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On the Implications of Mainstreaming in the USA

Interprofessional communication

When the United States takes a step forward, it is a firm step. The word "mainstreaming" owes its prominence in education today to the Public Law requiring it, for it has placed the undertaking to which this term refers so firmly on the map that there can be no evading its many and costly obligations. Reynolds explores the kinds of obligation that are the most difficult to engage and yet the most critical for success — those changes of role (and by implication, of assumptions of status) between the professionals who together must evolve and monitor each child's "individualized education program." There are acute and unfamiliar problems of process here that the several kinds of professional involved must understand and resolve. He offers three "structures" helpful to carrying on complex communications in ways which will serve the educational purposes that the Law has stipulated.

On September 1, 1978, U.S. Public Law 94-142, the Education for All Handicapped Children Act of 1975, became effective. For the first time, the states were obligated to provide all handicapped children, regardless of severity of disability, between the ages of 3 and 18 (3 and 21, as of September 1, 1980), with a "free appropriate public education" in conformity with an annual "individualized education program" (IEP) that includes specific educational goals and objectives, in a classroom with nonhandicapped children, near the child's home, "to the maximum extent appropriate," or in an alternative placement that conforms with the least restrictive environment* rules. A result of this law is a decreased enrolment in special education stations (for example, special classes and day schools, residential schools) and the necessity to increase the capacity of regular classrooms to accommodate handicapped students.

*The "least restrictive environment" principle means that when a public agency (now including the schools) intervenes in the life of an individual it must do so in the way which least interferes with the person's life. In an educational context this means that special education and related services should be provided to the handicapped child while he remains in his home and regular school environment whenever this is feasible.

An IEP must be developed periodically for each handicapped pupil by a team consisting of the child's teacher, a person other than the teacher who is qualified to provide or supervise the provision of special education, one or both parents, the child (when appropriate), and other persons who are brought in at the discretion of the parent or school. In addition to specifying educational goals and objectives, the IEP must include a statement of the specific special education and related services which will be provided for the child, the justification for placement in a mainstream or other setting, and the objective criteria that will be used to evaluate the child's achievements.

However superficial this preceding summary of the law may be, it indicates that profound changes must occur in the roles of classroom teachers and of other personnel, and in the relationships of all persons who contribute to a handicapped child's education. Implied in the law is the need to develop new conceptualizations of the roles of teachers, school psychologists, school social workers, and other professionals who work in the schools, which, in turn, inevitably dictate important changes in the programs preparing personnel to assume such roles. Because the effects of Public Law 94-142 on teacher preparation programs would require a paper beyond the space allotted here, they may be derived mostly by inference from the following sections.

Role changes

The provisions of Public Law 94-142 have sounded the death knell for the traditional separation of special education from the remainder of the schools and for the isolated practice of specialties. By law, "regular" classroom teachers are playing a greater role in the teams that plan and write IEPs for handicapped children, and when they refer children or mainstream handicapped children, they participate in the evaluations. Within classrooms, teachers are dealing with a greater range of individual differences than ever before. Although they always have been accustomed to making some adaptations in curricula to meet individual needs, they now are called upon to make even greater adaptations to implement the IEPs of handicapped children. When instructional or behavioural problems arise, they are expected to deal with such problems in general by calling consultants "in" rather than by referring children "out" of their classrooms.

The decrease in placement of children with special needs in special classrooms has tended to decentralize special education and the provision of other special services. Handicapped children must now be served in many places rather than in only a few, and the methods of serving them must accord with the principles of the least restrictive environment. Thus, more and more specialists are learning to function in the context of support systems for regular classroom teachers.

The increased participation of teachers on decision-making teams outside of

the classroom, and the greater participation of specialists in the management of problems within the classroom, have changed the nature of interprofessional communications.

