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Education in our time: competency or aptitude? The case for medicine. Part II[☆]



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Abstract Part II is focused on participatory education (PE), a distinctive way to understand and practice education in contrast to passive education. The core of PE is to develop everyone's cognitive potential, which is frequently neglected or ignored.

The epistemological and empirical basis of PE is defined as the concept of *creative critique*, the idea of knowledge as each person's construction and life experience as the focus of reflection and cognition. PE aims towards educating individuals with unprecedented cognitive and creative capabilities, qualified to approach a more inclusive and hospitable world.

The last part is about the fact that medical education has remained among the passive education paradigm of the *professional capabilities*. It emphasizes the critical role of *cognitive skills*, both methodological and practical (clinical aptitude), in the progress of medical education and practice. Finally, it discusses what to do and how to do all these elements, aiming towards a better world away from human degradation.

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PALABRAS CLAVE

Critique;
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La educación en nuestro tiempo: ¿competencia o aptitud? El caso de la medicina. Parte II

Resumen Esta segunda parte se enfoca en la *educación participativa* (EPT), una forma radicalmente distinta de entender y practicar la educación en comparación con la *educación pasiva*. El núcleo de la EPT es desarrollar las *potencialidades cognoscitivas* inherentes a toda persona, que han sido secularmente mutiladas, relegadas, inhibidas o ignoradas.

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Se definen las bases epistemológicas y experienciales de la EPT: el concepto de *crítica penetrante y creativa*, la idea de conocimiento como elaboración propia del sujeto y la *experiencia vital* como objeto primario de reflexión y cognición. Con estas bases, se especifican los caracteres distintivos de la EPT que apuntan a la formación de sujetos con potencias cognoscitivas y creativas inéditas, capaces de aproximarse a un mundo hospitalario e incluyente.

La última parte se dedica a la educación médica que, al adecuarse a la moda de las *competencias profesionales*, permanece dentro de la *pasividad*. Se enfatiza el papel clave de las *aptitudes cognoscitivas* metodológicas y prácticas (la aptitud clínica) en el progreso y superación de la educación y la práctica médicas. Finalmente, se argumenta sobre qué hacer y cómo hacerlo respecto a la educación, en la búsqueda de un mejor mundo a contrapelo de la degradación.

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1. Introduction

This second part deals with *participatory education* (PE), a radically different way of understanding and practising education in contrast to the *passive one*. The epistemological basis of PE is the concept of critique and the idea of knowledge to specify the factors aimed at the formation of people who can overcome the *degrading attributes* and approach a friendly and inclusive world. The last part refers to medical education which, by adhering to *professional competences*, does not go beyond *passivity*. It also highlights the decisive role of *cognitive skills* and especially the *clinical aptitude* in the progress of education and medical practice.

2. Participatory education

The theory of PE, based on the idea of knowledge as *a construction of the learner*, claims the existence of inherent *cognitive skills* in every subject—denied, ignored, relegated or inhibited throughout history—and from such an assertion it reveals and identifies the process that transforms them, through *critique*, into cognitive and creative skills that make such creation possible. The critique alludes to a kind of thinking parallel to philosophy: *used to put everything in question, not to give anything for granted, trying to get to the source of what seems natural and evident*, with the creative element which provides *critique* its true meaning: *to devise and propose superior ways of thinking and interacting with the critique object*. Accordingly, its concept *penetrating and creative critique* to distinguish from its common meanings, such as pejorative judgment, disqualification, censorship or focusing only on quibbles.

The most essential condition of the *participation in knowledge* is *life experience* (LE) which takes its place as a *self-referential* key of the cognitive actions (reflective and deliberative) of the subject^a. Hence, the starting point

of *participation* is to reflect on the LE and adopt a cognitive attitude towards those experiences that disturb, move, attract or arouse curiosity, what shapes the individual *cognitive* interests. By becoming aware of these interests, the adventure to self-readability and context awareness begin, where the subject realizes that knowledge is not something external but a personal construction, which allows capturing the quality of its relationships with significant objects and its conflicts which is the origin of their desires, inclinations, inhibitions, satisfactions, dissatisfactions, frustrations, and aversions. So this involves the exercise of their cognitive skills that motivates the individual to relate in a more rewarding and enriching way with objects (to be a better person) and figure out their place in the world and their possibilities of interaction in it.

