



Motor Movement Approaches in Elementary Physical Education

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Physical education has become a required part of the elementary school curriculum in most states. The unique curricular function of physical education is to develop the child's use of movement for motor skill, for organic and neuromuscular fitness, and as an expression of the self. However, relatively few schools have a curriculum that fulfills this function. Too many schools are floundering in their attempts to provide the pupils with an adequate motor education¹, because of a lack of clear-cut guide lines.

Unfortunately, physical education in the elementary schools has remained largely neglected and undeveloped by the leaders in its own academic field. This lack of professional leadership in the past seems surprising when common sense dictates that a strong foundation of basic skills and concepts is vital to advanced levels of learning, be it intellectual or motor performance.

In recent years physical education at the elementary school level has

been gaining recognition and support.² The content and methods of teaching have been changed by the assimilation of ideas from post-World War II European schools, particularly those of England and Germany. To date the number of neighborhood elementary schools that have been affected is relatively small. As classroom teachers and physical education specialists are introduced to the new ideas in curriculum and methodology, the outlook for a purposeful and sequential program should improve.

In the meantime, individual schools and school districts continue their periodic efforts to revise or construct a physical education curriculum.³ The following comments are offered as assistance in this task.

To build a curriculum which develops motor skill at the elementary school level, there seem to be two logical places to begin: (1) start with the fundamental movement patterns that underlie all more complex movement skills and expand their

multiple applications; or (2) start with the advanced skills and rule structures that compose upper level physical education and breakdown the wholes into assimilable parts. The first approach would appear to allow children more freedom and flexibility in discovering the potential uses of movement.⁴ However, tradition weighs heavily in favor of the second approach with its pre-determined goals.

By beginning curriculum planning with basic motor patterns, attention is centered on generalized relationships that underlie the production, control and absorption of force. A curriculum of this nature requires that the child, through guided exploration, learns the meaning of concepts such as direction, level, facing, opposition, twist, bend and space. The child is encouraged to use the basic movement patterns in a variety of situations to develop competency and to be aware of the similarities between skills.⁵

Two basic motor patterns may be



used to illustrate this approach to curriculum development. *Underhand swing*: the fundamental pattern of the underhand swing can be developed through changes in level, range, direction, and implements into motor skills such as bowling, softball pitching, volleyball serve, badminton serve, horseshoe pitching, and pushing a vacuum sweeper. Common in all these motor activities are the uses of (1) opposition of contralateral limbs for balance and transfer of weight and (2) trunk rotation or twist for increasing momentum. *Sliding*: sliding is a basic locomotor pattern that appears in more advanced physical activities such as dodging in games, folk and social dance steps, guarding in basketball, and leading off in baseball. Common to these various advanced skills are maintaining the center of gravity over the changing base of support, keeping the joints flexed and "easy", and changing direction smoothly.

The child is encouraged to explore the variations and combinations possible with basic locomotor and non-locomotor movements. The outcome is likely to be the traditional motor skills of physical education, enhanced by the child's better understanding and control of movement. Sometimes, given freedom and challenge, the child may find uses of movement other than the traditional stylized patterns of sports and dance.

To attempt curriculum planning at the elementary level from the standpoint of what activities are included in the secondary curriculum requires an analysis of each of the major areas of physical education, such as sports, dance, gymnastics and aquatics. Each major activity must be dissected to determine its advanced techniques and the fundamental skills, the rule structure and strategies peculiar to the activity and the rules and strategies common to other activities. Those skills and

organizational patterns which are common to several activities form the content core of the elementary program. The basic skills and rule structures plus whatever advanced techniques are suitable to the needs and physical development of the elementary school child must be arranged in logical sequence.

One team sport of soccer may be used as one example of how the physical education curriculum could be planned for sequential development. The rule that makes soccer different from other sports is that the ball must be manipulated without the use of the hands. (Only the goalkeeper has the privilege of using his hands in the game.) Skills specific to soccer are dribbling the ball with the feet and trapping or blocking the ball. Basic skills used in soccer, as well as other sports, are running, kicking, and throwing. Soccer has organizational similarities to other field sports: the number of players and their responsibilities of defense and attack, and rules regarding boundaries.

After the sport of soccer has been analyzed for its motor skills, rule structure, and strategies, the next step is to arrange the presentation of motor skills and team play in logical sequence toward the stated goal—playing soccer. During the elementary school program the child should learn to run, to dodge, to place kick, to punt, to pass, to dribble, to trap and block, to defend the goal line, to play defensively and offensively, to follow the rules, and to use strategies. The skills and the activities should be presented progressively according to the children's growing physical and psycho-social abilities.