Potential for dissonance

Rapid role changes create as much potential for dissonance (Braga, 1972) as opportunity for the development of new competencies and relationships. In any organization, the potential for dissonance is minimized if the purpose of the interprofessional communication is very clear. The purpose of consultation with teachers is to arrange instructional programs for children; that is the central concern in the schools, and that is what must be the focus of attention when professionals of various kinds join with teachers for the purposes of educational planning.

The term "professionals" is used here to include classroom teachers, special educators, psychologists, nurses, social workers, physicians, speech-language pathologists, audiologists, and, indeed, all other specialists who are qualified to provide the necessary services for the evaluation and/or instruction of handicapped persons. Not all of these professionals spend all or most of their time in schools or working on school-based teams that include teachers; thus, they often tend to view handicapped children from perspectives that are specialty-based and essentially tangential to the primary concern of the schools.

It is incumbent upon these professionals whom mainstreaming has brought into the schools to understand that the first concern of teachers is the appropriate instruction in complex group situations. When particular children are under discussion, the primary questions teachers usually ask are, "What kind of environment and what specific instructional approaches are most promising for this child?" "How can I fulfill this child's instructional needs while I maintain good order and a sense of community in the classroom?"

Teachers are not greatly concerned with long-term prognostics. Indeed, they are forewarned not to make early judgments about the future potentialities of children and to avoid the segregation of children in programs into tracks. Nor do teachers think mainly in terms of deficits and preventive measures, a concern which implies that schooling is intended to help children to recover from or avoid some malady. Rather, teachers tend to be oriented to growth and development, to emphasize first what Stoddard (1961) called the "cultural imperatives": the complex, culturally based behaviours — such as learning language, the rudiments of mathematics, acceptable social behaviours, and essential life-maintenance skills; then the "cultural electives" that lead to vocation and life enrichment.

However much some professionals are accustomed to discussing the needs of handicapped children in terms of their disabilities and of nonschool purposes,

they must recognize that in the context of the school's purposes and the classroom teacher's concerns their terms are not viable.

Implicit in the procedures for mainstreaming handicapped children are many adult-adult (as opposed to teacher-child) interactions in the planning and implementation of instructional programs. Yet consultation is rarely included in teacher-preparation programs as a topic of study. Reynolds and Birch (1978) outline some of the elements of a training program for teachers and other school personnel on providing and receiving consultation. For example, in any school consultative relationship, each person must recognize the other as a co-equal; each must be clear on which is the client, how communications will flow, what access to the child in question will be provided and on what schedule, whether the results of the consultation will be a set of alternatives or a single plan, and who will evaluate the consultation. These questions require careful attention, if not a written contract, when the new consultative arrangements come into existence. Fortunately, a useful literature on the subject is available (for example, Parker, 1975).

Resolving communication problems

Despite the requirement that each child for whom special services are provided under Public Law 94-142 be classified according to a handicap category, for purposes of "counting" (the number of children who are found to be handicapped and for whom IEPs are prepared determines the amount of federal funding provided; further, the proportion of children in a state who may be counted for federal funding purposes is limited), IEPs must be prepared on the basis of individual instructional needs alone. Inevitably, therefore, some of the professionals who participate in evaluations to establish the eligibility of children for special services (for example, psychologists, physicians, social workers, nurses) have great difficulty in formulating in educational terms the kinds of individualized services which should be provided for the children.

In the following subsections three structures are presented for thinking about how complex communications among professionals can be carried on in ways which serve educational purposes. The ideas involved are highly compatible and, in fact, can be brought together quite easily into a common form for considering evaluations of children and planning for them in the schools. If well understood by those working on evaluation teams in the schools, they should provide some of the structure, efficiency, and discipline needed in "team" approaches to educational diagnosis and in conferences designed to yield educational plans.

Cromwell's ABCDs

Cromwell and others (1975) have suggested a formulation of the complex problems of diagnosis and treatment which has a built-in evaluation component.

It is based on four classes of information:

A— Antecedent (historical, etiological) events.