Participation in the classroom becomes possible when favourable environments are achieved so that the learner recovers his LE as an object of reflective cognition, and is guided in a search for clarification of himself and its context. The above, to recognize and understand the nature of their links and conflicts in daily life, what led him to a consistent way of acting. Such environment supposes prioritizing potentially more appropriate, relevant, and stimulating for reflection and deliberation themes of the study for its closeness with their *cognitive interests*. Reflecting towards LE is the access key to the adventure of knowledge, where information that contributes to the understanding of the self and its context attracts the subject with keen interest, and is criticized for its shortcomings and limitations to recognize his intentions, and thus, when incorporated into the creation process and being part or incentive of points of view created by the subject, this information is transformed into knowledge.^b Such cognitive situation implies the presence

things; activities, events and performances of all kinds, or unannounced and shocking situations. The type of object and the quality of the experiences changes because of material, social, and cultural circumstances of the subject and his time in life.

^b the knowledge of the self and the context means to make an incursion with the weapons of critique (which assumes a mastery of oral language and, above all, written to unsuspected levels) in various fields related to the self (philosophy, psychology, anthropology,

^a LE are *affectively charged* experiences that arise during the particular interactions of each person with objects that are *significant*: the self (conflict concerns, curiosities), close friends, attractive people; other living beings (pets), various material and symbolic

of *learning with sense*,¹ where the issues are relevant and of interest because they satisfy or give a response to the subjects needs and intellectual desires (externalized *cognitive interests*) that depend on their life circumstances and age.

3. The penetrating and creative critique

To characterize PE, it is necessary to refer to the theory of penetrating and creative critique (PCC): "Thought that gives the cognitive skills inherent to each person—denied, ignored, inhibited, or repressed—a questioning and creative organizational pattern that can free the mind from the ideas and prejudices that limit it and at the same time make possible a penetrating knowledge of the self and the context". A mature PCC implies what is listed below:

- a) The *reflective and introspective habit* of the LE that allows to raise awareness and recover the experiences with greater affective-value load resulting from the interaction with significant objects, which take the form of cognitive interests as an axis of cognitive and creative endeavours
- b) *It is provided with the force of emotion*: favourable feelings aroused by the progressive penetration of the objects. Affectivity as a driving force
- c) *Two interdependent facets: self-critique*, oriented towards knowledge of the self, and *heterocritique*, towards the context itself (the critique to penetrate the objects of knowledge)
- d) *Predisposition* to put into question the assumptions of paradigms² prejudices, dogmas or unfounded beliefs (penetrating critique)
- e) *Prioritize its use* in the type of knowledge that is directly or indirectly related to the interests that govern the world and are ruining civilization, such as reductionist knowledge, the "established and unquestioned truths" or the dominant ideas in different fields of knowledge (the critique of knowledge itself)
- f) *Search* that transcends the boundaries between *disciplines*, leading to *transdisciplinary perspectives* of understanding
- g) *The attitude* of systematic doubt towards what is taken for granted and be open to other points of view and collaborations
- h) *The inclination to* propose pertinent cognitive alternatives to the criticized object
 - i) *Progressive scope*: versatile, diversified, and creative
 - j) *Habits of deliberative thought*: consider, meditate, question, discern, confront or infer

biology, anatomy, physiology) and context (history, sociology, politics, economics, ecology, technology, math, physics, chemistry). But not as independent and unrelated disciplines but selectively, interlaced and guided by the search for *meaning*, which response to the needs and cognitive interests of the subject, according to their age and stage of their cognitive adventure.

