



Paedology as a polygraph of pedagogy (psycho-pedagogical assumptions) in Faria de Vasconcelos (1880-1939)¹

A pedagogia como polígrafo da pedagogia (pressupostos psicopedagógicos) em Faria de Vasconcelos (1880-1939)

Pedología como polígrafo de la Pedagogía (suposiciones psicopedagógicas) en Faria de Vasconcelos (1880-1939)

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Resumo

O estudo, de índole histórico-descritivo na área da História da Educação, aborda os pressupostos psicopedagógicos da Pedologia, como ciência do desenvolvimento da criança fundada na Pedagogia, propostos pelo pedagogo português Faria de Vasconcelos. Analisaremos e refletiremos, na base duma metodologia hermenêutica, o conteúdo desses aspetos na sua obra e recorrendo a fontes secundárias sobre esta temática. Este pedagogo impregnado de ideias do Movimento da Escola Nova, associadas à sua experiência em Bierges (Bélgica) fornece contributos ao estudo científico da criança/infância. Os dois pontos da estrutura do texto coincidem com os objetivos estabelecidos: analisar a Pedagogia norteada pela Pedologia, no estudo do desenvolvimento da criança, sustentando-se na pedagogia experimental; interpretar os pressupostos psicopedagógicos do crescimento e autonomia da criança, as funções físico-psíquicas (princípios: continuidade e solidariedade) e o humanismo antropológico. Vasconcelos é um dos promotores da Pedotecnia e da psicopedagogia no estudo das crianças escolares na História da Educação em Portugal.

Palavras-chave: Faria de Vasconcelos. Pedologia/Paidologia. Ideias da Escola Nova.

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Abstract

The study, of a historical-descriptive nature in the area of the History of Education, addresses the psycho-pedagogical assumptions of 'Pedology', as a child development science founded in Pedagogy, proposed by the pedagogue Portuguese Faria de Vasconcelos. Based on a hermeneutic methodology, we will analyse and reflect the content of these aspects in his work and use secondary sources on this subject. This pedagogue impregnated with ideas from the New School Movement, associated with his experience in Bierges (Belgium), contributes to the scientific study of children/childhood. Therefore, the two points of the structure of the text coincide with the established objectives: to analyse the Pedagogy based on Pedology, in the study of the child's development, based on experimental pedagogy; to interpret the psycho-pedagogical assumptions of the child's growth and autonomy, the physical-psychic functions (principles: continuity and solidarity) and anthropological humanism. Vasconcelos is one of the promoters of Paidotécnia and psychopedagogy in the study of school children in the History of Education in Portugal.

Keywords: Faria de Vasconcelos. Paedology. New School ideas.

Resumen

El estudio, de carácter histórico-descriptivo en el ámbito de la Historia de la Educación, aborda las suposiciones psicopedagógicas de la Pedología, que es la ciencia de desarrollo infantil fundada en la pedagogía, propuestas por el pedagogo portugués Faria de Vasconcelos. Analizaremos y reflexionaremos, teniendo como base la metodología hermenéutica, el contenido de aquellos aspectos en su obra y utilizando fuentes secundarias sobre esta temática. Este pedagogo, impregnado de los ideales del Movimiento Nueva Escuela, asociados a su experiencia en Bierges (Bélgica) aporta contribuciones al estudio científico de la infancia. Los dos puntos de la estructura del texto coinciden con los objetivos establecidos: analizar la Pedagogía basada en la Pedología, en el estudio del desarrollo del niño, basado en la pedagogía experimental; interpretar las suposiciones psicopedagógicas del crecimiento y la autonomía del niño, las funciones físico-psíquicas (principios: continuidad y solidaridad) y el humanismo antropológico. Vasconcelos es uno de los promotores de pedotecnia/psicotecnia y/o psicopedagogía en el estudio de escolares en la Historia de la Educación en Portugal.

Palabras clave: Faria de Vasconcelos. Pedología/Paidologia. Ideas de la Escuela Nueva.

Background

António de Sena Faria de Vasconcelos, distinguished Portuguese pedagogist, was born in Castelo Branco (Portugal), son of the Attorney General of the District, Dr. Luiz Cândido de Faria e Vasconcelos and D^a M^a Rita Sena Bello de Vasconcelos, maternal grandson of Simão Pedro de Sena Bello, he graduated in law, following family tradition (MARTINS, 2019b). From early on, he felt, as a result of the times, a profound vocation for other areas of knowledge, especially pedagogy, and others such as (social) philosophy, paidology, psychotechnics and pedotechnics, biology, anthropology, sociology, arts, ethics, especially during his stay in Belgium and Switzerland (1902-1915). All this knowledge would provide him with the analysis, reflection and interpretation of facts, processes and educational/school problems, hence our reference in the title to have been a 'polygraph' of paedology/paidology knowledge of his time, especially in matters relating to children/infancy and adolescence. For him, the (contemporary) Pedagogy allowed the pupils to have an integral education, carried out harmoniously in its various dimensions (FERNANDES, 2006).

