# From scheme to praxis... From a praxis to another praxis... From praxis to competence...

Learning is to acquire knowledge one did not have before; it is to produce an action that had not been previously perceived.

Potential knowledge is included in the human genetic pool: since birth, babies «know» that such and such a situation in life pleases them or not, motivates or inhibits them, provides comfort and pleasure or contrarily, threatens their physical integrity, or still, is essential to their survival. Babies have the intuitive and innate knowledge to invest in elementary behavior, instincts, free from any reflection about the speculative meaning of the word: most of the time the same response responds to the same stimulus.

A primitive scheme of this Skinnerian behaviorist type rules the behavior of the simpler species alive, the unicellular, for example. That is so because we still have to accept the meaning of the word «knowledge» to what corresponds, in that case, to an elementary chemical reaction. But, it can also be stated that the same does not happen among highly developed species such as the human species. Due to the still very mysterious complexity of the biochemical arrays, there are still good reasons to perpetuate our belief in an immaterial nature of thinking.

The innate knowledge, the learned knowledge, the acquisition

That which very clearly characterizes human behavior is the variety and extreme difference between responses that suit situations in life. Some of those situations are sometimes completely groundbreaking and demand our competence to solve them.

And if we evaluate the percentage of primitive behavior we resort to, the repertoire of conducts to which we are subject, we will find out that innate knowledge is largely dominated by learned knowledge. We must not ignore that underlying genetic features are very often introduced into the neural paths where the codes stemming from our reason and determination are operated: quite many monumental nonsensical notions, regrettable mistakes, reproachable acts have their origin in the intrusion of the unconsciousness in the feedforward carried out by our "id" in our supposedly voluntary behavior.

Thank you, Mister Freud for having set the poor limits of our free will.

To go beyond the predetermined behavior of the lower species to the varied and often quite unnatural behavior to which human kind is summonsed, man and women must move on a winding difficult uphill path and they are often liable to every kind of failure. Human enterprise starts at birth; on the other hand, modern sociologists and economists don't foresee any possibility of a relative equilibrium to some of us until very late in life.

So, every agent in human society, especially those who have chosen to become educators, must be well aware of the stages in that evolution and must also know the right means to assure everyone a happy way to accomplish his/her maximum potential. Among other issues, it's important, again, to raise questions about the beautiful statements the traditional teaching was proud of, now at the light of the roaring failures that same traditional teaching is responsible for.

Anyone who claims that a child is a man's young and not a little man, that the origin of his development is within himself and not in the adult, states nothing but an obvious fact.

But, at the same time, the educational processes carried out at school are still invariably based on an adult view and knowledge and logical transmission rather than on the reality of the biological and psychological child evolution.

It's true for the French language, in which the power of language prevails over the language, in which spelling and grammar fall on objects whose meaning is not precise or simply unknown, forever strange to the children's speech.

It's true for mathematics, which imposes games with symbols, without the reality they stand for or without any practical usage for a child (those dear old times' equations with two unknown values)

It's true for the sciences that are based on the knowledge of laws whose concrete application has not been illustrated.

It's much more true for sports education for very good reasons: the teaching of body competence is transposed from adults' sports and not adapted to the momentary situation each child is going through; that outrageous concept is understandable among the head of swimming instructors, tennis "teachers" or skiing coaches, all of whom are responsible for a "school of youngsters" which never or hardly ever produces one (cf., our Olympic mediocrity and the steady invasion by foreigners in all our professional sports teams).

But that assumption wouldn't be so well accepted by some of the highly qualified education specialists who work in our schools.

How does one go from infancy to an educated adult stage?

## 1. The first stage is the **scheme** stage

That first stage is still closely related to the phylogenetic evolution laws: the innate condition prevails.

In some cases, the acquisition of schemes does not depend on the environment at all: from the age of 3/4 months to the age of 11/12 months the child will spontaneously issue all the sounds available to the human species' speech organs. The child won't "talk", in the strict semantic meaning of the word; the child will rather be able to issue the sounds that make up languages, vowel sounds first, the consonants next and then, the diphthongs. That behavior depends on people's own innate genetic pool: the phonemes are a universal language, in a way, common to all the children in the world, no matter what their origin or their environment is; that Esperanto-like phonemes language is available even to children who are born deaf.