- k) *Cognitive skills*: communicate, listen, analyze, argue, inquire, observe, experiment, collaborate, persuade
- l) *Reflective and deliberative actions* to decide, to undertake, to assume, to persevere, to overcome or to desist in the cognitive adventure
- m) *Differentiation of the cognitive skills* in methodological and practical skills

Consequently, it is understood that the PCC is not about the appropriation of the object, but a way of thinking, which can be achieved, by promoting creativity and the respectful exchange of opinions, controversy, reciprocal cognitive challenge, deep deliberation and generation of knowledge.

4. Self-construction knowledge

About the *participatory epistemology*, we retake what was left pending in part I.³ This represents a heterodox theory where knowledge is the result of a *creative critique*. In this theory, with decisive implications in the educational field, unthinkable attributes of knowledge stand out in the dominant (passive) epistemology.²:

- a) *Powerful will* (passion), the life force of every cognitive and perseverant enterprise that has remained latent, inhibited or silenced the human condition
- b) *Cognition*-based on the integration of affectivity and intellect. The reflection of the LE, from which a genuine cognitive adventure emerges
- c) *Self-construction* through the PCC (auto and heterocritic)
- d) *The upward spiral process* of reflecting the LE, raise questions, find related information, criticize and develop enlightening perspectives, which changes the perception of the LE and restarts the process over again
- e) *Enlightening perception* of oneself and our context
- f) *Excellence product* of the cognitive skills
- g) *Transdisciplinary perspectives* (complexity) for understanding objects, events, contexts, actions, and ventures
- h) *Determined cognitive will* that leads to continue, turn and wind in the cognitive adventure
 - i) *Creative way of thinking* about objects
 - j) *Forms of interaction* with the object of study, which become more pertinent, versatile, fruitful and transcendent
- k) *Construction* of new material and symbolic works
- l) *Path of progressive clarification* of the nature of the problems we suffer in a hostile and collapsed world, which leads to overcome the *degrading attributes* (passiveness, individualism, consumerism, competition, vulnerability towards manipulation) and commit to altruist projects in the search for favouring conditions towards a satisfying, stimulating and dignified life. As well as to become part of organizations willing to fight for the highest value of existence: the dignification and universalization of life in all its forms.⁴

5. Distinctive characteristics of participatory education

PE has a premise: *to a self-construct knowledge* that comes through PCC. This way the subject can be the protagonist of its cognitive adventure and will be able to create its versions of itself and its context, which crystallize in its points of view about the perceived problems. That represents a transitory cognitive platform from which modifies his points of view all over again. This process occurs in environments that enable interaction, discussion, and argumentation from peers; hence, a genuine interest in knowledge begins to grow (desire, passion). PCC matures while applying it, and cognitive skills begin to differentiate into aptitudes. Therefore, the knowledge acquired because of these cognitive skills become perspectives that give consistency and congruence to individuals' decisions.

In the PE, the concept of *participation* refers to the protagonist of the subject in the creation of his knowledge; it is a way of understanding and practising education different from *passive education*. It involves rethinking traditional ideas regarding the school "raison d'être", its purposes, the roles played by educators and learners, the learning priorities, the contents of the curriculum, the formative pretensions of the graduates or the type of society to which they aspire. The *distinctive characteristics* of the PE, as opposed to those of passive education, represent the logical consequences in the educational level; on the one hand, the theory of *penetrating and creative critique* (PCC); on the other, *participatory epistemology*, based on the idea of knowledge as a self-construction of the knowing subject. Among these *distinctive characters*—that can operate, among other things, as a reference pattern when assessing education—highlights the following:⁵