His vital biography and/or formative path presents articulated moments between them and susceptible of a deeper analysis, although several scientific works have appeared in Portugal and Brazil in the last years, for example the periods: (1880-1902) primary education in Castelo Branco, followed at the Colégio dos Padres do Espírito Santo in Braga and ending with the law course at the University of Coimbra; (1902-1912) academic training at the New University of Brussels, being a professor there, besides disseminating innovative ideas in education; (1912-15) the practical sense of (experimental) pedagogy when experimenting the principles of the New School in Bierges in Belgium, followed by an expansion of knowledge, of academic collaboration and sharing of ideas with figures from the Institute J. J. Rousseau Institute in Geneva (Claparède, Ferrière, Bovet); -(1915-1920) disillusioned with the war environment he left on the 'Belgian Mission' of pedagogues (hired/invited) to Latin America (Cuba and Bolivia), where he intervened and applied the ideas of the New School; (1921-1939) back to Portugal, he dedicated himself to the teaching work in several educational institutions, took part in several magazines (Seara Nova) and collaborated in João Camoesas's Proposal of Bases for the Reform of Education, in 1923 (GOMES, 1980), besides the creation of the IOP-Institute of Professional Orientation (1926-39), of the Institute of Mental and Pedagogical Rehabilitation (1929-31), of the Navarro de Paiva Institute, where he was an outstanding researcher. As director and professor at the IOP that his name crossed borders, projecting the name of the institution in such a way that it was one of the most prestigious in Europe, as the editorial of La Gazeta Literária Iberico-Americana (1928, p.1) mentions:

The second lecture, which took place on Sunday, was given by Dr Faria de Vasconcellos and was about the Institute for Vocational Guidance, which he runs with great success. This Institute is one of the most modern in Europe. The professional orientation with 22 laboratories, which serve to orientate minors and adults, according to their physical and mental capacities, in the profession they should follow. This Institute has physiological, psychological, pedagogical, economic, placement and protection sections for juvenile delinquents, and its sphere of action is now being extended to public schools, for which the Institute prepares specialised experts in these delicate subjects. The in-depth study of this modern institution has aroused great interest among the pedagogues and men of science who attended this conference.
(Translated from Spanish)

The work of Faria de Vasconcelos presents a systemic perspective that needs a re-reading not only in the light of the New School model since he is more genius than reflection, more producer than the product of those scholastic ideals (MARTINS, 2019b). He is a polygraph in the domain of scientific-pedagogical knowledge, of the time, and of doing (action), which forces historians of education to a resounding 'reconstruction' of his discourse and his praxis. If we highlight the primary reference to *'Lições de pedologia e de pedagogia experimental'* (MARQUES, 1986, p. 187-692; VASCONCELOS, 1909) and *'Une École Nouvelle en Belgique'* (VASCONCELOS, 1915, 2015), besides other writings illustrative of his educational and psych pedagogical thought, we can verify his conviction in the regenerating, emancipating and edifying power of education, based on scientific pedagogy. This trend in his thought made him evolve by sociological, pedagogical (pedological) and psychological scientific interests, which determined his intellectual activity, always focusing on teacher training and the transfiguring capacity of the educational activity.

This scholasticovist with ideals of innovative and scientific pedagogy put the science of education at the service of action and the action at the Greek service. An excellent example of this statement is Vasconcelos's performance in the institutions he directed, especially the IOP, when collaborating with the schools in the detection and support of students with school or learning difficulties ('weak-minded'), including the 'abnormal' children/young people, as well as in the didactics of teacher training, in order to intervene and support the students in school problems. Always aiming at inclusion, he collaborated in the processes of diagnosis of childhood held in the Central Courts of Childhood (observation in refuges), with the institutions of re-education and jurisdictional services for minors, with the institutions of social assistance and with the companies with the aim of professional improvement. For him, the school and professional orientation consisted in substituting the arbitrary and empirical processes in the choice (vocational) of a career/course by scientific methods, submitting the individual to a diagnosis and to a series of examinations (clinical, physiological, anthropometric, mental or cognitive) "destined to verify not only his aptitudes but also his inaptitudes, to establish his somatic, functional and mental type, his essential characteristics" (VASCONCELOS, 1931, p. 9). In this formidable formulation of orientation, fundamental in individuals' educational/formative process, he also instilled the professional, ethical perspective and professional deontology in today's language.

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educational/formative process, he also instilled the professional, ethical perspective and professional deontology in today's language.

Our study, of a historical-descriptive nature (qualitative methodology), within the scope of the History of Education (contemporary Pedagogy) is based on the hermeneutic method of content analysis of the writings on the pedagogy, paedology and psycho-pedagogical assumptions of A. Faria de Vasconcelos (1909,1915, 1921a 1921b, 1925, 1928, 2015) with recourse to his work organised, in volumes, by J. Ferreira Marques (1986, 2006, 2012), which are related to our approach theme. In addition, we resort to secondary sources of various kinds (MARQUES, 2012; MARTINS, 2017, 2019), referring to the Portuguese scholastic under analysis and/or to the pedagogical context of the time in which he lived.

We tried to understand Faria de Vasconcelos's thought better through the proposed objectives, reflecting it in the Pedology strand, which is based on experimental pedagogy and had, in the framework of Educational Sciences, specific interest for the training of regular teachers and the educational action. In this historical period in which Faria de Vasconcelos lived, pedology, paidology, medicine (the influence of psychiatry regarding 'abnormality'), and hygiene (and eugenics) (VELOSO, 2017) were decisive to know the child/infancy and adolescence, besides influencing the political discourse (social/educational policies).

