process and methods. Faced by mass culture, mass conformity, dictatorship of the computer and a possible de-personalization, a revolutionary younger generation tries to find the way back to individual freedom and critical self-determination — "Anti-authoritarian" education and "International solidarity" are the slogans of this revolution around the world. A new insight into individuality should become the basis of a critical new insight into society.

Individualization, Specialization and Socialization are the closely connected and mutually dependent aspects of this educational reform. In my concept the term "Sport" means physical education as well as physical training, because in the German language "Sport" nowadays is often used as a basic term i.e., sport-sciences, sport-medicine, sport-politics.

What is the meaning of Individualization, Specialization and Socialization as basic principles of education? Individualization means the attempt to promote the development of the individual according to his own potential. Personal interest and individual inclination should be the determining factors for the necessary specialization. This specialization must be understood as a possible reinforcement and intensification of a learning process leading to a higher level of aspiration.

Out of this education which aims at self-determination and self-realization grow the binding ties to the society which are not based on pressure but on free decision. In order to take over responsibility for others, one must have experienced responsibility for himself.

Socialization, therefore, is the consequence of a correctly understood individualization; it is also defined as, I quote: "Self-confident acting . . . often from the daily social interaction of most people" or, in other words: Socialization is based upon the "transformation of social outer controls into inner controls of the individual". (Berrsndorf.)

The unconscious and conscious learning processes which are necessary for this socialization are clearly described by Jean Piaget, who takes the example of children's play with its rules made by children themselves, with its structural arrangement and the respective leadership-roles: "Children's games are admirable social acts. The marble-game, for instance, contains a system of manifold rules; a complete legal code and a whole jurisdiction." (Piaget.)

Social repression, however, in the form of compulsory adaption or submission to rules made by a higher authority without understanding and accepting them, does *not* lead to socialization. Even team-work, team-play, is, in its functionality, dependent upon the team-spirit of the individual team members.

Individualization thus has to be understood as a guide to critical self-comprehension. And Socialization means a self-confident and critical attitude of the individual towards the society and its traditional usages.

Menze criticizes: "It is wrong to understand socialization as a process of adaptation, as a process of submission to the social concept of "people do", which lead to an increasing destruction of the ego. . . . The essence of socialization is not the blind acceptance of material repression and

values of the respective structure of society, but this acceptance itself must be already an act of creative modification and detachment from the 'people do. . . ." (Menze.)

Intellectual knowledge alone does not lead to critical self orientation. Maybe that sport, with its action-structures, has a special mission here. Sport is not primarily based on thinking about, but on the ability to act with knowledge.

In the field of sports the individual must always make his personal decisions. The runner, the jumper, the player; each competitor can only fight and compete out of freewill. Sport competitions, therefore, are not values in themselves; they become educationally relevant only when the child, the youngster or the adult has accepted, understood and comprehended this training and competition.

Individualizing physical education stands in contrast to generalized and academic instruction.

Thus, individualizing education should lead to a personal style of movement in contrast to the style-bound type of instruction which presents only one "correct" form of movement.

Exactness is the rule of "formal" method. Competitions in gymnastics, springboard-diving or ice-skating are still subject to this formalism; their grades of difficulty are often measured with mathematical precision.

This individual style creates sometimes new techniques which bear the names of their inventors, like as in medicine or mathematics, for example, in gymnastics the "Stalder"—at the horizontal bar, the "Stockli" at the side-horse, the "Streuli", in figure ice-skating the "Rittberger", the "Salchow" or remember since 1968 in track-and-field the "Fosbury"—flop, very well known now.

Competitive sport is a challenge for the individual to act creatively. This is similar to the dancer who needs a basic technique, but who becomes creative only by his individual ability or expression which dominates the technique. Therefore, a mastered technique is a pre-condition for an individual style.

But, individualization does not only mean development of a personal style of movement—it also means to activate the individual to self-learning. Therefore, we try to change compulsory sport subjects from 11 years more and more to voluntary activity.

Mr. Kiphuth, Yale University, reported to me, since last year, that instead of compulsory sports they introduced a variety of courses on a voluntary basis—the consequence was an increase and not a decrease in the number of participants. This enabled also the sport teacher to work more intensely with the individual student who came non-motivated from poor achievement.

We can only choose freely when there are possibilities for choice. Also, in your country yesterday, one lady interviewer told me how she hated hockey—but always she had to play hockey in school!

How may we motivate the student for self-decision? How can we challenge the individual to active and critical learning?

Let us compare different styles of teaching in this direction. One is, for example, called the authoritarian, the "drill" or "command" method. This style of teaching uses a more or less pronounced degree of authority and is based upon orders, demands, instruction and demonstration from the teacher. The student is permanently controlled by the teacher and has to move according to the teacher's ideal. The authoritarian style allows the teacher to transmit masses of information within the shortest possible time. But he does not know whether the acquired skills have been understood in their sequence and context. The teacher cannot say if the student who has learned these skills will be able to employ them independently in appropriate situations.

The authoritarian style of teaching is still widespread in the field of physical education. This style likes to use mass-drill for the purpose of public mass-demonstrations. Contrary to sport competition these gymnastic demonstrations present exact arrangements and æsthetic ornaments.

The Polish writer Kracauer describes "this 'mass-ornament' that consists of 'thousands of bodies', the movements are mathematical demonstrations . . . and the masses celebrate with enthusiasm the regular arrangement of the ornament. . . . The æsthetic interest is directed towards them. The bearer of the ornaments is the mass. . . . Here the man is a small fracture of a figure, he does not count as an individual, but only as a member of the mass. . . . The man must not think while he is forming a small part of the ornament". (Kracauer.) The colourful ornaments in the famous shows at the Sokol—and other socialist festivals are political demonstrations of power and masses. Also, the well-drilled showgirls of the cheer-leading groups at the American football games are æsthetic public-relation-drill.

At the big gymnastic demonstrations of former times these ornaments were used as symbols of social solidarity. Our German young generation has no more time for this kind of show.

Another critical factor in the authoritarian style is the teacher who knows only "his" method and who speaks of "my technique", "my system". This "suggestive" method ("Do not listen to anyone but me!") leads to situations where the athlete is dependent on a specific coach, "his" coach whom he trusts blindly. In some cases the athlete really believes that he is unable to start in a sports event without his coach at his side. This "unfree" athlete has been "made" instead of "having made himself". Every top performance is based on lonely decisions. No suggestion from outside can help here—only self-suggestion: "I can, I will. . . ."

Let us now look at the socially-integrated teaching style, which is also called the "democratic", the "active" method, or "to learn to do by doing".

This style is based on various integrating contacts: between teacher and student, student and teacher, and among students themselves. These contacts aim at gaining information from the student himself. The teacher presents movement-tasks as "problem-solving" method. The teacher stimulates independent search, discovery and experimentation as "discovery"-method. This reciprocal contact between teacher and student

leads to discussions, and the discussions lead to reflection. Our research has shown that in physical education lessons students are very seldom stimulated to ask questions. The "socially-integrated" method demands from the teacher more special knowledge than the authoritarian method, for the students' questions often lead to side-lines which must be taken into consideration; also, unspecific questions and problems must be directed towards the specific learning-process. The aim of this method is to motivate the students' self-activity and cooperation.

It is important to challenge the individual to lift, to raise, to extend his level of aspiration by means of critical self-comprehension and objective self-judgement. This level of aspiration should more and more surpass the "level of expectation" and become an "ideal level". The skilled and active student—especially younger grades—nowadays are often left behind at a "minimum level". In too many cases the physical education teachers of the lower classes are satisfied with the "law of good-enough" (sufficiency level). In many school grades we find, sorry to say, an equalization at minimum-level instead of individualization as a challenge to personal top performance.

Within the method-of-challenge I will explain three specific phases of learning: the question "Who can . . . ?" is the first challenge for the student to spontaneous action. This phase represents a more or less intuitive or naive reaction. Let me call it better the "situative action". The teacher presents situations in which the student learns to master the situation. Therefore, in our curriculum is the basis of all rules of liability not the forbid but the opening of action in which the students learn to act independently. These "situations" must correspond to the level of aspiration of the different groups.

The next phase of learning would be the "reflective action". The teacher encourages the students to compare and to judge the different solutions which have been found. The students learn to find out the optimal quality of movement and what is specific for various techniques. This second learning phase is most important. It is often neglected! The student learns to understand different motor-learning phases only by perceptual training, by watching, comparing, identifying. He should learn to ask why a movement is done this way or that way. He learns to recognize and to explain how he is acting.

Even top athletes are sometimes unable to analyse their movements (Misangyi). For hours and hours they repeated a special technique without understanding it. Even small children are easy to interest in the "How", when they want to learn a "clever trick", i.e., when they are motivated for learning. "How do I throw the ball into the basket?" "How can I do the double jump?"

The "Why"-questioning demands from the teacher extensive knowledge in various sectors; he has to know mechanical principles and physiological facts. "What makes the Fosbury-flop so effective?"; "Why the pole in pole-vaulting has only a certain elasticity?" This "Why" should be a stimulus to the student; he must reflect and experience things by himself; he must learn to doubt and to criticize.

To summarize: intuitive and situative learning, connected with the reflective learning, lead to self-control and self-conditioning.

Let me explain four dimensions of this sport-specific self-directed learning. The first dimension refers to a self-understanding of the functional system, to posture and health-consciousness. Students come to know and to act with sensitive physical effects: like strength, agility or coordination.

Which speed do I use in a certain situation? How will I become more fit? What does agility mean? Which parts of my body are flexible or not flexible? Why is, for instance, the flexibility of the ankle-joints and of the spine of extreme importance? Which are the causes of a wrong posture, attitude or an ineffective movement? The value of this self-directed learning process lies in the information that Sport gives the student about his own body system, to know that "I am. . . ."

The second dimension is aimed at self-confidence. Only by sensitive, differentiated tasks, for example, in walking, running, jumping, hanging, climbing, balancing, etc., the movements will be refined-"mastered". The student becomes more and more skilled: "I can turn—I can react".

The third dimension refers to the variety of movement-creations, to the joy in invention, inspiration, improvization. Just as in language, first of all the elementary vocabulary has to be mastered. If we are secure, we start to modify the basic forms. We enjoy the variations. A skilled swimmer often "plays" with his swimming abilities: he dives, turns and jumps joyfully and even invents new techniques of swimming or diving or turning. These creative movements are a product of playful phantasy: "I have a new idea. . . ." "I create. . . ."

Creative movement is based on mobilizing the phantasy. Phantasy in movements does not mean imitation but invention. It does not mean, for instance, with small children, imitation of animals", as it is often misunderstood in primary school to be creative movements.

Even for the child in primary school, creative movement means invention with simple elements, for instance, in running, jumping, throwing and rolling. Creative movement means forming new compositions; we call this movement—"Gestaltung", this "Gestalt" is more than only a summary of single skills.

The fourth dimension refers to the will to achieve. Which performance do I expect of myself—can I realize my own expectations? It is important to know the own limitations of one's abilities also in first grade and learn to surpass them: "I will. . . ." The grouping of the class is often necessary in order to enlarge the individual levels of aspiration. Students often state that they feel themselves neglected in physical education: they find the classes "boring", "there is no challenge", "we learn nothing new, always the same tasks".

The individualizing teaching method prefers, also, "test-yourself" programmes. Even the "sport for everybody" applies in the first place these "test yourself" programmes: in the "Trim-Action", for instance, which is becoming popular in many European countries. Each participant

marks his own scores in a note book; the completed note books are honoured by a special badge. The one who cheats, cheats himself, because he knows that he is cheating; thus he spoils his game, for, above all, sport is a game even in competition. Who disregards the rules excludes himself even if he should win.

One other form of the "test yourself" programme is circuit-training. It becomes more and more popular because of its individualized methods. The circuit can be built up for first-grade children as well as for groups of adults, can be used as a general conditioning training or as a specific training for a certain sport discipline. Students may select the different "stations" by themselves; they learn to control themselves. They may intensify the "programme" by means of a higher number of exercises or by cutting down the given time.

Individualization also means self-control through self-judgement. Even a first-grade child should be able to understand why he has been given a certain grade. The teacher should explain any process of judging and students must learn how to judge and must find by themselves reasonable judging rules and evaluation.

This kind of self-orientation leads to many ways of additional self-training, for instance, we tried this as homework in physical education. The student gets a ball or a rope to take home to exercise by himself; or the teacher opens an extra grade for those who acquire during the holidays some new skills in swimming, judo, horse-riding or sailing.

Closely connected to individualization is the educational aspect of Specialization. After having learned to act on his own, and thus being able to inform himself, the pupil needs specialization in order to gain special skills. For this intensification he needs time.

Today, the classical ideal "to know as many details as possible of everything" gives way to a new insight: to intensify the learning process on the basis of few examples or, in our field of sport: in one or two disciplines the student ought to intensify his training. Training means an aim-directed, systematically increased exercising. The aim is to raise the level of aspiration or, in other words, to gain more confidence in one's own abilities.

In the course of an individually planned training-process the student experiences his own capabilities. He may reach his "ideal level" which he never thought possible before. He is like a high-jumper who has mastered a certain height: he reaches for the next level. High-jumping may serve as a good example, it shows that the student must be able to estimate his own abilities correctly because, if he fails the first chosen height in competition he is out. This reasonable self-estimation has to be learned at any age-level. And this self-estimation level is best when the success of performance corresponds with the aspired aim. Therefore, specialization leads to individual performance and to critical self-judgement based on experience.

Specialization should lead to personal top performance. Sport is inconceivable without competition—competition regarding time, measurements and quality of performance; it is very natural to compete against

one's own person — "to outdo oneself" — and to compete against the performance of others. Even two- or three-year-old children are eager to compete; they aim at new skills.

Each competition must arise out of free decision, no-one must be forced. The attractive feature of competition is the venture, the uncertain finish.

To quote an Olympic hurdle-runner: ". . . the sudden fright, if everything is present, the spikes, the starting number . . . the burning desire to win and, at the same time, the desire that everything might soon be over . . . hurdle race always means a venture, a risky undertaking into uncertainty . . . a short stumbling, a false move, a missed start . . . but this is the real essence of sport: glorious victory and deeply disappointing failure, side by side; but this recklessness in sport has become dear to me. Sport weights exactly; no former success helps!" (Z. Kopp.)

Each competitor "suffers". He seeks the adventure and at the same time he is afraid of it. This is the attraction, the adventure of competition, which is felt even by children: they try again and again to climb a steep staircase even if they have already failed.

Besides the Olympic competitions, all grades of competitive sport grows up, all kinds of competitions are carried out; there are regional records, records within a club, records within a family. Sixty-year-old people compete in tennis against each other as eagerly as the numerous participants in the, what we call, "open races for everybody". During the last few years in Europe, thousands of younger and elder people took part in the various popular competitions in running, walking, cycling, swimming. The participants are men and women of different age, whole families or groups of friends It is not the record which is hereby honoured, only the participation within a given time-limit.

Each specialist also in Sports looks for a partner who is his equal: the tennis-player, the golfer, the sprinter. In competition it is the rule the chances must be the same for everyone.

It is not true that a specialist must be only one-sided. On the contrary: the profound learning, searching and experiencing in one field enables him to understand better the endeavours in other sectors. This might be the reason that, especially a top-performance athlete honours highly the achievements of others; for he knows how many hours of intensive trials and work, how much self-discipline it costs to reach a top performance.

We come to the third educational aspect. We have heard each process of socialization is based on "deliberate and self-confident action".

Especially in the field of sport we find typical examples for socialization processes. Olympic games never would exist if the different nations had not agreed upon international rules and laws in sport. Therefore, Coubertin, when he re-founded the Olympic Games in 1894, the first step was for him to join British, Italian, Belgian, American and German rules into the international "legal code of sport".

A new record set up in Moscow, in New York, or in any corner of the world, will be officially acknowledged if the international rules have

been observed. Soccer players from Brazil, for instance, play against a British team, and the referee may come from Czechoslovakia.

These rules do not only include measures and numbers. They include also laws of moral behaviour—well known as "Fair Play" rules.

The idea of "fair play" came from British play fields and has gradually penetrated social life everywhere. Fair action or unfair action is a question of conscience. Even children criticize each other. "We cannot play with you, you are cheating!" People who cheat—and in this way get an unjustified advantage—are not players" in the proper meaning of the word, they are betrayers. The laws of fair play may be offended—the spectators and all competitors who know the rules will always estimate and honour a fair-play athlete and a fair-play team.

Sport is an expression of our voluntary responsibility for ourselves and for others. Responsibility for others cannot be dictated, even traditional social systems are unable to do this. Responsibility and human relationship must derive from our free decision and insight as a consequence of self-realization and self-responsibility.

Therefore, sport activity then becomes a factor of socialization only when it is more than imitation and only acceptance of the rules. Also, children should learn as early as possible how to act as a referee, how to become a life-saver, how to give mutual help in sport; this will help them to understand the basic principles of well-functioning social action.

We repeat, therefore, that socialization means a possibility to "transform social outer controls into inner controls of the individual". Sport may give to the individual one of the possibilities to decide independently what he has to do, and by sport he can demonstrate his free will to achieve.

But sport has also created its own culture-patterns. In every sport event there are not only international rules and laws, there are also always created certain "ceremonies". For instance, the referee distinguishes himself by special dressing and special behaviour, teams exchange special greetings, etc. Coubertin was thinking always about these special ceremonies regarding the Olympic Games. He created many details for the beginning and the end of the Games, the handing over of the medals with fanfares, the triple platform for the three medal-winners, etc.

Coubertin also created the Olympic symbol: the Olympic Rings. Olympic ceremonies and symbols have found their way into worldwide social life; they are now symbols for international cooperation.

Socialization in sport means international understanding in the sense of internationalization. Only from this point of view to set up self-directed rules in the view of doing sport with each other can the Olympic idea be understood.

My lecture in honour of Fritz Duras shall be a small contribution in this direction, to give the single child more chance to choose his individual sport, to open more possibilities, qualified teachers and facilities for specialized training, and to motivate internationalization through social understanding in Olympic sport.

A Look at New Endeavours in Colleges Offering Courses for Primary and Secondary (Specialist) Physical Education in New South Wales

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IT is an interesting co-incidence that the year in which an international conference in physical education is held in N.S.W. is also the year in which tremendous changes have been initiated in most establishments concerned with teacher education. In fact in my 21 years of lecturing I have never experienced such a fever for change with new ideas being discussed, explored and tried by the college staff of which I am a member. In order to report briefly to you, I have discussed the situation with various college principals, all heads of departments of physical education, and have studied the various calendars, and I am amazed and thrilled by the variety of approaches that I find being developed.

I have prepared a *table of information* which is issued as an appendix. It presents for easy comparison the nature of core and elective courses and other relevant information. Despite the fact that all the teachers' colleges are within the Education Department it is obvious that with courses, the Director of Teacher Education has encouraged principals and staffs to seek *solutions that solve their own specific problems* and which satisfies the educational climate within that institution.

Certain trends in thinking appear evident in respect to *Primary training*. A significant one is the attempt to *reduce* the number of lectures presented to students in each year of the course. Alexander Mackie Teachers' College has a first-year lecture load per week of 18 periods—the majority offer loads in the low twenties—and only Balmain reaches the thirties, but even Balmain reduces this to 24 for second- and third-year

students. Opportunities are therefore extended to students for greater freedom to use college resource centres or local public facilities outside of lecture time.

Every college course in physical education is governed by its *total college policy* and it is significant that there is a growing tendency to initiate *general core courses* wherein staff work as teams *within an inter-disciplinary framework* to enrich students' understanding of the world in which they live. Thus at Armidale—the first College in N.S.W. to introduce such courses, the physical education staff lecture on "sport and physical education in the ancient world" and "sport in the Australian society"—to all students within the College. Balmain College has instituted an eight-hour-a-week course for all second-year students entitled "Man in Society" wherein during the first two-thirds of the year students study the problems of industrialization in two cultures and in the remaining sessions elect two areas of expression to organize and prepare their ideas for public presentation. Physical education plays a part in both these areas. Lismore College presents three cultural background courses—the "arts"—the "sciences" and "society" to all students. Alexander Mackie has an inter-discipline course entitled "teaching" in which the physical education staff make a contribution. Balmain College has also introduced an inter-disciplinary course in child growth and development and another in "foundations of education" where panels, including physical education staff, participate on equal terms with other disciplines and at a richer academic level.

The development of this approach I regard as a wonderful innovation into N.S.W. Colleges and represents an attempt to break down the barriers of the closed-shop subject-discipline approach which I think has contributed to the general teacher's lack of understanding of the role that physical education should play in the education of the child.

The reduction of overall lecture time and the introduction of general core courses together with the growing trend to include *elective studies in depth,* some of which are quite extensive, e.g., Armidale 4 p.p.w. for six semesters and Wollongong 10 p.p.w. (3.3.4) over three years, produce problems that are worrying to administrators both at college and within the service. It means that the available time that can be shared by the subjects for curricular courses is now extremely limited and there must be unequal opportunities for training in the curriculum areas. Most colleges attempt to present a concentrated *physical education core course* in first year, e.g., Alexander Mackie and Balmain, while others, e.g., Mitchell College of Advanced Education, spread the core course in selected semesters. But the actual lecture period allocation to physical education for courses allied to the syllabus of P.E. for primary schools is *declining* rapidly, e.g., Balmain, which had 8 p.p.w. over two years now has only 5 p.p.w. over three years. Lismore has only one period per week for one semester for curricular studies in physical education. Sydney College has one p.p.w. in each year. Wagga retains 2:2:1 and Newcastle 2:2:–. Wollongong requires one p.p.w. in one year (for those who did not elect to do the curricular study in physical education).