- a) The *life experience* (LE): the experiences of interaction with objects, charged with affectivity, it is the centre of reflection and cognition; and the link between feeling and intellect in the cognitive act, which gives rise to the *need of knowledge*
 - b) The *promotion* of the habit of introspective reflection of the LE for cognitive purposes, which shapes the *cognitive interests* that function as a "search engine" towards certain objects by its cognitive intuition. This is what justifies talking about *the creation of the own knowledge*, which is absent in the passive education
 - c) Introspective reflection of the LE that reveals the interactions between the subject and the object and becomes the link between the self and its context. This is the true access to knowledge
 - d) The *self* and the *context* as objects of knowledge requiring the progressive realization of the PCC, which takes the form of *self-critique* (towards the self) and *hetero-critique* (towards the context)
 - e) The permanent claim of *meaningful learning* when selecting, sequencing, and relating curricular issues based on their *potential to tune* with curiosities, concerns or desires of learners, depending on their life circumstances, their age and their previous experiences.
- Do not confuse with meaningful learning,⁶ where the LE is excluded, and creation is non-viable
- f) The close link between cognitive interests and the subjects of study that encourage and enrich reflection (meaningful learning). It is from experience (reflective) that a true integration with theory can be achieved, in stark contrast to passive education, on the basis of theory to attempt an illusory integration with the practice
 - g) In the study of the subjects, the *absolute priority* is the deployment of the *cognitive skills* guided by the PCC, which is expressed in attitudes of "questioning" the studied in terms of its scope and limitations, merits and demerits to clarify uncertainties, confusions or doubts; to answer questions or satisfy concerns, curiosities or cognitive desires of the subject. Thus the primary reason for the tasks: to incite and channel the cognitive skills of the students, resorting to the PCC and appealing to the cognitive interests determined to seek their satisfaction
 - h) The critical role of writing in the development of cognitive skills, as long as it deals with problems and issues that concern the learner (purpose) who seek to clarify or communicate
 - i) The cognitive powers, when reaching an advanced development, differentiate and diversify in methodological aptitudes and practices that are interdependent
 - j) The role of the student, which is to star in his adventure of knowledge development through the PCC. In this adventure, the core is the development of the cognitive skills that give him the creation power to venture into the different spaces of the collective experience
 - k) The teaching role as an effective promoter of favourable environments, so that learners become aware and externalize their cognitive interests and develop their cognitive skills exercising the PCC. Here the domain of didactic techniques to "teach and transmit" is very secondary
 - l) The priority activities in the classroom: encourage dialogue, discussion, controversy, deliberation and collaboration that generate bonds of respect, reciprocity, complementarity, interdependence, stimulating and fraternal, diverging from individualism and competition
 - m) That incites the cognitive interest for problematic situations that shake the collective conscience and for decrypting the reality of the current world (the context), promoting the development of personal points of view of increasing solidity (beyond the reductionism and awareness of the manipulation and social control)
 - n) The idea of progress that refers to *increasing skill* of knowledge construction by the students, supposes maturity and differentiation of cognitive powers in *methodological and practical abilities*
 - o) Evaluation, which is, as a matter of principle, an essential means of criticizing the educational system in its scope, limitations, benefits, vices or possibilities for improvement, and in that tenor, is a motivating factor and key guide of the protagonist's efforts to overcome
 - p) The incitement to complex thinking (transdisciplinary) when understanding the reality of the world, which operates as an interpretive framework for events and as a reference for decisions and actions (penetration of the

context that leads to decrypting the logic of power and domination)

- q) The unwavering pretension of inclusive specialization: the specialist, having deepened in the self and the context learns to relativize their professional activity and understand their interdependence with other tasks, to decode the prevailing order and create alternatives for understanding and action that make it possible to overcome reductionism, individualism and manipulation
- r) Their desiderata, which are people with unusual cognitive and creative skills, equipped with the PCC, members of collective forces engaged in the search for authentic progress: validity of values of the intellectual, spiritual and moral overcoming of the human condition; self-management of environments conducive to inclusive, pluralistic, deliberative, egalitarian, fair and careful communities of the planetary ecosystem (an unprecedented civilizing flourishing)

It is underlined that the PE does not define profiles, but formative pretensions, learning priorities (development of the cognitive skills), strategies and tactics to incite and channel the creation of knowledge. The profiles (something finished) in the form of desirable competencies embodied in "experts" are unfeasible in a collapsing world, where subjects are configured—almost without exception—by the degrading attributes: passivity, individualism, competitiveness, consumerism and high vulnerability to control and manipulation of consciences and bodies. Only the development and diversification of cognitive skills through the PCC, promoted by education, from early ages and up to higher levels of schooling,^{7,8} as the core of vital projects that leads the graduates to integrate new collectivities, can generate influential forces that joined, challenge with real possibilities to the prevailing order that "administers the civilizing ruin".