1. Pedagogy guided by pedology

The Portuguese scholasticivist expresses his intention and purpose of the respective content (12 lessons delivered) of the work 'Lições de pedologia e de pedagogia experimental, addressing the pedagogy based on paedology, stating that:

systematization and vulgarisation that too many, despite its imperfections, can be helpful. It is a fact that many of the indications contained therein are of immediate and indispensable application in the present schools. Others suppose a school organisation entirely different from the existing one. However, both obey this fundamental principle in Pedagogy: adapting teaching and education to the child's natural, physical and psychological development. (VASCONCELOS, 1909, p.7). (*Translated from Portuguese*)

Vasconcelos defines Pedology as a new science, in a psycho-pedagogical and social perspective (MARQUES, 1986, p. 198), that is, for him, "It is the experimental science of the child under its different aspects", which seeks to know the child's body, whether it has normal or abnormal development. This new pedagogy of experimental nature integrated physical, physiological and psychic knowledge regarding the child development, using techniques (instruments), in such a way that Faria de Vasconcelos specifies this definition is saying: "Pedology is the experimental physiology of the child, whose body and spirit it seeks to know, to determine not only the laws of its development but also the differences, varieties and individual types", in a differentiated way (MARQUES, 1986, p. 205). Therefore, it was a new science, oriented to "The scientific study of the child is still very backward, and it would be extremely imprudent to deduce from the current results of experimental psychology precise and positive pedagogical applications" (MARQUES, 1986, p. 206).

The scientific study of the child's life (development) covered, according to Faria de Vasconcelos, "all problems concerning the physical and psychic nature of the child, whose solution is sought in the sense of a practical pedagogy, of a natural and logical education of the child" (MARQUES, 1986, p. 205). Pedology investigated the children's growth, during the period of childhood(s), in which theories guided these studies, indicating experimentally

the way to "lead them to the fullness of their development" (MARQUES, 1986, p. 224) and, therefore, covered problems related to the preservation of the child's growth; problems about the stimuli on their strengths (will); problems concerning factors leading to their full development. For Vasconcelos, that science "investigates the general laws of the psychic processes, of the physical and mental development of the child, it deals with problems of a general order: the general results apply to all children" (MARQUES, 1986, p. 208). Considered as the experimental science of the child, it would be necessary "to know the child's body (for example stature, weight), normal or abnormal, its evolution, the sense organs, its spirit, the physical, intellectual and moral qualities and defects, in order to determine the laws of physical and mental development" (MARQUES, 1986, p. 198). It was up to the teachers "to know the nature of the child and create around him an environment that conforms with his development" (VASCONCELOS, 1909, p. 47). At school, similarly to the doctor, the teacher should be able to evaluate the learning conditions of each student and find, with strategies adapted to the educational path of each one of them and, therefore, it was essential to know the child because, at that time, teacher training was "[...] in the same conditions in which one would find a man who was a horticulturist without having notions of botany that would qualify him to the knowledge of plants" (VASCONCELOS, 1909, p. 10). Obviously, the teacher should know the curriculum and deepen other disciplinary areas of the student, such as the anatomical, anthropological, physiological, psychological aspects, social relations, and the child's relationship with the environment (PIMENTEL-FILHO, 1929).

Paedology was guided by the medico-pedagogical perspective (MARQUES, 1986, p.194-195), emphasising the doctor's intervention at school. Historically, repressive and prophylactic medicine extended its functions to preventive medicine (school), focusing on the child's physical development (FERREIRA, 2003). There was a relationship of the Pedology movement with the hygienist movement (social hygiene, school), with the pedotechnics (passage of empiricism to the scientific field in education) (GERMÁN, 1955, p. 831), with the anthropometry and the orientation (personal, social and professional), that sprouted in the scientific forums of that time in Europe and United States (FIGUEIRA, 2004).

According to Faria de Vasconcelos (MARQUES, 1986, p. 191-197), this medical-pedagogical model was the fulcrum of the evolution of education science. The (experimental) methods of Pedology were guided by measurements (pedometry), anthropometry, anatomy and physiology, in addition to observations, the use of the methods of introspection, retrospective, psychoanalytical, the experimental method and the objective or extrospection method (MARTINS, 2019a). All this amalgam of knowledge, of a psycho-pedagogical nature (Paidology), gave rise to institutes and figures, among others that of Decroly in Belgium, of Montessori in Italy, of E. Claparède (1910, 1960) and A. Ferrière (1955), at the J. J. Rousseau Institute in Genève, which influenced not only Vasconcelos but many Portuguese pedagogues (Aurélio da Costa Ferreira, Alves dos Santos, A. Sérgio and Luísa Sérgio, etc.). Pedology contained a division composed by the following parts (MARTINS, 2019a):

(a)-**Pure Paedology**: somatic pedagogy integrating child anatomy and physiology; psychic Paedology composed of structural, functional and genetic; and medical Paedology integrating child pathology and hygiene. This Paedology approached the critical study of the child (child biology, psychology and sociology) described the child organism in its structure, development, nervous system (physiology and neurophysiology), at the psychological level and respective differential functioning in the distinct ages or periods of child evolution (somatic Paedology and psychopedagogy) (MARQUES, 1986, p. 205-212).