Various attempts have been made to resolve this problem and to relate it to the realities of the primary school needs. Physical education in the State schools is usually found as an "expression" period of sport with no skill teaching except for the talented, special swimming instruction and some folk dancing. Some schools are introducing gymnastics and educational dance but at the moment it appears more in club activities than the normal class situation. Realizing this situation, most heads of departments are keen to extend the *elective* system and it is finding expression in two forms: i.e., physical education as a *major study* and as a *minor study*. All heads of P.E. departments believe that some form of specialization is necessary for the teaching of physical education and now, as never before, when it is now impossible to find sufficient time to train students adequately in all subjects of the primary curriculum.

Wollongong has actually *grouped its "practical" subjects*—music, art, craft, physical education and natural science and allow students to elect two of these for study. Armidale attempts to attract as many students as possible to its *minor* elective (practical course) for 3 p.p.w. for one semester and has this year involved 85% of the men and 65% of the women. Balmain has its *supplementary* course (2 p.p.w. for one semester (half year)) which provides an opportunity for those who are interested to do a short practical course—as well as those who are directed to do so. Wollongong *prescribes* for all students a one p.p.w. per year course for *personal skill development* and Lismore has a similar scheme of 1 p.p.w. for two semesters. I regard these *minor practical studies* aimed at personal development of the student to be of vital importance because by such contact, students' *attitudes* may be developed towards the values of such experiences to the individual. Until this becomes a fact appreciated within the community at large and by academic staff members in particular, physical education will continue to be regarded with suspicion in an academic curriculum.

The development of *major studies* in physical education provides a welcomed opportunity for colleges to treat the subject in depth, and, in fact, to prepare a teacher capable of accepting responsibility for the practice of physical education within the primary and infants' school. It might well be needed, as is believed so intensely by one head of department for *full* specialization to be urged for the primary schools. As colleges of advanced education develop there must also develop full specialist courses that offer training for both primary and secondary specialization in physical education. This course of action must be considered because it appears as a logical extension of the major elective scheme working in most colleges as a result of the planning for three-year courses. I believe its implementation is imperative because it could provide a real link with the formative years of the middle childhood period when the skills of an individual's culture must be practised and practised so that they become part of the individual's modes of expression whether as an adolescent and as an adult.

Some colleges are offering *bridging* courses. Alexander Mackie and Lismore are concerned with the poor standard of personal skill and fitness evident in the adolescent who enters college. Mackie tests its students and directs them to bridging courses which are fitted in to suit the student.

Lismore is developing an individual teaching method to overcome this problem and I imagine all colleges have to make some provision to cater for the wide range in students' physical abilities. Balmain *guides* its weak students into the supplementary courses (short course electives) after the assessments of first year.

Balmain appears to be the only college providing a general core course for teaching children with deviations from the normal in growth and development and in which scheme physical education lecturers make a contribution, e.g., in perceptual-motor training, and adapted physical education programmes for the retarded and gifted. Students select a special study project and will teach in selected schools with retarded children, culturally deprived children, children with language difficulties, and gifted children during practice teaching at the end of this year.

Some colleges provide within the curriculum a block of time for team training or recreation of a physical nature, e.g., Wollongong with a club period adjacent to the lunch hour, Balmain with a sports union period last on a Wednesday.

Many colleges are approaching physical education from the movement study approach, with the concepts of Laban and Kephart being developed alongside those of mechanics and physiology. Gymnastics and dance are the basic physical education media used but they can only be adequately treated in the major elective courses.

Many colleges are also emphasizing the fitness approach in the core courses or through a special course for personal development, e.g., Lismore and Wollongong.

Some colleges emphasize creativity, e.g., Armidale, Sydney and Newcastle. Newcastle has no special time for studying sports in depth like Balmain so encourages a student's use of creativity in the games programme. It also supplements this by encouraging students free when the schools have their sports period to assist in this programme. Balmain, in it foundations of education course, has a team of educationalists, artists and physical educationalists taking a 15-period course in creativity.

Because physical education is so expansive, the temptation to teach all aspects of the subject within a few lectures faces all lecturers. To avoid this Balmain has concentrated its physical education course on gymnastics and dance and has been able to retain another time slot on the first-year timetable for instruction in the sports played by primary children, i.e., the games method course (in which each woman does women's basketball and either softball or soccer and each man cricket and football) that is, where two sports only are studied in *detail*, rather than attempting to give fewer lectures to more sports.

An interesting new approach being used in some N.S.W. colleges is the *subject team teaching* approach, e.g., Wagga uses three staff for two sections of students and each specializes in one area—with the students changing over at set intervals during the year. Balmain uses five staff for four sections in its games method course on Monday and Wednesday afternoons, and once a sport has been treated the students change lecturers in order to work at their second sport.

Wagga is planning to introduce a special *distinction course* in physical education, to enable outstanding students to gain additional enrichment in the subject. Wollongong is able to go even further, it offers outstanding general students at the end of the first year an opportunity to fill any vacancies in the second-year specialist group. This, I think, is a wonderful idea.

Several colleges are experimenting with teaching all groups co-educationally. Armidale has co-educational groups for all practical work. Others are planning exercise *laboratories* for major study areas, e.g., Alexander Mackie. Westmead is making *use of a school* that resides in its grounds. The children are used for observational studies and pupil testing by the students, while the physical education staff are able to assist the teachers with demonstration work and the loan of equipment.

What is happening within the specialist physical education courses? At the present time only two colleges have courses leading to the Diploma of Physical Education—each three-year courses of some standing, and for which Perth University has given reasonable accreditation for students wishing to continue to the degree.

Sydney Teachers' College has three major strands to its course—a general course which is the same for all college students, a professional strand and a special physical education curricular course. (21 : 22 : 22 p.p.w. for first-third year respectively). All students elect in the general course *one* area for two years' study. The curriculum course covers *three* areas—the theory of physical education, the science of physical education and applied kinetics. These strands are continued into second year (with the addition of a course in music or art with the general course) and third year where the general course is replaced by a special physical education elective (or by the honour's course) and health education. A fourth year is available for students who elect to specialize in health education, in addition to extending their physical education knowledge but it has not yet been awarded graduate accreditation by the Public Service Board.

The physical education elective programme enables students to specialize within one of these areas of special interest—"physical education and society"; "health education"; and "facilities". These studies have both theoretical and practical components.

In the applied kinetics course in third year students may specialize in *one* practical field, e.g., gymnastics, dance or sports. This new endeavour has appealed to staff supervising practice teaching. Students are observed to have a much deeper insight in their special area and to apply this facility when helping children in other areas of skill acquisition.

The honour's course is a special course which replaces the general elective course for students who attain at the end of first year 70% average of marks and who maintain this at the end of second year. This course "comprises practical participation in original research in comparative primate anatomy and primate locomotion; dissection and preparation of specimens and models; application of the method of photographic analysis to the study of locomotor patterns", (p. 196 Cal.).

The diploma course is conducted within a framework of other disciplines — with lecturers outside the physical education department sharing largely in the programme. In addition, the student is presented with an overall programme which enables him to teach physical education competently at all stages of a child's schooling.

Wollongong Teachers' College approaches the training of specialist teachers with fairly similar emphases but some differences. Some of these differences recognized by the Wollongong staff are:

(*a*) During the first year the special students embrace a course similar to general primary course students, thereby enabling them to do a general primary practice teaching session, but they do not devote the same time to the general curriculum courses as do the primary trainees.

(*b*) The first two practice experiences are conducted within the primary schools. It is not until the third practice session that the students teach full-time physical education, and this is programmed during third term when the students spend one day a week in the high schools.

(*c*) Wollongong staff believe that their course has a stronger academic emphasis with three-quarters of lecture time devoted to this emphasis and which time is utilized by mostly non-physical education staff. (A second subject must be studied in depth and this may be taken at the university.) Both colleges welcome an interdisciplinary approach to the training of its students and seek to maintain this training within close association with students of other disciplines.

(*d*) A greater emphasis is placed on the communication skills wherein students receive a greater common exposure to the communication media of language, art and music.

Both colleges endeavour to provide a background in preparation for research activities with Sydney's honours course providing a real stimulus for participation in actual research projects. Both colleges also expect students to engage in field work and they give accreditation for attainment of certificates for coaching or umpiring in allied areas. Wollongong has also a point system functioning, requiring participation in at least three of the four service areas:

- Children's training camps.
- Camps — organized for various purposes, e.g., Church, practice teaching.
- Play centres and swimming schemes.
- Community service—YMCA, Scouts.

By attempting to provide such an overview I imagine that I have produced many errors of distortion—nevertheless, I hope I have been able to show something of the ferment of ideas being expressed experimentally in so many places and of the answers being suggested for preparing students to face the realities of teaching with confidence and competence. It is a wave of activity of which I have never seen the like, and the trigger for this release of energy has been the introduction of the three-year course of training following so quickly upon the new six-year high school course.

Staff had to face seriously the problems of the population and knowledge explosions, the tremendous technological advances in educational aids, and the changing nature of educational needs. I hope that I have been able to convey something of the revolution I found occurring in the colleges and its effects upon the physical education courses developing for the general primary school teacher and the secondary specialist teacher in physical education in New South Wales.

A look at Physical Education in Teachers' Colleges in Victoria with an emphasis on New Endeavours

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In the 13 State teachers' colleges in Victoria there are 10,000 students in training this year but less than one-third of these has any contact with intensive physical education activities or, indeed, with required physical education of any kind.

At the present moment there are no specialist courses and physical education is confined mainly to students in primary colleges who are taking a general course for primary teachers. However, general inservice training for those already qualified elsewhere in physical education is provided for both secondary and technical teachers to enable them to complete their qualifications.

The Melbourne Secondary Teachers' College offers a course leading to the Trained Secondary Teachers' Certificate (Phys. Ed.). This allows the two-year Dip. Phys. Ed. students from Melbourne University to complete a general teaching certificate, thereby qualifying them to teach another subject besides physical education in the secondary school. In 1970 there are 181 students taking this course. A similar course at Melbourne Primary Teachers' College offers a general certificate to Dip. Phys. Ed. students who wish to teach in primary schools. Both of these certificates represent three years of training. However, as the physical education course content for these students comes under the University of Melbourne, it is not within the scope of this paper.

Monash Teachers' College is hoping to include physical education in 1971 in a four-year course for Higher Diploma of Teaching. This will cater for students wishing to teach physical education in secondary schools

and at the same time study two other teaching subjects. It is also probable that the Secondary Teachers' College Latrobe University Centre now being established will also be able to offer full-time specialist courses in physical education.

But these ventures are all in the future. They represent attempts by the Education Department to provide more trained physical education teachers in secondary schools to supplement the output from Melbourne University, which at the present time is the only source of physical education specialists in Victoria.

It is therefore true to say that in 1970 there is no specialist course in physical education in any Victoria State Teachers' College. However, our subject forms an integral part of the training of every primary teacher in Victoria. If we go back 20 years we find a one-year course for Trained Primary Teachers' Certificate (T.P.T.C.) within which physical education was allotted one period per week. The obvious outcome was that emphasis was placed on method of teaching the subject in the primary school and the activities taken were those suitable for primary school children. With the introduction of the two-year T.P.T.C. in 1951, and more recently, in 1968, the three-year course for Diploma of Teaching, the time allocation has been increased and the emphasis has shifted from method alone to activities taken at the individual's own level. Physical education is therefore truly seen as an avenue of learning, an educative experience in which the activities undertaken are a means to an end—that of developing each individual student.

Physical education plays an important part in the total educative process involved in preparing young people to teach in the primary school. It is the subject which provides students with the opportunity to develop their own health to its optimal level through both its practical and academic content.

It is no longer acceptable that a course in a primary teachers' college should be mainly concerned with primary school method and physical education should be no exception. In the words of the Pryor Report:

> ". . . the basic assumption . . . for the preparation of teachers is that the quality of the person matters more than anything else. . . . The Committee has rejected the idea that teacher preparation consists of requiring a sudent to master the contents of a prescribed course of study and certain pre-determined techniques and skills which are offered as 'the method of teaching'."[1]

Physical educationists, through their subject, have a unique part to play in helping to guide these young teachers towards maturity and full acceptance of their responsibilities in the teaching profession.

In Victorian primary colleges, physical education is combined with health education, so that the subject is termed health and physical education and as such must be studied by all students as, at least, a twelve-month curriculum study. It is also available equally with other subjects as a sub-major or a major study in the diploma course, which means a study of three or four hours per week. Students entering college have just completed an intensive year of academic study in preparation for matriculation, and many have never known or have forgotten what it is like to

engage in strenuous physical activity. Therefore, it comes as somewhat of a shock to find that participation in physical education is an inescapable requirement of becoming a primary teacher. A higher level of personal fitness is required and great emphasis is placed on the development of a sound attitude towards total health through partcipation in as wide a range of physical activities as possible.

In an attempt to give every student a sport in which he may become interested, most colleges provide a variety of activities for sport on Wednesday afternoon. A weekly inter-college competition provides regular competition for some 700 students in all the traditional team games. In addition, coaching in skills is offered in most of these team sports and also in varied activities such as fencing, horse-riding, judo, ice-skating, archery, scuba, dry skiing, water skiing, sailing, etc. Inter-college carnivals in athletics and swimming provide the opportunity for students of all colleges to meet and compete together and also to gain experience in organizing and conducting such carnivals.

The health and physical education courses cover a broad spectrum of topics, but at the same time, provision is made for students to specialize and study in depth areas of their own choice, both in the practical and theoretical aspects of the course. Major studies in health and physical education place emphasis on outdoor pursuits and introduce all students to adventure-type activities and organization of camps. Three primary colleges have now acquired country or seaside camp sites and are busily planning their future development. Extensive use is also made of National Fitness Camps and areas such as Wilson's Promontory and the Grampians.

With the increase in leisure time in the community, lecturers in physical education are increasingly aware of their responsibility in educating students to take their place as recreational leaders. Plans to equip students to meet this challenge form an integral part of all major studies undertaken.

The first graduates of the Diploma of Teaching course will complete their training this year and begin their careers in the schools in 1971. Of these graduates, 124 will have taken health and physical education as a major study. In primary schools it has been traditional for the grade teacher to take responsibility for the teaching of physical education in his own grade. In the past this has generally proved disastrous and has often led to a situation in a child's life in which for seven years physical education (as distinct from sport) has been totally neglected, so that by the time the child enters secondary school the damage has been done. Patterns of non-participation and lack of skill have been established and we are well on the way to developing another spectator rather than an active participant. I believe that sound programmes of physical education will only be possible in the primary school when trained and interested teachers are placed in charge of the subject. An experiment is to be begun in Victoria in 1971 by placing students who have majored in health and physical education as co-ordinators of the subject in large primary schools. In this way, those teachers who have a specialist training will be responsible for the subject rather than those who may be neither equipped nor interested in truly educating children through the medium of physical activity.

However, to expand this scheme of a co-ordinator in each large primary school it will be necessary to maintain a constant flow of enthusiastic young teachers from our primary colleges who have specialized in health and physical education in their college courses.

As we complete the first three years of the new Diploma of Teaching (Primary), it is necessary to reappraise the courses we have established, to concern ourselves with possibilities of integration with other disciplines and to undertake research to ensure continuing development, so that we will be always reaching out towards new endeavours in physical education.

At this time, Victorian teachers' colleges are moving towards a future in which each individual college will be autonomous under its own college council. In this era it is well within the bounds of possibility that with adequate facilities and staff, more of these colleges will be able to offer specialist courses in physical education. Our present courses have laid a firm basis for this and we are now able to look forward with confidence to the future of physical education in Victorian State teachers' colleges.

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The Professional Preparation of Physical Education Specialists in Australian Universities for Meeting the Challenge of the Future in Schools and the Community

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LIVING in a technological age deprives man of one of his most basic requirements, namely, that of movement. As a biological organism, he has evolved over millions of years in a natural environment in response to pressures for mobility and endurance, yet during a brief period of approximately 50 years, the intense desire for progressively encompassing labour-saving devices has altered the mode of living for the majority of our Australian population. Modern man, in changing his physical way of life to meet the needs of an urban society, has interfered with his biological adaptation which was achieved through a long process of natural evolution. There is now well documented evidence available which demonstrates that such a rapid change may indeed threaten man's ability to biologically adapt, and our non-vigorous, over-stimulated life (Figure 1),[1] together with a rapidly changing environment, is bringing us new problems in the form of an increasing incidence of degenerative disease such as, for example, cardiovascular disease.

It is important for us to realize that *Homo sapiens* is physically an animal and as such must have a basic amount of physical activity for his biochemical processes to function normally. Wherever possible, we should attempt to return to at least some of our basic living patterns, and one of these natural phases in our evolutionary history is physical activity. It is high time that modern man awakened to the fact that any alteration

to the physical or biotic environment should be neutralized by appropriate compensatory mechanisms. Recent discussion of world conservation and pollution is encouraging, but to conserve our environment is not enough; we must also conserve man.

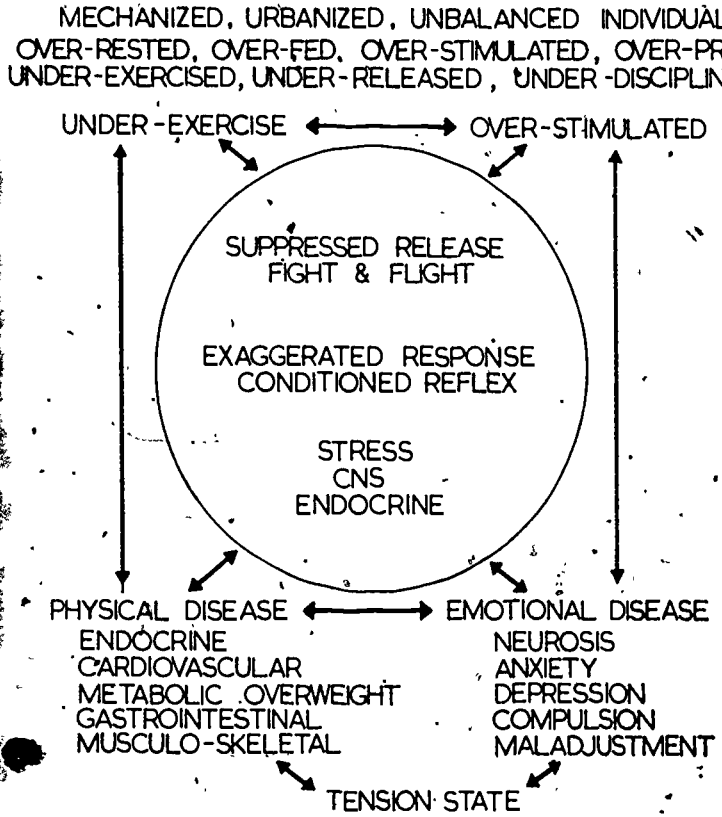

FIGURE I: The under-exercise over-stimulation syndrome.

What Can Be Done about These Problems?

As physical educationists, it is essential for us to consider man within the framework of his urbanized and automated environment, because he cannot be separated from it and is an integral part of it. The physical educationist of the 1970's must be aware of this fact when he attempts to physically educate the community, and must be thought of as a social service worker in the overall field of education. Preventive, physical and, to an extent, social medicine, will be his major pursuit; he should be trained with this philosophy in mind, and must understand that he is working in the broadest sense in the area of human biology. Thus an

education of a person's physical being from a human biological point of view must be the goal of physical education today, with activity being used as a major tool to obtain this goal.

This then leads us to the major point of this paper, namely, that of the professional preparation of the physical educationist of the future for the schools and the community. Only professional preparation at the university level will be dealt with, as this is a specialized level in itself. This is not to say, however, that it is the most important level, as it is only a part of the whole.

TABLE I

An example of a Bachelor of Science Degree Majoring in Physical Education

(Biologically oriented)

First Year :		
Biol. Sc.	..	Animal biology
Biol. Sc.	..	Human biology
Phys. Sc.	..	Physics/chemistry
Soc. Sc.	..	Psychology
Second Year :		
Biol. Sc.	..	Biochemistry, human physiology
Biol. Sc.	..	Gross anatomy, histology and embryology
Phys. Ed.	..	Biomechanics*
Third Year :		
Biol. Sc.	..	Mammalian physiology, functional anatomy
Phys Ed.	..	Biomechanics*
Phys. Ed.	..	Motor learning and motor capacities
Fourth Year :		
Phys. Ed.	..	Physiology of exercise, growth and development
Phys. Ed.	..	Sports medicine, biomechanics*

* The theoretical and practical study of the anatomical and mechanical analysis of human movement.

What Should a University Offer to Prepare such a Physical Educationist?

First, it is important to examine very briefly the function of the traditional British university so that we can orient ourselves as to its present position and responsibility to the community.

In the past it was the traditional seat of learning, with a strong academic bias. Since World War II it has slowly become a more professional institution with a reasonably well balanced academic and professional orientation. It was during the early development of the professional or vocational era that physical education was first introduced into the Australian universities. It was also at a time when there was little knowledge about man's developing problems in his environment, and it was difficult to convince the academic powers-that-be that the study of human physical performance was a valid university discipline for the latter part of the 20th century and beyond it.

I am quite sure, however, that the climate for a steady development of physical education at the university level is now ripe. This is, however,

only provided that we "fall into line" with the basic philosophy of the Australian university. The following points may help to clarify this.