6. Cognitive skills

Skills (concepts of the PE) refer to the differentiated organizational patterns that the exercise of the PCC confers on the cognitive potentials of each subject, which, strengthened by affectivity (passion), represent progressive facilitation to deliberately influence various kinds of objects or situations. There are two interdependent types: methodological, manifested as projects of creative inquiry of theoretical, symbolic and factual objects (penetrate); and practices, which are expressed as constructive action projects that seek specific influences on people or groups (influence).

Among the methodological aptitudes are: the critical reading of theoretical writings (questioning the universe of ideas); the realization of theoretical investigations (intellectual contributions in the universe of ideas); the essential reading of factual investigations reports (diverse questions to the processes of factual world); the realization of factual investigations (diverse contributions in the factual world). It should be noted that methodological skills, in addition to interdependent, have hierarchical relationships where ideas have primacy over the facts since they are the ones that can

confer greater cognitive scope to the inquiries. This is so because of all scientific facts have as a background specific ideas about the object, so that if the ideas are superficial or simplified, the facts "partners" of such ideas will suffer from similar limitations (as F. Nietzsche said, "There are no facts, only interpretations").

Methodological skills in the form of creative inquiry projects,⁹ although they bear similarities with the scientific work skills where there are theoretical, methodological or factual objects are diametrically different because, in the reductionist empiricism of official science, the strictly theoretical objects are ignored, disqualified, mutilated or misunderstood. Also, the diverse skills that an investigation has been considered very specialized subjects own of other so many specialists (similarity with the professional competitions that pretend the formation of very specialized "experts"). This stands out in the division of current scientific work that is based on a plural articulation of experts: methodological, in the use of technologies, in the innovation of techniques, in assemblies and experimental instrumentation, in the execution of techniques and procedures or the use of statistical packages. They are not considered experts in theoretical matters (except in physics: theoretical and experimental physicists).⁹

With regard to *practical skills*, which were manifested as constructive action projects with certain types of objects: people or groups in specific situations, whose purpose is to influence them in two ways, the first: seeking favorable, motivating, beneficial, inspiring, comforting or calming effects in the peculiar situation in which they find themselves; the second: to incite them, guide them and channel them towards a reflective and cognitive experience with respect to themselves and their context (participation in knowledge), in order to become progressively responsible for the decisions and actions that concern them in the achievement of their aspirations, expectations or purposes of life. Outstanding examples are the clinical aptitude and the teaching skill.¹⁰

By exercising a practical aptitude, the subject uses two types of cognitive strategies to achieve his purposes: to approach the object in question in-depth (person or group in a situation) to capture expectations, aspirations, dispositions, possibilities and vital priorities of the case. This constitutes the framework of interactions that seek favorable, motivating, beneficial, inspiring, comforting or peaceful effects; devise, define, test and adapt tactics of action -based on a penetrating cognition- tending to promote and channel participation in the knowledge of themselves and the context by patients or students, as the case may be. When addressing the education of physicians, the clinical aptitude is detailed.

7. The education of doctors

If something still represents the *ethos* of medicine, it is clinical skills are, without ignoring that the progressive modernization, massification, bureaucratism and the commercialization of the medical practice are emerging as the "new identity" of this noble millenary profession. Hence,

the reason to devote the most significant space to clinical aspects in this section on the education of doctors.

