

Greg Reid

Mainstreaming in Physical Education

The concept and its implications

The gymnasium and the playing field seem perhaps the greatest challenge to children who are handicapped, physically or otherwise, when they attend normal school. The "phys. ed." teacher must become a teacher of "adapted physical education", and shares with the special educator a major responsibility for the success of mainstreaming. Reid explains why mainstreaming is on the agenda in Canada and explores five major tenets of the proposition, together with a number of its practical implications for physical education under the headings of the required personnel, individualization in large classes, the leadership competencies called for, and the problems of organization to be anticipated.

Physical educators have been confronted increasingly with the challenge of coping with children who manifest a wide variety of handicaps. The traditional settings for dealing with handicapped persons included the establishment of large, isolated institutions, the placement of the individuals in hospitals, the creation of special schools, and the development of segregated classes in regular schools. These approaches were often based on the intuitive and honest viewpoint that special people required special settings to meet special needs (Martin, 1974). Physical educators were thus "spared" from the problems and challenges of teaching children and adults who were perceived to demonstrate either a physical, neurological, perceptual, sensory, or mental disability. The contemporary educational practice for teaching the handicapped involves transferring many exceptional children from a variety of segregated settings into regular classes and schools. This process has been termed mainstreaming. It is thus the implementation of mainstreaming, endorsed by the Council for Exceptional Children in 1973 (Birch, 1974), that has increased interaction between educators and exceptional children or adults.

Why mainstreaming?

Special classes and segregated settings for handicapped persons have been controversial since their inception (Dunn, 1976). Support for mainstreaming may be attributed to several factors, including the desire for normalization, efficacy research, legislation, the desire to delabel, parental pressure, special education advancements, questions of inappropriate placements, and changing educational philosophy.

Normalization (Wolfensberger, 1970) involves efforts to provide living conditions and life styles for handicapped persons which are as similar as possible to patterns typical for others. For example, large institutions for the mentally retarded are being replaced by group homes for six or eight residents in local communities. Proponents of normalization argue that society's attitude to the handicapped will never improve if such individuals are not visible in the community (Dunn, 1976).

For many years researchers have attempted to ascertain the effectiveness of special classes and schools for the handicapped, especially for the mentally retarded. These researches, known as the efficacy studies, although laden with methodological inadequacies, have failed to provide objective evidence that special classes help the majority of students enrolled (Guskin & Spicker, 1968; Kirk, 1964). Mainstreaming appears to be an attractive alternative.

Recent legislation in the United States has questioned part of the tracking system, a form of segregated education, and as well has ensured that school systems are responsible for the education of all children, no matter how severely handicapped (Gilhool, 1976). Education in the "least restrictive environment" is also a major concept in the U.S. public law 94-142, which mandates free public education and requires written individual educational plans for all children receiving special education. Under this law educators are thus required to individualize their programs for all handicapped students.

A child in a special class usually receives a concomitant label which possesses negative connotations. It is believed that the label will influence the way he or she is perceived by other people as well as by himself or herself (Birch, 1974). Thus mainstreaming has been proposed by professionals eager to eliminate educational labels.

Parents have realized that placement in a special class is anything but a mark of distinction. As parents became aware that their child's needs could be increasingly met in regular classes by "high quality special education" their support for mainstreaming increased (Birch, 1974).

Technological advancement, commercial program materials and increased numbers of trained special educators have rendered the field of special education

easier of access. These changes have enabled regular educators to assume the duties previously considered to be solely in the domain of the specialist (Birch, 1974; Dunn, 1968).

Psychological measurement has never been considered infallible. Possibly due to an over-reliance on too few test scores, many students have been placed in special classes when such placement has not been warranted (Garrison & Hammill, 1971). This problem has been particularly acute in those special education classes which include a disproportionate number of children from ethnic minorities (Birch, 1974).

Finally, mainstreaming has been advanced by the contemporary philosophy of humanism, that philosophy concerned with making us all more human (Sherrill, 1976). Only by means of an integrated educational setting can individual differences be truly accepted and assimilated into society. According to Sherrill (1976) "The success of mainstreaming, whether in the classroom or the physical education setting, depends then first and foremost on the extent to which administrators and teachers believe in the philosophy of humanism" (p. 21).