First, we should develop an academic strand in physical education. Such a course would be centred around the biological and social sciences and would be aimed at producing mainly researchers and university lecturers for physical education. There would be less emphasis on practical biomechanics (activity skills) than in the professionally oriented course, simply because it is necessary to train a researcher in depth, especially in his basic science subjects. Those of us who are teaching in the field of physical education are virtually dependent on the researcher to formulate the body of knowledge with which we educate our students. We must also rely on the investigator in areas cognate to physical education as well as those working in our own applied discipline, if we are to teach the facts about the art and science of human movement.

TABLE II

An Example of a Bachelor of Science Degree Majoring in Physical Education

(Behaviourally oriented)

First Year :		
Soc. Sc.	..	Psychology (measurement and general psychology)
Soc. Sc.	..	Anthropology
Biol. Sc.	..	Human biology
Phys. Ed.	..	Biological basis of physical education (functional anatomy, human physiology)
Second Year :		
Soc. Sc.	..	Social psychology
Soc. Sc.	..	Sociology
Phys. Ed.	..	Biomechanics*
Third Year :		
Soc. Sc.	..	Social psychology
Soc. Sc.	..	Sociology
Phys. Ed.	..	Biomechanics*
Fourth Year :		
Phys. Ed.	..	Physiology of exercise, motor learning and motor capacities, growth and development
Phys. Ed.	..	Sociology of physical recreation, biomechanics*

* The theoretical and practical study of the anatomical and mechanical analysis of human movement.

Unfortunately,[2] at the present time our field is full of "theories". Thus it is that we in the British Commonwealth have hardly progressed beyond the era of "old wives' tales" in physical education, although in the last two decades a considerable body of knowledge has been formulated in Europe and North America.

There will certainly be criticism from some members of the physical education fraternity in Australia at the mention of such a course. They will maintain that everyone must do ALL the basic skill work in order to become a qualified physical educationist. However, the forward thinking professional in our field fully realizes that we in Australia have hardly

progressed in our professional preparation of the physical educationist in the last 20 years.

It should also be emphasized that only 10 to 15 per cent of students would enter such a science oriented degree (Tables I and II). Naturally it would only be the students that can adequately handle the challenging basic courses presented in Australian universities. The remainder entering university-level physical education would do the professionally orientated course to be mentioned below.

TABLE III

An Example of a Bachelor of Education or Physical Education Degree Majoring in Physical Education

(Professionally oriented)

First Year		
Biol. Sc	..	Animal biology
Soc. Sc.	..	Psychology (measurement and general psychology)
Phys Sc	..	Physics/chemistry
Phys. Ed.	..	Functional anatomy, biomechanics*
Second Year:		
Soc Sc	..	Anthropology or sociology
Biol Sc.	..	Human biology
Phys. Ed.	..	Human physiology, biomechanics*
Third Year:		
Ed.	..	Educational sociology, educational psychology
Phys. Ed.	..	Physiology of exercise, growth and development, biomechanics*
Phys. Ed.	..	Professional area—methods of teaching, organization and administration of P.E., history and principles of P.E.
Fourth Year:		
Phys. Ed.	..	Motor learning and motor capacities, biomechanics*
Phys. Ed.	..	Sports medicine, sociology of physical recreation, biomechanics*

N.B.—Practice teaching in physical education would be carried out for 12 weeks, spread over the third and fourth years.

* The theoretical and practical study of the anatomical and mechanical analysis of human movement.

What would university academics think of such a course? Once they realized the need for a study in depth of man's human physical performance they would welcome it with open arms. They have rejected our courses in the past on many grounds (some of them quite invalid) but one of the major reasons is that they have lacked academic depth.

Now let us turn to the other type of professional preparation we should be offering our students to face the immense challenges of the future. The majority (85% to 90%) of our students would follow such a course, which should probably be offered in the form of a Bachelor of Physical Education or a Bachelor of Education Degree (Table III). It should be a four-year qualification with an educational orientation which will equip the physical education graduate to communicate with other graduates as he works in the field.

This course, however, must still approach the subject areas from an academic viewpoint, and the *how* and *why* of human physical performance must be taught, not just the facts; to teach skills in the traditional sense is probably the best way to have oneself ostracized in the British Commonwealth university. After spending a short period of time in an Australian university, the writer agrees with the majority of his colleagues that the skill-oriented course is not university level work. However, if one teaches all skill work with a theoretical kinesiological and mechanical analysis base to it, then it becomes no less a worthy pursuit in a university than physics, chemistry or biology laboratories.

The other major criticism from university academics in the past is that physical education courses have not required the basic prerequisites on which the applied discipline of physical education must be built. There is no doubt that one must have at least basic animal biology, chemistry, some physics and human physiology before one can study exercise physiology. Similarly, one cannot study the sociology of physical recreation adequately without a basic background in general psychology, social psychology, anthropology and sociology.

It is important that this course should have enough flexibility to train teachers for the State and private schools as well as physical educators to work in the community. We have not yet made very much of an attempt to place physical education specialists outside the schools in Australia but there is a definite place for them in the following areas: the armed services, hospitals (in cardiovascular and physical rehabilitation), mental institutions, gaols, child welfare departments, industry (industrial fitness), health clubs (cardiovascular reconditioning), national fitness councils, community health recreation, advanced colleges of education and universities. Physical education specialists work in such places in parts of Europe and North America and are considered to be an integral part of the overall preventive and rehabilitative medical programme.

It is necessary to stress the fact that we must give our physical educationists a high level of training, first and perhaps most important, so that they can do a competent job as educators and social service workers in the schools and the community; second, so that they can communicate with professional graduates in other allied fields, and third, so that some of them can conduct research into many of the medical problems facing man today. Too long have we played second fiddle to many other professions, mainly because we felt inadequately trained when we compared ourselves to them.

To *conclude* this topic, it is necessary to stress that the time is *now* ripe for us to develop a highly respected profession. This is vitally necessary for the physical well-being of man, as he enters the computerized and technological age of the future. Because our profession is so valuable in such areas as preventive and rehabilitative medicine, we must *insist* that our future physical educationists be given equal opportunities for sound academic and professional preparation in the Australian university with all the other basic and applied disciplines. We have a right and an obligation to tactfully demand this, as the writer is certain that our case

is a valid one. If we present it insistently and with conviction, we should have little problem in gaining full acceptance in the Australian university in the very near future.

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Teacher Education for Physical Education in New Zealand

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THERE are two aspects of teacher training concerned with physical education in New Zealand that should be examined. Firstly, there is the professional training of specialist teachers of physical education. This is provided for at the university level. Secondly, there is the training of general teachers for primary teaching and of secondary school teachers with specialization in other fields who are required to have a useful background of knowledge and skills relating to physical education requirements in the school curriculum. These are provided for at the teacher college level.

There is only one source of university specialist training but all teacher colleges provide varied and possibly increasing degrees of specialization and curriculum study. The Education Department also plays some part in teacher training in physical education. In a limited but significant way, so does the New Zealand Association of Health, Physical Education and Recreation. The present situation, therefore, is rather a complex one that is largely the product of evolution.

Each of the agencies concerned with teacher training in physical education can now be looked at in turn. The present form owes much to their past as do some of the problems that still beset the profession generally.

1. The Education Department

The National Adviser of Physical Education advises the Minister of Education on physical education matters and administers the Physical Education Branch of the Education Department. This comprises assistant staff and area advisers.

In-service training courses conducted by area advisers in physical education are set up locally and courses are usually of about two days' duration with about 20 attending. One of the objectives of such courses

is to train what are known as resource teachers who will take information back to their schools and have some responsibility for organization and assistance to other teachers.

Recruitment to the advisory service is now made from teachers trained on what is known as a fellowship course which is conducted at Palmerston North Teachers' College.

2. Teacher College Courses in Physical Education for Primary Teachers

Teacher training in physical education is provided for in the teacher colleges for primary teachers (Division A courses) in several course structures to meet different requirements. Before outlining these, however, it should be pointed out that because of the large measure of autonomy in the colleges there is variation throughout the country in time allotment and course content though, basically, the aims and objectives are the same.

(*a*) *Syllabus Study* This is the basic course for all students training as primary school teachers. Time allocation may range from as low as 20 hours at Dunedin for the three-year course to as much as 48 hours at Christchurch.

(*b*) *Selected Study Courses.* Students entering Teachers' College select a course of study from the eight subjects of the school curriculum in which they wish to acquire some degree of specialization. The study course may be for one, two or three years, according to ability or wish to participate in other selected study courses. Each level, therefore, is designed as a complete unit but is progressive through the three years. A year's study is divided into two semesters with assignments and examinations in theoretical and practical work.

Approximately one-quarter of the annual intake of students (385 at Christchurch) choose physical education as a selected study. About two-thirds of these continue with the study at the second year level. Only the best students (approximately 30) are permitted to study the unit at the third-year level. Those who wish may enter for the NZAHPER Associate examinations since they have already covered much of the syllabus requirements for this. About half the year three selected study group do this.

Students who have progressed through the three levels of selected study in physical education will have had 329 hours of class work apart from their own study and reading. This gives them a substantial qualification in their specialized field and will enable them to become the resource teachers in their schools.

3. Teacher College Courses in Physical Education for Secondary Teachers

There are two colleges for secondary teacher education—one at Auckland and one at Christchurch. The function of these colleges is to prepare university graduates (Division C students) for a teaching career by means of a one-year course of study. Most of these students were committed to teaching on entry to a university by accepting a substantial

bursary (called studentship) by which they are bonded to the Education Department for the number of years they accept the studentship.

The amount of physical education that can be accomplished with these students is often very small. Half of their year is taken up with periods of teaching practice in schools while many continue with additional university studies for which they have time off. The general aim is to provide an introduction to physical education activities in post-primary schools and some competence for those who may later wish to assist with teaching the subject or with games coaching. A minor course is conducted for one term for four hours a week. In this course, students choose three recreational activities and five extra-curricular sports. A major course is offered as preparation for teaching in Forms 1-6. This includes planning of schemes of work and lesson units and the development of teaching skills as well as gaining competence in recreation and sport.

An interesting experiment in teacher education is now being developed at the Christchurch College, embracing most subjects taught, including physical education. A sequential programme is outlined which calls for identification of a specific topic, its relationship to the field of study and an understanding of basic principles. The topic analysis leads to use of acquired knowledge, lesson planning and, finally, mastery of the topic. In the case of physical education, understanding and analysis of skills leads to teaching ability and the acquisition of sound background knowledge rather than mere ability to perform.

There are two special groups at the colleges for secondary teachers for whom special courses are provided.

(*a*) *Division B Course Teachers.* These are university students who are based at either of the two colleges for three years during which time they are expected to have completed five degree units and the Associate examinations for NZAHPER to qualify for a diploma of teaching. There are certain difficulties with this course. Students on the course tend to be of lesser ability than other university students, since most are not aiming at a completed degree and only a very small number (about 20 in three years) are attracted. The Associate examination requires almost three years to complete and failures can hinder the outcome of the course. It is almost impossible to arrange for a timetable of study for physical education with students attending university lectures for different courses at different times.

Members of NZAHPER see an injustice in equating the Associate examinations to one degree unit but hesitate to claim that the examination on its own is sufficient qualification for a specialist secondary school teacher. The Division B trained teacher was intended to become an assistant teacher under heads of departments in schools to help overcome serious staff shortages throughout the country. Because these shortages are still acute (over 100 vacancies a year) it is likely that the Division B trained teacher will be accepted for specialist positions. Some physical educationists fear a lowering of professional standards.

(*b*) *Diploma of Physical Education Graduates.* There are this year about 20 of these graduates in each of the two colleges. Because they

have already studied physical education, however, a special course in this subject is arranged for them. Its purpose is mainly to complete those aspects of their training where it is thought there may be deficiencies. The administrators of the course complain about the broken time where students undertake further university study and about the lack of understanding by school principals. The students complain of an unfruitful year and misuse of the teaching practice periods in schools. They object to being treated as "slave labour" because of staff shortages in schools. There is obviously a need for improvement in this aspect of Division C teacher training involving diploma graduates of physical education.

4. The School of Physical Education

Notwithstanding the contributions of other institutions towards teacher training in physical education, the School of Physical Education at Otago University, Dunedin, is the only source of professional training in physical education in New Zealand leading to an academic qualification. The three-year diploma course has the same admission standards and students qualify for the same university bursaries as for other university courses. In a teaching position, the diploma carries the same qualification grading marks as for a first degree.

The minimum entrance qualification is university entrance with the exception that any person over 21 years of age may enter a university provisional on attaining the required standards at the end of a year. Only a few enter under this *ad eundum* provision. Ordinary university entrance bursaries provide free tuition to all students.

The course has now been operating for 22 years and there have been many changes to course structure, especially in the latter half of this time. Perhaps the most valuable change has been the opportunity since 1968 for students to study selected topics in depth by providing options for specialization over more than one year.

In the three-year course, use is made of several other university departments. The Departments of Biochemistry, Physiology, Anatomy and Education, as well as the School of Home Science and Dental School, all contribute to the course.

As yet no opportunities exist for post-graduate study. The necessity for graduates to go outside the country for this is in some ways an advantage since it produces a steady feed-back of fresh ideas from a great variety of sources.

Men students must attend the one-year (Division C) courses at either Auckland or Christchurch Colleges of Secondary Teaching to qualify as teachers. Women students may be exempted, though about half of them elect to attend while others may return later on full teaching salary. The teaching qualification appears to be necessary to ensure graduate status for graduate study overseas.

A degree course has been discussed and planned since the diploma course was established, but still not agreed upon, though hopefully anticipated within two or three years.

5. The New Zealand Association of Health, Physical Education and Recreation

Discussion of institutional courses has already revealed the widespread use of the NZAHPER Associate examination. Apart from the utilitarian reasons for sitting the examination, it is also used to advance professional status. Diploma graduates use the examination as an incentive to continue study and as an additional qualification. It can scarcely be considered as a post-graduate qualification though the standard is such that not all diploma graduates succeed in passing all subjects for which they enter.

The Associate examination is a prerequisite for advancement to the status of Fellow, for which an original thesis must be submitted. To date, only three people have advanced to Fellow, though the number of Associates is growing yearly. Candidates must be members of the NZAHPER.

The Associate course was originally intended as a home study course and is essentially still of that nature, though teacher colleges are increasingly basing instruction on the prescribed syllabus. Successful students are able to complete the examinations in just over two years except that diploma graduates are exempt from the first year's work (or Stage 1 subjects). After completing all the examination requirements, candidates are given an exacting practical examination in teaching skills.

Candidates are required to complete assignments during the year and are assisted with reading lists. The Association has now accepted responsibility for conducting refresher courses every two years. These occupy a full week and are orientated towards preparation for the Associate examinations.

6. Summary and Conclusions

Teacher training in and for physical education in New Zealand presents a complex picture. Some of the courses have grown out of earlier provisions for physical education. With this process of evolution we have made many satisfactory advances but have also inherited many problems. The source of many difficulties stems from the attitudes of administrators in education.

Teacher college courses, already extremely diverse in their function, are complicated by the autonomy of the colleges. No two colleges make the same provision in either time allotment or coverage of subject matter. There has been some experiment in course structure and some of this is encouraging. However, there is obviously a need for more collaboration, not only among the colleges themselves, but with the NZAHPER, whose main concern should be the preservation and raising of professional standards. There is a strong danger that the common use of the Associate examination for purposes other than the advancement of status, as was originally intended, may manœuvre the Association into the position where it becomes more an agent for institutional bodies than the professional body for qualified physical education teachers.

In spite of the complicated nature of teacher training in New Zealand and the seeming conflict of interests at times among the institutions concerned, there are reasons for viewing the future with some confidence. Perhaps the most hopeful sign is the growing sense of profession among physical education teachers. In developing this, the high academic standing of the School of Physical Education, the increasing quantity and quality of research within the country, the widely accepted institutional use of the NZAHPER Associate examinations and the infiltration of physical education teachers into teaching and administrative positions of responsibility, have all made contributions. This is a situation which can only grow and reflect beneficially on teacher education.

"The Challenge of Recreation"

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IT is my task to offer you a challenge in the field of recreation. By going back and re-appraising the field of recreation as a whole, I will try to expose problems within the field of recreation and challenge you to see a purpose for action and new endeavours in recreation.

As a newcomer to the field of recreation, I find it difficult to gain a real structure or framework of reference in which to work. There seem to be many definitions and many confusing terms in the field of recreation. I find it difficult to differentiate between leisure, sport, athletics, fun, recreation and many other terms which seem at many times in speech and print to mean the same thing. There is a challenge to look for consistency of definitions within the field of recreation. There is a definite need for a common basis in looking at the field of recreation.

Leisure and recreation, for instance, have each been defined in various ways. I am forced to wonder whether leisure is something more than discretionary time or a time when a person is free to do what he chooses; I wonder if leisure is not merely a time block, "but a force, which is not only the germinating concept of art and culture, but a pause during which a participant gains glimpses of values and realities that he ordinarily misses in everyday life". I wonder whether leisure is the time a person spends free from his work, apart from that necessary for eating and sleeping.

Let us consider the term "recreation". Here are two definitions of recreation. First, recreation embodies those experiences or activities that people have to engage in during their leisure for the purpose of pleasure, satisfaction or education. Secondly, recreation is an enjoyable leisure experience in which the participant voluntarily engages and from which he receives immediate satisfaction.

To further confuse the term recreation, there is another term called "community recreation". Sometimes it appears as an aggregate of constructive, socially approved activities and services conducted and sponsored by tax supported voluntary and commercial agencies and groups of people within a defined communal area. Out of all this there must be some common basis for determining definitions and terms associated with

recreation. I challenge you as recreationists to provide a more coherent and co-ordinated structure for introducing people to the theory and description of recreation.

Someone said the urgent question of the 20th century in this booming age of leisure is not "What can I do?", but "Who can I be?" We need to look again at what recreation is doing and where it is going. Other challenges of the recreational scene can be drawn out and highlighted by looking at the historical setting and development of recreation.

In primitive cultures, work, recreation and survival were integrated. In modern civilization we have organized rather than integrated recreation. Hemming has suggested that when a large civilization replaces a simple one, creativity is limited because of impounded conformity.

The challenge is to elicit creativity from the individual and restore easy communication between individuals in a civilization that is trying to over-organize recreation at a local government, State and international level. It is the individual and his recreational needs that are important in recreation, not the organization.

The impact of modern technology on society has been to produce, we believe, a better standard of living, but it has also accentuated problems in the field of recreation.

It has resulted in a greater availability of time for leisure pursuits. How has modern technological society changed to accommodate for an increase in leisure time? This in itself challenges the recreationist to adapt programmes and facilities to meet the need of urban technological society.

Leisure involving games is conducive to an environment of equality that is not ordinarily found in work pursuits. This provides an important regenerative element, for in leisure play the individual "avenges himself upon reality, but in a positive and creative way". When leisure attains this active mode the relationships between individuals may be enhanced in a manner that modern work fails to provide. Leisure can thus express an educative function in that it gives incentives to perfection. Unfortunately, such motives all too often are corrupted by professionalism in which the quality of pure play is leached out in order to convert leisure and play into a form of business. Once this is done, the confrontation of work and leisure is eliminated and what was once leisure is enveloped by the same work attitudes that exist elsewhere in society. The activities, sports, movies, television—are not leisure even for the spectators who fill the stadiums simply to engage in an expenditure of time. Hero worship replaces the admiration of skill while violence dominates the activity itself.

Our challenge is to take recreation out of the purely commercial field so that people can be educated to use it well, and for their own well-being. We need to counteract the commercial picture of recreation put forward by the mass media and show people their need for recreation if they wish to live life to the full.

This brings us to look at the philosophical problems concerned with the challenge of recreation. If philosophy deals with aims, objectives, values, programmes and the appraisal of terms, I find little of value in

what I have heard or read in the field of recreation. There is little correlation between the aims and objectives stated by a recreational programme and the actual end result. There is a tendency to concentrate on the skills and forget the purpose behind teaching the skill.

The challenge is to prepare a coherent co-ordinated philosophy of recreation. When we plan a programme do we take into account any view of the "nature of man". Does our view allow man to be anything more than a body, something to be conditioned to perform a skill. Do we teach him something that involves his mind or his spirit. Whatever our view on the "nature of man" is, or whether it has all or none of the components mentioned above, it will determine what sort of programme we will eventually devise.

If culture depends on the transmission of values to the people within it, how can recreation develop or maintain a value pattern. I wonder whether recreation can have a stated value pattern. You can move from one recreational scene geographically to another and feel purposes and values to be different. Someone suggested that recreational programmes in some centres are little more than a substitute for the war urge. We need to resolve for ourselves the following types of questions. How do we inculcate the values in which we or the employing authorities believe, into a recreational programme? Do we ever consider the purpose or value of our work? Is it important in this age to look at value patterns if our society is changing so rapidly? Can recreation have a stabilizing influence or offer cultural benefit to our world as it moves ahead? Are any of the following aims suggested by Yukic important in community recreation?

1. To achieve a quality of leisure activity which sets a level for society and contributes ultimately toward improving American living and civilization.

2. To enrich community living through opportunities for satisfaction of man's need of fellowship.

3. To allow for individual self-realization in physical well-being, recognition, prestige, new adventures and emotional outlet.

4. To enhance human relationships through a process of improvement of social skills, group experiences; and by a refinement of habits, attitudes and appreciations.

5. To promote economic efficiency. Recreation may enable an individual by providing a physical or mental change from work to work more effectively.

How can we see individual recreational needs in the perspective of large group or community activities? What do you do when you look at the school situation and find that recreation is treated as a frill rather than a necessity? How can the individual be led to discover where their own specific recreational needs can be met? Where do you learn about life-long sports and activities if they are not introduced as part of the school curriculum?

Some of the aspects which seem to be brought out in programmes are competition, the desire for excellence, beautiful looking organization

patterns and skills. These factors are important, but too much emphasis on any one area tends to create problems.