To place the current moment of the training of doctors, particularly in our context, it is necessary to remember report A. Flexner (1910) for the Carnegie Foundation for the Advancement of Teaching, concerning medical education in the United States and Canada.¹¹ This report derived in the inclusion of full time learning experiences in laboratory environments in different branches of science (the so-called basic sciences) during the first two years of medical school, and the remaining two years, in the hospital and school environments. While the report's recommendations became true, it was argued that teaching and the medical practice acquired true scientific bases. And even more, that one could legitimately speak of the medical science or the scientific medicine, opposing it to the empirical medicine or the tradition is ancestral healing, like the oriental ones or the herbalist. (Clarification: medical practice may have few or many scientific bases, decisions and treatments can be premature or late, right or wrong, pertinent or inconvenient, beneficial or harmful but they can never be "scientific").

The influence of the Flexner report extended, and our country, like many others¹² was not an exception. The medical career has remained *mutatis mutandis* over time, with the same organization that separates the basics from the clinical. What changed are the contents because of the development of medical science, which determines decisions, additions, updates, and rarely, integration of subjects to study. To illustrate, we can take the curriculum 2010 from the Faculty of Medicine of the Universidad Nacional Autónoma de México (UNAM), being representative of the educational work at the national level since it is usually emulated by other schools and faculties regarding adjustments and updates of the programs.¹³ This curriculum is a result of deliberations from the faculty,¹⁴ it introduces adjustments and various modifications in the contents of the program, mainly because of the adoption of the *professional competences* approach and the needs of updating the vertiginous and fragmentary growth of sciences in this field. (It is not a matter of disqualifying the effort of the faculty, which requires binding consensus where resistance to change and conservatism usually prevails, but to exemplify the validity of passive epistemology). The following elements from the curriculum stand out: a) it preserves a conformation of disconnected subjects: divided between basic sciences (the first two years) and clinical sciences (the rest); b) it separates theory and practice, assigning more credit hours to the theoretical classes than the practical; c) evaluation is based mostly on the memory of information; d) the graduate profile is defined by competences: critical thought, clinical judgment, decision making and information management; self-teaching skills; effective communication; knowledge and application of the biomedical, sociomedical and clinical sciences in the practice of medicine; clinical diagnosis, prognosis, treatment and rehabilitation skills; professionalism, ethical and legal responsibilities; public health and health system: health promotion and disease prevention; development and personal growth.¹⁵

In this curriculum we can recognize *passive education* in several points: a) it is obvious that in the first two years, the

cognitive reflection of the *life experience* (LE) is excluded^c; b) the idea of knowledge implied the accumulation and retention of information (this fragments the discipline and establishes memorization as the base of evaluation); c) it usually raises unfavorable attitudes towards knowledge (represented by fragmented, disjointed and meaningless information which must remember): apathy, indifference, rejection or aversion; d) fragmentation hinders or prevents an integrated vision of the body (not just include an "integrative subject") which causes reductionism and exclusive specialization; e) the *critique* is not about studying the curriculum but that understanding the information, memorizing it and accumulating it become the only cognitive skills the student develops; f) theory does not operate as a means of cognitive reflection of the LE (which is neglected) but as a "revealed truth" unquestionable and devoid of context of where it came from; g) practice does not represent a challenging experience for the theory, but its tacit confirmation, which favors dogmatism and deployment of experiences impoverished, bounded and eventually stereotyped.

The above reveals a curriculum that promotes fragmentary learning and with no sense that prevents achieving the profiles objective-desirable but unachievable skills-and illustrates the gap between the curriculum and the professional and social performance.

As long as the core of passive education remains untouched (in facts, the speech does not matter much), changes made to the curriculum will be illusory, will remain in the rhetoric, and in the *degrading attributes*: passivity, individualism, consumerism, competitiveness and high vulnerability or manipulation that constitute the *ethos* of civilization today; with their permissiveness and contribution to the civilizational collapse, which will mark the physiognomy of graduates and citizens.