(b)- **Applied Paedology**, which included educational paediatrics (psychopedagogy, school hygiene and orthophrenia), paediatrics or medical paediatrics (psychiatry, child clinic and child hygiene), judicial paediatrics (child criminology and pedological prophylaxis) and experimental pedagogy (FERREIRA, 2014). This type of Paedology (also known as

Pedotechnics) was used in practical research on the physical, psychological, social, and pathological lives of children. From the educational perspective, there was a relationship between the objectives of Pedology with those of education (intellectual, physical and moral/social) and educational activities, taking into account the laws and principles established by somatic and psychic pedology. This influence in education originated the strand of psychopedagogy (FERREIRA, 2014, p. 301). Thus, educational pedotechnics referred to the hygienic school conditions (buildings, material, class, school organisation, guidance, physical exercises, games, excursions, museums, school canteens), for example of social prophylaxis to infectious contagious and parasitic diseases, school sanitary inspection, school aids (GERMAN, 1955).

(c)-**Social Paedology or socio pedology** included the judiciary pedotechnics, with convergence towards the field of social pedagogy, of German nature, when studying the mesological, educative and psychological causes to the dangerous and (pre) delinquent minors and, especially, initially in a disciplinary perspective and, afterwards, in a reeducative perspective related to the type of unadapted minors (legally typified 'in moral danger' or at risk: for example poor, abandoned, destitute, beggars, exposed) (PIMENTEL-FILHO, 1929).

All these specificities of Paedology and its divisions turned it into a totalising science of knowledge about the child/adolescent, grounding the development itself and guiding the educators in the educational task. The concern of Paedology in monitoring the various phases of this development between irregularity, abnormality and normality (discourses of medical-psychiatric and hygienist influence) of the child/children, analysed the (un)favourable factors that acted on it, sometimes being confused with experimental pedagogy, but being an experimental psycho-pedagogical aspect (MARQUES, 2012). The same data obtained by diagnosing children/adolescents provided therapeutic intervention processes (influence of medical knowledge articulated with the paidology knowledge of the time) in their growth, making the need for observation and paediatric examinations unavoidable, particularly for school children.

We recall that the basis of education and the New School was the scientific study of the child, conceived as a natural science (influence of naturalism of Rousseau, Pestalozzi, Froëbel, among others) (GUICHOT-REINA, 2010). It was evident that Pedology was at the service of this new science whose object of study was the child, using the experimental methodology of observation and experimentation, with the creation of laboratories (child psychology) and specific institutions, at the beginning of the century. At the beginning of the 20th century, for example, the Medical and Pedagogical Institute of the Casa Pia of Lisbon, for boys, directed by Aurélio da Costa Ferreira (1920) and having its bulletin; the Colónia de São Bernardino in Peniche, for boys, dependent on the Casa Pia; the Medical and Pedagogical Institute of the Countess of Rilvas, for girls, linked to the Church; and the Adolfo Coelho Institute). In this way, the measurement techniques, the enquiries and other diagnostic examinations multiplied, including at school level, including the examinations in the Central Guardianship of Infancy (Refúgios in annexe) and reformatories for minors (FONSECA, 1930), and the IOP, directed by Faria de Vasconcelos (1928, 1931), served as a support to many psychological diagnoses, including to delinquents (relation with the measurement of intelligence).

Moreover, the Positive Pedagogy intended to reintegrate the child in nature (physical-natural, cosmic), considering it an element that was removed by theological pedagogy and metaphysical pedagogy (GABLE & HAIDT, 2005, p. 105). That is, it intended the respect for the nature of the child, in which its growth or development, assumption of the fundamental law, requiring adequate training and qualification of the teacher. If the physical growth of the child constituted a fundamental pedological law and a symptom of (a)normality, then there was a duty to know to predict and provide, turning the educator into a hygienist (influence at the time in social and school terms) that "watches

over and favours the normal development of the child" (VASCONCELOS, 1909, p. 20). This obligation to provide a suitable environment for the average growth and development of the child and its childhood, considered as a sine quo non-condition of the scholastic innovators, it was up to the educator/teacher this duty to treat these factors, which are awakeners and stimulators of the child's physical and intellectual energies that, in the words of Faria de Vasconcelos (1909, p. 20) and following Binet's theses, "before teaching and educating the child, the educator needs, first of all, (...) to teach it to learn". Hence, the factors conducive to growth were physical (pedagogical) and intellectual gymnastics, exercises and manual work, school games and the playful part of learning like music, the lessons of things, walks, excursions, pedagogical visits.