The foregoing illustrations of two approaches to curriculum planning in elementary physical education provide only a glimpse of the task that needs to be done, for physical education covers a broad range of motor activities. A guiding principle in cur-

riculum planning should be that during the elementary school years the child should have the opportunity to explore the great variety of physical activities while his range of interests is wide. To promote the child's learning and growth, the emphasis should be on basic skills and concepts, and the determination of content should be based on variety and progressive development according to the child's capacities.⁶

¹Marjorie H. Bond, "Play on a Higher Level," *Journal of Health, Physical Education and Recreation*, 36 (May 1965), 69-70.

D. K. Brace, "Critical Issues Facing Physical Education," *American Academy of Physical Education Professional Contributions*, No. 7, (1961), 110.

²American Association for Health, Physical Education, and Recreation, "Elementary Schools," 1965 Convention Report, *Journal of Health, Physical Education, and Recreation*, 36 (June 1965) 22, 36.

Anna S. Espenschied, *Physical Education in the Elementary Schools*, What Research Says to the Teacher Series, No. 27 (Washington, D.C.: National Education Association, 1963), p. 19.

Reuben B. Frost, "A Vision of Greatness," *Journal of Health, Physical Education, and Recreation*, 36 (September 1965), 31.

³Elsa Schneider, *Physical Education in Urban Elementary Schools*, Bulletin No. 15 (Washington, D. C.: United States Government Printing Office, 1959) pp. 20-26, 68.

⁴Larry Gray, "Games Can Wait," *Journal of Health, Physical Education, and Recreation*, 36 (May 1965) 34-35.

Layne C. Hackett, "Exploring Movement Experiences," *Journal of Health, Physical Education, and Recreation*, 36 (May 1965), 28-29.

⁵Gladys Andrews, "Creative Rhythmic Movement Contributes to Learning," *Journal of Health, Physical Education and Recreation*, 36 (April 1965), 69-70.

⁶Naomi Allenbaugh, "Physical Education Skill Progressions for Children of Primary School Age," *New Dimensions for Progress*, A Report of the Fourth National Conference of City and County Directors and Supervisors of Health, Physical Education and Recreation, (Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1964), pp. 103-106. John E. Anderson, "Growth and Development Today—Implications for Physical Education," *Social Changes and Sport*, National Conference on Social Changes and Implications for Physical Education and Sports Programs (Washington, D.C.: American Association for Health, Physical Education, and Recreation, 1959), pp. 44-47.

Espenschied, 12-16.

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astic about Pahia or diving obliquely and ascending from the dive feet first.

The fourth group of Hawaiian games was that of recreational sports for adults and children. Cock-fighting, wrestling on stilts, walking on stilts, hide-and-seek and flying kites were a few of the recreational pursuits in this particular group.

The fifth and final category of games were those of a quieter mood. Both sexes participated in these games and some of them were played indoors at night. Representative of these activities were Hei or cats' cradle—string games accompanied by chants, Pahipahi—slapping hands as in peas porridge hot, Kimo—jack stones, Ume and Kilu—licentious games of forfeits, and Konane—similar to chess, using pebbles on a flat stone.

1819 was the last year that the Makahiki was celebrated. It was also the year that Kamehameha the Great died. Soon after the termination of the last Makahiki the formal abolition of the tabu system was evidenced. The whole structure of society, along with idol-worship and the kapus disintegrated. Emerson¹⁰ pointed out that Hawaiian games as an institution and as an integral part of the Makahiki Festival were inseparably connected with the consideration of the tabus. It is a highly significant fact that the overthrow of the tabus, the final observance of the Makahiki, and the last formal public celebration of Hawaii's games occurred in the same year.

Thus, when the tabu system fell, the whole structure of ancient Hawaiian society also tumbled into ruins. Unfortunately, the ancient Hawaiian sports and games, which were so intimately allied with the tabus and idol worship, soon faded into oblivion, except for one. The singularly notable exception was the exciting sport of surf riding.