The reduplicated bubbling innate scheme will develop into the language praxis, which will then depend on the environment.

• Other schemes also belong to the innate condition, but their onset and development are facilitated by conditions offered by the life environment.

= So, one could justify the structure made up of iron railings or wires set in parks, designed for the children to play in their early years. The possibility of using the hand to grasp favors the acquisition of the upstanding position, which comes before walking.

= It's also desirable that 2 year-old children have paper and pencils available to them in their environment as soon as the "scribbling" scheme emerges. That scheme is the previous motor requisite to the construction of the writing practice.

= When the child enters school at the age of two and one half years he/she undergoes the running scheme onset: the accelerated marching, with one of the feet in contact with the ground while the other foot moves ahead. Right afterwards, that scheme is replaced by a gestural technique in which the child jumps from one foot to the other with some time of suspension in the air between a support movement on the ground and the next.

The scheme can then be defined as an **indifferent voluntary motor behavior**, which will later be modeled into specific praxis for which that scheme constitutes an essential fundament.

## Duties in kindergarten and elementary school

The kindergarten and elementary school's mandatory task is to propose to children all the pedagogical situations that lead to the acquisition of a complete repertoire of schemes. The choice of toys offered to children should also follow that idea.

That exhausting list was the inspiration for the organization of the new programs of education, elementary and secondary schools (from 2 1/2-5 years and from 5-8 years), designed to attend to the recommendations defined by the law that settles the school objectives.

The awakening, the development, the refining, and the enriching

- from the perception motor behavior, to which the individual will resort in order to respond to the life situation requests (definition of the body scheme);
- as well as mental and social effective attitudes favorable to the quality of responses are proposed here through the schemes essential to the construction of praxis and competence:

\*marching and running, leading to the structured organization of space and time, to the perception of brain domination, to the awareness of "self" in a complex material and human environment, to the structure formation with other schemes (running, catching, throwing...);

\*climbing: all kinds of movement to be organized in function of different level plans, ascending and descending, horizontal or slant, with and without the use of hands;

\*jumping: on two feet, on one foot, forward, backward or sideways, at length, height or depth, with and without impulse, in a repetitive way or in a structure formation with other schemes (running, catching, throwing...);

\*Support at different parts of the body (seat, back, shoulder bones, hands);

\*Suspension, with or without supplementary support;

\* Grasping.

- Catching, moving, transporting, setting objects of different forms, volumes, and weights;
- Stopping, catching again, controlling, catching a mobile that rolls with the two hands, with one of the hands, with the foot;
- Catching a mobile that flies in the space with both hands, with one of the hands, with propulsion;
- Making a mobile roll on the ground, on the body... with two hands, with one of the hands, with a foot, with length or precision awareness, with and without impulse;
- Throwing a mobile (idem);
- Juggling and holding mobiles (juggling balls, scarves) or hitting them, dribbling them etc.

\* Handling instruments (tools): propelling, moving and manipulating bats and paddles, rackets, wooden legs, several instruments;

\*Sliding and rolling: on top of a sliding surface (toboggan) with sliding and rolling instruments (skateboard, scooters, roller-skates, skies, tricycles, velocipedes...);

\*Skills to move in the water: prerequisite and swimming gestural techniques.

All of those schemes are part of a well-structured evolution process; the mobilizing situations would demand a progressive development:

- Of body image and perception, of space and time organization, command of the muscle contraction intensity, of body tonicity, of the repetitive action speed (running, dribbling, picking) balance, resistance, amplitude, precision and skill in all the movements, rhythm;
- Knowledge and respect for safety rules, for oneself and the others, introduction to the needs to carry help and provide assistance to others;
- Esthetic taste, body expression, awareness of precision in accomplishments, creativity;
- Socialization, confidence in one's action before risky "situation", effort determination to overcome oneself, self-respect, respect for the others and for the environment, health-oriented management;
- Culture that which rises physical education above all the psycho-movements that intend to compete with it.