We should mention that Pedology was taught among us in the context of teacher training, in Lisbon, for example at the Escola Normal do Calvário by Costa Sacadura in 1908-09; by A. Faria de Vasconcelos giving 12 lessons at the Sociedade de Geografia de Lisboa, in 1909-10, when he was a teacher at the Universidade Nova in Brussels; and later by Aurélio da Costa Ferreira (1921) and Alberto Pimentel Filho (1929) at the Escola Normal de Lisboa, just as later Fernando Palyart Pinto Ferreira approaching 'abnormal' children. Many other medical-paedagogists were interested in understanding the child's development and childhood and adolescence, as they were convinced, in need of specialisation and scientificity to prepare the child or individual for life (FERREIRA, 2014). The knowledge of the evolution of the growth of the child/adolescent allowed guiding its educational process, in the conviction that education as the emerging science supported the educational activities of the educator/teacher and could transform it. The different approaches of Pedology (pure, applied, social), as referred by Vasconcelos, allowed psychologically to guide the educational activities of the teachers, knowing that that science was linked to medicine which, since the hygiene (social, school), expanded and legitimised itself in the pedagogical intervention and also covering the health problems, understood as social and urban problems and with repercussion in the school problems.

Historically, paidology and pedology (of French-speaking nature) took the influence of medicine (psychiatry, paediatrics) to interpret normality versus abnormality or pathologies, using the criteria of psycho-pedagogical and psychosocial evaluation (MARTINS, 2017). Complementarily, Pedology took from hygienism the way to intervene in practical problems, from the scientific knowledge of the time, legitimising the extension of its field to education/teaching (school hygiene), child and youth criminology, childcare and the interpretation of society and history (FERREIRA, 2014). Thus, the medical-pedagogical model and medical-biological model focused their interpretation on the problems of abnormalities or mental illnesses and the conduct of children/young people in social deviation, in general, especially vagrancy, poverty, marginalisation, delinquency and criminality (VASCONCELOS, 1931). In other words, the expansion of this model and hygiene followed the visibility that the problems of the social issue had at the end of the 19th century and the beginning of the 20th century.

Therefore, Faria de Vasconcelos considers in psycho-pedagogical terms, fundamental aspects of Pedology (MARQUES, 1986, p. 205): the importance of the adaptation of teaching to child physiology and psychology; the promotion and multiplication of the relations between "Family-School", in order to motivate the parents to the schooling path of their children; to associate the doctor to mental education (collaboration); to train the teacher to the (re) organisation of teaching on new bases with active methods and strategies; to create laboratories in the school and lead the students to carry out experiments, with the pedagogical support of the teacher, making the student immerse himself in knowledge and make pedological applications in his learning. Now the problems of Pedology covered the preservation of the child's growth, the stimulation of the child's physical and psychic forces, teaching the child to promote the acquisition of knowledge, according to the child's state/stage of physical and

psychic evolution and, for this, quantitative and qualitative methods should be used, methods of analysis and synthesis (tests, scales).

2. Pedological presuppositions in the Vasconcelosian system

The scientific study of the child/infancy, inserted in paidology and pedology, of essentially French-speaking origin, presented several scientific principles or assumptions, pointed out by Faria de Vasconcelos (1909, p. 12), as characteristics of (contemporary) Pedagogy, considered as the Science of Education, at the end of the 19th century and beginning of the 20th (VASCONCELOS, 1921, p. 17) and which we will analyse next.

2.1 Pedological assumption of the child's growth

In the work 'School Problems' the Portuguese scholasticovist refers to the scientific spirit, the methodology of analysis to the characteristics of contemporary education, in which Pedagogy, as an "autonomous science", in consensus with the "positivist meta-narrative", entered "the phase of the scientific method, freeing itself from empiricism" (VASCONCELOS, 1921, p. 13) From this assumption or principle of Pedagogy and the New School derived the essential imperative of the "psychological and pedological education of the teacher", so essential to the pedagogical act of educating (VASCONCELOS, 1909, p. 12). Well, this (psycho) pedagogical assumption had already been mentioned by previous pedagogues of the New School (Rousseau, Pestalozzi, Fröbel) when they warned of the educator's lack of knowledge of the way of being and characteristics of the student. Therefore, the Portuguese pedagogue advocated the submission of curricular content (learning units) and didactic processology to the child's individual psychophysical needs and abilities in the school context. Thus, based on the experimental methodology of observation and experimentation, Pedology resorted to the measurement of aspects arising from the child's schooling process. Well, the knowledge of the symptoms of (a)normality in the child's development turned the teacher/educator into a hygienist who "watches over and favours the normal development" and creates a favourable environment for it (VASCONCELOS, 1909, p. 20) and, therefore, it was up to them to take care of these factors related to the physical and intellectual energies (based on Binet's ideas).

Faria de Vasconcelos considers the teacher as a "researcher", today we would tell a reflexive researcher about his action (thinking), a connoisseur of the laws of general Pedology, of the differences and aspects revealed by it, besides being attentive to his sensitivity and imagination, attention, memory, judgement, reactivity, for example. The emergence of this (new) science of education raised, at the time (scientific influence) the concern for a new scientific object of study (WAGNON, 2013): the growth of the child/adolescent based on laws (development), using the experimental method of approach. This whole scenario made reflect the function of the educator/teacher on the "preservation of the normal evolution of the child" (VASCONCELOS, 1909, p. 33) in a scientific and measurement approach (observation, techniques, methods, examinations and tests) regarding their physical and intellectual growth (VASCONCELOS, 1925). In this sense, Binet, Decroly, Claparède, G. Rouma, G. Compayré, E. Peeters, among others, and Quetelet and Schuyten in this sense terms of school anthropometry. In our perspective, the teacher's 'surveillance' of the child's physical and psychological growth required the use of pedometry, because according to Faria de Vasconcelos (1909, p. 39) ", it allowed us to know in each case whether the child's development is normal or whether it is very fast or whether it is delayed", retarded or with difficulties in learning, besides the help of anthropometric

data which indicated "the determination of the gender and the number of physical exercises which must be advised".