B— Current observations (results of current assessments and other data).

C— Treatments (for example, instructional interventions).

D— Outcomes (evaluation of the individual following intervention).

When the information provided by a professional is analyzed in terms of these four classes, one may determine the knowledge base supporting that information. For example, the observation that children with a history of eating lead-based paint tend to become mentally retarded is an AD relation. The use of current intelligence test results to predict academic achievements is a BD relation. Finding that a child responds well to social reinforcements (a form of instructional intervention) is a CD relation. The determination that students who show a relatively low "conceptual level" (B) tend to achieve best (D) when instruction is highly structured (C), is a BCD relation.

The central idea in using the Cromwell formulation in the present context is that the only relevant Cs are instructional interventions, and the only relevant information about a handicapped child for educational purposes is that in which permutations of A, B, and D include C; permutations that do not include C, specifically instructional interventions, are irrelevant.

If this formulation were adopted for the evaluation of handicapped children, professionals would be able to determine readily what information is and is not of educational interest. At best, those who wanted to be useful to teachers would become conversant with the teaching environment and the kinds of option that are open to teachers; at worst, they would offer only AB information. For professionals who are willing to discipline themselves, the tough criterion of relevance which they apply is contained in the question, "Can the advice being offered make a difference to the educational development of the child?"

Orders of dispositions

Another method of considering problems of communication among different professionals is to return to an old but much-neglected concept of analytic philosophy, the orders of dispositions (Sellars, 1958). For example, "magnetic" is a first-order disposition, "magnetizable" is a second-order disposition required for establishing the first; iron is magnetizable as some other metals are not. Closer to the educational context, consider the case of a child who has PKU (a genetically determined condition resulting in faulty metabolism of phenylalanine). Following the order of dispositions in reverse, it can be said the child of the PKU genotype has a fourth-order disposition to become mentally retarded if his diet includes significant amounts of phenylalanine, or to develop normal intellectual capacity if his phenylalanine intake is limited. In turn, the child's intellectual capacity is a third-order disposition to acquire a second-order disposi-

tion, such as the *ability* to learn algebra or English, and knowing algebra or English is the first-order disposition (Meehl, 1972).

The point of emphasis here is that different professions often concentrate on different orders of dispositions which may, finally, influence the educability or the conditions of instruction which are most promising for a child. The problem is to be as specific as possible about the patterns of contingencies and interactions among the orders of dispositions. In the case of PKU, there is no disorder (no mental retardation) unless both the PKU genotype and the high phenylalanine diet — which is strictly within environmental control — are present. *Cause,* then, needs to be understood in terms of both heredity and environment. Highly specific knowledge about the genetic-environmental interaction is essential for the information to be useful.

The presence of a genetic factor (as in PKU) does not mean that environmental approaches are useless. A brain injury or other organic problem does not necessarily mean that a child's educational prospects are limited. A physician may be able to specify particular levels and kinds of dispositions which interact with educational interventions. At this time, however, the extent of our knowledge about such possible medical/educational interactions is very small.

A very common level of discourse on handicapped children is displayed by psychologists who describe children in terms of certain cognitive dispositions or abilities (attention, memory, perception) on the assumption that they should be considered by teachers in arranging instruction. Any method of teaching word-analysis skills, for example, inevitably makes assumptions about memory and attention. Unfortunately, our knowledge of interactions between such psychologically-based dispositions and specific instructional strategies has not been worked out very well or in detail.

In the field of learning disabilities, in particular, there seems to be a lot of wasted motion in the communications between psychologists and educators due to their failures to consider the "orders of dispositions" concept. Some theorists focus their explanatory concepts and instructional energies on so-called underlying processes of reading as they teach for reading ability, while others prefer to make a surface-level analysis of the task of reading and to organize instruction sequentially to cover what appear to be the apparent components of reading. Those who are "process" oriented often teach at the level of processes — presumably to impart specific cognitive, attentional, or perceptual abilities. Others feel that this approach fails to connect in any demonstrable way with any actual progress by children in learning to read.