That is all related to the set of symbols: language, graphic arts, the notion of numbers and magnitude, the sound, and the gesture, of course...

The young boy who attends the school where teachers have decided to apply in their daily teaching practice the suggestions from the "physical education" chapter in the new programs should consider himself a happy mortal.

Now, the brain-advantaged young man whose scheme development is left at random or to the problematic visits of a "specialist" is really unlucky; the child whose body is in action only during leisure time is definitely unfortunate; it can only be said that the student whose teacher gives a hard time only to do "serious things" while the essential actions are left in paper in the "physical education chapter" that those cold intellectuals did not allow themselves to read is infinitely hapless.

## 2. From Schemes to Praxis

## 2.1 The explosion of number of praxis

Quite many live beings, even those that belong to the so-called superior species, can go through existence on earth making use of the single set of their innate behavior.

As long as they're not obliged to be ridiculous in a circus imitating man, dogs, bears, felines, and the pigeons can live approximately the same way as their ancestors did during Homer's or Charles Magnus' days.

The same does not happen to human kind. We are compelled to learn ceaselessly, and always at an increasing pace, new forms of usage for our bodies and for our spirits.

Those forms are, over time, more artificial, more sophisticated, more distant from the original scheme that underlies the body's construction: what is still the relationship between scribbling and Bill Gates Microsoft Word? How far is it from the propulsion scheme to the touch-ball! There is a sea between the humble swimming in chlorated waters and the hydro-powered Jacuzzis, floating toboggans, the harmonious water floating exercises in St. Bernard blessed waters!

How much of that disgusting refinement should we list from innateness to uselessness, at the foot of an idol called dollar, in most of the cases!

I would be curious to find out what were the reflections made by the primates invited to a CocaColympic competition provided with a bar and fixed pulls where they would hit us without EPO? What would their judgement be about the major concerns of the federations classified in the first category?

We should not go against Darwin's sequence: one must put up with one's days.

Our days, we repeat, are characterized by a great number of praxis; we always have to adjust our conduct to domestic professional or leisure situations, or we have to acquire new praxis so as to integrate our behavior.

The praxis can be defined as voluntary conduct conditioned by a specific objective.

All the praxis are, in principle, built over a common scheme, or over an association of schemes; the original and the single gestural form of the scheme is shaped towards the specific objective that is sought. That functional mode of objective naturally drives to the fact that praxis is a competence component.

• Praxis can be constructed on a single scheme: so the running scheme is the basis of the sprinter's specific running praxis, of the marathon competitor's, the collective sports players', the dancers'. Similarly, the scribbling scheme supports both writing and drawing.

• Other practices appeal to scheme structure: the basketball-jumping throw is made up of running, jumping, and propulsion.

Essential notion: praxis is **knowledge**; it is essential to competence but it's not enough. The jumping throw is a component of basketball competence; vocabulary and grammar are language components. But, neither lay up nor vocabulary grammar can guarantee basketball and language.

Believing that the command of knowledge is enough to acquire a competence, traditional teaching has supported a fallacy.

And all the arrogant "psychomotor" movements remain stuck to one other...

2.2 How does the student go from the scheme to the praxis?

a) Above all, one must be willing to go from scheme to praxis. It's a matter of setting objectives to one's own actions; either children run informally during class breaks, or they have to do it formally, in a gym, going around a pole, moving away, or reaching other students, for example.

That objective must, above all, be positive and meaningful to the child. The essential issue is: the subjects proposed stem from the adult's knowledge and logic. Are they meaningful and positive to the child? The issue applies to grammar rules as well as all formal and esoteric exercises with cones and arches that the coach imposes to children when they had only joined the club to play soccer or basketball.

b) Without being aware of that, the children's objective-oriented experience traces a centripetal circuit in the practitioners' perceptive system.
Jean-Pierre Changeux in "L'Homme neuronal". (Fayard, Paris, 1984) has popularized two notions:

= the stereo-chemical nature of that trace at the level of nucleic acids in the nervous cell and

= the constraint nature: the later motor inflows take the traced paths at the centrifugal direction this time; they model themselves upon the material structure of the printed circuit. In other words, the experience acts as a feedforward to the conditions to come.