The concept of mainstreaming

A host of definitions of mainstreaming have recently been offered (AAHPER, 1978b; Birch, 1974; Bundschuh, 1976; Di Rocco, 1976; Dunn, 1976; Puthoff, 1976). Perhaps Birch has proposed the general definition which describes what most educators feel to be its essence. Mainstreaming refers to enrolling and teaching exceptional children in regular classes for the majority of the school day, but at the same time assuring that the child receives high quality special education.

A number of factors inherent in this definition of mainstreaming have been postulated (AAHPER, 1978b; Birch, 1974; Di Rocco, 1976). These translate into five basic tenets. First, mainstreaming must be decided on separately for each individual case. If it is to progress successfully, only children who are socially and emotionally prepared for an integrated educational setting will be placed into the mainstream. It does not mean the wholesale elimination of all special classes or schools. Indeed the process can easily incorporate temporary segregated instruction aimed at developing the competencies children require to function adequately in integrated classrooms and gymnasiums (Simard & Wall, 1979). Mainstreaming therefore does not imply that severely retarded or autistic children will enter the regular classroom. However it should be pointed out that 89 per cent of cases of mental retardation are only mildly affected, and of these as many as 80 per cent will marry and have children (Sherrill, 1976). Thus although mainstreaming is not yet appropriate for everyone, it may be a just procedure for many mildly handicapped persons.

Secondly, the process should follow a diagnostic-prescriptive approach. In the past it was usual to *label* a child, *place* that child in a setting consistent with the label, and then develop a *program* for the *class* (AAHPER, 1978b). The mainstreaming process, however, is to *assess* each child's strengths and weaknesses, develop a *program* in accord with the identified needs of the *child*, and then *place* the child into a classroom in which the program can be successfully implemented. This placement is often into a regular class. Implicit in this diagnostic-prescriptive model is a periodic re-evaluation, to determine objectively the effectiveness of the placement and of the program.

The third basic tenet of mainstreaming demands a changing role for the special educator or for the teacher of adapted physical education. The special education expert will no longer necessarily have a homeroom class. Rather his or her role will be that of an individual tutor to special children in a resource room or auxiliary gym, or as a resource consultant to the other teachers in establishing individual programs; thus a mainstreamed student might still spend as much as half of the day with a special teacher.

Fourth, successful mainstreaming entails for teachers and students a change of attitude toward handicapped persons. Some authorities believe that the negative attitude of teachers is a main stumbling block toward meaningful integration (Martin, 1976). Donaldson and Martinson (1977) have reported a significant improvement in the attitudes of college students toward physically-disabled individuals after they have viewed a live or videotaped discussion by a panel of handicapped persons. It would appear therefore that attitudes toward disabled persons can be modified. However, mainstreaming does not necessarily induce social integration among students, although Martin (1976) believes that increasingly frequent and positive interactions between the handicapped and the nonhandicapped are the essence of mainstreaming. It has been reported, at least with preschool children in a mainstreamed program, that social integration can occur (Peterson & Haralick, 1977). Furthermore, experience does indicate that real understanding, true acceptance, and elimination of prejudice are all enhanced by direct people-to-people contact (AAHPER, 1978b). Nevertheless more research is required to explore the means by which mainstreaming may enhance the social aspects of integration (Mosley, 1978).

The final and fifth tenet of mainstreaming is that all students must be served in the least restrictive environment (Jones, 1976). A cascade of services for special students ranging from hospital-bound environments to regular classroom settings has been proposed (Deno, 1970; Reynolds, 1962). The concept of the least restrictive environment requires that a student be moved to an educational setting which is decreasingly restrictive and which increasingly approaches the regular classroom. For instance, this principle would be functioning if a child were moved from a special school to a special classroom in a regular school closer to his or her neighbourhood; and similarly, if an institutionalized person were moved to a special school for educational purposes. In many ways, *least restrictive environment* is a more desirable term than *mainstreaming* because it

more accurately and realistically describes the feasible modification of educational settings for a wider range of students.