8. The clinical education

The traditional formation of clinical doctors has been limited to the nosological sphere; in other words, the attention, the meticulousness and the various skills that are demanded as doctors. It focuses in obtaining evidence (signs and symptoms) of a disease, ignoring or rejecting other because they do not "fit into any pathology", even when they can reveal deep aspects of the patient in question. In spite of the unconstrained vision of the human pain, the great clinicians of the past transcended the nosological fence in their per-

^c In this stage, the LE with respect to the self would be represented by conflicts, fears, uncertainties or curiosities related to the self: body and mind, which upon being known as cognitively conscious, would raise understanding the needs (the study of the program becomes the preferred way of knowledge of oneself). Regarding the context, the main thing of the LE would be the interactions with sick people that arouse favorable affectivity (compassion, harmony, empathy) and cognitive interest that moves to the search for clarification of the problem that afflicts them and to provide help and support (the subjects as means of reflection to deepen the knowledge of the patient who occupies the attention).

ception of suffering and could establish a deep and open communication, and obtain subtle but relevant data of the *sick person*. In this respect, an aphorism attributed to R. Fournier, who was director of the School of Medicine, UNAM is relevant: “*it is more important to know the patient who has the disease than to know the disease of the patient*”, which remains an emblem of humanism in medicine.

Now, the Single Program for Medical Specialties (PUEM) at UNAM,¹⁶ applies this premise even more than in the bachelor degree: “*Learned medicine is the practised medicine on a given environment*”, which explains the *gap* between academic profile and performance of graduates. On the one hand, a list of relevant, desirable or necessary skills; on the other, the environment which dissociates a clinical routine (low in reflection, study and deliberation) from the classroom (the subjects studied unrelated to practical problems), where training is the habits and customs of medical service. Thus, the profile becomes illusory and unattainable because in these environments prevail:

- a) *Specialization* with a reductionist standpoint, where the *complexity* of the patient is out of perception, absent as an interpretive framework of relevant events to establish decisions and actions. What prevails is the mechanism: the patient as a machine damaged to be repaired” by adjusting the dysfunctional part or changing what is useless”
- b) *Bureaucratization*, which values the number of registered actions (even if they are simulated), ignoring their quality and merit
- c) *Commercialization* of the medical practice where time is money, and the priority is income viability and good business
- d) The *massification* of care that saturates services, favouring hasty or simple actions, which impoverish clinical work. In the private sector, this also happens regarding insurance companies
- e) The *defensive medicine* “forced” to use simulations and excessive use of technology to justify exposing patients to inconveniences or unnecessary damage
- f) The *impersonation* of basic clinical skills by the indiscriminate and abusive use of technologies (consumerism) that in the discourse they are perceived as “omnipotent, objective and infallible”.

Today, even a simple clinical relatively discreet and focused on the disease tends to disappear. The training of future physicians is weakening as the dependence on diagnostic and treatment technologies grows. In this regard, the obsession by cutting-edge technology, given the “omnipotence” attached to and *consumerism*, prevents the awareness that technological development is responding *primarily* to the interests of profit and profitability and operate *primarily* as a control device of minds and bodies.³ It is evident that technology can act as an effective adjuvant; what is usually ignored is that they function governed by an individualized criterion, clinical exercise and judgement. Otherwise, their improper use is encour-

aged and has counterproductive and undesirable effects for treating physicians, and even harmful or deadly to patients.

9. Clinical aptitude

And now, regarding the title: skills or aptitudes? Is the turn of the clinical aptitude (CA): *an organizational pattern which differs from cognitive skill*, that results from the PCC (radical difference with skills), which *facilitate the subject to have a positive influence on people or groups* with determined purposes. It has the following attributes:

- a) *Affective-value* as the empathy and harmony
- b) *Intellectuals*: clinical reasoning adapted to its context
- c) *Theoretical interpretation*: complexity as a way of understanding the patient and evaluate a framework for potential interventions
- d) *Methodical*: order and prioritization of actions and decisions by the interpretive logic
- e) *Technical*: the ability to obtain relevant and profound evidence of the problem