- c) A first conclusion is inevitable: the better educated subject is the one to whom educators have provided the most extensive, the richest, the most varied range of conducts; that large number and quality of conducts will determine the subject's availability to respond to the most diverse situations in life. Wouldn't that be the definition for competence?
- 2.3 The sufficient stages for learning process

#### 2.3.a) The sensory-motor stage

Jean Le Bouche names those playful and intuitive conducts "primitive practice learning". They are exclusively conditioned by the target to be reached: when the kindergarten school accomplishes a "cumulet", children will be happy enough if they roll on their back and walk back to their seat; the child who holds a tennis racket for the first time has fun just by propelling the ball and nothing else.

At that stage, children play, realize the result of their actions as feedback: repeat them, correct them, and attempt to perform new actions so that pleasure can always be dynamic.

#### Fortunately, children retain nothing

When the motor perceptive circuit is fixed, when it is transmitted to the procedure memory it will encompass the inflows that trigger the conducts and determine their shapes; the neighboring neural-circuits become useless and die.

«Learning is to eliminate, » writes Changeux; that is the way he characterizes the obliterating feature of knowledge as to its capacity to acquire other akin knowledge. That explains, among other things, why the knowledge of native language represses children's wonderful original skill to learn another language.

The relevance attributed by the new programs to the learning sensory motor stage has an explanation: it's the moment when a child can explore the field of conducts in all its dimensions without reducing it to a bunch of coercive instructions.

Do you know why the Brazilian soccer players, the black American basketball players, and the "non-French" colony players are the best? That is so because their socioeconomic status as third world children protected them from the qualified wizards at "monitor and coach schools". Those professionals would have shown them what and how to do things or would have prevented them from doing something else and from doing it some other way.

In the first and second cycles of fundamental teaching (2.5-5 years and 5-8 years), the learning sensory motor stage must hold an almost exclusive position; that stage is still mandatory to the older subjects who approach entirely new specialties: that is so for the adult who learns how to swim, how to ski, how to speak a foreign language (emersion methods, Asimil, etc).

But the pedagogical procedure goes on a different development path.

#### 2.3.b) The motor perceptive stage

Children at the third and fourth cycles in elementary school and teenagers and adults are provided with their own, more developed, perceptive sense: they are able to <u>perceive themselves</u> in their attitudes and movements; they are ready to become aware of the construction of their conduct.

No matter how far the previous well-designed education had gone to offer them all the experience necessary to the sketching of a wide circuit of sensory motor communication, the learner can now make a mental representation of himself/herself in all his/her actions.

At that moment, the apprentice is able to apply instructions related to the praxis technical form: the little child's "cumulet", described in the chapter about the sensory motor stage and primitive learning praxis, can become a somersault: the subject will voluntarily determine and will realize through his/her own perceptive means the degree of flexion or extension stage at his/her ankles, knees, hips. That is the moment when the young tennis player will learn to tell the difference between the right strike from the back strike and will be able to correct the ball position and strength; this is the moment when the child, who was able to express himself/herself spontaneously since the age of twelve months, will now become aware of his/her language own characteristics. That is a required condition for his/her improvement. The child has arrived at the learning perceptive motor stage, the stage of awareness.

#### 2.3.c) The Cognitive Stage

The next stage will be the conceptualization stage or the cognitive stage.

At that moment, the subject introduces in his/her actions the knowledge of the procedures that make that action more appropriate or more efficient.

The subject reflects before acting. He knows, for instance, the specific kind of somersault necessary to accomplish, so that the next element in the gymnastics chain of movements is made possible and correctly performed; he/she knows the biomechanics and physics laws that rule the movements in the water: he/she resorts to the stated memory to model the praxis, both new or already available in the procedure role memory.