Moreover, the child's mentality modifies, grows, and develops so that a gradual differentiation of mental experiences accomplishes this development by progress in its organisation in personal control (MARQUES, 1986, p. 287-289). Therefore, for the Portuguese scholastic innovator, the mental education to ensure the most favourable conditions to the growth and development of the mentality, in the sense of its differentiation and organisation, should cultivate and train the functions and mental processes aimed at adapting the child to the environment, to the variations and modifications that it was suffering and to the new situations that would arise. First, however, ignorance of the psychophysiological nature of the (school) child, their tendencies, capacities, activities, characteristics and differences should be analysed by the teacher in order to establish the appropriate orientation of the teaching provided.

These observations and measurements (pedometry) should, according to Faria de Vasconcelos (1922, p. 20), obey an analysis framework that would take into account: the rhythms of growth with phases throughout the years of childhood; the differential growth of the various organs; a long period of growth in relation to that of other animals. In this evolution, it was possible to detect an 'inverse correlation' of physical growth and mental energy, knowing that intellectual aptitude decreased during periods of rapid growth, which had specific pedagogical implications:

Current teaching and pedagogy reveal an almost total ignorance of these fundamental and vital questions. It is necessary to adapt the teaching, pedagogy, physiology and psychology of the child so that the school organisation, schedules, programs, classes and holidays are inspired by the demands and needs of the child's body and spirit. (VASCONCELOS, 1909, p.85)

The data obtained in the diagnosis provided a therapeutic intervention and hence the need for paediatric examinations in schools, mainly on stature, weight, thoracic perimeter, biochemical diameter, cephalometry, muscular strength, for example. One of the measures proposed by Vasconcelos was the elaboration of the school notebook advocated by the medical-pedagogic aspect of the New School, which facilitated to the teacher "the knowledge of the march of the physical growth and the mental development of the child" in a physical and psychic hygienic evolutionary normality (VASCONCELOS, 1909, p. 86). Besides this pedological principle of development, Faria de Vasconcelos mentioned, referring to several scholars of the time the following laws: biogenetic law by which children develop in the same order of the species (phases); Pestalozzi's law in which the fundamental law of the spirit the ascension from intuition to abstract was restrictive since it referred to the cognitive instance; Stern's law which, being reductionist, synthesises the pedological evolution from the periphery to the centre (from heteronomy to autonomy). For him, mental development was too complex to be explained by a single law and, thus, using Claparède (1910), he indicates several more harmonious pedological laws. One, for example, is the law of hereditary succession in which the mental development process is carried out by successive and constant phases, in which the acquisition of the temporal relationship precedes the assimilation of the spatial relationship; law of genetic and functional exercise in which the game has much importance; law of functional adaptation related to the psychic functions. In other words, the natural inclinations, interests and psychological needs of children should be covered by the curriculum, the methods and activities of school children, and knowing the characteristics of mental development and intellectual and moral differences and personal aptitudes (law of individuality). Hence,

physical growth and spiritual evolution (law of rhythm) do not take place continuously but with advances and setbacks.

2.2 Assumption of the autonomy to be developed by the child

At the dawn of the new science, Pedology imposes the law of autonomy of the child, which represents a break with the anthropological theory that the child is an adult in miniature and childhood is an instrumental phase of the ascent to maturity. In this way, childhood, considered an autonomous state of the individual's life, was legitimised by the theory and practice of education and the New School. It was not the adult state or maturity that gave meaning to childhood and adolescence, knowing that the child is a unity/totality in itself. Recognition of the principle of autonomy determined the overcoming of the child's conception in the image and likeness of the adult and the subordination of the educational act to their specific interests. The New School intended to end with this "pre-judgment of the adult" (VASCONCELOS, 1909, p. 330). Thus, the Portuguese scholasticist, based on research, establishes in the child three factors in his mental development: the game (playful part), imitation and interest.

(a) Play. This factor has a deep significance constituting a high degree of child development, being the "first instrument of the child's development" (VASCONCELOS, 1909, p. 89) since playful activities were sensory-motor activities. He resorts to several theories to explain the advantages of children's play, for example (MARQUES, 1986, p. 290-292): the playground theories (Schaller, Lazarus, Guts Muths); excess energy theory (Schiller, Ruysen); the activism theory (Stanley Hall); the preparatory exercise theory (Spencer, Wundt, Gross) in which play is a preparation for life; Carr's theory (preparatory exercise and stimulation of the organs, solidarity and discharge of tendencies); Lange's theory (play implies the emergence of latent tendencies); Claparède's theory (1910) where he deals with mental and physical development, play, imitation, interest (psychobiological) and fatigue. Faria de Vasconcelos recognises the multiplicity of functions of play in development (physical-psychical, mental, individual, social) but distinguishes two aspects: the genetic aspect (pre-exercise of life); and the physical aspect (affirmation of personality in the face of adversities). In other words, for him, "the game is more than a pastime, it is also an intellectual work and, consequently, a school of thought and will" (VASCONCELOS, 1909, p. 93). From the panoply of games of imagination, motor, intellectual, affective, of exercising the will and the attention, of heredity, of imitation, the artistic ones, etc. all of them illustrated the fact that games are interrelated, as to their origin and educational function and the accentuated predominance of certain constitutive elements and particular purposes (MARQUES, 1986, p. 298).