Two other aspects associated with programme planning in our modern society need to be highlighted. The first one is concerned with the education of leaders and the second with research.

The greatest challenge to recreation at the moment is provision of qualified leadership. It amazes me to see the types of people that are running recreational programmes, helping or advising people in the field of recreation. A number of mistakes are being made because highly skilled professionals are not employing their enthusiastic but untrained assistants in the right way. Amidst a world lag in the provision of educated leadership, recreation can do nothing more than provide mediocre programmes. This situation will continue unless better use is made of the limited professional resources available and action is taken now to relieve the shortage by planning for the development of leadership potential.

Many people are trying to give dignity, status and professional values to recreation without showing evidence of research to support or substantiate their position. Recreation is a discipline in that it has a body of knowledge of its own, a set of skills to pass on, and an ever expanding area of research. Too much emphasis, however, has been placed on physiological aspects of sports and fitness and not enough on the mental, social, emotional and educational aspects of recreation. Many of the philosophical aspects are awaiting research. There is a demand within society, particularly from industrial groups to prove the worth and need and economic values of recreation in a society which is supposedly affluent.

Many people in recreation consider their vocation a second-rate one. They do not seem convinced of the value of their work, they sell themselves short rather than accept the fact that they are just as important, if not more important, than any other aspect of education for living in the world of today. We should not need to be convinced of the worth of our field of endeavour. We need to accept the fact that there are problems in the field of recreation yet we need to go beyond this point to accept the challenge to work for their solution.

We need to take responsibility and act so that recreation may become available and suitable for the needs of everyone.

Our greatest challenge is to help people to involve themselves in meaningful, worthwhile, creative recreation.

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"Blueprint for Tomorrow"

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THE subject "Blueprint for Tomorrow" places me in the role of seer and prophet. Presumptuous perhaps, but it would be presumptuous indeed if I did not make it clear that my observation will be confined to recreation in Australia as I see it in the future.

An adequate definition of recreation has so far escaped me. Lack of a concise statement may permit the outlining of some aspects of recreation upon which we may agree. Leisure is a pre-requisite of recreation—the more abundant the leisure the greater the opportunity for recreation. It flourishes to best advantage with security and freedom. Liberty to choose also needs aspiration, motivation and application. It can rise to great heights of achievement, bring satisfactions and joy in the effort. The pursuit of excellence will require the accrued knowledge of others, deep absorption and self-imposed discipline. It is also present in the happy laughter of play. It seems to flourish best in groups, but many individuals find full expression for latent talents without group contact. It pertains to all ages. Security, liberty and freedom being present, recreation may usher in education at its best—a truly æsthetic and social experience. May I, to help these assumptions, borrow from T. P. Nunn: "upon what basis does that historic claim to liberty rest if not upon truth, seen darkly by some, by others clearly envisaged, that freedom for each to conduct life's adventure in his own way and to make the best he can of it, is the one universal ideal sanctioned by nature and approved by reason; the beckoning gleams of other ideals are but broken lights to this." It seems to me that in recreation, some of Nunn's beckoning lights come shining through for Australia. May I go further—and again I borrow from Nunn, continuing his quote: "It offers the one sure foundation for a brotherhood of Nations. Dare we take a lower and can we find a higher ideal to be our inspiration and guide?"

The astrologist consults the stars, the weather profit his charts of temperatures, pressures, the cloud formations by satellite—so I must refer to the Australian economic and social climate which I find very propitious to recreation and about to cross our moving screen.

- We are on the threshold of great affluence.
- We have an abundance of new leisure.

- We enjoy a high standard of living, equally shared.
- Twelve million population offers equality of opportunity.
- A ferment of ideas, cultures, in progress with the influx of migrating peoples from many lands.
- A recency of civilized history, few inhibitions imposed by tradition.
- A nation which prides itself on its vigour, and with a love of sport a part of its culture.

There is a vacuum in regard to organized recreation outside of our considerable experience in sport. Conservation, pollution, are now matters of public conscience. National parks, public recreation space are well implanted with planners and advisers at all levels of government. There is a proliferation of clubs: grog clubs, sports clubs, service clubs, youth clubs, senior citizens' clubs. Recreation is happening at the local level which is as it should be, but in my view there should be more State and national involvement soon.

The ICHPER Congress may help to polarize these unrelated activities and lead to a clarification of our recreation guidelines. The APEA is our strongest ally in recreation associated action. We would hope that the Australian Recreation Association can knit together the many and varied organizations interested in this field. The Association aims to improve communication, provide services, gather resource material, technical information including facilities, and generally promote recreation in Australia. In my blueprint for the future I see associated and related action as basic to success. We would hope that we can bring our best minds and all accrued experience into this association—that there is a place for all interested groups and persons. Inasmuch as the field is so vast, we have created divisions which include professional training and employment; groups—local authorities, clubs; education—schools, colleges and universities; recreation therapy; conservation and parks; camps and camping; tourism, business and commerce.

The Association was constituted in 1967. It has, at present, one hundred members. We are in the process of a membership drive and the target in 1970 is 1,000.

Professional Training

There are a number of training courses operating in various areas including group work, youth workers, social service. The only Diploma of Recreation Course operates under the authority of the Minister for Education and Science at the National Fitness Centre, Narrabeen. The student enrolment is about 200. The first 10 diplomas have been granted and we expect this total to exceed 18 in 1970. Mr. Butt expressed my blueprint for the future excellently in our group session yesterday—a school for specific purposes as an autonomous college of advanced education, granting diplomas and, later, degrees in recreation and possibly physical education. We would hope to develop a three-year course, but we would continue the present four weeks' intensive courses termed "sandwich courses", to provide for training for those already employed.

Accreditation with colleges and universities granting degrees is being negotiated for specialization in fields requiring advanced training.

Staff and students from Sabah, Ceylon, Hong Kong, China, Japan, New Zealand, the United States, Canada and Thailand have participated in our recreation training. My blueprint. an international college with student and staff exchanges—a peace corps of recreation experts.

Groups

Local authorities, Departments of Education, National Fitness Councils, youth organizations, community centres—to mention some of the organized fields of recreation—constitute the major field of placement of trained recreation staff. In my blueprint for tomorrow, I would see the continuance of voluntary leadership with available training to suit their specific interests, but the emergence of full-time career employment with appropriate professional training. Melbourne, Sydney, Willoughby, Kuring-gai, Warringah, Tasmania, Queensland—to name only a few—have recreation officers, and organizations such as the YMCA have had employed staff for many years. I foresee, within a decade, over 1,000 such persons in full-time employment.

Education

Universities and colleges—almost without exception—conduct student recreation programmes consisting mainly of sports, but of recent date new recreation activities and improved facilities have made their appearance. The schools, particularly the secondary schools, have become increasingly aware of the need to prepare the students for a recreation experience in later community life and student club programmes are no longer rare. In my blueprint I see a related programme of health, physical education and recreation operating in and out of school time with an adequate trained staff. Further, I see no major difficulty in conducting recreation programmes for community groups using the school facilities—we have been doing this for some years with no major problems. If I had my way I would begin to plan the schools for this future school-community use as a major community recreation resource. I have always been disturbed at the hours wasted and economic loss during evenings, weekends and vacations when these costly facilities provided by the public are closed. The Department of Education, N.S.W., has a recreation staff employed in a variety of educational fields.

Recreation Therapy

The upsurge of interest in fitness has resulted, in part, from the alarming increase in cardiovascular disease. This has produced a public awareness of the importance of physical recreation. Jogging clubs have appeared almost spontaneously, recreation facilities proliferate in registered clubs and health studios are commonplace. Local authorities take pride in the recreation opportunities they have made available—community centres, pools, parks are well to the fore in town planning and new housing developments. This recreation mass therapy continues to expand.

The use of recreation as a method of therapy is well established in specific fields: psychiatric hospitals now have recreation officers; we have heard how sports medicine assists in fitness conditioning; the social misfits of child-welfare and the prisons are assisted back into society through recreation; one of our speakers has mentioned programmes for the handicapped.

Conservation and Parks

Commonwealth and State Governments, in recent years, have made vast land provision for national parks. Since the War we have overcome many of the deficiencies in our parklands. Increased leisure and improved roads make the need of further park development apparent. We have park administrators, rangers, forestry and maintenance staff, fire protection, but, as yet, few recreation staff to bring to the public the full potential of these recreation areas. In my blueprint I can foresee a large field for employment and training of such staff.

Camps and Camping

Camping in permanent camps for the school age is well established in all States. In N.S.W. about one in every four school children experience school camping in National Fitness camps. We have not, as yet, embarked on family camping, although many youth organizations have established their own camps. Commercial camping is limited to snow areas and caravan parks, but planning is proceeding for recreation travel camps.

Tourism

The Director of Tourism yesterday indicated the billions of dollars being expended on travel at the present time. It has become the world's biggest business. In itself it is a form of recreation, but the relationship of travel with the popular recreations of the country has mutual benefits. My blueprint includes highly specialized recreation consultants, organizers, guides.

International Role of Recreation

May I return to my earlier quote: "It offers the one sure foundation for a brotherhood of nations." Dare we take a lower and can we find a higher ideal to be our recreation inspiration and guide?

The Development of Outdoor Pursuits Centres under the Control of Education Authorities

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SINCE World War II there has been a vast increase in the development of outdoor pursuits within what we now recognize as the field of physical education. Mountaineering, canoeing, sailing, underwater swimming, caving, camping and ski-ing, orienteering and pony trekking are the main pursuits from which the basic programmes of work in outdoor pursuits centres are selected.

Even before 1939 some education authorities had started camping in areas well away from their own localities. Initially, most of these authorities used their camps to provide cheap forms of holidays for children who, at that time, lacked opportunities in their homes for going on holiday. In my authority, which is part of a highly industrialized region, this was certainly true, but gradually the camps were used increasingly as situations for teaching the basic skills of camp crafts needed for life in any large standing camp. Schools arranged programmes to meet their own needs and, although there was an emphasis on the study of the locality from historical, geographical and nature study points of view, some light-weight expedition work from the base camp was begun. Since the authority's camp was in a mountainous area—this was fortuitous rather than planned—it was imperative that the teachers taking children to camp should have courses not only in camp craft but also in mountaineering. This was the least that could be done to ensure that the safety regulations normally imposed in the 1950/51 period were understood and that the courses in mountaineering were sponsored by the Education Authority. Annual mountaineering courses were organized by my authority for seven years prior to the purchase of a building in the Snowdonia National Park in 1958.

Before this date only one local Education Authority outdoor pursuit centre had been established in Britain. In a survey of centres published

earlier this year by my professional Association, the BAOLPE, it is shown that there are now 36 outdoor pursuits centres in existence in Great Britain, of which 19 are run by education authorities. Although I am sure that you will readily appreciate the worth of this work, I would like to underline what I consider to be the chief values.

1. Living together in any residential centre is in itself of great educational value. This opportunity is usually not available for most children. In an outdoor pursuit centre children live and work with a partner or with a small group and the responsibility for organization is very much on them.

2. Such centres provide an enlargement of opportunity which can be of value to an individual when a choice of leisure activity is made. Children receive *encouragement* to carry on with outdoor pursuits and are given information on how they are able to do so when they leave school.

3. The children get the opportunity to learn sound, safe methods from members of staff who are enthusiastic and highly qualified.

4. We all realize that our modern environment shelters us from many hardships. It is my belief that, providing the best equipment is available, and proper safety precautions are taken, children should experience some hardships, for example, drenching rain, intense cold, intense heat (a little difficult in the United Kingdom), inky darkness, solitude and (the fast disappearing) silence.

Children should be aware that there are long horizons of the importance of attributes such as punctuality, of skills like accuracy with map and compass, and what I call "retrospective enjoyment". The key note is that the activity should be satisfying whatever the difficulties to be faced in doing it.

What of the future? There is a gradual tendency to move away from regarding mountains, lakes and rivers as useful only for physical education. Field studies are playing a greater part in the curriculum of outdoor centres and there is a greater emphasis on the study of the environment. It is now recognized that there are various planes or levels of adventure. Although physical conquests often still provide the greatest challenges there should be opportunities to use a camera, to study the rocks, the living things around us and the history of the area in which centres are located.

There has also been a move towards a more intensive study of safety factors. Centres have been in the forefront of experimentation and their work has influenced the attitudes now taken by responsible national organizations whose example is emulated in turn by all those who consider themselves to be devotees of outdoor pursuits. There will undoubtedly be continued expansion of facilities for outdoor pursuits which will maintain the high standards set by those already working.

Someone once said: "Only when people are in extremity, and realize that they are so, are they likely to act on fundamental advice for their salvation." Local Education Authority centres in the United Kingdom are playing a great part in helping people to realize that this is the wrong emphasis for outdoor pursuits in an educational context.

Recent Developments of Outdoor Education and Outing Activities in Japan

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1. Definition of Terms

I HAD an opportunity to make a report on the worldwide survey on outdoor education at the 11th ICHPER Conference, Dublin, Ireland, in 1968. On this survey I found so many terms related to outdoor education were used in each country: besides a term of outdoor education, such terms as outing activity or outdoor activity, outdoor pursuit, school camping, adventure training and education in the fresh air, etc. In my country, a term of outing activities is more popular than outdoor education.

In my country, this outing activity is defined as follows: "Outing activities are those which are carried out in natural environment to appreciate, understand and love nature; such activities as hiking, cycling, camping, orienteering, mountain climbing, fishing, boating, canoeing, yachting, ski-ing and ice skating are included."

The following objectives will be achieved through these activities.

(1) To master basic skills related to these outing activities and to improve physical fitness and to foster attitudes towards healthful and safe living through participating in these activities.

(2) To promote profound understanding of nature, to understand the importance of conserving nature and to make every effort toward conserving our natural environment.

(3) To foster social characteristics such as cooperation, leadership, obedience, initiative and self-control, etc., through participation in outing activities.

The Japanese meaning of outing activities is closely related to physical activities which are practised in the natural setting. However, when we go camping we include many types of activities such as cooking, arts and crafts, singing, sketching, poem writing, reading, as well as various types of games and sports, so it is not appropriate that outing activity should

include physical activity only. Outing activities include various kinds of pursuits which are carried out in a natural setting as well as physical activities in the natural environment: it is an inclusive term.

On the other hand, outdoor education is a rather new concept in the field of education in Japan. In a broad sense it is defined "to utilize outdoors for education" or "a means of curriculum enrichment through experiences in and for the outdoors". It is not a subject, but it is a method of education utilizing outdoors or natural environment for achieving educational goals. It relates every subject in the school programme.

In this sense, outing activities are subject matter in outdoor education; in other words, outdoor education can utilize various activities as its content. The relationship between outdoor education and outing activities is the same as the relationship between physical education and sports. As you know, various kinds of sports are the subject matter of physical education.

2. Brief Historical Development of Outdoor Education in Japan

Of course, camping has been held before World War II by YMCA, YWCA, Boy Scouts, Girl Scouts and other youth organizations; however, remarkable development has been made after World War II through Government support as well as efforts by the schools and various voluntary organizations. The first guide book on camping for youth was published in 1953 by the Ministry of Education. It was the first book which was published by the Government Office suggesting guidelines for organized camping for youth, and in 1955, the Ministry of Education began subsidizing the local board of education for the promotion of organized camping in every prefecture. The books "Guide for Educational Camp" and "Safety Procedure of Outing Activities" were published by the Ministry of Education in 1956.

In the enactment of the Sport Promotion Law in 1961, outing activities as well as sports are further emphasized by the Government. The following article is included in the law.

"In order to popularize and encourage such outdoor activities as hiking, cycling, camping and other activities performed for sound development of mind and body, the State and local public agencies shall endeavour to take necessary steps, such as constructing trails and establishing camp sites." Since then, further development of outing activities has been made and the Government has started new steps for giving subsidies of 20 million yen for the construction of outdoor education centres by the local Board of Education. For example, Shizuoka Prefectural Outdoor Education Center, located at the foot of Mt. Fuji, was the first one.

3. Recent Trends

(1) *Programme*

Through these efforts, the number of schools which prepare outdoor education programmes is increasing every year. Most of these programmes are not sufficient from the viewpoint of overall outdoor education objec-

tives, however, the content of the programmes is improving every year. I would like to share a few examples with you:

(*a*) *High School Programme in Nagana Prefecture.*—It has been held for several years, however, it was not a required programme for all students. To ensure participation of all students and to make the programme more meaningful, new policy is established as follows:

10th Grade Experience of Outdoor Living.
11th Grade Experience of Outdoor Living.
12th Grade Mountain Climbing.

Main activities which are offered in this outdoor living are as follows:

Lecture by the school principal;

Activities: outdoor cooking, games and sports, singing, sketch, arts and crafts, hiking and camp fire.

These programmes were planned and carried out by the cooperative effort of the physical education teacher, music teacher and arts and crafts teacher as well as home-room teacher. The following observations or comments were pointed out:

1. Aims and objectives of this programme were defined more clearly than before and meaningful experiences were provided compared with the former programme which was conducted on the free choice basis.

2. Further understanding among the students and between teacher and students was achieved.

3. Delightful outdoor living experiences were developed by the cooperative effort of teacher and students.

4. Various types of activities were presented.

5. Outdoor living experiences were a great experience in the natural environment and further understanding of nature was achieved.

Students paid 2,150 yen for three days' outdoor living experiences.

4. Leadership Training Camp in a Junior High School in Aomori Prefecture

In Yokohama town, Aomori Prefecture, northern part of Japan, a junior leader training camp is sponsored by the local Board of Education. There are two junior high schools and four elementary schools in this town. This leader training camp is carried on a free choice basis, however, from 4th-grade children to 8th-grade children all participate in this camp.

The objectives of this camp are as follows:

1. To foster leadership ability among the children.

2. To learn and understand individual roles and responsibilities through group living in the outdoors.

3. To have a new and creative experience in the natural environment.

4. To appreciate and understand nature and the importance of conserving nature.

5. To develop sound mind and healthy body through participating in outdoor living.

This junior leader training camp is carried on in the primitive camp site which has a small stream. It is located four kilometres from the town, and is easy to reach. Contents of the programme are as follows:

Lecture: Why do we go to camp? How to find a camp site and set up tent. Camp food and Way of Cooking.

Activities: Group singing, folk dancing, hiking to the Eboshi Mt. (508 m.), camp crafts and outdoor cooking, low organized sports and games, nature study, social studies and camp fire.

Though the camp is only for two nights and three days, children get new and exciting experiences with trained leaders in the primitive type of outdoor living.

Besides the school-planned programme, several outdoor education centres which are established by the prefectural Board of Education are now providing basic or common programmes and facilitating utilization of these facilities for the schools. For example, Nara Prefectural Outing Activities Centre, which was established in 1969, prepares a guide book for school teachers. This guide book explains how to utilize this centre for a meaningful outdoor education programme. Contents are as follows:

1. Preliminary planning.
2. Geographical and historical explanation in and around the centre.
3. How to utilize this centre:
   basic daily procedure,
   morning assembly and evening assembly,
   dining rooms, toilets, lodging facilities, etc.,
   safety and service activities.
4. Camping activity.
5. Outing activity.
6. Other outdoor education programmes.
7. Indoor facilities for outdoor education.
8. First aid and safety procedures.
9. Others.

Though each school which wants to use this centre may develop its own outdoor education programme, this guide book makes it easier to plan the programme.

(2) *Leadership Training*

As I mentioned at the 11th ICHPER Congress, Vancouver, 1967, there is still only one university which offers an outdoor education course for major students—that is the Department of Outing Activity, School of Health and Physical Education, Tokyo University of Education. However, the number of universities which require an outing activities course for physical education major students is increasing.

At the same time, in-service training courses for outdoor education are more emphasized by the Ministry of Education. For example, the Sports Section, Bureau of Physical Education, Ministry of Education,

sponsors a short training course for outdoor education for five days every year. Contents of this short training course are as follows:

Lecture: Aims and objectives of outdoor education;
How to plan and develop the programme in relation to the school programme;
Health and safety in outdoor living;
Nature study and conservation.

Activities: Hiking, camping, orienteering, outdoor cooking, singing and camp fire, etc.

About 250 teachers and youth leaders participated in this course which was held at the Asagiri Highland Outdoor Education Center, Shizuoka Prefecture and divided into three groups such as camping, cycling and hosteling in this year.

Moreover, every prefectural board of education sponsors a short training course for outdoor education for three days utilizing participants of the central short training course which was mentioned before as leaders, with cooperation of officials of the local Board of Education.

(3) *Facilities*

According to the recent survey on the sports and physical education facilities in 1969 by the Ministry of Education, the number of camping sites is 1,275. This is an increase of about 100 since 1965.

Number of Camp Sites in 1969

Established by the public agencies	624
semi-public	154
commercial	351
others	128
Total	1,257

Great developments have been made in establishing comprehensive outdoor education centres in several prefectures and big cities. I have already mentioned the Osaka Prefectural Outdoor Education Centre and Hyogo Prefectural Outdoor Education Centre. After this, a new outdoor education centre was established in Nagasaki Prefecture, Nara Prefecture and Shizuoka Prefecture. These centres have a camping ground, sports field as well as a main administration building which has an office, dining room, meeting room, assembly hall, lodging facilities with accommodation for about 200. However, there are such great demands for these types of facilities in each prefecture that every school cannot use these facilities and they can stay only two nights and three days.

For encouraging the establishment of these types of outdoor education centres, the Ministry of Education gives subsidies every year. Although the amount is not sufficient, it does stimulate further development of outdoor education throughout the country and each prefecture is now trying to provide well planned and equipped outdoor education centres with trained leaders.

