierarchical positions within the school organization (Fenton, et al., 1977). In a related study, Fenton and others (1978) found that there was disagreement about role responsibilities within planning teams studied in the State of Connecticut.

The teacher participation issue is an important one from the point of view of the success of multidisciplinary planning as a useful educational innovation.

Without meaningful teacher participation in group deliberations, there may be great discrepancy between the plan that the group produces and the program that the teacher actually implements. Even with the teacher's full participation in the planning stage the IEP implementation task is difficult enough; without such participation, the teacher's motivation to follow the prescribed objectives is apt to be low.

A number of training programs have been developed to promote participation and leadership skills for multidisciplinary teams (e.g., Council for Exceptional Children, 1977; D. Semmel, 1979). However, there is no way of determining at this time whether there are widespread efforts among local education agencies at providing staff development for interpersonal communication skills. Regular teachers apparently do not feel prepared for their role as multidisciplinary team members. The competencies needed to be successful in this aspect of the expanded teacher responsibility must be developed through inservice training.

Competency in the assessment of pupil performance

The evidence from a number of studies suggests that teachers do have the ability to make good judgments about pupil performance. Teachers' estimates of academic achievement and their impressions of social-emotional status have been found to be generally accurate. This generalization is qualified by the findings of studies which show differences according to the specific pupil variable being considered. Brophy and Good (1974) observed that teachers' impressions are stable across time, whether or not they are accurate. Studies reported by Nelson (1971) and Walker (1978) found that teacher ratings based on direct observation of behaviours were valid indicators of the emotional disturbance of pupils. The use of teacher judgments about personality characteristics was reported to be a valid technique for screening behaviorally disordered children when the California Test of Personality was used as a standardized criterion (Harth & Glavin, 1971).

Keough, Tchir, and Windeguth-Behn (1974) held that a majority of recent studies offer evidence that teachers are "surprisingly" accurate predictors of the future successes and problems of pupils. In a longitudinal study of teachers (K through 5), Keough and Smith (1970) reported that 90% of the pupils rated by kindergarten teachers on a reading readiness scale did achieve in the predicted direction. These results were similar to those of Brophy and Good (1970), who obtained a rank order correlation of .77 between teacher ratings of expected achievement and total scores on the Stanford Achievement Test administered at the end of the school year.

In a review of the literature on teacher perceptions of children with learning and behaviour problems, Minor (1976) concluded that problems identified

on the basis of teacher perception tended to indicate both future academic performance and need for special education.

Keough, Tchir and Windeguth-Behn (1974) found that teachers of both middle and low socio-economic status (SES) children could discriminate between categories of high-risk children, although there was some biasing effect due to SES. This study touched on an important issue in research on teacher assessment capabilities: *How differentiated are teacher estimates of pupil ability?* Are teacher judgments gross estimates, or can they differentiate between the relevant aspects of pupil performance? Hanby and Stiles (1976) found that teachers were unable to make accurate differential diagnoses of specific learning disabilities. Farr and Roelke (1971) examined teacher ratings of three components of reading skill (vocabulary, word analysis, and comprehension) with subscales of three standardized tests, and obtained high correlations between the teacher ratings and the standardized tests. But although the tests differentially discriminated between pupils on the three subskills, the teacher and the reading specialist ratings did not differentiate the separate reading components. Farr and Roelke suggested that teacher assessments may be valid at a global level only.

Yoshida (1976) studied the feasibility of using the teacher's recommendation rather than the student's age-grade placement as the basis for selecting the appropriate level of a standardized achievement test. He found teacher judgments to be accurate in selecting the appropriate test level for educable mentally retarded (EMR) students, even when the disparities between the pupil's age-grade level and the appropriate test level were very large.

These findings on teacher competence in pupil assessment have important implications for teacher participation in, and contribution to, multidisciplinary planning. Most of the studies cited used rating scales to measure their teacher judgments. What is uncertain from the literature is whether teachers have a common lexicon that permits an authoritative communication of their information and observations about pupil performance. Such a professional vocabulary may be imperative if a teacher's observations are to be influential in multidisciplinary decision-making. To define operationally a set of concepts and terms out of what appears to be a functional but largely intuitive set of teacher assessment skills is a task for further research, development, and training.

The teacher training literature, on the other hand, provides numerous examples of teacher assessment competencies acquired as an outcome of specific teacher training methods. Particularly successful are programs that use the techniques of applied behaviour analysis (Hall, et al., 1971; McKenzie, et al., 1970) and competency-based teacher education programs (Courtnage, et al., 1975; Schwartz, et al., 1972; Wood, 1975). It seems reasonable to expect that teachers who receive preservice training in Competency-Based Teacher Education, Behaviour Modification, or Diagnostic-Prescriptive programs will be more effective in contributing to multidisciplinary pupil assessment than teachers who

do not (see Semmel, Semmel, & Morrissey, 1976).