Despite controversy in defining and conceptualizing mainstreaming, one fact is certain: mainstreaming in some degree is not new. Samuel Gridley Howe is reported to have expressed apprehensions about blind children associating only with each other when he observed it was "most desirable that they should associate with the seeing." This famous educator, a patriarch in the field of the visually handicapped, made this statement in 1851 (Connor, 1976). In several large cities the visually handicapped were taught cooperatively by regular teachers and special educators as early as 1913 (Abraham, 1976). Although these antecedents of the current mainstreaming phenomena appear rich in years, nevertheless there is little argument that the current large scale movement toward mainstreaming is a recent occurrence.

Implications for the physical educator

In the special education literature literally hundreds of research articles, position papers and descriptions of mainstreaming programs have been produced and reported. By comparison, little specific information exists in the books and journals of physical education. This state of affairs suggests a number of implications for physical educators, whether they be primarily teachers, administrators, professors at teacher preparation institutions, or researchers.

Personnel

University *researchers* must begin to assess the effects of mainstreaming on motor skill acquisition and social behaviour. Little is presently known in this regard. It is occasionally heard that a mainstreamed pupil will divert the instructor's attention from the rest. Do the non-handicapped actually demonstrate a lack of progress in motor terms when they are integrated with a handicapped peer? Reversing the question: will the pupil who has just been introduced to the mainstream be socially censured, or fail to improve in fitness or skill? Will the exceptional student actually model the nonhandicapped person, as is often proposed?

University *professors* involved in *teacher preparation* must provide experiences for undergraduate physical education majors so that each graduate will be competent to teach handicapped persons. It is encouraging that the Canadian Association for Health, Physical Education and Recreation has officially adopted a proposal which suggests that all physical education undergraduates receive at least one course in adapted physical activities (National Convention, June, 1979).

Additional scholars are required with *graduate training* and specialization in adapted physical education. These persons could be employed as university

personnel, as school board consultants, as teachers in special schools or in settings for the more severely handicapped, or as instructors at community recreation centres such as YMCAs.

University personnel must work in close concert with school board *officials* and *teachers* in developing, refining, and evaluating models for individualizing physical education programs.

Individualization

Although mainstreaming implies individualization, it is indeed difficult to establish truly individual programs when one is working with large numbers of children. Such a situation however should not be used as an excuse to avoid mainstreaming but should be accepted as its challenge. It is possible that we will be forced to abandon some of our existing programs and practices, and the physical education profession will be the better for it.

Programs to improve pupils' physical fitness may be individualized by the effective use of circuit training, jogging programs, or contracts between teacher and student. Circuit training is a method of fitness improvement which comprises the performance of a given exercise at each station in the circuit. The intensity of the station exercise is established for each individual, but everyone in the class can perform simultaneously, each with the goal of decreasing his or her time required to complete the circuit.

Jogging programs involve an initial assessment and subsequent training at a level commensurate with the individual's fitness level. For example, wide discrepancies in ability can be managed in one class if the run is for 5 or 10 minutes. Some may run continuously while others may use a combination of walking and running. The goal is to improve distance for a specific time. Jogging for blind individuals can be integrated with others' simply by pairing the blind person with a sighted peer of similar ability and running in tandem, connected by a short rope held in the hands (Buell, 1973).

A contract (Gotts, 1976) is a written agreement of what the pupil will accomplish in order to obtain a certain grade or privilege. This could be used in conjunction with circuit training or jogging programs. A less ambitious step, toward at least noting individual differences in fitness, can be achieved by only slight modifications of the instructor's directions: "How many sit ups can you do in 30 seconds?" or "Do three more than you did last day" are surely more individual requests than "Everybody down and perform 25 sit ups."