These attributes are manifested in *specific and relevant forms of interaction* with people and groups (family), beset by health problems (tip of the iceberg of civilizational collapse) requesting or requiring understanding, guidance, help and relief. From the above, it follows the key role of ideas: enable a keen perception of the patient under a complex reasoning,¹⁷ result of integrating the concepts of *disease* (nosology aim, the deviation of normality) *condition* (the subjective experiences of each self and the culture of belonging) and *psychosocial situation* (particular existential circumstances of the individual).¹⁸ At this stage, the LE with respect to *itself* would be represented by the conflicts, fears, uncertainties or curiosities related to the self: body and mind; same as when they are aware of a cognitive spirit, will raise the need for understanding (the study of program materials become preferred route of self-knowledge). With regard to *context*, the central part of the LE would be interactions with sick people, to awaken affection (compassion, harmony, empathy), and cognitive interest, which moves to clarify the problem that afflicts them and provide them help and support (the means of reflection to deepen the knowledge of the patient). This theoretic plot is the *interpretive framework* to judge the relevance of the differential factors of the patient-family, context of the decisions and actions. Again, the progression of the CA is interdependent on the progress in the methodological skills, and as a creative process it manifests through the following features:

- a) *Progressive relevance* in the forms of interaction with the patient-family, based on empathy and harmony, considering the objective, the subjective and the circumstantial
- b) *Anticipatory versatility*: adjustments and modifications in the ways of interacting that anticipate the potential variability of patient-family situations
- c) *To be up to date* concerning the most penetrating theoretical approaches of the problem in question; to

promising novelties in prevention, diagnosis or treatment, and to the changing strategies of manipulation, fallacies, deceptions and half-truths promoted by the health industry

- d) Increasing effectiveness: by *identifying* the clinical problem in its complexity (interpretative framework of complexity and clinical refinement); by choosing and using the diagnostic and treatment resources judiciously and selectively based on the needs of each in their context and in anticipating eventualities of iatropathogenesis (quaternary prevention)¹⁹
- e) *Progressive scope*: by promoting (encouraging, channeling) patient-family participation in recognizing, understanding and taking charge as much as possible of the problematic situations that afflict them, and in asserting their interests and rights as services users; when advising in the way of contributing or leading the decisions and actions that concern them with respect to anticipate, prevent, recognize or face such situations and choose between alternatives, according to their aspirations, expectations or life purposes

CA as a growing skill of a medical professional to positively influence the patient-family represents an advanced stage of participation in this field and marks profound differences with clinical competence because it involves the exercise of the PCC as a condition of all cognitive, penetrating, persevering, pertinent and liberating undertaking. The development of the CA is unusual in current times, where passivity and exclusive specialization prevail, and critique is misunderstood and precluded.

There are few possibilities for the PE to influence the training of future doctors because of the proverbial closure of the institutions with respect to heterodox ideas and practices, especially if they are not of foreign origin; In addition, teachers are not trained on experience critical reflection, which is crucial to promote this radically different type of education. Although CA is, to a large extent, unachievable nowadays, it has an excellent heuristic value as an ideal reference capable of guiding and channeling the interest and behavior of learners and educators towards overcoming themselves; It gives real meaning to clinical experience in a path of creativity and improvement, which is the foundation of any authentic progress of people's health care, whose desideratum in the social sphere is to encourage the growing participation of patients and users in the decisions and collective actions of their individual interests, and as citizens in the defense and promotion of their rights.

10. Epilogue

The aphorism: "*Education is the hope for progress of societies and nations, and, therefore greater education implies higher progress*" must be contextualized in our proud civilization, "the most educated in history" led by dominant societies that subordinate and oppress others, which is in a spiritual and moral crisis and has led us into another form of barbarism. So, it is not about insisting on the model of *passive education* that has operated since ancient times as a robust device control and constraint of consciences and bodies; but another kind of education based on a penetrating

and creative critique of the established and unquestioned knowledge; that frees the mind and shakes the *degrading attributes* and promotes the exercise of *cognitive and creative skills* of social groups. These, in turn, equip themselves with self-determination and power, can freely choose their conditions and circumstances in life, where they can find spiritual, intellectual and moral growth, as well as the preservation of the planetary ecosystem.

Conflict of interests

The author declares no conflict of interest.

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