In summary, the empirical literature appears to suggest that teachers do have the competencies necessary for assessing broad levels of pupil performance. However, their accuracy is limited to relatively gross assessments. They apparently are less able to assess differentially the specific problems of pupils. Hence, it would appear that teacher training programs would be more effective in preparing teachers to work with handicapped pupils if they focused on the building of competencies related to specific assessments of levels and learning characteristics. An emphasis on training teachers to uncover the curriculum-related problems of pupils (oral and silent reading, spelling, mathematics, social-emotional problems etc.) would be particularly useful. Training in the use of informal reading inventories, in systematic observation, in the construction of criterion-referenced tests, and in the administration and interpretation of diagnostic instruments and standardized tests would appear to be appropriate competencies for regular grade teachers who work in mainstreaming programs. If teachers of mainstreamed handicapped pupils are to be asked to play an expanded role in assessing the pupils' levels of performance, in diagnosing educational problems, and in determining the expected levels of their functioning, then it is incumbent upon teacher training programs to provide the necessary experience to prepare for these responsibilities.

Competency in establishing instructional objectives

Instructional objectives are statements which define exactly what, how well, and under what conditions a student will be able to perform (Mager, 1962). The systematic approach to goal specification has been integrated into many facets of contemporary education. Bloom (1956) and Krathwohl, Bloom and Masia (1964) have provided the guidelines for the construction of curriculum and instructional objectives based upon a comprehensive organizational scheme of learning hierarchies. Behavioral objectives have also been influential (if not instrumental) in the Competency-Based Teacher Education movement (Elam, 1971; Semmel, Semmel & Morrissey, 1976). Similarly, the method has profoundly influenced contemporary curriculum construction (Duchastell & Merrill, 1973; Kapfer, 1971).

In special education, systematic instructional development in programs for the severely retarded and the emotionally disturbed has used behavioral objectives extensively as concomitants of applied behavioral analysis (e.g., Anderson, 1972; Haring & Phillips, 1972; Hewitt, 1968). In the field of learning disabilities, diagnostic schema serve as a guide to the development of instructional objectives.

Although a number of special education teacher preparation programs have reported using and teaching about instructional objectives (Deno, 1973;

Semmel, Semmel & Morrissey, 1976), few published studies of the effectiveness of instructional objectives in special education have been located.

Duchastell and Merrill (1973) and Davies (1976) reviewed recent research on the effectiveness of instructional objectives and found the results inconclusive owing to differences between the studies in the degree of specificity of the objectives that were studied. In some instances the effectiveness of the treatment itself was in doubt. However, Davies (1976) was able to draw some inferences from the rather weak research. He concluded that general objectives are as effective as specific objectives; that verbs are the most critical features of objectives; that children taught by teachers using objectives learn more than children whose teachers do not use objectives; and that teachers need more training in using behavioral objectives. Given the limitations of the research described earlier, and the paucity of studies in the area, these conclusions are probably not entirely warranted, with the possible exception that teachers need more training in writing objectives (see also Turner & Macy, 1978; Walker, 1978).

The essentially technological, operationally definable nature of behavioral objectives permits their aggregation into data banks. Potentially complex processing systems for the generation of specific computer-based objectives, keyed to appropriate pupil entry levels and specific instructional resources for achieving the objectives, are therefore likely to be developed in the future. However, the practice of developing individual plans that include annual goals and short-term objectives may anticipate the advent of the appropriate automated technology; efforts to ensure that teachers have the skills to write instructional objectives will continue to be necessary, unless such a technological substitute becomes readily available (see M. Semmel, 1975; M. Semmel & Frick, 1975).

If computer-generated objectives are accepted for widespread use, then teacher attitudes toward, and skills with, automated technology will become a particular concern to teacher education. The development of teacher decision-making competencies will also be necessary to assure that it will be teacher judgment and assessments that determine computer output, and not vice-versa. The risk in developing computer-based plans is that they may not permit modifications based on new teacher data. Instructional objectives generated in this manner are likely to be static and unrelated to teacher assessments. Similarly, computer-based objectives must be modifiable by other relevant planning variables, such as pupil functioning, in relation to specific curricula. The advent of automated IEPs cannot be expected to serve as a substitute for teacher involvement in individual planning, but in fact will mean the development of new teacher skills.

Teachers' attitudes toward individualized planning and instruction

It is generally expected that handicapped pupils placed in regular classrooms will have individualized educational plans and will receive the instruction designed to meet their individual needs as defined by the plan. Are teachers predisposed to develop these individualized plans for their handicapped pupils? Are they prepared to cater to individual differences in level and in learning characteristics? Little or no research exists which directly answers these questions. However, we can approach an understanding of the issues by examining the attitudinal literature relating to individualization and to mainstreaming.

In a review of the literature on teacher attitudes toward individualization, Stern and Keislar (1975) found that teachers were generally favorable toward the concept but that they did *not* apply it in their own work. Spears (1973) found teachers more positive about specific individual instruction systems (such as IGE and IPI), but less positive about the concept. Bosco (1971) reported from a descriptive study that 41% of respondents rated individual instruction desirable but only 20% reported actually individualizing it. Furthermore, while only 17% reported that providing the same instruction for all pupils in the class was desirable, 54% indicated that whole class instruction was their actual practice. Although the rate of return from the randomly selected schools was not reported, and may be a source of bias, Bosco's study suggests a substantial discrepancy between teachers' values and practices. Spears' (1973) findings may also be interpreted as indicating teachers' favorable attitudes toward individualization — when it is part of a total system (that is, when it has institutional support) as opposed to a free floating individualization which, while desirable, is seen as instructionally unfeasible.