Other programs, to help pupils acquire motor skills such as ball handling in basketball, or gymnastic stunts, can be developed by the use of student-teacher contracts as noted previously, or by task cards (Mueller, 1976) and the judicious implementation of media resources such as charts, film loops, movies, slides,

video tapes, records, transparencies and programmed texts (Enberg, 1976). A task card for instance can include a written description of the task, accompanying media aids, hints to the learner, and procedures for evaluation and feedback. The description of the task will include such information as the goal of the task, the equipment required, the positioning of the pupil, and the number of practice trials. Media aids which might accompany the task can either provide a model to emulate, or supply a review of the task description. Hints to the learner involve an analysis of the task, such as "place the nonkicking foot alongside the ball." Finally the evaluation component can be individualized by recording quantitative scores, or by utilizing the teacher or the student's peers as observers for a qualitative feedback. It might be added here that task cards for students unable to read, with pictorial descriptions with matchstick people, have also been produced (Auxter, 1971).

Leadership competencies

Individualization, however, demands more of a teacher than providing a single program through which students proceed at different speeds. Four general areas of leadership competency are necessary for mainstreamed programs: program planning, group instruction, integration leadership, and personal communication skills (Simard & Wall, 1979).

Program planning includes the identification and teaching of the competencies necessary for the handicapped person to participate successfully in the integrated program. This could result in the building of ramps for people in wheelchairs, ensuring that a mentally retarded person is familiar with procedures for changing clothes, and so on. Group instruction involves an initial assessment of motor skills (AAHPER, 1978a), the selection of objectives (AAHPER, 1977a, 1977b), and appropriate learning progressions and strategies of instruction (e.g. AAHPER, 1977b) which acknowledge individual learning styles. These strategies of instruction encompass any adaptations of equipment and rules: for example, badminton racquets can be attached directly to the arm prosthesis of an amputee, and teeth can be used to pull an archery bow. As for team sports, a physically-handicapped boy can be integrated into a softball game by allowing him to bat but not run, or by allowing his crutch or wheelchair wheel to count when it touches the base (Grosse, 1978).

Integration leadership refers to the instructor's ability to establish a learning climate which will accept individual differences. This might initially begin with the teacher preparing the nonhandicapped children for the integration of the handicapped students (AAHPER, 1978b), perhaps by discussing with them the concept of individual differences. Finally, personal communication skills include the need for the program leader to make the program objectives clear to parents, volunteers, and other leaders.

Many of the competencies outlined in the previous section can be developed efficiently through courses and workshops. School boards and prin-

cipals must therefore provide the additional in-service training in adapted physical education and provide the incentives for teachers to upgrade their qualifications.

Organization

If mainstreaming is to be implemented successfully, the organization of school programs must be reassessed. Maintaining the basic organizational unit of a whole class for a 50-minute lesson may mean that teaching exceptional children in an integrating environment — or even as a special class in a regular school — cannot proceed effectively. However, perhaps groups of children could be integrated for a lesson or two per week, but still come to the gymnasium or mini-gym for additional work in smaller groups. If handicapped students are integrated on some days for physical education and segregated for other days, it may be reasonable to promote activities such as track and field and gymnastics initially for the integrated program, since an individual's performance does not directly influence the success or failure of other pupils (Stein, 1976). Team sports might be initiated on segregated days and then slowly incorporated into a more global integrated program. Modular schedules should also be reviewed, to discern if their application might facilitate individual programs and mainstreaming (Puthoff, 1976).

Non-professionals can be employed in the development of mainstreamed programs. It is possible in many schools to mobilize parent groups, leaders' corps, or peer-teachers to help with instruction, with record keeping (yes, paper work is increased in a mainstreamed program) and with classroom organization. Can high-school students help elementary students? The ability of the volunteer should not be underestimated.

With the advent of integrated students the physical educator, the special educator, and the regular classroom teacher will have to establish an interdisciplinary relationship (Dowd, 1977) in order to enhance the learning of the children and to support each other through trying moments. Interdisciplinary work is not new; it just isn't practised enough.

Some have argued that segregated educational settings deny the nonhandicapped basic human rights. If it is impossible to mainstream the handicapped child, is it possible to bring nonhandicapped children into the special class or school, either to help instruction or to be educated beside their handicapped peers?