An important remark: not all the apprentices reach the three stages; some of them are blocked in the sensory motor stage, in special education, for example. For them, all the benefits from their attendance to school are proportional to the pedagogical situations within that stage. Others will witness excellent procedural competence without including in it any of the cognitive knowledge. Do the great cooks know the biochemistry of lipids, glycids, and protids that make up the food they handle to create gastronomical wonders? Is it true that every Olympic swimming champion knows the hydrodynamics laws applied in high level performances?

But, would it be forbidden to think that those subjects would still be better if they "knew" it all?

3. From one praxis to another praxis

Jean-Pierre Changuex has clearly demonstrated the physiological mechanism of the mnemonic acquisitions; he has described the nature of the neural sketches corresponding to learning; he has emphasized how the existing perceptive motor circuit imposes on the construction of the conducts. The same can be said about the cognitive nature circuits (prejudice, for example) and about the socio-effective essence circuits that play tricks on our consciousness and our determination.

Neural-theories clearly explain why it is difficult for us to improve praxis when they are integrated in the memory process: a subject can be recognized by his/ her way of walking, his/her handwriting, and accent. As soon as those units praxis are fixed, they do not spontaneously follow any evolution; they hardly ever go through any transformation unless the subject voluntarily seeks that evolution, at the price of a considerable effort.

That explanation clarifies several of the learning aspects.

#### 3.1 The notion transfer

From its origins, pedagogy has been based on the notion of transfer. The acquisition of knowledge is compared to opening of doors and facilitating the acquisition of other knowledge.

The old Hellenist and Latinist scholars in my generation will remember their professors' beautiful assumptions: ancient languages played a very secondary role to the understanding of ancient cultures, their influence on modern civilizations, the long-lasting refinement of their philosophers and artists. In fact, Latin and Greek were rather seen as precious "intellectual gymnastics exercises". It would have been a sin if such a skilled disciple wouldn't end up by mastering a command of argumentative power able to smash all the other Disciples in the modern humanities department.

In its desperate search for recognition in that noble and intellectual environment, educational pedagogic gymnastics of those days derived from the same principles. It intended to "lead to every specialty in a very careful way so as not to go into any of them, or it would become as specialty itself" Lucien Dehoux.

Changuex's neural theories have clarified the transfer notion. Provided it is true that every perceptive stimulus is translated by the tracing of a circuit in which the motor inflow will be shaped, then there will be a serious difficulty every time an akin situation, though slightly different will come up. So, early bilingualism seems to be free from risk when the two languages in question are quite different, French and German. Bilingualism may not be convenient when the two languages are very close: the often agreeable dialects' influence on the national languages is a good example of that. The same applies to motor activities. Gymnasts tend to stretch the tip of their feet when they are swimming or hurdling; basketball players experience pain when they get away from the ball, when they are playing tennis.

Therefore, it is necessary to be very careful with transfer: some of them are dangerously negative!

## 3.2 The neural motor pattern notion

A simple observation can also be used to add to our teachings: a person's handwriting is recognized no matter if he/she writes using poster letters (with shoulder articulation), in big letters on a board (with elbow articulation) or in small letters, in a piece of paper (with wrist and finger articulations), no matter if he/she uses the right hand or the left hand to write.

So, writing responds to a **pattern** printed in the neural circuits. It was believed for a long time that a motor action was specifically related to the requested muscle and articulation groups, and that such action had to be developed as a function of an anatomical specific feature.

## 3.3 The notion of a neural availability

There is another simple observation that teaches us a lot: young subjects learn new praxis incredibly fast, provided their life, family or school environment offers them the necessary stimuli.

Nevertheless, that neural availability fades away very early in the young adult. To become a sports champion or a virtuoso musician, one must start at a very early age, as it is customarily said, start the right way.

It's not a surprise that most of the professional sports people hardly ever acquire any new skill after the end of their teenage period. However, their evolution conditions are full of complex situations and they have the most competent coaches. Any progress they make is rather at the level of physical skills and the understanding of tactics' schemes (the "old player" experience, the violin player's concert background).

«Learning is to eliminate»; it is to eliminate the perspective of learning something else.

3.4 The fundamental principles of great movement families

Anything that has already been said seems to corroborate the opinion of those who understand that "you cannot learn how to make a gesture unless you make that gesture and nothing more than gesture".