The ability of teachers to individualize instruction successfully has come into question as the result of current research on engaged learning time in the basic skills (Rosenshine, 1979). Rosenshine cites research indicating that teachers who work with one or two pupils at a time appeared unable to supervise the remaining children (Stallings & Kaskowitz, 1974). These researchers found a negative relationship between the time spent working with one or two pupils and achievement for the whole class; they found a positive relationship between class achievement and the time spent working with pupils in groups.

These findings, taken together with research indicating that teachers are reluctant to individualize instruction in spite of their verbalized expressions of its desirability, suggest that much caution is in order in training teachers to develop this skill. Indeed, meeting an individually determined objective does not necessarily mean that the pupil must be instructed on a one-to-one basis; individual instruction is only one of many possible instructional alternatives. As the research alluded to above indicates, individualization can be counter-

productive. In addition, providing individual, programmed, or tutorial instruction to a handicapped child without integrating that pupil with the social milieu of the class is an obvious negation of the goals of placement in the least restrictive environment. The instructional effectiveness of individualization within the classroom is likewise not firmly established.

Teacher attitudes toward having the handicapped in regular classrooms

Jones, Gottlieb, Guskin and Yoshida (1978) concluded from research evidence that a majority of regular class teachers feel they are not prepared to teach handicapped children. Gickling and Theobold (1975) found that 85% of regular education teachers felt they lacked the skills necessary to teach exceptional children. In a study comparing the attitudes of teachers in schools having self-contained special classes with the attitudes of regular class teachers in schools having resource-room integration, Shotel, Iano and McGettigan (1972) found that teachers in resource room schools were less favorable toward the integration of the mentally retarded by the end of one school year.

As may be expected, the findings on teacher attitudes on mainstreaming vary according to the nature of the pupil handicap. Higgs (1975) reported that for different population groups, more contact led to more positive attitudes toward the physically handicapped student. Jordan and Proctor (1969) found special education teachers better informed than regular class teachers, but they did not differ on their attitudes toward the integration of the handicapped. These findings are similar to an earlier study by M. Semmel (1959) which found special education teachers better informed about mental deficiency but not different from elementary teachers in attitudes. A trend toward a similarity of attitudes among teachers who worked on the same staff was found by Guerin and Szatlocky (1974), in their study of integration programs for the mildly retarded. Information about the handicapped appears to be positively related to attitudes toward the handicapped, but findings from such studies (often using undergraduate subjects) cannot be extrapolated to teacher attitudes.

Education and training appears to improve the information and the attitudes of teachers (Brooks & Bransford, 1971; Yates, 1973), but the durability of these changes is not known. There is some evidence, however, that subsequent experience with the handicapped may result in a negative shift in attitudes (Shotel, Iano & McGettigan, 1972). There is also some evidence that a knowledge of the legal requirements concerning mainstreaming may influence attitudes toward mainstreaming, and that attitudes toward mainstreaming in turn strongly influence attitudes toward individualization in educational programming (D. Semmel & Morgan, 1978). While we can only speculate on the reasons for the finding that such knowledge influences teacher attitudes, incorporating information about the legislation concerning the education of the

handicapped into teacher education programs may be a simple and effective method of improving teacher attitudes toward mainstreaming.

Summary and conclusions

In summary, this review of selected literature on teacher competencies and attitudes related to the implementation of mainstreaming suggests the following. Teachers tend to make relatively valid judgments about pupil academic achievement and social-emotional status. While there is an ostensibly contradictory literature on teacher susceptibility to "experimental" manipulation (cf. Rosenthal & Jacobson, 1968), the finding that teachers' judgments and use of rating scales are frequently valid and stable over time suggests that the basis for the development of better and more differentiated teacher assessment skills is present. The literature on teacher skill with instructional objectives is less promising. The research in this area is poor, and we do not know whether the concepts and attendant methods are unworkable or whether there has simply been no adequate demonstration yet that teachers can be trained to prepare and use instructional objectives effectively. The development of computer-based objectives, on the other hand, cannot be expected to substitute for teacher planning skills, but will certainly entail the development of new teacher competencies in communicating with computers.

Because participation in multidisciplinary staffing is a non-traditional role for teachers, and because there is much anxiety and some negative attitudinal bias on the part of regular class teachers concerning the mainstreaming of handicapped pupils, new and creative teacher education programs will be required that can provide the skills that will support the development of new roles and attitudes. Thus teachers will need to plan for mainstreamed pupils on an individual basis; the skills for implementing an individual plan, however, will need to go beyond individual instruction and to emphasize the integration of the handicapped pupil into the social and instructional environment of the class. Handicapped children must be taught directly in order to learn, but individualized attention is not synonymous with individualized instruction. Teachers will have to be trained to maximize the amount of direct instructional time received by their handicapped pupils — in both individual and group instructional contexts.

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