Surf riding or board surfing is Hawaii's greatest contribution to today's world of sports. The ancient Hawaiians far excelled all other branches of the Polynesian race in this fascinating skill. In the other islands, a short, pointed breast board, not more than two or three feet long, was commonly used. Whereas, in comparison the Hawaiians possessed magnificent boards. The natives of old Hawaii built and used 250 pound boards of koa wood, an extremely dense hardwood. By their standards, this was the most practical surfboard. In addition to these magnificent boards, the Hawaiians built canoes especially designed for surf riding.

Down through the ages surf riding probably varied in its degree of popularity. It was a sport engaged in during times of peace as historians have found that it was absent in times of battle. Blake¹¹ indicated that after the invasion of Oahu by Kamehameha I in 1795, the practice of surfing declined. The declination continued and by 1900 riding the long boards was a lost art.

The great Duke Kahanamoku, former Olympic swimming champion, introduced the 10 foot board around 1910. It was looked upon as being somewhat cumbersome until 1924 when Lorin P. Thurston appeared with a 12 foot beauty. The 10 to 12 foot surfboards were used until 1929 when Tom Blake revived the old-style 16 foot surf vehicles. This has been apparently successful and has brought about a revival of the "sport of kings" back on the high level it enjoyed long before the time of Kamehameha the Great.

¹Ralph S. Kuykendall and A. Grove Day, *Hawaii: A History* (New York: Prentice Hall, 1948), p. 5.

²Ralph Linton, *The Tree of Culture*, (New York: Vintage Books, 1958), p. 48.

³Bryan, Buck, Emory, Wise and others, *Ancient Hawaiian Civilization* (Honolulu: Kamehameha Schools, 1933), p. 38.

⁴Ralph S. Kuykendall, *Hawaiian Kingdom*

(Honolulu: University of Hawaii, 1938), pp. 10-11.

⁵Edward Joesting, "The First Hawaiians: Polynesian Pioneers," *Natural History*, (May 1960), 58-59.

⁶Maryknoll Sisters "Hawaiian History for the Elementary Schools," Unpublished, (Honolulu: Maryknoll School, December 1940), p. 58.

⁷Bryan, Buck, Emory, Wise, and others, pp. 61-62.

⁸Bryan, Buck, Emory, Wise, and others, p. 148.

⁹Donald Mitchell, "Na Pa'Ani Kahiko O Hawaii: Ancient Sports of Hawaii," *Kamehameha Schools*, (Year ?), pp. 2-3.

¹⁰N. B. Emerson, "Causes of the Decline of Ancient Hawaiian Sports," (Langton-Boyle Publisher and Editor, 1930), p. 12.

¹¹Thomas Blake, "Surfriding in Hawaii," *Paradise of the Pacific*, 45 (October 1933), 10.

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concerns and unique emphases. The concern and support of the school administrators is vital to the success of such a cooperative and interrelated approach. With such an approach two major practical developments or innovations are suggested. First, is the need for a functional existence of a school health council. This involves the pooling of representatives from all of the areas to implement cooperative planning, which when put into effect will enhance the success of the program. Second, is to provide a health coordinator in each school. Nemir⁹ suggests that one person should be delegated at the central administrative level and also in each school to serve as coordinator. Such a coordinator would include in his major functions the organization and supervision of all aspects of the school health program and the coordination of the activities of such a program with those of the community—interacting with health departments, parents, physicians, dentists, private and voluntary health agencies, and various school and community health councils. A school health coordinator is a definite sign that the

school administration has taken a resolute stand—a positive one.

¹Elena M. Sliepcevich, "School Health Education Study," (New York: Samuel Bronfman Foundation, 1964), pp. 40-43.

²Delbert Oberteuffer, "Vital Ties Between Health and Education," *NEA Journal*, 53 (March 1964), 3, 57.

³Oliver E. Byrd, *School Health Administrator*, (Philadelphia: W. B. Saunders Co., 1964), pp. 11-16.

⁴Charles A. Bucher, *Foundations of Physical Education*, (St. Louis: C. V. Mosby Co., 1960), pp. 177-78.

⁵American Assoc. School Administrators, *Health in Schools, Twentieth Yearbook*, (Washington, D.C.: National Education Association, 1942), pp. 297-302.

⁶Byrd, p. 12.

⁷L. A. Kirkendall and D. Calderwood, "Changing Sex Mores and Moral Instruction," *Phi Delta Kappan* 46, (October 1964), p. 63.

⁸M. S. Calderone, "Sexual Behavior—Whose Responsibility?," *Phi Delta Kappan* 46 (October 1964), 69.