But, there are so many gestures in the world nowadays that one would not be able to learn the entire repertoire during childhood and adolescence.

So, there must be a reflection about the existence of fundamental motor principles, whose command could have consequences in more than one unit of praxis, in more than one competence.

It seems to us that those passwords devised to open different doors can be found in several packages:

• Some of the perceptive nature domains can be indifferently applied to all the practices that require them. That is the case of brain domination: as soon as children realize and establish their brain domination, they can explore it either in the streets, in the sport's gym, in writing activities, in reading charts, letters, plans.

• There must also be a revision of a logical but false process. One cannot transfer a simple competence to a complex competence (Roger Pierard); truth is in the opposite direction: the so-called modern arm movement (more complex) favors learning the so-called old arm movement (less complex); the Alp's skier (more complex both at the coordination level and affection) easily moves on to cross country (less complex), and it's well known that the opposite does not happen.

• But, one should search in biomechanics for the origin of the motor principles more directly applicable to different situations.

So, it happens with supports on the ground, which interfere in propulsion. Based on their original schemes, non-educated children build poorly efficient praxis. Left only to their intuition, people throw themselves more strongly than their projectile; it's enough to observe a beginner at his track and field throws to be convinced of that; similarly a great number of our students use the excuse that they lack strength or that the ball is too heavy to justify their weak throws in volleyball. But take a closer look at them: at the moment their fingers touch the ball they are at full stretch or at the tip of their feet, with a precarious support and total disagreement with Newton's action and reaction law.

The same happens with tonicity, which allows the subject to fix articulations and transmit to his/her own mass center the forces exerted by his/ her own muscles.

Tonicity, and especially the improvement in the pelvic bones articulation is not an instinct, it is far from that; but it conditions quite many praxis in different forms of gymnastics, dance (hold in your stomach, flex your buttocks) swimming (immobilize the articulations on your lumber spine if you want to fully transmit the propulsion force

exerted by your legs to your body gravity center); there is practically no physical activity that does not require the self-perception of joints and the tonicity of some of them.

That is what happens with the set of action that operate the structures (and the thinking structure that will follow, cf. Piaget): the body self perception in attitudes and movements, the capacity to organize actions as a function of space, of time and of space-time structure, the notion of rhythm, the relationship between oneself and the other material and human elements in the environment etc.

The new programs proposed at the fundamental education level deal with each one of those points as exhaustively as possible.

It seems to us that the common basis of all the sports can be found at this level. This is the level at which lies the control of the great family of movements, of those physical potentialities that should emerge among fundamental education students. That is the level applied by Inspector Jean-Luc Cornia, as it was published in the article published in the current issue of «Fondamental Infos».

It must also be added that pedagogical intervention is not only desirable but also essential for all the children to become aware of the relevance of those fundaments and their application in different situations.

## 4. From Praxis to Competence

We insist on the fact that praxis is knowledge, and knowledge does not necessarily assure that there is competence.

Every regularly educated person knows that smoking is tremendously harmful to health and staying in the sun too long causes skin cancer: but just get into a teacher's lounge in the winter or go to St. Tropez in the summer!

Sports educators' and coaches' milieu does not follow different rules.

Sometimes there is a wide gap, even an abyss between having the knowledge about a skill and integrating it into one's behavior: that is what competence is all about.

So, the distance between active and passive vocabulary can be measured. That is the way some mathematical knowledge seems to be suddenly deleted when it's time to apply it to physics.

Concerning that point in their education, children are free to have that which the official documents determinate:

4.1. A «Stative Knowledge»: he <u>knows</u> what is the problem to be solved and he <u>knows</u> how to solve it.

- provided that a previous sensory and motor-perceptive education has endowed the child with a range wide enough for him to have a choice of solutions (heuristics),
- provided that the child's creativity has been repressed by a prescriptive teacher, who sets a single way to a solution (algorithm).