Conclusions

Despite a meagre amount of literature supporting mainstreaming in physical activity, the literature that does exist describes integration in feasible and positive terms (Anooshian, 1961; Auxter, 1970; Brace, 1966; Grosse, 1978).

A final implication therefore is that mainstreaming should be viewed as a genuinely accessible goal.

Many of the implications of mainstreaming discussed in this paper are difficult for the already busy physical education professional to transform into reality. However, this does not detract from mainstreaming as an admirable goal. It is a goal or product as well as a process. Thus the process of mainstreaming implies that the goal cannot and probably should not be attempted with the vigour of the athlete competing in the 100 meter event. As Martin (1976) has argued, the "mad dash" toward mainstreaming should be avoided. The program leadership competencies identified (Simard & Wall, 1979) provide a starting point in the process of instruction for the handicapped person, and suggest a modification of the nonhandicapped person and environment in order to maximize the possibility of success in mainstreaming. It is a goal that can be reached, but gradually and with evaluation (Jones, Gottlieb, Guskin & Yoshida, 1978).

It has been suggested by Goodwin (1976) that physical educators do not possess the expertise for mainstreaming. Indeed much is to be learned. Also, change will not occur without individual and collective commitment. It is desirable that physical educators continue to read, discuss, question and experiment. Finally it is hoped that the concept of mainstreaming be implemented cautiously, slowly, and intelligently.

REFERENCES

- AAHPER. "Individualized Education Programs." *Practical Pointers*, Vol. 1, No. 6 (1977a).
- AAHPER. "Individualized Education Programs: Methods for Individualizing Physical Education." *Practical Pointers*, Vol. 1, No. 7 (1977b).
- AAHPER. "Individualized Education Programs: Assessment and Evaluation in Physical Education." *Practical Pointers*, Vol. 1, No. 9 (1978a).
- AAHPER. "Tips on Mainstreaming: Do's and Don'ts in Activity Programs." *Practical Pointers*, Vol. 1, No. 10 (1978b).
- Abraham, W. "The Early Years — Prologue to Tomorrow." *Exceptional Children*, Vol. 42 (1976), pp. 330-335.
- Anooshian, V. B. "A Survey of Problems Arising from the Integration of EMR Boys in the California High School Regular P.E. Class." Unpublished Master's thesis. Claremont Graduate School, California, 1961. (Summary described in AAHPER, *Integrating Persons with Handicapping Conditions into Regular Physical Education and Recreation Programs*. Washington: D.C.: AAHPER, 1974.)
- Auxter, D. "Integration of the Mentally Retarded with Normals in Physical and Motor Fitness Training Programs." *Journal of Health, Physical Education and Recreation*, Vol. 41 (1970), pp. 61-62.
- Auxter, D. "Perceptual Motor Development Programs for an Individually Prescribed Instructional System." Unpublished manuscript, 1971.
- Birch, J. W. *Mainstreaming Educable Mentally Retarded Children in Regular Classes*. Leadership Training Institute, University of Minnesota, 1974.
- Brace, D. K. *Physical Education and Recreation for Mentally Retarded Pupils in Public Schools*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1966.