⁹Alma Nemir, *The School Health Program*, (Philadelphia: W. B. Saunders Co. 1959), pp. 237-38.

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tion, (New York: Harper and Brothers, 1960), p. 73.

Jesse F. Williams, Clifford L. Brownell and Elmon L. Vernier, *The Administration of Health Education and Physical Education* (Philadelphia: W. B. Saunders Company, 1964), p. 128.

²Carl E. Willgoose, "Value Illness," *Journal of Health, Physical Education and Recreation*, (March 1965), 25.

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5. Conduct periodic evaluations and terminal tests of student progress.
6. Provide each child with particular physical education experiences adapted to his specific needs and interests.⁸
7. Maintain a complete and accurate record for each individual through concerted efforts by the teacher, nurse, student, physician, and administrator.
8. Review and assess all developmental and adapted programs in the light of student progress so as to assure recognition of successes and to keep the activities suitable to the level of the pupil. These procedures must be sup-

ported by certain conditions in order for the specialist to implement the adapted program: (1) enrollment in the classes, if segregated, must be kept small so each student may receive adequate instructional attention relevant to derivation of full benefits from the specially prescribed exercises; (2) proper equipment and facilities are also needed in the proper conduct of the classes; and (3) the pupils must be willing and capable of directing themselves in many of the diverse personal exercises and activities. When this self-direction becomes possible, segregated scheduling is not really necessary as the teacher is relatively free to supervise the conduct of the entire class.

When such conditions as stated are met, scientific techniques and knowledges can be applied to the many areas of student inadequacies. These applications are drawn from such scientific sources as physiology, physiology of exercise, biology, anatomy, kinesiology, sociology, and psychology. The following will serve as illustrations. Apart from medical appraisals, such tools and devices as the Wetzel Grid is useful for nutritional assessments. For measurement and detection of somatotypes, Sheldon's classification component is appropriate. To determine the strength index in youngsters, the Rogers Physical Fitness Index, among others, is useful. When circulatory-respiratory endurance is a suspected defect in students, the Harvard Step Test is particularly useful considering the several modified versions available. There are cable-tension strength tests designed for use with a tensiometer which can bring light upon certain postural or orthopedic defects.⁹

Thus, it is clear as to the vastly scientific and technical nature of developmental and adapted physical education. And while the role of this service is largely educational and

developmental, the functions are concerned with general conditioning and build-up activities, postural correction and mechanics, resocialization adjustment, and relaxation activities for low-vitality and hypertension cases.

Calder¹⁰ made the observation that a great enterprise depends on three things: "The Method, The Man, The Moment." The general aptness of this observation certainly befits the subject of this discourse. "The Method" implies technical devices, a scientific system of intuitive approach and valid techniques. "The Man" refers to the qualified and dedicated school physical education specialist. "The Moment" is now or the climate in which many factors combine to make possible the implementation of a program of developmental and adapted physical education. If "The Man" who is endowed with "The Method" does not act now, he will miss "The Moment."

¹H. Harrison Clarke and David Clarke, *Development and Adapted Physical Education* (Englewood Cliffs: Prentice-Hall, Inc. 1963), p. 9.

²The Committee on Adapted Physical Education, Therapeutic Section of The American Association for Health, Physical Education and Recreation, 1950.

³Clarke, pp. 24-25.

⁴Hans Kraus and Wilhelm Raab, *Hypokinetic Disease*, (Springfield, Illinois: Charles C. Thomas, 1961), p. 12.

⁵*Youth Fitness—Hawaii: A Guidebook for Physical Education*, Honolulu: Office of Physical Education and Athletics, Department of Education, 1964), p. 23.

⁶Delbert Oberteuffer, *Physical Education*, (New York: Harper and Brothers, 1951), p. 308.

⁷Romaine P. Mackie and Lloyd M. Dunn, *College and University Programs for the Preparation of Teachers of Exceptional Children*, U. S. Office of Education Bulletin No. 13, (Washington, D. C.: Government Printing Office, 1954), p. 23.

⁸Charles C. Cowell and Hilda M. Schwehn, *Modern Principles and Methods in Secondary School Physical Education*, (Boston: Allyn and Bacon, Inc., 1964), p. 144.

⁹H. Harrison Clarke, *Cable-Tension Strength Tests*, (Springfield, Mass.: Stuart E. Murphy, 1953).

¹⁰Ritchie Calder, *Science in Our Lives*, (New York: The New American Library, 1962), p. 48.