Mental health clinicians have had hard lessons to learn about how genetic and environmental conditions may interact to produce schizophrenia (Meehl, 1972). In the same way, special educators and their colleagues in related professions still have hard lessons to learn from the insights provided by neurological

and psychological information at one or another level of disposition, insights which deserve attention by teachers and yet take nothing away from their own broad range of relevant teaching skills and insights. We have hardly begun to penetrate the interactions between education and the professions or disciplines from which it must receive consultation.

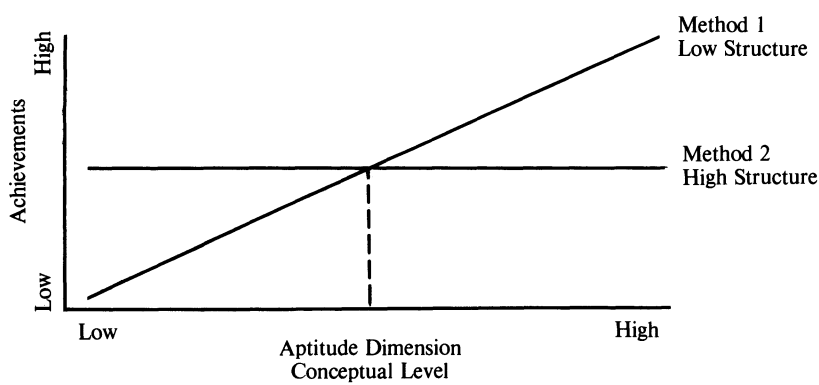
Person-environment matches

The Hunt and Sullivan (1974) concept of "matching" processes, a practical extension of Cronbach's ATI (aptitude-treatment-interaction) model (Cronbach and Gleser, 1965) and of Kurt Lewin's (1936) ideas on person-environment interaction, provides a way of thinking through the preceding concepts. It suggests that people making education plans for children must know well the available alternatives for each instructional intervention, and then must carefully attend to those variations in the characteristics of children so that each child (person) can be matched with an appropriate instruction (environment).

A matter of special interest in the Hunt conceptualization has been the degree of structure in instructional programs. It deserves attention in the special education context because much of special education can be understood as high-structure instruction. This is to say that special educators have been enabled in a very unusual way to meet children individually and in small groups for purposes of microlevel, high-structure instruction.

Figure 1

ILLUSTRATION OF APTITUDE TREATMENT INTERACTION



To illustrate the meaning of aptitude-treatment-interaction consider the hypothetical situation depicted in Figure 1. Two contrasting methods of instruction (low structure, method 1 vs. high structure, method 2) are available in a subject matter field. It happens that an aptitude (in this case conceptual level) correlates positively at higher level with method 1 than with level 2; and, in fact, the regression lines showing these relationships intersect. Thus it is suggested that pupils low in aptitude (those to the left of the dotted line) are likely to profit most from high structure whereas those of high conceptual level would profit best from methods showing lower structure. Teachers are constantly making informal decisions, about "matching" individual pupils with appropriate instructional systems, which are analogous to formal ATI decisions.

In fact, findings in research studies tend to be consistent with the hypothetical situation depicted in Figure 1. Studies by Cartwright (1970) and Hunt (1975) and the general summary of ATI studies by Cronbach and Snow (1977), for example, suggest that general intellectual ability and conceptual level interact with degree of structure in instruction.

The ATI and matching strategies are well known and do not need further elaboration here, except to note that the mainstreaming movement has made them all the more important not only "between psychology and education" but among all the professions that work together in educational planning.

Concluding comments

Most educators in the United States appear to consider the least restrictive environment or mainstreaming principle of Public Law 94-142 to be morally just. The provisions detailing the evaluation and IEP procedures, however, are often criticized for demanding too much time from teachers and specialists for meetings and paper work.