5. Conclusion

As I mentioned before, outdoor education is a rather new field, so there are many things to do and we are facing various problems. However, I personally feel it is very important to promote outdoor education in the age of industrialization, urbanization and the age of public nuisance and hazards. It is the time to conserve nature and utilize nature effectively for human beings. Specialization is going on in the field of science, even in the field of physical education. It is a natural phenomenon. However, generalization is also necessary in the field of education. Outdoor education is a method of education trying to approach the human beings as a whole based on the scientific facts.

I feel very happy that I could exchange ideas, information and resource materials concerning outdoor education on this great occasion of the ICHPER Congress.

"Providing Innovation Experiences Through Evaluation of Individual and Group Progress"

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My portion of today's programme is concerned with developments in the area of evaluation in the United States.

It is generally recognized by health and physical educators in the United States today that evaluation is an essential part of good programme development. They know that if they are to achieve the objectives that have been set forth by their profession that they must be skilled in the use of a variety of instruments, techniques and methods of evaluation. The responsible educator, therefore, finds himself engaged in a continuous process of evaluation, utilizing the tools of measurement for many reasons.

In addition to the traditional use of measurement for grading purposes, usually by determining progress, we are also commonly using it for such vital purposes as (1) determining the needs of individuals and of groups, (2) classification of individuals, (3) assisting in the determination of strengths and weaknesses in materials, methods and teaching procedures, (4) motivation of students, and (5) evaluation of the outcomes of physical education in the light of our stated objectives.

I might interject at this point that the objectives of physical education in the United States are commonly considered to be: (1) Development of physical fitness and organic efficiency, (2) Neuromuscular or skill development, (3) Interpretive development (including knowledges and understanding), and (4) Social and emotional development.

Instruments have been developed which attempt to measure outcomes for each of these areas. It is not possible in our time allotment this afternoon to even begin to discuss all of these devices. There are, however, several good texts and bibliographies available in the United States which interested persons may consult for listings and descriptions of evaluation instruments in health and physical education. In addition, the American Association for Health, Physical Education and Recreation attempts to make its members and all interested persons aware of developments in this

field through publications such as this one listing *Evaluation Instruments in Health Education* and through annual listings of completed research in health, physical education and recreation. Physical educators have also sometimes found instruments developed by other disciplines such as psychology and sociology to be useful in measuring certain outcomes. It is the responsibility of the prospective evaluator to be certain that the technique which he employs is that which is most suitable for the intended purpose.

With this in mind, I would like to share a few recent developments in measurement and evaluation in the United States. In the 1950's, educators in the United States became quite concerned over the results of the Kraus-Weber tests which seemed to indicate a lack of physical fitness on the part of American children when compared with European children. As a result, President Eisenhower established the President's Council on Youth Fitness, and in 1958 the AAHPER youth fitness test was developed with national norms for boys and girls in grades 5-12. This test was revised in 1965 and new national norms were established at this time. It is of special interest because it represents the first attempt by the physical education profession in the United States to establish national norms. The AAHPER youth fitness test receives wide publicity through the various news media, and it is possibly used more than any other test battery by physical educators in our country.

The special committee who selected the test items was guided by the following criteria: the tests should be reasonably familiar; the tests should require little or no equipment: the tests could be administered to the entire age range of grades 5-12; the tests should measure different components of fitness; and, with the exception of pull-ups, the tests could be given to both boys and girls. The items which comprise this test battery include: pull-ups (for boys), flexed-arm hang (for girls), sit-ups, shuttle-run, standing broad jump, fifty-yard dash, softball throw for distance, and the 600-yard run-walk. Since this battery includes abilities which underlie motor performance, but are not essential for basic physical fitness, it might be classified as a measure of motor fitness.

Many good sport skills tests have been developed in the United States; however, there has appeared to be a need for nationally standardized tests to remedy what some persons have regarded as a weakness in the field of physical education. Accordingly, in 1959, the American Association for Health, Physical Education and Recreation initiated an ambitious project to develop standards for all of the sport activities which are included in programmes of physical education. The AAHPER Research Council decided to first establish tests and norms for 15 of the sports most frequently found in school physical education programmes. Following careful research and preparation, the skills test manual for the first activity was published in 1965. Since that time, work on six more batteries of tests has been completed and the appropriate test manuals published. These include American football, basketball for boys, basketball for girls, softball for boys, softball for girls, archery and volleyball.

It is of interest to note briefly the criteria which are being applied in the development of these test batteries. First, in relation to validity, the

tests are designed to be as nearly identical to the skills being measured as possible. They are intended to measure performance level rather than to predict potential ability for the specific sport. Preference is given to a test which is a method of practising the skill. In this way the student can practise a skill and be tested on it at the same time. Instructions for administering the test must be clear, and it should have no unusual requirements as to equipment, space, time, money or leadership. Other criteria relate to reliability, variability, scoring and the control of extraneous influences.

Thus far, more than a million scores have been used in establishing the percentile tables. It is the plan of the Association to publish the appropriate skills test manual as the norms are completed for each particular sport. These manuals are being favourably received by the physical education profession, and it is felt that they will be a positive factor in improving teaching, in the greater motivation of students, and in more effective evaluation of skill performance.

Still another project of our national association has been a two-fold pioneer effort: (1) to define and set down the body of knowledge in physical education, and (2) to provide a basis for evaluation of knowledge and understandings in physical education through the construction of written standardized tests. This effort, known as the Physical Education Knowledge Test Project, has resulted in the preparation and publication during the past year of the manual on *Knowledge and Understandings in Physical Education.*

We should remember that one of the primary purposes of this book is to serve as the basis for instruction in preparation for written tests in physical education. The preparation of these AAHPER cooperative physical education tests has been placed in the hands of the widely respected Educational Testing Service of Princeton, New Jersey. It is planned that there will be two final forms for grades 4, 5, 6; two for grades 7, 8, 9; and two for grades 10, 11, 12. Plans are for the tests to consist of approximately 50 items, with each item having four multiple-choice options. The testing time is to be 35-40 minutes. Norming editions of the proposed tests have been given, and it is anticipated that these tests in final form will soon be available for use with standardized tests from other areas of the school curriculum.

Needless to say, the complexity and magnitude of developing instruments of this type has demanded contributions and cooperation from many, many dedicated members of our profession who believe in the importance of responsible evaluation.

Turning now from these significant national projects, there are a number of other areas which are receiving special attention from health and physical educators. As we all know, a field which is attracting much interest at the present time is that of perceptual-motor efficiency. Educators and researchers are in general agreement that a significant number of children have learning disabilities stemming from a variety of causes, but with one thing in common—this is a discrepancy between what would seem to be their educational capacity and their actual functional level, especially in regard to reading and language disorders.

In an attempt to help these individuals, some persons are attempting to use movement as a therapeutic agent for these exceptional children. In some instances claims have been made for certain structured movement programmes involving activities such as crawling and cross-patterning or other types of activities which are quite controversial. Several theories have emerged, however, which do seem to suggest that aiding the child in the development of better movement patterns may assist in remedying other educational deficiencies. *All theories, even though unconventional, should be explored.* We are fortunate that we have persons such as Mrs. Sheppard here in Australia who are doing just this.

At any rate, it is the belief of many physical educators that an attempt to improve the perceptual-motor capacities of children through certain movement experiences will play an important role in education in the future. Accordingly, some researchers in the United States have attempted to develop norms for performance levels to which an individual child's performance may be compared. An evaluation may thus be made of a child who is suspected of possessing various perceptual-motor problems, and his performance may be rated according to what normally might be expected as a child matures. Interested persons may wish to examine the norms and the *Six-Category Gross Motor Test* for this type evaluation which are presented by Bryant J. Cratty in his book, "Perceptual-Motor Behaviour and Educational Processes", as well as in the recent publication, "Perceptual-Motor Efficiency in Children" by Cratty and Sister Margaret Mary Martin.

Many researchers today operate under the maxim that "if it exists, it can be measured". It is obvious, however, that some qualities seem to lend themselves to more accurate measurement than do others. The physical educator will probably never be able to completely divorce himself from subjective evaluation. For example, in sports no objective test has been devised which measures all of the factors involved in actual competition. Our profession, however, has an obligation to continue the progress in evaluation which has been made in recent years. Much remains to be done. New instruments need to be devised and others up-dated. Problems resulting from increased overcrowding, mechanization and the tempo of modern living will need more research and improved methods of evaluation.

Last year ICHPER published the report entitled "Physical Education in the School Curriculum". This study provides an overview of the school physical education programmes provided for boys and girls in 81 countries around the world. If these programmes are to reach their full fruition, it is essential that appropriate evaluation methods be developed and used to determine the extent to which the programmes are fulfilling the stated objectives of the various countries.

The future for health, physical education and recreation is bright. It seems safe to predict, however, that their continued growth and effectiveness will be closely allied with the willingness of the professions to properly utilize and refine existing means of evaluation and to continue to scientifically develop others.

Micro Teaching—A Pilot Programme

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Introduction

The preparation of teacher trainees for the activity of teaching has been regarded by some as a pious hope rather than an achievable reality. The failure of psychological theory to provide adequate models of instruction has supported the disenchantment. As a result, recent studies of teaching have turned from models based on learning or thinking to teaching behaviour itself. Micro teaching is a training method which adopts this approach and extends it to a simple and direct application.

The purpose in this paper is to first present the concept of micro teaching, and then to describe and evaluate a programme which applies its basic principles to pre-service training in physical education.

The Micro Teaching Concept

Micro teaching is a technique which provides teachers with situations where complexities of the typical classroom are reduced. It aims through this simplification and through the provision of immediate information on performance to gradually induct the student teacher into the macro teaching situation.

Teaching is simplified by reducing class size, lesson duration and by narrowing the scope of the lesson. For example, a student teacher may instruct four or five pupils for about five minutes, concentrating on a specific skill or technique. Immediate information or "feedback" is provided from any of the following: supervisory comment, comment of fellow students, the student's own recollections or by a video-tape replay of the lessons. Following the feedback period, the student reteaches the lesson with a different set of pupils.

The rationale of micro teaching appears to rest on a particular concept of the nature of teaching, supported by the viewpoint held by Nathaniel

Gage. To Gage "If everything a teacher does *qua* teaching is teaching, then teaching consists of many kinds of activity—".* Hence "Teaching" "can be analysed according to the kinds of activities in which a teacher is engaged".† It is their central assumption that the identification, isolation and development of a variety of individual skills considerably assists and accelerates the development of the beginning teacher's expertise in the whole class situation, for in this situation he can call on any of these skills when the occasion demands.

While the purpose of this paper is not to critically discuss the concept of micro teaching, some issue should be raised. Firstly, not everyone would see "teaching" as so simply divisible; some may well regard the end product behaviours of successful teaching as far too complex or, indeed, unknown, so that they cannot be specified. In such a view, the individual is expected to transfer his learnings from a variety of related areas to the performance of teaching behaviour. Secondly, emphasis is placed on directly observable behaviours. The analysis then is clearly descriptive and not psychological.

Finally, the establishment of a skill in isolation by no means guarantees the learner's capacity to elicit that skill in the complex situation. It would appear that two capacities need to be developed: the first is the skill itself, the second the capacity to make decisions as to when the skill will be applied. If we follow Smith's[6] contention that teaching behaviour is "reactive" and often extemporaneous this is surely a point which becomes critical.

The Pilot Programme of Graded Teaching Experiences

A pilot programme applying micro teaching principles to the physical education situation was carried out in the first months of 1970 at Sydney Teachers' College. The Sydney Teachers' College conducts a three-year course leading to the Diploma of Physical Education in which a pattern of student teaching is based on two or three block periods (of about one month each) in every year of the course.

In these periods, students take over whole classes and conduct lessons of the normal duration. The first-year students encounter this situation in the fourth month of their college career. Preparation for this practice period is provided through lectures on method, practical lectures on primary and infants' school programme content and observations of typical physical education lessons at the Haberfield Demonstration School.

For a number of reasons it was decided to construct, apply and evaluate a scheme through which students' exposure to the actual complex teaching situation would be less abrupt and potentially traumatic. The group chosen was the 1970 first-year group consisting of twenty females and seventeen males, the majority of whom had quite recently graduated from high school.

* Nathaniel Gage, "Theories of Teaching", Chapter XI of "Theories of Learning and Instruction", ed. E. R. Hilgard (Univ. of Chicago Press, 1964), p. 275.

† D. W. Allen and K. Ryan, "Micro Teaching" (Massachusetts: Addison-Wesley Publishing Co., 1969), p. 14.

The Aim of the Study and its Research Nature

The major aim of the study was to devise and apply a programme through which students would be provided with a structured sequence of graded teaching experiences culminating in the fully complex teaching situation.

Upon the implementation of the programme an attempt was made to discover which variables within it were significant and whether any relationship existed between them. It is therefore stressed that the study was by no means intended as experimental. Indeed, following Festinger and Katz[4] the research involved may best be described as a "field study" of the exploratory type.

The Programme

The programme had two main elements: the first was a micro teaching schedule using the conventional components of this technique but with modifications applicable to the physical education situation. The second element was the June practice teaching session in which the normal procedure was adjusted so that whole lessons were taught but to classes of variable size. The combination of these two elements represented the attempt to structure the student's initial exposure to teaching in a sequential and graded form.

The Micro Teaching Schedule

The construction of a micro teaching schedule consisting of a sequence of teaching units was the first task. Each unit was composed of a number of skills regarded as necessary for the beginning teacher of physical education.

A lecture based on the skills of each unit was presented to the students. As soon as possible after this, students planned and delivered a short lesson to pupils. In this lesson the selected skills were deliberately stressed. Immediately after the lesson, the student's performance was discussed, alternatives and improvements were suggested, and a second lesson followed. Usually the student then progressed to the next unit of the schedule set for the following week.

Components of the Schedule

The Identification, Selection and Sequencing, of the Teaching Behaviours.—In this area, the literature on micro teaching was of some, but not significant, assistance. The physical education literature, however, was, although it appears that no really systematic attempt has yet been made to identify the full range of behaviours executed by physical education teachers. Guided by this literature and personal opinion, skills were arbitrarily identified and selected, a major criterion being their specific and observable nature. Terms such as "creating a good teaching climate" or "control", were rejected in favour of those descriptive of specific acts such as "rewarding", "directing", "gaining attention".

The following skills were ultimately selected and placed into the sequence of micro teaching units:

Unit	*Teaching Behaviours and Skills*
I.	(*a*) Directing pupils (gaining and regaining attention-giving directions, obtaining responses).
	(*b*) Presenting activities—direct method—(part).
II.	(*a*) Explaining.
	(*b*) Presenting activities—direct method (whole).
III.	(*a*) Developing desired—reducing undesired behaviours (reinforcement).
	(*b*) Presenting activities—indirect method.
IV.	(*a*) Moving and organizing the class.
	(*b*) Providing participation—class activity pattern.
V.	(*a*) Moving and organizing the class.
	(*b*) Providing participation—group activity pattern.
VI.	Promoting group participation.
VII.	(*a*) Individualizing teaching.
	(*b*) Promoting learning—analysing, diagnosing and directing.

Not all of these units were actually implemented; Unit VI was eliminated, as was VII (*a*).

One particular point became increasingly apparent as the schedule progressed. This was the distinction made between "predesigned" and extemporaneous or reactive teaching behaviour. Early in the schedule it was obvious that while students were generally applying pre-designed skills successfully, many, even in the small group situation, were not "sensitive" to the variety of responses within their class. Artificiality was observed in the application of "reactive" skills. For example, the rewarding behaviour of most students lacked discrimination, direction and variety. Accordingly, an additional behaviour or skill labelled "teacher sensitivity" was identified and emphasis was placed on students' capacity to observe and to selectively react to the specific class situation.

Presentation of the Skills.—A variety of methods was used to present the teaching skills to the students. These included the pure lecture situation, the use of 35 mm. slides to demonstrate some aspects of the teaching skills and the use of models (both live and video taped). In the latter forms, a variety of methods also was applied, a major distinction being the amount of information given to students about the skill prior to the model's demonstration of it.

The Micro Lessons.—Following the presentation of information about the skills of the unit, students were allotted a teaching time. They then prepared lessons in which these skills would be stressed; the choice of activities was made from a range set by the supervisor. A standard preparation pattern was adopted, and students submitted their preparation prior to the lesson.

The organization of the teaching period allowed three teams of students to operate at once. Each team usually consisted of three students

each of whom taught their pupils for a short period. When the last student completed his segment, the pupils returned to their classroom and discussion on the performance took place. At the completion of the five-minute discussion period, new groups of pupils arrived and the cycle was repeated. Class size ranged from four to six pupils (Units I, II, III and VII) to 12 to 15 pupils (Units IV and V) while lesson duration rarely exceeded six minutes.

Feedback.—Discussion was based on several approaches. The original incidental comment was replaced by check lists and rating forms. When the video-tape recorder was available, some of the lesson was replayed. An aspect of the discussion was the emphasis placed on the contribution of the students. By the use of these methods it was possible to provide feedback to all students during the critique period. This was a significant feature for pressure of time denied supervisory comment to every student at every session.

The effect of the emphasis on mutual and self analysis is reflected in the answers to two items of the questionnaires. While students generally preferred supervisory feedback they also rated "student feedback" next in preference. Secondly, five out of eight supervisors of the June practice session agreed that these students showed greater capacity for mutual assistance than students encountered in the past, the remaining three lecturers were undecided.

The June Practice Teaching Period

In previous June practice periods, first-year physical education students were first attached to infants and primary schools where they were required to present from 12 to 16 lessons per week to normal classes. In 1970, a decision was made to continue these procedures but to apply the principle of "graded exposure". The dimension chosen was class size. Accordingly, students were required to teach full lessons (of 20 to 30 minutes' duration) to groups which shifted from one-quarter to one-half and, finally, to full class size.

The four-week period was divided so that students taught quarter classes in the first week, half classes in the second and full classes in the final two weeks.

The usual practice, where members of the college physical education staff assume supervisory roles was retained. Eight members of the staff were involved with the supervision of the group under study.

Evaluation of the Programme

The method used to obtain much of the data was the questionnaire, four of which were constructed. Two were administered to the 1970 micro-trained group, a third was administered to the current second-year group, i.e., the 1969 first years who had been prepared by conventional methods. These questionnaires elicited students' attitudes and opinions towards three areas (*a*) the preparation for their first practice teaching session, (*b*) teaching, and (*c*) micro teaching.

The fourth questionnaire was answered by the eight members of the physical education staff who had supervised the first-year group during the practice teaching session. A group of items solicited supervisors' opinions about both performance and affective components of students' behaviour, as compared to previous first-year students. The second section elicited supervisors' attitudes and opinions of the micro-teaching programme as a method of professional preparation.

A final source of information was the practice teaching rating of students by their supervisors. This is a regular feature of all practice teaching and provided a basis of comparison with earlier first-year groups prepared in the conventional manner. Ratings are usually finalized in the last week of the practice period.

Findings

Student Teaching Effectiveness.—Comparison of supervisors' practice teaching ratings of the 1970 group with those of previous years indicates that the distribution of ratings for the 1970 group is quite different from previous years. The concentration of 1970 ratings into the "satisfactory" category and their absence in the "outstanding", "borderline" and "unsatisfactory" divisions are distinctive.

The amount of deviation from the pattern of previous years does suggest the existence of a relationship between the homogeneous, but generally lower, ratings of the 1970 students and the programme of teaching experiences undertaken by them prior to the final week of the practice period.

The pattern of previous years resembles a normal distribution. It is probable, however, that this is artificial. It may be that supervisors, by common agreement, have constructed standards on particular criteria of teaching which allow this pattern to develop. The ratings of the 1970 students are therefore "bunched" together not on an absolute scale of teaching effectiveness, but on one based on criteria and standards which have evolved from a different type of practice teaching experience.

A marked contrast to the trend of supervisors' general ratings was revealed in their impressions of the 1970 students on micro criteria of teaching effectiveness. Supervisors' replies to an open-ended item eliciting perceived difference between 1970 students and previous first-year students revealed that the most common attribute identified was the greater concern and capacity for actual teaching by 1970 students. Typical comments were—"showed a grasp of the teaching process as opposed to setting pupils to work" . . . "their main consideration was teaching".

It appears that most supervisors perceived their micro trained students as superior in those behaviours related to the specific process of instruction.

Supervisors' replies to a further open-ended question suggest that the major errors in 1970 students arose in the large class situation. The most common errors reported were the failure to transfer "teacher sensitivity" from half class to the full class situation and the inability to "organize" and "control" the larger numbers. All supervisors saw the

transition from half to full classes, in the third week, as the critical stage. Five of the eight supervisors reported their students as failing to make this adjustment in the short period of two weeks. Finally, all supervisors agreed on two additional points: firstly, that ratings of student performance on half classes only would have been distinctly higher than on full classes, and, secondly, that changing class size clearly appeared to be a contributing factor to the unusual distribution of student ratings.

A point may be made that previous first-year students if "tested" in the half-class situation may also have manifested these "different" behaviours. This is, of course, possible but supervisor opinion agreed that the 1970 students came to the practice teaching period with these behaviours already partially established. Secondly, while "instructive" behaviours were most clearly perceived in the half-class lessons, supervisors reported students' intention and awareness of these in the full class situation. On this *vis-à-vis* comparison the distinction was supported.

It appears, then, that supervisors perceived the 1970 students as superior in the area of "teaching" (particularly with the classes up to half size) but as inferior in large class situations dominated by the demand on "organizational" and "control" elements.