- Buell, C. *Physical Education and Recreation for the Visually Handicapped*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1973.
- Bundschuh, E. L. "Preparation of Undergraduate Physical Education Majors for Mainstreaming." In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Caldwell, S. F. "The Open Gymnasium." In *Personalized Learning in Physical Education*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1976.
- Connor, F. L. "The Past is Prologue: Teacher Preparation in Special Education." *Exceptional Children*, Vol. 42 (1976), pp. 336-378.
- Deno, E. "Special Education as Development Capital." *Exceptional Children*, Vol. 37, (1970), pp. 229-237.
- Di Rocco, P. "Political and Economic Implications of Mainstreaming." In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Donaldson, J. & Martinson, M. C. "Modifying Attitudes Toward Physically Disabled Persons." *Exceptional Children*, Vol. 43 (1977), pp. 337-343.
- Dowd, F. D. "Mainstreaming — Problems and Solutions in the Public Schools." In J. M. Moran (ed.). *Mainstreaming in Health, Physical Education, Recreation, Dance*, U.S. Office of Education, 1977.
- Dunn, L. M. "Special Education for the Mildly Retarded — Is Much of It Justified?" *Exceptional Children*, Vol. 35 (1968), pp. 5-22.
- Dunn, J. M. "Mainstreaming: Definition, Rationale and Implications for Physical Education." In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Enberg, M. L. "Multimedia Approaches." In *Personalized Learning in Physical Education*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1976.
- Garrison, M. & Hammill, D. D. "Who are the retarded?" *Exceptional Children*, Vol. 37 (1971), pp. 13-20.
- Gilhool, T. L. "Changing Public Policies: Roots and Forces." In M. C. Reynolds (ed.). *Mainstreaming: Origins and Implications*. Reston, Virginia: Council for Exceptional Children, 1976.
- Goodwin, L. "Arguments against Mainstreaming: Are we Ready?" In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Grosse, S. J. "Mainstreaming the Physically Handicapped Student for Team Sports." *Practical Pointers*, Vol. 1, No. 8 (1978).
- Gotts, S. L. "Student-teacher Contracts." In *Personalized Learning in Physical Education*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1976.
- Guskin, S. L. & Spicker, H. H. "Educational Research in Mental Retardation." In N. R. Ellis (ed.). *International Review of Research in Mental Retardation*, Vol. 3. New York: Academic Press, 1968.
- Jones, P. R. "Up Front with the President." *Exceptional Children*, Vol. 42 (1976), p. 365.
- Jones, R. L., Gottlieb, J., Guskin, S., Yoshida, R. K. "Evaluating Mainstreaming Programs: Models, Caveats, Considerations and Guidelines." *Exceptional Children*, Vol. 44 (1978), pp. 588-601.
- Kirk, S. A. "Research in Education." In H. A. Stevens & R. Heber (eds.). *Mental Retardation*. Chicago: University of Chicago Press, 1964.

- Martin, E. W. "Some Thoughts on Mainstreaming." *Exceptional Children*, Vol. 41 (1974), pp. 150-153.
- Martin, E. W. "Integration of the Handicapped Child into Regular Schools." In M. C. Reynolds (ed.). *Mainstreaming: Origins and Implications*. Reston, Virginia: Council for Exceptional Children, 1976.
- Mosley, J. L. "Integration: The Need for a Systematic Evaluation of the Socio-adaptive Aspect." *Education and Training of the Mentally Retarded*, Vol. 13 (1978), pp. 4-8.
- Mueller, R. "Task Cards." In *Personalized Learning in Physical Education*. Washington, D.C.: American Alliance for Health, Physical Education and Recreation, 1976.
- Peterson, N. L. & Haralick, J. G. "Integration of Handicapped and Nonhandicapped Preschools. An Analysis of Play Behavior and Social Interaction." *Education and Training of the Mentally Retarded*, Vol. 12 (1977), pp. 235-245.
- Puthoff, M. "Instructional Strategies for Mainstreaming." In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Reynolds, M. C. "A Framework for Considering Some Issues in Special Education." *Exceptional Children*, Vol. 28 (1962), pp. 367-370.
- Sherrill, C. "Arguments for Mainstreaming: A Humanistic Rationale." In *Mainstreaming Physical Education*, the National Association for Physical Education of College Women and the National College Physical Education Association for Men, 1976.
- Simard, C. & Wall, A. E. "A Prospective View of University Preparation in Adapted Physical Activity for the 90s." Paper presented at the Second National Conference of the Canadian Council of University Physical Education Administrators, Brock University, May, 1979.
- Stein, J. "Sense and Nonsense about Mainstreaming." *Journal for Physical Education and Recreation*, Vol. 47 (1976), pp. 43.
- Wolfensberger, W. *Normalization: The Principle of Normalization in Human Services*. Toronto: Leonard Crainford, 1972.