(b) Imitation. This process is connected with a suggestion, habit or voluntary act, that is, reproducing an act of another. For the act of imitation to exist, there needs to be the condition of being, like every human act (conscious and voluntary), and if it is involuntary, it occurs by mental contagion. At that time, the phenomenon of suggestion was related to education since the child internalised unconsciously and involuntarily the symbolic message received. In Binet's perspective, the suggestion was the moral pressure that the person exerted on the intelligence, affectivity or will, in which the word constituted the frequent expression of this influence (FERREIRA, 1920). We know that Bandura's theory modified this conception of social imitation. However, the scholastic innovators' suggestions were the difference between the educational act and the act of suggestion. Because Faria de Vasconcelos (1909, p. 99) clarified this pedagogical confusion by using Vigouroux, Jacquelier, Guyau and even Gustave Le Bon when he said that "educator, whose mission consists in developing intelligence and not enslaving wills, needs to be aware of his prestige in order to resist the desire to do the work of

a suggestion". Obviously, school and teachers are stimulators of the psychic functions of attention, will, inhibition, and the child's resistance to suggestibility.

Intelligence is the function of the organism, but being a complex phenomenon, it was submitted, at the time, to the metric of tests since the processes or delays in the (school) child depended on psychological, physical, physiological and pedagogical factors (PINELL, 1995). For Vasconcelos, this appreciation could not resort to a single method since the body and the spirit combine in a harmonious synthesis. Therefore, the complete exploration (diagnosis) should determine the intellectual value of the individual (MARQUES, 1986, p. 264). Therefore, it was up to the school to introduce examinations (psychological, pedagogical, anatomical and physiological of the child and adapt teaching/education to the student's intellectual and physical development (MARQUES, 1986, p. 565). In other words, it was fundamental to create around the child an environment corresponding to its developmental needs in order to guarantee its natural evolution and preserve it from disturbing or abnormal factors, which contradicted this physical, intellectual and moral regularity.

(c) Interest. This factor, already mentioned by Herbart, W. James, Dewey, Claparède, Luquet, Decroly, was determinant for the child's teaching. It constituted a fundamental principle in the new pedagogy in respecting his natural physical-psychic development (VASCONCELOS, 1909, p. 105), knowing the nature of the child, his interests and the condition of adjustment of the curricular contents to it, by the teacher, taking into account his curiosity and interests, in order to have a good school performance and, on the other hand, success in the educational activity. Based on Claparède (1960), the Portuguese scholastic innovator refers, according to age, to the following interests in the child: the perceptive or sensory, the glossy, the intellectual, the objective and the specialised. Furthermore, the effects of interest, according to Vasconcelos (MARQUES, 1986, p. 310) and following Claparède (1910), would be: the increase in the intensity and sharpness of the perception, through the adaptation of the senses and the attitude of the body; the reaction of the organism to the object which impresses it, is accompanied by a specific feeling, which sustains the perception (feeling of interest) of a sense of pleasure or pain; it increases the intensity of the perception through the dynamogenic action on the nervous centres since the adaptation appropriate to the interesting excitation prevails over the possible adaptations. Hence Vasconcelos (1925, p. 22-26) approached the interests of children and adolescents by resorting to the theses of Baldwin, Luquet, Claparède, among others, as he considered that the natural, acquired tendencies (habits) presented an intensity of impression in which the content and dynamism of the consciousness and the phenomena of the organism were central.

2.3 The psychic functions and the principles of continuity and solidarity

The principles of continuity and solidarity accompany the psychic functions since they "are solidary, interdependent" (VASCONCELOS, 1909, p. 115). The ontological indistinctness of the physical-psychic phenomena stemmed from the unity of the 'psychic dynamism', which diversified into a multiplicity of functions. In other words, the function of the organism, in terms of the explanation of psychology, biology or natural science of the psychic functions, determined: the psychophysical continuity which differentiated physical and psychic phenomena in the degree of development, intensity and complexity, differentiated expressions of the evolutionary process as stated by Faria de Vasconcelos (1909, p.115):

There are no affective phenomena that are only affective or representative phenomena that are the only representative. Any psychic phenomenon is at the same time practical, representative and active;

what distinguishes an affective phenomenon is the predominance of the affective element in the dosage of the combination in which the other elements enter.

The anthropological assumptions of psychophysical continuity and solidarity were realised in the pedagogical intention that teaching one psychic function acted upon others since the "activity of the senses constitutes the basis of psychic activity" (VASCONCELOS, 1909, p. 119), as well as the relevance of sensorial education in that development. Therefore, in school terms, manual work acquired a value of training for citizenship in the curriculum, not being the means, but as a pedagogical purpose to contribute to this desired psychic and moral development of the child/youth. The 'integral culture' itself underlies these assumptions of the continuity and solidarity of the psychic functions and the organic activity, implying a questioning, at that time, in the light of biology, physiology and experimental psychology that these acquisitions constituted a unit, since as we know the brain thinks. The whole body acts and feels (VASCONCELOS, 1925).