A possible explanation of the situation which occurred may be made in terms of "inhibition". It may be that students' awareness and desire to carry out specific teaching skills of the type developed in the small class lessons established "sets" which inhibited their capacity to either modify existing or to elicit new behaviours in order to meet the different situation. This notion is supported by supervisory report. Students apparently retained behaviours characteristic to small group teaching. As an example of negative transfer, this would explain the "bunched" distribution, particularly the depression of ratings normally to be found in the upper categories.

The supervisory comment that the "step" from half to full classes was too large suggests an alternative. It is probable that the stages of the programme were too rushed, or the increments too large. Thus, while the general pattern of progressions may be effective, more time or smaller increments are needed in order for students to acquire that state of "readiness" necessary for progression.

Student Attitudes.—It was quite evident during the micro-teaching schedule that most students were highly motivated and interested in their teaching experiences. This suggested that an examination of those affective variables relevant to teacher personality would be pertinent. Accordingly, supervisor ratings and students' self-ratings of attitudes and interests towards teaching were obtained at the end of the programme.

Supervisors' opinions of the motivation and confidence of their students during the practice session were revealed by their responses to two opinion statements in the questionnaire. Self rating by 1970 and 1969 first-year students of feelings and attitudes experienced in their first practice clearly shows a marked difference in the reported recalled attitudes and interests towards teaching, the more favourable being those of the

1970 group. The information provided suggests that a possible relationship may exist between earlier micro teaching experience and the attitudes held towards teaching immediately prior to, as well as during and after, the first practice teaching session.

The development and retention of appropriate attitudes and interests towards teaching are obviously major and critical contributions of the teacher preparation programme. Aspey[2] argues that when students feel confident about their capacity to "cope" with the immediate problems of everyday teaching they are more likely to go beyond a concern for "survival" skills to acquire the background necessary for full professional growth. Hence this finding may have a significant implication.

Micro Teaching and Professional Preparation.—Two questions were asked of both students and supervisors to assess their opinions in this area. The first related to the effectiveness of the programme as a practical method of preparation for teaching. The second asked opinions of its value in assisting students to discover and appreciate the theoretical foundations of their profession.

On the first question, every single respondent among both supervisors and students recommended the continuance of the programme for future first-year groups.

On the question of future application of micro teaching in their own training, 76% of the students agreed, 10% were undecided and 14% disagreed (N = 30). The major modification to future schedules desired by the students was a development towards the macro situation by extending lesson time and enlarging class size.

Supervisors, however, agreed on the value of using both small and large class situations in future programmes and saw no problems in the integration of both types into a single three-year programme.

When asked if the micro teaching experiences helped them to recognize the significance of theory courses to their teaching, 71% of the students agreed, 16% did not know, and 13% disagreed. Of the supervisors, 75% perceived a probable contribution of micro teaching to this function while 25% had no strong opinion.

It seems clear, then, that the opinion of the majority of supervisors and students is that micro teaching experience can contribute to the quality and impact of pre-service training in physical education.

Discussion

There are dangers in the unwary acceptance of any of the findings of this study. Nevertheless, relationships are suggested which future, more controlled research may investigate. The positive findings related to the suggested influence of the programme on the attitudes of students and the optimistic support by both students and supervisors to the micro-teaching concept provide more than adequate reasons for further exploration.

Findings related to criteria of teaching effectiveness are mixed and do not completely confirm those reported in the literature. In this pro-

gramme it appears that students did acquire and manifest important teaching behaviours. However, under the conditions available, they generally had difficulty in transferring their competence into the large class situation. The problem of a lack of transfer to the macro class has not been reported in studies based on classroom teaching. A number of explanations may be postulated, including cultural differences between Australian and American schools, teachers and pupils. A more fruitful explanation may centre on the distinction between the scope and types of teacher behaviours in the classroom and those in the physical education lesson.

It has been mentioned earlier that "organizational" behaviours constitute a significant segment of the physical education teacher's repertoire, whereas in the classroom these are minimal. "Instructive" behaviours may also differ. Smith, as noted previously, has emphasized the "reactive" nature of teaching, where the teacher's perception of the pupils behaviour is followed by a diagnosis and finally by a reaction based on these.

It is claimed that a clear distinction exists in this area of teaching between the classroom and physical education situation. In the latter, teachers are primarily concerned with perceiving and diagnosing responses which are overt and directly observable, i.e., motor performance. In the former, pupils' responses are mainly cognitive and covert. In the full class situation this distinction is magnified. It is extremely difficult for the classroom teacher to gain an immediate, total and accurate picture of his class's responses. As Smith states, "his perception of pupil behaviour is likely to be some sort of generalized picture, and his diagnosis a hunch".* Often classroom teachers guide their perception by seeking cues, asking probing questions, encouraging pupil talk, etc., but the nature of their situation where often only one child's response can be perceived at once, forces the teacher to "infer" from this sample the nature of the general situation.

This is not the case in the physical education lesson where every pupil's response is available in a very short period of time. The observing teacher is literally "bombarded" with information. The teacher's generalized picture is gained from observing a large number of specific cases and extracting the commonalities rather than inferring from one or two. This is no easy task; it may well be that in this situation the critical aspect is the teacher's ability to "deal with information"—to distinguish between the relevant and irrelevant and to selectively attend to limited aspects of performance.

It is argued that a distinction exists between the methods used by each type of teacher. It is suggested that the shift from small to large classes does not significantly alter the efficiency of the classroom teacher's "sampling method". The same condition requires the physical education teacher to "deal with" a much greater amount of information. This the novice cannot do and, as is commonly reported by supervisors, either makes very few corrections (reactions), or shifts to a situation where

* B. Othanel Smith, "A Concept of Teaching", *Teachers' College Record*, 61, p. 235.

the amount of information is within his capacity. He usually does this by concentrating on a small group of pupils, neglecting the rest of the class.

The not unintentional implication of "information processing theory" in this discussion reveals a personal opinion that models of instruction based on psychology may yet significantly contribute to future training programmes.

The immediate need, however, is to identify the most important behaviours executed by experienced physical education teachers. When the full range of behaviours are included in schedules, it may then be possible to determine whether the micro teaching technique can, in fact, make a significant immediate contribution to teaching effectiveness in physical education. That no such conclusion is warranted in the results of the programme reported has not dampened the enthusiasm of lecturers involved in it.

The basic notion of micro teaching is a principle long established in physical education: "learning by doing". Such an identification surely offers further stimulus and "promise" for the involvement of physical educators in this "new endeavour" in the teaching of teaching.

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An Interdisciplinary Approach to Curriculum Design in Health Education

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ACCORDING to Whitehead, "There is only one subject matter for education and that is Life in all its manifestations." Had Whitehead been writing specifically of health education, he could scarcely have given a more accurate summary of the health curriculum, viz., "Life in all its manifestations". Yet, because health does cover such a wide field of knowledge, the curriculum can too easily become merely a collection of fragments of information rather than a body of knowledge unified by a dynamic purpose.

As far back as 1869, Thomas Huxley opposed what he described as an "omnium gatherum of scraps of all sorts, and undigested and unconnected information". The health curriculum must, on the one hand, draw upon the fields of medical science, psychology, philosophy, sociology, history of medicine and other related areas. Yet it is required to present an appropriate balance of breadth and depth. Taba points out that "depth of understanding and a breadth of coverage are two contradictory principles. One cannot practise both to an extreme". She demonstrates, however, that the contradiction is significant only if one views subject matter as an accumulation of descriptive facts, and depth merely as an extension of coverage. If one takes "depth" to mean a clear understanding of certain basic concepts as well as their application, then it is possible to achieve a reasonable balance of breadth and depth by selecting a sufficient range of ideas for study which have the greatest applicability and the greatest power of transfer. For example, one could study the moral obligations in inter-personal relationships in sufficient depth without necessarily providing an extensive course in moral philosophy.

Health educationists are well aware that the mere acquisition of knowledge of health facts does not necessarily lead to value orientation and social perspective. B. R. Joyce's statement that "ultimately, science is a human study which has meaning only in terms of human values", may be applied most appropriately to the health sciences. The student of embryology needs to think through his own attitudes to abortion law

reform. The student of genetics must consider carefully the moral and ethical issues involved in genetic counselling and in arguments for and against euthanasia. It is in such areas as this, however, that one finds the health curriculum cutting across the seemingly clear-cut fields of medical science and moral philosophy. In a teachers' college where subjects are separated into departments, each confined to its own specific discipline, the problem of planning a health curriculum becomes apparent. At Sydney Teachers' College, an attempt has been made to draw upon the expertise of specialists in a number of disciplines while calling on certain of the medical staff to correlate and coordinate these studies into an integrated whole. This has been achieved most successfully with physical education students undertaking studies in health education during their third and fourth years at college. It has been found that although ten different college faculties have been involved in this health education programme, a considerable measure of unity has been achieved.

These ten departments are as follows:

Biology, contributing specialized studies in human genetics, bacteriology, immunology, entomology and parasitology;

Chemistry, which contributes a short course in biochemistry as it relates to health;

Physics, offering a special study of certain relevant aspects of biophysics;

Home Economics, which deals with the sociological as well as the scientific aspects of nutrition;

Education, which provides lecturers in sociology in relation to health science and social anthropology as well as certain aspects of mental health and counselling;

History, which covers the history of health practices;

Physical Education, whose staff has provided valuable assistance in teaching method.

In addition, the *Art* Department has advised students on the preparation and use of health posters and bulletin boards, and a member of the English staff who is also, by profession, a barrister-at-*law,* has given a series of lectures on family law during that part of the course which deals with family life education.

In our college, the Department of *Health Education* itself is at present composed solely of medical officers, and it has been our task to provide courses for these students in such specialized fields of medicine as human histology and pathology, human embryology and marriage and family life and also to coordinate the whole in general lectures and seminars which draw upon the subject matter of all the strands I have mentioned.

During the second year of the course, that is, in the students' final year at college, numerous visits are made to medical institutions such as child health centres, general hospitals, medical research institutes, clinics for drug users and alcoholics, psychiatric and geriatric hospitals, diagnostic centres for the mentally handicapped, acoustic laboratories and rehabilitation centres. The general pattern has been to follow each visit by two seminar sessions in which students attempted to evaluate the work of the

institution from the point of view of community health and to relate what they had seen to their theory lectures. These visits and seminars are conducted by medical staff as part of their role in the coordination of the course as a whole.

It is during these seminar sessions that health facts acquired during the students' college course are brought into clearer focus and that health concepts are crystallized. Dr. Oberteuffer and Dr. Beyrer point out that "merely to give information in class and to test for knowledge are not enough to assure action. Information received is only part of the story . . . surely group sanction or endorsement and group agreement to act are of great importance in affecting individual behaviour". We have found that group discussion assists students too, in handling such controversial issues as abortion law reform and contraception. One saw in students a development of respect and tolerance for those whose opinions differed from their own and one felt that, following such discussion sessions, they would be much better equipped to handle such subjects in the classroom situation.

Towards the conclusion of the course, students were located for four weeks to certain specific community health projects. Some were involved in a research programme in the school of behavioural sciences at one of our universities. Others were attached to the State Department of Public Health's Division of Health Education and carried out basic research on such projects as the health problems of migrants. Others shared in a research programme relating to the evaluation of health courses in secondary schools in N.S.W. This experience replaced the students' usual period of practice teaching in schools at the conclusion of their course, and all of them found it to be of great value.

Our first group of students, then, has graduated. The world into which they have gone, however, is already different from when they were in college and we must ask the questions: "Have they merely acquired a knowledge of health facts or have they gained what may be described as an 'informed adaptability'? Are they mature people with the judgement and discrimination which they need in order to cope with uncertainty and change? Are we ourselves adapting our courses and recognizing that from year to year the classroom climate changes?"

I am reminded of the story told recently by a visiting lecturer of a certain philosophy professor who was scheduled for lectures at 9 a.m. each Monday. He bemoaned the fact that whereas five or six years ago all his students were on time and participated enthusiastically in his lectures, he now could muster only a handful of students at 9 a.m. and he added emphatically "It isn't my lectures that have changed!".

Perhaps we have not quite reached that stage, but we do need to evaluate our courses and, more specifically, to evaluate our objectives. There are a number of improvements that we would like to see introduced. One is a greater integration of science and non-science in our overall programme so that the one will illumine the other. To achieve this, we would need closer liaison between all participant lecturers in staff seminar discussions. A divided college campus, with buildings in two separate locations, a crowded timetable and a shortage of lecture and seminar

rooms are some of the practical difficulties in the way of such staff sessions. We would like, too, to see the present two-year health certificate course integrated throughout the whole four years of the students' college life, rather than offered as an end-on course in their third and fourth years. The students, too, would like to see greater recognition of their qualifications in terms of status and remuneration, since physical and health education are still struggling to achieve acknowledgement as academic disciplines in our education system.

This, then, is a brief overview of the main course offered to students preparing to teach health education at secondary level. Other more abbreviated courses include a health education method strand in the Diploma in Education course for graduate students with a university background in the behavioural or social sciences and a somewhat similar course of 66 hours for home economics students taking health as a supplementary method during their second and third years at college.

While arts and science graduates and teachers of home economics are contributing to the health programme in schools, the major responsibility for the implementation of the school health syllabus continues to lie with physical educationists. Problems of implementation include the pressures of external examinations allowing little time for non-examinable subjects such as health, staff shortages which, once again, result in the location of teachers to examinable subject areas and the reticence of some school principals to introduce a subject which could, to any degree, represent a source of controversy. Despite these difficulties, we have been encouraged by the keen interest shown in health lessons by children in those schools where the programme has been given the enthusiastic backing of the school principal. Because of the many problems, our college students need to recognize the need for a high frustration tolerance in health education. Attitudes are not changed overnight and this may not, in fact, be the least valuable lesson our students learn in their college days. Their understanding of mental health may well be put to the test in dealing with difficult school situations. If the staff shortage in schools demands that they teach some subject beyond their own immediate field, we may rightly deplore the deficiencies in our education system, but we shall also soon know whether or not our students have acquired an "informed adaptability". When faced with ethical ond moral issues at times of industrial unrest affecting the schools, our students should be better equipped to handle such situations if their studies in moral education and ethics have been more than a superficial intellectual exercise. The very problems facing our students in the schools, then, may well be for them a means of evaluating the objectives of the course they have undertaken.

Health, as we know, means "wholeness". In our curriculum design, we surely need to look at the whole area of professional responsibility which our students will undertake and help them develop attitudes which may be recognized as "healthful". The School Health Education Study and other such programmes remind us that basic concepts are what will remain when the peripheral detailed knowledge of facts has long since been lost.

Our college structure has not permitted the implementation of a programme completely identical with that outlined in the S.H.E. study. Yet it is hoped that our course may represent something more than what Whitehead described as "a rapid table of contents which a deity might run over in his mind while he was thinking of creating a world and had not yet determined how to put it together". The word "design" is easily overlooked in an inter-disciplinary approach to curriculum design but we cannot afford to let this happen in the field of health whose very meaning is "wholeness".

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The Need for Change in Concept and Emphasis of Health Education as Seen in a University Situation

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I HAVE REGARDED health education in its broadest terms as education and preparation for healthy living—physical, mental and emotional—and not just a method of maintaining bodily health. I shall say little about the benefits of existing programmes of health education. Much of what I will say will be critical of the present, at least in this State. Perhaps some has already been remedied and will become apparent to me, dealing with a university population in the next year or so. I am not suggesting that the present courses be abandoned but hope to spur health educators and educators generally on to greater activity for significant improvement in the health and wellbeing of the young who are still under their supervision.

I shall attempt to highlight some of the deficiencies and needs as shown from the interviews with university students by the medical officers of the Student Health Service in the University of Sydney in the last ten years. Perhaps I may be expecting too much from a health education programme, but at least in this country the field is fairly new, and the opportunities to help and influence the wellbeing of students are countless.

At the University of Sydney there are no formal lectures in health education, no compulsory sport or physical activity, no compulsory medical examinations. Except for the occasional lecture on a particular aspect of health relevant at the time, any health educating done is as part of a medical or psychological interview, and only when there seems to be a need for it. The eight doctors who work in the Health Service spend their days and sometimes their nights dealing with the problems of the largest collection of young people in this country, 17,000 of them on one campus. While much time is spent treating their sore throats, their hay fever, their acne, their injuries from motor vehicles, laboratory accidents or sporting fields and their other illnesses, much more time is spent

answering their questions about how to relate to people, how to cope with stress, how to maintain good health, how to attain adult attitudes physically, emotionally and mentally. These are not a sick group of young people, they are perhaps physically more healthy than most of the population except that their concentration on academic pursuits is often at the expense of physical exercise or social development.

The later years at school and early years at university are periods of rapid growth and change in one's identity from the obedient, dependent, accepting school pupil with little sexual anxiety or even awareness, to the critical, independent, questioning student frequently with much anxiety about, and interest in, his sexual role. There are six main areas about which I intend to speak and in which I feel health educators could play a more active role, namely, image of the self and ability to deal with feelings, interpersonal relationship, biology and sexual education, physical recreation and relaxation, ability to seek help before or when in difficulties, ability to make a decision when the facts have been obtained. Health educators are likely to be aware of the places where they may help with physical health or disease and so these have not been enumerated.

For the student who remains at school until the age of 17 or 18 and then intends to go or has gone on to tertiary education, the exacting nature of his study has probably meant that he has not done much thinking about his future identity or if he has, often he has had litle chance of experimenting with it. He is usually much less mature and worldly than his colleague who left school at 15 and has been working and receiving a salary for three or four years, who may be married or contemplating marriage, who can go out seven nights a week, and is not kept home by study or insufficient finance, who probably has his own vehicle and who, at work, is treated as an adult. The student has been forced to place his normal maturity in abeyance and to accept a dependent role when physically and psychologically he should be becoming independent. He is dependent upon his family or the State financially and his teachers and professors academically. His own social, intellectual, sexual and religious attitudes often have to be smothered for fear of his causing displeasure in those to whom he is responsible. It is little wonder that students frequently enter university with a rather shaky identity, an uncertainty about their future careers, and an anxiety about their own image.

Though the students described below are ones who consulted medical practitioners in the Health Service, many of them could have presented their problems just as appropriately to some of you gathered here. If you think of the situation you know and do not dismiss these as medical problems, my address will probably have more relevance to your particular fields.

While the student who feels that his body is satisfactory in size, weight, shape and appearance is the norm, there are many who have great anxiety about their bodies.

To mention just a few, you probably all know the obese person who is anxious about entering into any sporting activity where his body is exposed because he is embarrassed. He seldom swims because he is

ashamed of his fatness, and if he can avoid other sports where he may have to use a communal changing room he will. But the thin person may be equally as sensitive about his scrawniness, or his hollow chest, or his lack of muscles. Two other groups who also avoid any communal activity where they can are the lads with big breasts or those embarrassed by the small size of their genitals. Until recently the very hairy person often did also, but now hair is fashionable.

Fortunately, in our culture, girls do not have to expose themselves so much to the gaze of their peers, so that body image except where excessively fat or where their breasts are very large does not cause them so much concern.

In the Australian culture, much is made of the image of the smooth male who is attractive to women, who has composure and confidence. He is often portrayed in cigarette advertisements. Some of our young men are frequently anxious about their sexual adequacy, their inability to talk to girls, or to have a steady girlfriend. In many of our schools segregated by sex, students have had little opportunity to talk to, to meet, or get to know in a natural way members of the opposite sex of their own age. This may not cause much difficulty for the young person who has siblings of the opposite sex and thereby meets the siblings' school friends, but with no siblings or with parents who do not make the opportunity for their young people to meet others there can be great anxiety about social sexual adequacy.

Recently the greater permissiveness of society and emphasis in mass media of sexual adequacy have caused more students to come to the Health Service concerned about their genital adequacy, or their hormonal normality. One's anxiety about identity may occur about family attitudes. There is often resentment about the need for continued dependence upon one's family. Except in Jewish and migrant families the authority of parents is often questioned. To honour, obey and respect one's parents is often seen as weak and peculiar. Some who feel that this is reasonable behaviour are concerned because their peers feel that they should be moving out and fending for themselves or taking anything they can get from their parents but not continuing any emotional involvement or concern for their parents' attitudes and beliefs. Students often come to the Health Service to talk about how they should treat their parents, or concerned about the unsatisfactory way in which their parents are living. There is an opportunity to lessen both the communication and generation gap for many, as they struggle with their own maturing identity, but they frequently need the help and support of someone outside the family.

Often related to the family experience are problems associated with interpersonal relationships. The student who has had difficulties relating to his father may have difficulties relating to his academic authority figures, or may have become excessively dependent upon his mother and so have difficulty making satisfactory relationships with girls, or may go around looking for suitable father and big brother figures, or make close relationships with his peers and be anxious about homosexuality. Fears of homosexuality and fears of inability to relate satisfactorily or inability to trust

anyone are frequent causes of anxiety among students and have disastrous effects on their work. Students with severe emotional deprivation have often compensated by great intellectual effort, and have often been successful. When they come to the realization that their effort cannot be sustained or that it is a poor substitute for personal relationships they may seek help.

Several emotions may cause students great difficulty. We all know how disruptive an infatuation can be to a person's study. But the loss of a boyfriend or girlfriend can be even more devastating. Students are of an age where fathers die of coronary artery disease and mothers die of carcinoma. For many the loss of a parent will occur during their last years at school or during university. Some are going to suffer the death of a school or university friend, perhaps by natural causes, frequently by sudden illness, but most likely by violence or traffic accident. The death of a parent or the death of a peer can cause a temporary threat to the feeling of "adolescent immortality". The stiff upper lip tradition which is still part of our male image does not help the mourning for a parent or a classmate.