It is likely that in those school districts in which the criticisms are the greatest, for example the large cities with heavy populations or poor, disadvantaged, culturally different, minority groups, the requirements for complying with the law have been merely patched in rather than made the basis for instituting changes in roles and interprofessional relationships and communications.

Although the law has provided some special funds for the retraining of school-based personnel, inservice programs have tended to focus on compliance with the letter rather than on the intent of the new principles. Teacher preparation centres have begun to respond to the new roles of classroom teachers, and there are indications that the response may broaden to include the resolution of long-standing problems in teacher education. The focus on educational planning at the level of the individual student provides the starting point for what may be fundamental changes in all of education.

All professionals involved in the evaluation of and planning for handicapped children need common understandings to facilitate the procedures required by Public Law 94-142 and interprofessional communication. Several such approaches have been suggested in this paper as useful devices in thinking about and renegotiating roles and relationships.

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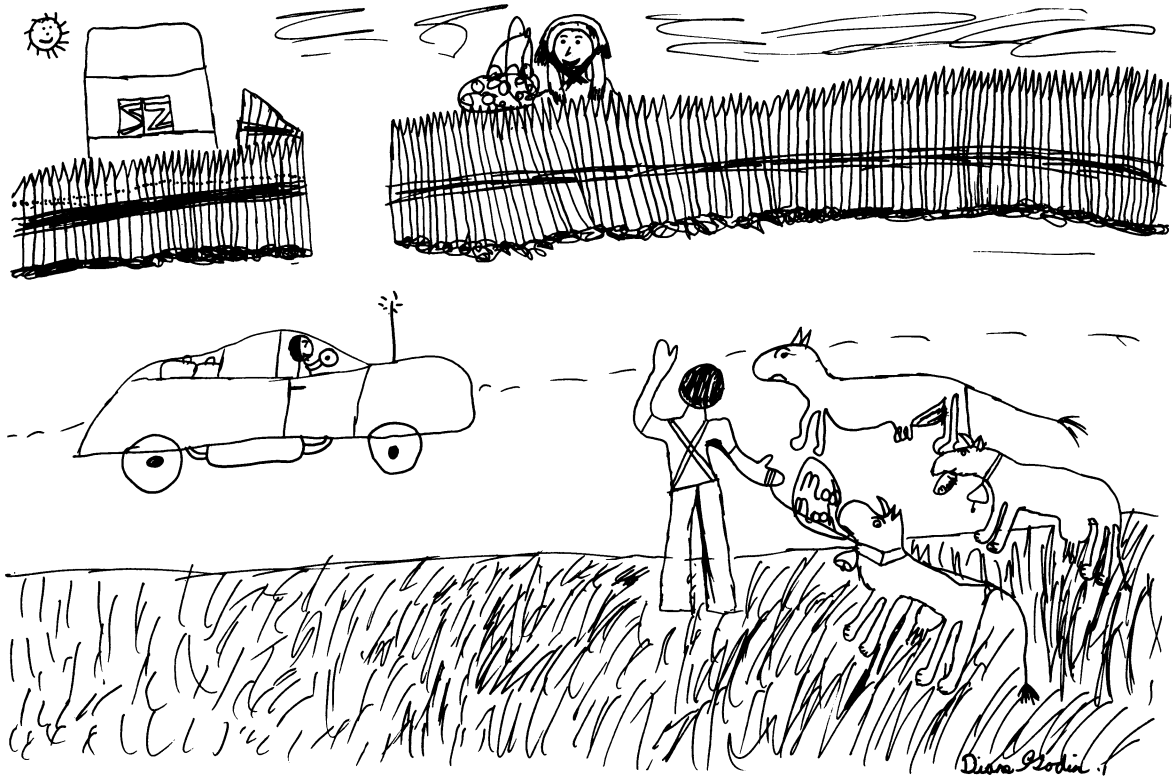
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