In elementary education, it would be very useful to invite the child to express stative knowledge either by means of words, writing, graphic symbols. The child may not have anything but an intuitive notion of that knowledge, not conceptualized in a symbolic language and, therefore, not liable to being communicated;

- 4.2. "Procedural Knowledge": the child is able to do what has been requested; the child has got hold of the required practice at a his/her own level of relative perfection;
- 4.3. But to reach that stage of competence, the said official documents call for a third kind of knowledge: the conditional knowledge. That term means the ability to apply an element from procedural knowledge to a complex situation, structuring it with other elements at the highest degree of efficiency.

So, a child can know the verb agreement grammar rules (stative knowledge- the child knows the rule).

The child can also be able to identify the correct verb flexions to use: (procedural knowledge).

But that is not enough. Some children do not have the necessary motor-perceptive condition to realize the spatial organization between two terms in a complex situation: "the dog that was here don't speak". Conditional knowledge is deficient, and so, competence is not mastered.

Following the same order of ideas there is a ditch, quite deep sometimes, between being able to write, on the one hand, and being to able to guide one's writing in accordance to the communicative situation, the pursuit intention, the addressee, the writing physical support etc., on the other hand.

The same applies to motor competence: knowing how to drive a vehicle in a closed circuit condition is entirely different from driving it in a real situation.

Throwing the ball to the basket during a warm-up period before the game and throwing it to the basket during the game illustrates the same difference there is between process and conditional knowledge.

Life concrete situations are characterized by several degrees of complexity. In sports' education for instance, there are distinctions

• the elementary situations - competence practically corresponds to praxis: speed races in track and field and in swimming, jumps and throwing sports in track and field and artistic gymnastics, basketball free-throwing. In every case, praxis is isolated, only submitted to positive affection dynamism (the last length jump by Jesse Owens in the Olympic Games in Berlin in 1936, to defeat the German athlete Lutz Long) or negative (the penalty kick that misses the goal in the game last minute);

• the complex situations - they outnumber the sports situations at which several parameters demand a conditional modulation of knowledge: the slalom sketch, the elements structure in a chain of different forms of gymnastics, tactics in a race, every situation involved in collective sports.

At the learning level, we go back a pedagogical process proposed over 30 years ago, which has not been sufficiently generalized in schools and is virtually unknown in clubs. It is the learning situation that is <u>reduced but not impoverished</u>.

Such a notion implies that the mobilizing situation presented to the student must be less complete than the global situation, but it must respect all its elements and structures.

So, one of the swimming viewpoints demands and develops procedures such as total emersion in a horizontal position, balance, breathing control, propulsion and hydrodynamism. You can observe that, paradoxically, the apprentice swimmer arrives at the end of the tenth lesson and then struggles against the water at a length of 25 meters, 2 meters from the margin, accompanied by the instructor who follows the apprentice along the beach. So how can one get rid of all the procedures and feel that in spite of everything, he/she is awarded the "know how to swim" label? Yes, but how, and how safely?

An exceptional situation in basketball (3 versus 2), or in soccer (with support and back-up) or entering in volleyball, is less complete than the whole sport, but they include the goal, the ball, the opponent and the partner, the specific techniques, the affection discharge. Those situations are reduced but not impoverished.

Doing dribbling exercises around cones, doing lay-up exercises by oneself, exchange balls in a clock-like tick tack exercise are reduced and impoverished situations, comparable to those represented by learning how to swim outside the water. The same happens with all these pointless "little games" that are unfortunately appreciated by so many colleagues of ours.

Supplying the children with systematized life situations in such a way as to request their potential as a whole, respecting the learning stages order by avoiding stage skipping, complying with the great movement control fundaments, making them aware that knowledge alone is not enough for competence, settling learning in complex situations provided with all its components and structures. All that make it a hard process, but that is the way it must be to condition the psychological procedures aimed at the students' development. That is the way children will simultaneously learn how to do and how to become in reality all that which physical education alone can potentially grant them. How, as the psychomotricity specialists believe, how can one accomplishing the task of becoming something without really doing it?

These are the decisive reasons to condemn physical education as a peripheral discipline, entrusted to a specialist, while the professional responsible for the group is somewhere else, making other decisions that are quite far from the interdisciplinary ideal that applies quality education to make a school successful.

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