Two other emotions which may worry them. Anger is not seen as acceptable. It needs to be controlled and not shown, or so many young people feel. Bouts of anger or hatred may submerge a young person in gloom, guilt and despair. Frequently they need to be told that anger is a normal emotion, that most people feel and have cause to feel angry at times but what is important is how one deals with it. Think of the passive aggressive and the sullen person who smoulders with anger, and in contrast the hot-headed and quick-tempered person who feels his anger, perhaps shows it, deals with it and quickly returns to his composure. Many of our students have been taught to be patient, long suffering, not allowing themselves to show anger when it was a normal feeling. Similarly, sexual awareness and feeling for many have been forbidden. Many worry about the quite natural sexual interest and arousal of late adolescence, feeling that they are being crude, dirty, evil-minded, lustful, oversexed or obscene. Frequently the sexual experimenting that occurred before or during puberty or the masturbation that occurred then or now, or the hatred and anger which they have repressed are first talked about by a student when he feels he has the confidence and understanding of a member of the Health Service. Sometimes the relief which follows the discussion is a joy to see, and he has made a friend! It is a type of confession, an exposure of his innermost feelings which have troubled him for years. Now it is no longer necessary to live a lie and hate himself.

In the last ten years, school education and the mass media have brought a new level of biological and sexual knowledge to the community. School children can talk quite knowledgeably about pregnancy, genetics, childbirth, abortion and contraception. Most university students know much more about these facts than their parents did at their age and may know more than their parents know now. But despite all this there are wide gaps in students' knowledge. Few have much awareness of the emotional involvement, the total involvement of sexual relationships. For

many it is a physical relationship which they feel they can enter without becoming emotionally involved or attached. Many do not consider the risks of pregnancy until it happens when they will then say "But we are too young" or "We are not able to have a family" or "I could not possibly spend the rest of my life with that person", "I do not love him (or her)", or "I do not believe in contraception because it is so detracting from a relationship, so calculated, but I could not possibly go through with this pregnancy even though I do not believe in abortion". We have had some people become pregnant, denying that they had ever had intercourse, even though when it was explained they agreed they had, because they thought it would be different from what happened. Some, because of inadequate description earlier, have thought that the hymen was a tough membrane to be ruptured with pain and much bleeding, and when this did not happen have thought that penetration had not occurred. One young man, after his first sexual encounter said, "If I have waited for 22 years for this, then I can afford to wait a lot longer and get on with my studies and be an academic; I had imagined it would be far more satisfying." Often our society has presented sexual intercourse as being the height of experience, not stressing that it is the whole person involvement, not the physical act, that is important.

For all their knowledge about biology and sexual reproduction, there is a dearth of understanding about emotional involvement, commitment and sharing which young people are only too keen to discuss frankly, feeling that their present training has not dealt with the most important aspects of this topic.

I shall say little about the need for physical recreation about which you are convinced. There is an increasing awareness among the medical profession and the community generally that physical effort by its increasing cardiac and respiratory reserves and for other gains is of value to our sedentary existence. When students who did not appreciate this at school became aware of the importance of a healthy body, they feel it is too late and they can do little about it.

There is a greater need for students who have poor physical skills to be taught to play sports and to learn methods of physical relaxation. At university they become aware of sport not only as a means of keeping fit, but perhaps more important, as a method of relieving tension and possibly aggression, or relaxing and of possible social interaction. It is unfortunate that this is often overlooked at school, and students who are not inclined or capable are not helped to attain a level of success and enjoyment at sport which would provide them with greater muscular control, more relaxation and ability to work as part of a team. Many a loner wishes he had this opportunity over again.

Sometimes the job of the Student Health Service is to make the path of the student in need of help easier. It may be by discussion with his parents, or with his academics, so that he is able to approach them without fear of rejection. Sometimes there is opportunity to bring a group of students together to discuss their problems, which may be academic, or social, or to do with home conditions. Frequently the student who is lonely and has no one from whom to get help seeks advice about a medical

condition and then mentions the cause of the medical condition. There are also problems such as insomnia, examination panic or pre-examination stress which can be dealt with, and the use of sedatives and tranquillizers may not be necessary if the condition can be discussed.

Last year we decided that any student who was ill or under strain could apply to do examinations in the Student Health Service. Some 50 students took advantage of this opportunity. Two epileptics who were frightened of attacks during their examinations completed their papers without attacks. Students with migraine or dysmenorrhœa who normally would have walked out and failed the examination were brought to the Student Health Service, treated, and when feeling better, completed their examinations. The bulk of students who did examinations in the Student Health Service were suffering from physical illness, but the thing they appreciated most was the relaxed atmosphere and the knowledge that if they were sick or needed medical care during the examination it was not a problem. Most of them were successful in the examinations despite their illness, yet several had not intended to sit their examination because of the illness.

Students come for information and advice. It is important that students coming to the Student Health Service be treated as responsible adults and given all the facts and then be allowed to make their own decisions. We are not there to protect students but to prevent them making decisions with inadequate knowledge. We are not *in loco parentis*, but are willing to help them if they wish our help. If they do not accept our advice or make the decision we feel they should, then there is nothing we can do. This is a learning situation, and they will never learn effectively if they are protected and prevented from experimenting. They may not choose our solution, but they will have thought and considered it before making their own decision.

As you will have seen, most of the time of the doctors who work with me is spent with one or two students at a time in a consulting room where they are free to ask questions, seek information or expound their theories about health and illness. Most of our time is spent in a one-to-one encounter where we have great opportunity to learn of the aspirations, ideals and problems of the young client, and they at times take advantage of the privacy, informality and intimacy to express anxieties and feelings which they have never dared express, or even at times think, previously. At such times subjects frequently brought into the discussion by the client are anxiety about a satisfactory personal identity, difficulties in relating or communicating with parents, anxiety about sexual adequacy, or uncertainty about sexual attitudes and behaviour, difficulties about relating to authority, problems about anti-social activities such as lying, thieving and sadism, inability to make adequate relationships. In most cases they do not wish to be told how to rectify these, they need to feel free to discuss them and then they will decide the next step.

Having told you at some length what university students see as their needs for satisfactory and healthy being, can you help? Well many of you will either be responsible for the curricula for health educators or will be providing health education in the schools. Much of the distress that occurs

in the university age group could have been lessened if it were tackled in the schools. I will mention briefly some of the areas in which I feel that students at school could get more help, and I see the health educator indirectly through other members of the teaching staff or directly helping students with these difficulties.

The student with sport difficulties, the class clown, the cheeky child, the class bully, the bright child with a poor work record, the fat boy, the attention seeker, the perfect child are some who may need help. While in the minor years at school health education may consist mainly of providing pupils with facts and ideas for healthy existence, I am certain that in the later years there is a need to provide small discussion groups which can discuss freely (with a health educator present to provide information) all manner of topics. At such meetings pupils can talk freely about what concerns them most. If a group does not introduce a topic some safe topics could be introduced by the health educator such as the attitude of young people to motor accidents, "Is smoking really a health hazard?", or "Is it necessary to smoke to show your maturity?" When a group feels secure it is likely that discussion about sexual relationhip before marriage (or generally), contraception, abortion, homosexuality, drug taking, will be discussed.

Other areas in which a health educator could be of help to many students would be dealing with authority, reasonable attitude to one's parents, attitudes to examinations, fear of illness, death and mourning, inability to relate to people, facing the unknown with anxiety is normal. In fact, the topics are endless.

The Inner London Education Authority attempted as an experiment by placing trained workers in schools to help pupils in the transition from school to learning and finding jobs. A small pamphlet, "Fifteen Talking", gives a brief report of a few of the discussions that took place with one of these workers. From my reading of the pamphlet, personal enquiry and subsequent observation in this country, I feel that it is a valuable method of health education. With school medical officers and school guidance officers and counsellors, physical educationists and health educationists make up quite a team of people working in schools for a high standard of physical and mental health and fitness.

One of the most important contributions a health education programme could make to senior students at school would be to encourage thinking about and aiming at good health, and free speech about any topic in which they are interested. The ability to communicate and discuss personal issues and problems will be of great advantage to them in their future progress to maturity, to deeper personal commitment and to marriage and family life.

A gathering such as this could go forth with new vigour in an attempt to remove the obstacles which prevent students maturing into healthy, happy adults. In some places it will mean criticism of long standing habits, perhaps decrease in academic work load, in some a change of emphasis, in some the change will have to be insidious and gradual. What are we all aiming for if not to provide an education for living, wholesome contented healthy living?

Measurement of Human Power Output

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SOME sports, such as rowing and cycling, require substantial quantities of mechanical power to be put forth by the athlete. It is of interest, therefore, to be able to measure with some degree of accuracy this mechanical power output.

The question may be considered in two parts:

1. What factors affect the production of human muscle power?
2. How can we measure the power output and what are the relative advantages and disadvantages of the various means of carrying out this measurement?

Of the many factors which affect the amount of power produced, perhaps the most important are:

(*a*) The duration of the effort.
(*b*) The mode of working; which includes not only the geometry but the kinematics of the motion being executed by the subject.
(*c*) The load being overcome.
(*d*) The environmental conditions existing at the time.

Unfortunately, these factors cannot be considered separately, as there is, to a certain extent, interaction between most of them.

Turning now to the question of measuring the power output, if the above mentioned factors are taken into consideration, we find that it is necessary to allow the subject to work in a way which copies rather closely not only the geometry but the kinematics of the motion executed during the particular sport and to absorb the energy released in a suitable manner. The work output of the subject is usually absorbed by applying a braking torque to a rotating member of the machine on which the subject is exercising. Several types of brake may be used and their characteristics are quite important. They fall roughly into three categories:

1. Viscous type brakes where the brake load increases with speed.
2. Friction brakes where the load remains reasonably constant irrespective of speed.
3. Constant power brakes where the load adjusts itself to the speed in such a way that the power involved remains constant.

Of these, the constant power brake would appear to be the simplest to use, as having adjusted the brake to a particular power value, it would only be necessary to record the duration of the effort to determine the total work output of the subject. However, such a brake has characteristics which do not match those of the muscles and instability can result.

The viscous brake, whilst perhaps the simplest in concept, requires the continuous recording of load and speed in order to determine, with any precision, the amount of work performed in the given time.

The constant torque brake, if it can be successfully engineered, is a satisfactory compromise as, apart from the measurement of the duration of the effort, it is only necessary to measure the total number of revolutions of the output shaft in order to determine the work output.

Other factors which should be taken into consideration in assessing work output are the mechanical efficiency of the transmission system and changes in kinetic energy of the moving parts of the ergometer resulting from any change of speed at the end of the test as compared with the speed at the beginning of the test.

The foregoing comments indicate that the measurement of the mechanical power output of subjects exercising in various ways is not quite as straightforward as it looks, and that care has to be taken if meaningful results are to be obtained from any experimental work undertaken.

University of Western Australia Test Battery to Evaluate Some of the Factors which Affect Human Physical Performance

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THIS presentation outlines the test battery being used at the University of Western Australia to evaluate *some* of the factors which affect human physical performance. The presentation discusses the procedures for testing, measuring and analysing the various test items and also discusses the rationale behind the selection of each test item. No attempt, however, is made to discuss results, as the collection of data is still in progress.

Some of the test items have established validity, others are still being investigated. The former group of test items is utilized:

1. To establish a pre-season fitness profile indicating the individual's weaknesses and training needs which then determines the nature of the training programme.
2. To evaluate the functional fitness of individuals.
3. To evaluate the individual's improvement during the training programme.
4. To evaluate individual or team changes as a means of re-directing the training programme should evidence of such a need occur. Such evidence may be in the form of a plateau or downward trend in the test scores.

The test teams, for which validity is still not established, are included for research purposes in an attempt to provide evidence to either substantiate or refute the value of such items.

This test battery, which was established by Dr. John Bloomfield and Dr. Alan Morton, has concentrated on the following factors:

1. *Body structure* as evaluated by various anthropometric measures, somatotype assessments and skin fold measures.
2. *Muscular strength* as determined by a battery of at least six tests the nature of which varies with the sport concerned.

3. *Power* as determined by the power lever and the jump and reach test.
4. *Reaction time and movement time.*
5. *Cardio-respiratory fitness* as determined by:
   (*a*) Vital capacity.
   (*b*) Hæmoglobin concentration.
   (*c*) Various aerobic power tests such as MVO_2, Astrand and Balke tests.
   (*d*) Resting and recovery electrocardiograms.
   (*e*) Resting and recovery values for the electromechanical lag (Q.I.H.S.I.).
   (*f*) Arterial blood pressure.
   (*g*) Brachial pulse wave recordings.

Predictive Indices in School Sport

C. LES COTTON

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Australian Empire Games Team

THE aim of this paper is to demonstrate a simple and practical method of testing and evaluating fitness and aptitude for varying sporting activities in the school situation.

This paper will cover the following:

1. The object of selection—an activity for every child at school, in leisure hours and in adulthood to keep fit—success in sport resulting in less inferiority complexes and consequently better academic work and better school spirit—to help instill greater interest in school and life and lessen delinquency.

2. Methods of testing—pupil participation as testers maintains interest and is fairly reliable.

3. The tests consist of "the Cotton step test" with new evaluating graph for aerobic capacity based on end exercise pulse rate after four minutes; the vertical (Sargeant) jump; the ball throw, using a cricket ball or a table tennis ball and relating distance on a new "Universal Throwing Chart" with body and ball weight to give an individual "throwing index"; the vitallograph lung volume test using vital capacity and forced mid-expiratory flow as guides to performance and potential. In addition to this, age, height and weight are taken, from which the Index of Build and WHAT index are calculated, the latter being the weight, height, age trend which enables future stature to be determined.

3. The arrangement of the school timetable to facilitate the application of the testing programme in the form of "Integrated Sport". This enables three or four classes to be taught different sporting activities at the pupils' own assessed level, at the same time, by trained personnel. This may be done on a "one sport per term basis" for two to three years prior to participation and specialization in extramural school sport.

4. The follow-on programme—first-form pupils are tested during the first year and retested during subsequent years. The same procedure is adopted for each first form in ensuing years so eventually the whole school is tested.

5. The training of physical education teachers and students in test and measurement procedures and their application.

6. The evaluation of the results obtained to date and their significance.

Constitutional and Environmental Factors Affecting Performance in Sport

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THIS contribution will deal with conditions that are not pathological but rather variations from normal—those states that are not average but certainly not a disease.

Study of factors influencing performance in sport shows that psychological variants are paramount. These latter are dependent on an inborn state which enables drive to be supplied, effort to be maintained where necessary and often a tolerance to fatigue is inbuilt. Heredity and familial factors are concerned in the emotional needs for sport and these can be modified by social and environmental features including nutrition.

There is no doubt a modification of results occurs when equipment is defective, particularly in relation to temperature and atmospheric conditions. Sports in water and on dry land project their own problems as do team sports.

Body build varies greatly, particularly between the sexes and in different age groups and this militates against particular sports.

Coordination is essential for peak performance. This is often missing as in the case of ball-sense, thus restricting an individual field of sport.

Training has been considered a *sine qua non* for peak efforts. This involves the coach and athlete intimately and problems frequently arise in this area.

Recent work has shown a variation in metabolic pathways in obese persons. Can such a variation account for the differences in performances of individuals and in the same person from time to time?

Probably the most important factor in any performance is opportunity—without it, a result is impossible.

"Pathology in the Limitation of Performance"

JOHN SUTTON

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DURING competitive exercise the body depends on an integrated response from all its component organs for an optimal result. Thus it is not surprising that most disease processes will cause a significant deterioration in performance. Alternatively, defects in training, such as inadequate, incorrect or excess training and psychological factors, especially a decrease in motivation, can have a similar effect on performance as any pathological process.

In the majority of instances where there is disease, the pathology will be obvious, e.g., infectious diseases such as respiratory infections or gastroenteritis or trauma causing contusions, ligamentous injuries or fractures. By contrast, in the incubation stages of infectious hepatitis or glandular fever, the diagnosis can be difficult to determine. Similarly, early stages of primary muscle disorders, diseases of the hæmopoitic, respiratory, endocrine, cardiovascular systems, and the renal tract, can easily pass unnoticed except under the stress of exercise.

The following approach is recommended when a pathological process is suspected as causing a deterioration in the performance of an athlete: a full clinical assessment which involves a detailed history of the illness, together with a family history, details of past health, social habits—including tobacco, alcohol and drugs—and details of visits to foreign countries, especially tropical areas.

This is then followed with a thorough physical examination, including weight, temperature and urine analysis. Where practical, observation of the athlete during exercise is worthwhile.

At this stage the physician will usually have made a diagnosis. However, in a selected number of cases the physician will require further investigations such as blood counts, examination of stools or urine, X-rays, cardiography, chemical or hormonal assessments.

The use of exercise testing by means of a bicycle ergometer, treadmill or simple step test and the simultaneous measurement of relevant factors when indicated, such as serum potassium, blood sugar, serum insulin, plasma cortisol, electrocardiogram, etc., can be particularly helpful in a selected minority of cases.

An Amateur Looks at Physical Education, Health Education and Recreation

SIR RONALD GOULD

President World Confederation of Organizations of the Teaching Profession

I IMAGINE the theme of your conference this year will be a challenge to all the experts I see arrayed before me this afternoon. To me, however, a mere tyro in this sphere, the theme had a paralysing effect. I could think of nothing significant to say, so as a mere amateur I propose to avoid all philosophic and learned approaches to physical and health education, and (since I have no option) to confine myself to simple questions well within my amateurish competence.

I must admit I do so with trepidation. For I cannot forget that when I turned for assistance to an American expert, I realized even more my inadequacy. For the expert declared that there were these approaches to physical education, the idealistic, the pragmatic idealistic, the dynamic idealistic, the naturalistic romantic, the modern naturalistic, the realistic, the dualistic, the contemporary realistic, the pragmatic experimental, the social pragmatic, the æsthetic, and finally the modern point of view. No doubt you understand all this, but I don't, so my approach this afternoon will be an additional one — that of the blundering, fumbling, muffing greenhorn.

Let me begin, then, by saying what I mean by physical education. I'm glad you do not use the term "physical training", for physical education means much more than hopping, skipping, running and jumping to develop the body. To me, it is the sum total of all the influences brought to bear on the child, consciously or unconsciously, in the school or outside, to promote healthy living. And just as the term "man" embraces woman, so the term "physical education" includes all exercise, sports, the teaching of hygiene, school and public medical, dental and optical services, school meals, well-lit, well-ventilated and well-heated schools and a good home and school environment.

The history of health education in England and Wales reflects the development of this concept. When in 1870 the State decided elementary

education should be available to all, they confined education to instruction in reading, writing and arithmetic only. No physical education of any kind was required.

Most of the changes have taken place in this century. They began with the introduction of drill, of marching, wheeling and forming fours. There were no organized games. Here discipline and fitness appeared to be the motives. Of course, the children of the wealthy in the so-called public schools had long enjoyed organized games. Indeed, the battle of Waterloo was alleged to have been won on the playing fields of Eton. The public schools had introduced gymnastics, too, mostly based on German ideas, and which involved the use of apparatus, the box, horse, rope, etc., which, I suppose, were too expensive for the children of the poor. Gradually, too, they imported from Sweden free-style exercises.

These two systems, these two traditions, were blended into one when grammar schools were publicly provided. Their physical education was derived from both elementary and public schools. Then ideas in the elementary schools began to change. Free-style physical education was introduced, music and movement developed, school games were organized.

Then, side by side with this, a school medical service evolved. Here the purpose was preventive as well as remedial. Doctors, dentists and oculists regularly visited the schools and treatment was provided. In more recent years psychologists have been appointed to help the retarded and the disturbed.

Then, during World War Two, a striking change in attitude took place. One of His Majesty's inspectors told me that he went into a school and discovered that a number of children brought lunch-time sandwiches which consisted of nothing but bread and Worcester sauce. This, he alleged, greatly affected Government thinking. True or not, however, the Government was convinced of the need to ensure that children should not suffer in a time of shortage. So school meals were started, and today every child can partake of a well-balanced meal at reasonable cost or in some cases at no cost at all. This was another great development.

And slowly the school environment was improved. In the early part of the 19th century the National Society of Education thought a barn might easily be converted into a school. Those days are past. School buildings now provide more daylight, more space, better ventilation and better sanitation; they are warmer in winter and have improved facilities.

Thus governments as well as teachers see health education as exercise, games, medical and dental provision, nutrition and good environment. They, and teachers, too, think health a priceless treasure.

"O health! Health! The blessing of the rich! The riches of the poor!" wrote Ben Jonson. "Who can buy thee at too dear a rate, since there is no enjoying the world without thee?" "A good wife and health are a man's best wealth" runs the proverb. "Health is better than wealth" runs another. "Look to your health", wrote Isaac Walton, "and if you have it praise God and value it next to a good conscience, for health is the second blessing that we mortals are capable of; a blessing that money cannot buy."

I suspect, however, that all these were referring to health as if it meant no more than bodily well-being. I suspect, too, that many governments and many teachers have the same idea. But what did Oscar Wilde say? "Those who see any difference between soul and body have neither." What does the Book of Common Prayer say? "We have done those things which we ought not to have done and left undone those things we ought to have done, and there is no health in us." And what did Laurence Sterne in "Tristam Shandy" say? "A man's body and his mind, with the utmost reverence to both I speak it, are exactly like a jerkin and a jerkin's lining—rumple the one, you rumple the other." Clearly, health should mean spiritual and mental as well as bodily well-being.

Yes, health to some may mean a man suffers from no illness or lethargy and he experiences a sense of physical well-being. But it should mean more—that body, mind and spirit are at one, all contributing to a sense of well-being, all making for wholeness. Franklin Pierce Adams summed it up nicely: "Health is the thing that makes you feel that now is the best time of the year."

Accept this, and it follows that the hypochondriacs and any obsessed with illness, real or imaginary, are certainly not healthy people. How could a hypochondriac be healthy if Goodman Ace was right when he wrote: "If you're a hypochondriac, first class, you awaken each morning with the firm resolve not to worry: everything is going to turn out all wrong." And how could Harold Ross be healthy, when it was said he gobbled pills like a famished chicken picking up corn?

No, to be obsessed with aches, pains and disease is unhealthy. It's also somewhat wearing for everybody else. All of us who have suffered from the sickness-obsessive will sympathize with Ogden Nash's opinion:

> "I once read an unwritten article by a doctor
> Saying there is only one cure for a patient's
> Female relative who has read an article
> A hatpin in the left ventricle of the hearticle."

All this adds weight to the point I made earlier. A man, woman or child is healthy when he or she can forget about ill-health and rejoice in the activity of body, mind and spirit. Accept this, and the sting is removed from some of the jibes, jokes and innuendoes about physical exercise and sport, which are all based on narrow assumptions about their nature. A truly healthy person can laugh at Beaumont and Fletcher's words:

> "As men
> Do walk a mile, women should talk an hour
> After supper: 'tis their exercise,
> For talking is probably necessary for a woman's health."

Or at Douglas Jerrold's "The only athletic sport I ever mastered was backgammon", or at Oscar Wilde's "I am afraid I play no out of door games, except—yes—except dominoes. I have sometimes played dominoes outside French cafes". Or at Ring Gardner's "The only exercise I get is when I take the studs out of one shirt and put them in another." Yes, exercises limited to talking, backgammon, dominoes or changing studs

may appear to jibe at all physical educators stand for, but if any or all of them contribute in any way to any form of physical, mental or spiritual well-being they are not to be despised.

Accept this definition of health, too, and see what it does for the status of the profession of physical educators.

For if health means well-being of body, mind and spirit, all teachers are engaged in health education. Maybe some teachers are engaged in some aspect that is largely intellectual and some on what is largely moral or physical. But all their work overlaps—the development of the intellect can't completely be divorced from the physical and moral, nor the moral from the intellectual and physical, nor the physical from moral and intellectual. But all their work, whatever its emphasis, contributes to the overall development of the child and his sense of well-being.

Accept this and note what it does for the status of physical educators.

Of course, most teachers regard their task as intellectual. Most were above average intellectually in school. Most followed academic courses in school, college or university. Most return to school to teach academic subjects. It is hardly surprising, then, that most teachers' attitudes are like cobblers—"There's nothing like leather." Almost unconsciously they tend to look down upon any non-intellectual activity. This has a corollary: they tend to look down upon those who teach the non-intellectual, or rather that with less intellectual content.

You think I'm exaggerating? Then why do teachers who used to be called cookery teachers or housewifery teachers now prefer to be called domestic science or domestic economy teachers? And why do teachers who used to be called woodwork or metalwork teachers prefer to be called teachers of handicraft? Are they not all, and rightly, struggling for adequate recognition? And in your own case, why has the timetable changed from drill to P.T. and from P.T. to P.E.? Is this not struggling for recognition too? And why is it that experts in domestic economy, handicraft and P.E. seldom become principals? Is it not because the intellectual is most greatly prized?

But if everybody said and believed and acted upon the belief that the purpose of a school was to produce well-rounded, healthy individuals, they would recognize that a hierarchy of the contributors to this end would be absurd. Thus the way to full professional recognition of P.E. is not quick or easy. We must convince people that schools are needed to produce healthy, well-rounded individuals, and every contribution to that end is important, and cannot fairly be graded.

Indeed, the more this question is closely examined, the more wide-ranging appear the responsibilities of the P.E. expert, and the more impossible it becomes to identify him merely with physical jerks. For has not health, rightly understood, a bearing upon intellectual development? Listen to the wise words of Robert F. Kennedy:

> Physical fitness is not only one of the most important keys to a healthy body; it is the basis of dynamic and creative intellectual activity . . . intelligence and skill can only function at the peak of their capacity when the body is healthy and strong; hardy spirits and tough minds usually inhabit sound bodies.

And has not health, rightly understood, a bearing on moral development? Is not physical education even in the narrow sense a moral duty both to oneself and to others? Many jokes suggest there is an easy way to health, but they are nonsense. "If I had my way I'd make health catching as well as disease", said Robert Green Ingersoll, but you can't achieve health by the easy way of catching it, but only by the harder way of a regular well-balanced diet, inner and outer cleanliness, regular exercise, moderation in all things and a clean environment, plus (if health means total well-being) satisfying work, well-organized leisure, security in home-life and constant contact with the things of the mind and spirit. A tall order, is it not? But "to be the best that I can be" is not merely the simple naive words of a child's hymn; it should be the object of all education and a moral imperative for us all. And that is why I endorse Herbert Spencer's stern words: "The preservation of health is a duty. Few seem conscious there is such a thing as physical morality."

Indeed, the more I think about this the more I see physical health demands the discipline which springs from intellect, conscience and will. "Oh", says Shakespeare, "it is excellent to have a giant's strength, but tyrannous to use it like a giant." "Samson with his strong body had a weak head", said Benjamin Franklin, "or he wouldn't have laid it in a harlot's lap." Yes, the body needs to be controlled by the mind and the will and the conscience. But if that sounds portentous, let me manufacture a few proverbs to prove my point. Don't keep drinking other people's health or you'll spoil your own. To reduce your weight, place both hands against the edge of the table and push yourself back. Ladies, if you want men to watch your figure, first watch it yourself. You see my point? Health is the product of physical, mental and moral discipline, and so you must be educators in the widest and most exalted sense.

With this in mind, I'd like you to consider for a while the phenomenon described as the World Cup. It is a question educators should examine. The World Cup games are obviously important. To bring together in competition the best professional players from many countries, to train them to the peak of physical fitness, to devise systems and plays to penetrate the opponents' defence, and to play before tens of thousands of spectators and hundreds of millions sitting before T.V. sets is obviously important and obviously news.

But is it really so important as the papers, radio and T.V. suggested? Wasn't the headline in one of our papers "Ball Over-Inflated" justified? Was it so important that back-page news had to be moved to the front pages, that scapegoats had to be found when teams lost, that results spelt national triumph or disaster, and that many believed that Mr. Harold Wilson's chances of success in the general election would be improved if England won and worsened if England lost? Don't misunderstand me. I was glued to the T.V. screen like everybody else. All that I am asking is—was it an interesting sporting spectacle or was it a matter for national shame and humiliation for the many and national glory and honour for Brazil? I personally think the World Cup got out of perspective, and if you suspect me of sour grapes, let me add Brazil, in my opinion, played skilfully, played fairly, and they won and deserved to win.

Worst of all, I think, when football or any other game becomes over-professionalized and over-important, someone has to be blamed for failure. So in England, Sir Alf Ramsay is put in the dock, asked to explain why we lost, asked weren't his tactics to blame, and does he think he is fit to manage English football in the future? He might obtain some satisfaction if he recalled the words of Al Forman, a National League baseball umpire: "I occasionally get birthday cards from fans", he said, "but it's often the same message. They hope it's my last." Or better still were the words of Harry Truman: "It's harder for a football coach than a President. You've got four years as President and they guard you. A coach won't have anyone to guard him when things go wrong."

Yes, I can't help feeling Sir Alf Ramsay and others like him are now asked to carry impossible burdens, and largely because highly professional sport has become far removed from games and recreation, far removed, too, from the idealism of Baron de Coubertin, who started the Olympic Games in the 90's, and far removed from his moral standpoint. For did he not declare: "The important thing is not winning but taking part!" How unfashionable and other worldly this sounds today, when to many the most important thing, indeed, the only thing, is winning, and winning at any price.

So, lest school games are similarly affected, let us remember what I stressed earlier, that as part of physical education they are contributions to the full development of all the faculties of children. They should be attractive to children not because they bring victory, money or glory, but because they are fun. Mother Goose's melody runs:

"Hey diddle diddle,
The cat and the fiddle,
The cow jumped over the moon,
The little dog laughed to see such sport,
And the dish ran away with the spoon."

The little dog, and no doubt the cow, the dish and the spoon found sport what it ought to be, a pleasure—and so should children.

"If all the year were playing holidays
To sport would be as tedious as to work"

wrote Shakespeare. His inference, too, is clear—sport is, or should be, fun.

Grant this, and certain consequences follow. If sport is fun, winning isn't all-important, and if winning isn't all-important, then bending and breaking rules, body-checking, hacking and maiming are ruled out. Oscar Wilde's view that "One should always play fairly when one has the winning cards" must be re-stated. One should play fairly all the time and with no exceptions. Thus, whilst one should play to win, play should be disciplined and fair, and winning and losing, even if we cannot like Rudyard Kipling treat these two as imposters, and equal imposters, at least do not become over-dramatized and over-important.

And thus sport at its best is a moral discipline, teaching lessons and forming attitudes of enormous importance in every aspect of life. And so you present here should recognize that you are not merely engaged in

strengthening bodies or in making them more perfect physical instruments, but in instilling a morality of enormous importance to man's well-being.

My friends, in this organization you have always had great leadership. Dorothy Ainsworth and Carl and Ray have all been outstanding in the techniques of physical education, but outstanding leaders of men and women, too. And the same is true of successive presidents. They have all been believers in the "seamless coat of learning", and consequently have thought it right that physical educators should stand shoulder to shoulder with all other kinds of educators in the world organization. So in this, my last speech to ICHPER, let me warmly thank them all for the knowledge they have brought to their task, for the solidarity they have established, for the sacrifices they have made to serve others, and for the idealism which has inspired them and inspired us, too. Thank you all! I wish you even greater success in the years which lie ahead.

CLOSING ADDRESS

JANICE WRIGHT

Physical Education Teacher,
Sydney, Australia

IT is with reluctance and a sense of sadness that I commence this, the closing address of the 13th Congress of the International Council on Health, Physical Education and Recreation, and the 8th National Conference of the Australian Physical Education Association.

For five days our geographic isolation has vanished because this Congress has brought the world of physical education to our doorstep. For the first time in the history of Australian physical education, we have been part of an international gathering in Sydney, New South Wales, and we have had the opportunity to meet, to listen to, and speak with colleagues from all over the world.

We all see the need for educators to travel, to exchange knowledge and to return to their own countries with more clearly directed energies. For these reasons it is my pleasure to thank you, who have travelled to Sydney to be speakers and contributors to this Congress—to thank you for your attendance and your participation.

Personally, I consider that the great benefit of this conference to Australians is the opportunity to view local problems in clearer perspective. A congress conducted on our own doorstep makes us realize that many of our problems are not just local problems—they are international—and the progress made in other countries has application in this environment.

Few visitors to Australia will realize the significance of this meeting to the host country and the hope it provides for an unknown future. Our local problems stem largely from two facts: we are a long way from the rest of the world, and physical education health and recreation are comparative newcomers to the Australian educational scene. From the outset, our early colonists were sports-loving people. The enjoyment that the early outback Australians—the shearers, drovers and bullock-drivers—took in displaying their masculine strength in contests which tested physical skill has continued to the present day. Our leading golfers, tennis stars, weight-lifters and squash players are often plumbers, grocers, concreters or wharf labourers by trade. In other words, sport has been the right of the ordinary person. Skill has been the determining factor. The right to excel in sport has not been a prerogative of birth or education in this country.

Initially, organized public education was concerned with the removal of widespread illiteracy. Sixty years after the country's foundation there were 12,000 children who received no formal schooling. Understandably,

the early schoolmasters concentrated on the 3 R's; sport and physical education, therefore, did not gain ready acceptance as an essential component of the educational process.

It was not until the beginning of the 20th century that war fears brought visiting drill sergeants into public schools to instruct cadet corps and teach children to march in unison. This had the effect of setting physical activity beyond the bounds of academic respectability and retarded the subject's development for many years. The trend was not helped by our first English-type universities which prepared an intellectual elite for the traditional academic professions and left activity to students' voluntary effort. Nor was it helped by the development of highly centralized State systems of education. But games did gain a foot-hold in secondary schools, because sportsminded teachers decided to start work half-an-hour earlier each day to provide time in the school week for a sports-afternoon.

It is only during the last 30 years that Australian physical education has made giant strides as the result of the total commitment of a few pioneer physical educators—one from Germany, one from Canada, one from England and a small number of native-born Australians, some of whom have been honoured in the course of this conference. This handful of people, working in different Australian States, confronted governments and university administrators, established professional preparation programmes, prepared courses of instruction and worked with community groups for the advancement of health, physical education and recreation. But these people were forced to do too much too quickly. They were not able to complete their work before death and retirement began to thin their ranks. Their philosophy and vision were only beginning to be dimly understood by administrators trained in the drill era, when Australia was confronted with an era of rapid educational change complicated by the rapid increase of school populations.

Severe financial problems, together with acute shortages of trained teaching staff have again placed our subject field in a difficult position.

Too many Australian physical educators, convinced that they are working in isolation with near-insoluble problems, seek solutions overseas. They go abroad for additional training. They mean to return, but, understandably, lucrative positions and good working conditions lure many away permanently. Australian physical education is currently suffering the same talent erosion that has beset Australian amateur tennis.

This Congress has come at a time when physical educators across the nation feel that our problems are overwhelming and peculiar to this country alone.

The Congress, and Professor Diem's memorial address in particular, have renewed our hope for the future. She has shown us that creating understanding and acceptance of physical education is an enduring quest. Whether we work in Cologne or in Sydney we must fight to synthesize our ideals and our practical goals. We must not be content to function as technicians or tradesmen. We must be efficient practitioners, capable of subjecting everything we teach and strive for to critical analysis. Current problems must be examined carefully and new solutions sought on the basis of knowledge, experience and sound reasoning.

To sort out the tangled skein of our future we need access to up-to-date information in all areas of health, physical education and recreation. In recent years it has become increasingly difficult to keep in touch with developments in our field within and without Australia. Within Australia our State professional association branches are hundreds of miles apart. Outside Australia the growth of knowledge is so rapid and so extensive that the enthusiasts who save for years to travel abroad so that they can study and observe, feel out-of-touch a few months after their return. For most Australians physical educators the written word has always been, and will remain, the main source of knowledge. But even the most avid reader cannot keep pace with the current literature in a single branch of physical education. Membership of international and local organizations does something to guide us to various sources of information, but the sheer number of associations often complicates the confusion.

There is no real substitute for the direct contact with men and women whose work in research is highly relevant to the programmes we conduct. But clearly, we cannot expect to have international conferences in this country as frequently as we would desire. Yet we *must* have access to the latest research findings in our field if our teaching is to be scientifically based. Realistically, we must face the fact that we can only undertake a measure of research in this country—we lack basic facilities.

Australian speakers at this Congress have demonstrated our ability to conduct research programmes relevant to the school situation. But until finance is readily available for the establishment of well-equipped research laboratories we will lag behind Germany, America, England and Canada in many branches of physical education research. These laboratory results must be translated and tested in the practical situation before we can make use of the findings which close the gap between theory and practice. For these guide-lines to action we must rely on information from countries where staffing and timetable provisions are more generous, where trained personnel are more abundant. This raises yet another obstacle to progress—the language barrier prevents most of us reading the studies published in Scandinavian, Japanese and other languages. So the need for translated document becomes very evident.

What is needed is a central reference source—a switchboard we can contact for information in any area of physical education.

Almost every person in this assembly would welcome access to one central source of up-to-date research findings which provided opportunities for cooperative action and exchange of ideas. Cynics may condemn the concept of an international reference centre as idealistic and impractical, but this is not the case. The resources needed already exist via a multitude of international and national associations. ICHPER, FIEP, FIMS, IDC, ICS, AAHPER, PEA, APEA, CAHPER, BOA, CCPR, and a host of others have already done a certain amount of work in their own specific areas of interest. The ordinary workers in the field are often so bewildered by the sheer number and the overlapping function of these organizations that they consider the associations are too remote, too impersonal and their services are too random to be helpful.

Basically, all that is needed is the energy and the finance to organize and mobilize the resources which already exist. Time does not permit any detailing of the mechanics involved in the operation of a central reference centre, but the existence of UNESCO and WHO, and the beginning made by FIEP in the preparation of a world manifesto for physical education offer substantial proof that world action is possible if enough intelligent people see the need for it, and are broadminded enough to draw together the strands which already exist at national and international levels.

Unless we have full details of new endeavours in countries where physical education is well established, the newer and the poorer members of the physical education family will slip further and further behind in knowledge. The gap is already too great. We have no wish to trail sadly along in the wake of more advanced countries, rediscovering the lessons they have already learned.

Enough has been said to show that, to Australians, this meeting is bright with hope for the future; we know our own problems and we work continuously to solve them. However, the Congress was not conducted in Australia to provide a panacea for local ills; so what has it all meant?

If I may summarize the significance that the excellent sessions conducted during the Congress period hold for everyone present, it becomes evident that health, recreation and physical education are all concerned with particular facets of the same contemporary problem. Whether we hail from England, Africa, America or Japan, we are faced with the need to educate men, women and children to live successfully in overcrowded societies where the stress-filled pressures of work and competition detract from the quality and length of living. As workers in health, recreation and physical education we are all concerned with identical issues—degenerative diseases and mental illness stemming from the pattern of twentieth-century life.

The steady reduction of physical exercise, as it exists among the super-civilized, motorized, automatized and T.V.-watching populations of the West, has long been cited as a causal factor in heart disease. Forward-thinking countries have initiated the establishment of organized, mass-reconditioning centres and programmes for the seemingly healthy, yet quietly degenerating sedentary adults. This is being practised on a large scale in West Germany by insurance companies and big industrial concerns with graded outdoor programmes in the Bavarian Alps and follow-up, all-year-round home exercise programmes. The Ford Motor Co. claims two years more work from its executives through supervised, constant-yet-light physical exercise. Are we doing all we can to educate the individual and the executives of large organizations to compensate for our predominantly sedentary lives and so retain our national health and vigour?

The strain of sophisticated and highly competitive living is already taking its toll in the guise of mental illness. Only slowly have we come to recognize the effect of activity on anxiety—the release of energy in constructive and aggressive activity. Are we really making our best effort to bring this home in realistic terms to the general public?

We have all witnessed the boredom and dissatisfaction of young people born into an increasingly mechanized and urbanized world—as evidenced in widespread drug-taking, riots, protests and "hippie cults". The sociologist, Mays, strongly proclaims that the maturational and social phase which we call "youth" presents social problems which one would be foolish to deny or understate. Are we in step with our young people's apparent desires to make independent decisions and exhibit freedom of choice of pursuits? Surely the decision to adopt physical education and recreation as part of their functional scheme will only be taken if they deem it valuable. Are we guiding the younger generation sufficiently to such a premise by providing stimulating and interesting programmes at the earliest age possible? Are we making their need for movement an *interest?*

All of us are familiar with the spectacle of thousands of sports fans packed into grandstands, cheering their favourite team. The accelerated development of professionalism in all areas of motor activity is depriving the common man of his right to constructive leisure and relaxation through action because commercial enterprise is taking control of playing areas and the mass media "sell" spectatorism to a gullible public.

Whether we work in the area of physical education, of health or recreation we *know* the potential our subject has for the resolution of pressing universal social problems. We know that our subject field is part of mankind's hope for the future.

We have all tackled the problems in our own ways in our own countries; but with limited success. It is possible that we have *all* worked in isolation and as a result we have failed to make sufficient impact on our governments, our industrialists, our local communities, on men and women and young people. Until we work more closely together we are unlikely to progress where we have already failed.

As this Congress draws to a close we can decide to go back to our own little niches and struggle with our own little problems, or we can decide that we now have the nucleus of a world team capable of transcending difficulties of distance, politics and ideology. Our problems will not be resolved overnight, but the quality of this Congress has been so ripe with promise for a world affinity in physical education that I am convinced we can provide for a traffic of knowledge, of resources and of people between our countries.

With full realization of the difficulties of this proposal, I am formally requesting that the members of this Congress support a recommendation to ICHPER executive for the establishment of a resources centre which will provide an efficient system of communication designed to help physical educators study, travel and work with professional purpose.

1970 ICHPER Resolutions

THE ICHPER-APEA Congress 1970 urges those responsible for the administration of education in all countries at all levels to recognize the following resolutions emanating from the Sydney Congress 1970.

1. Health, physical education and recreation are allied and closely inter-related fields and should be coordinated in the best interests of the community.

2. Physical fitness is a basic human need, and health, physical education and recreation programmes are specifically designed to achieve a desirable standard of physical fitness.

3. Provision must be made for professional preparation at undergraduate and postgraduate levels of health, physical education and recreation educators.

4. There is an urgent need for the provision of specialists in the fields of health, physical education and recreation in all elementary and secondary schools.

5. The appointment of health, physical education and recreation educators to teach the physically and mentally handicapped is essential.

6. Adequate facilities are basic to the implementation of programmes in schools, teachers' colleges and universities.

7. There is a growing need, through increasing leisure time, for the provision of professionally trained leaders in recreation along with adequate facilities for community recreation.

8. Education authorities should ensure that health, physical education and recreation enjoy a professional status in keeping with their vital contribution to the quality of modern life.

9. Health, physical education and recreation can play a significant role in educating the community in the necessity for controlling environmental pollution.

10. The ICHPER-APEA Congress expresses the hope that responsible authorities in all countries will come to appreciate the virtues associated with improving the situation as it exists in health, physical education and recreation, and will come to appreciate the value of setting out on a quest for quality in these areas and of persevering with positive endeavours to reach new horizons in these areas of health, physical education and recreation.