The Portuguese scholastic innovator highlights physical and sensory education in academic education, following the Piagetian genetic psychology, because for him, "the senses are the first instruments of knowledge" (VASCONCELOS, 1909, p. 137), which determines the pedagogical imperative of culture and sensory education, the need for medical and physical examinations, which were critical aspects for the teacher/educator. Likewise, the teacher should know the type of memory and its complexity in acquiring knowledge and adapting teaching to the child's nature because all of them have repercussions on the child's global development. We know from Herbart's formal steps theory that the association of ideas is crucial in teaching. Faria de Vasconcelos criticises the theories of James and Stuart Mill, Bain, Bell and Spencer, based on the principle of psychological attraction, since it is not only the representative phenomena that are associated, but also the effective ones, and because the perceptive facts do not corroborate the originality of the sensations since these are the product of analysis. Hence it is of prime importance that teachers organise teaching and education through a system of associations in conformity with the psychic reality of child life.

Using several theories on attention in children/infants (Kulpe, Binet, Lange, Muller, Wundt, Ribot, James, Baldwin, Marrillier, Rignano, Rageot, for example), the Portuguese scholastic considered it as the "primordial factor of psychic operations" (VASCONCELOS, 1909, p. 209), because it considers the interdependence of physical, intellectual and moral development. In fact, "the attention is first of all the direction of thought" because the "attention is the waiting" (expectant attention) which has as conditions the interests and tendencies of the individual (VASCONCELOS, 1925, p. 14). The factors of attention (interest, play, activities) alert to the nature of the child and the attraction that the knowledge taught, the methods and the means exert on the child (VASCONCELOS, 1925, p. 11-13). Scholasticans organise activities according to the interests and the nature of the child and, therefore, the attention, as a specific function obeys the same principles of unity and solidarity of all psychic functions, which implies the relational connection between the physical, sensory and intellectual development with the attention (MARQUES, 1986, p. 499). Stimulating curiosity and interest in the child, appropriate to the nature of the child and the type of knowledge taught, using sensory and perceptual activities, constitutes the principle and method of attention education. Vasconcelos (1909, p. 241) distinguishes the pedagogy of effort from the pedagogy of interest, because for him:

It is not the effort that educates the effort. Education through effort tires, fatigues, and bores the child, and it is this system that is habitually used. It is not by fatiguing the child that his attention is

fixed and maintained by imposing on him exercises unsuitable for his age.

On the other hand, the alternative to effort in the child would be the interest and motivation (direct or indirect), which constitute the mode of fixation and duration of attention. Thus, based on the child's autonomy and the unity and solidarity of the psychic functions, Vasconcelos conceives intelligence's psychic function (MARQUES, 1986, p. 322). It was imposed on the school a pedagogical imperative to examine the students (anatomical, physiological, psychological examinations) and adapt the curriculum to their level of psychophysical development; that is, in the Piagetian sense, the psychogenetic knowledge would be the necessary condition of this curricular organisation. All teaching would follow the expected evolution of physical-psychic life.

Regarding the education of affectivity, which today would be the affective-emotional dimension of the human being, in relation to the other psychic functions (memory, attention, intelligence), the attitude of the educator/teacher would be to favour the child's development. Starting from the classification of psychic phenomena (intellectual, affective, active) reveals the role of affectivity that in his perspective is "indispensable to carry out under the best conditions the intellectual education. The idea and the will draw their strength from emotion and feeling. The prodigies of the intelligence and the miracles of the will it is the sensibility that arouses and creates them" (VASCONCELOS, 1909, p. 332). We recall that Vygotsky (1979, p. 188) associated affectivity to thought, since "to understand the speech of another, it is not enough to understand his words - we must understand his thought. Nevertheless, even that is not enough - it is also necessary that we know his motivation".

Now, knowing the nature of the child/infant, overcoming adult pre-judgement and creating a favourable environment for its development were determining imperatives proposed by the New School. From the union of this amalgam of conditions obeyed the option to favour persuasion, reward and positive reinforcement, coercion, intimidation, terror, punishment, knowing that the child's behavioural deficit did not stem from his evil will, but from precarious organic conditions, the family environment and insufficient intellectual and affective development (MARQUES, 1986, p. 353). Thus, the pedagogical solution for Vasconcelos (1909, p. 331) would be to "encourage the child in his struggle of patience for the discovery of the world".

In this follow-up of knowing the child's development, the child's activity would emerge, according to the active education proposed in the strand of the New School movement. Faria de Vasconcelos (1909, p. 335) relates it to the referred principle of unity and solidarity of the psychic functions, considering that "the activity is a phenomenon inseparable from the other psychic phenomena", in a connection that in general "all the state of consciousness is at the same time effective, intellectual and active", residing the difference in the proportionality of the intervening elements. In the activity, the reflexes, instincts, and habits are overweight, but for him, the will was privileged (educate the will), which was connected with the character (MARQUES, 1986, p. 634-637).

The Portuguese scholasticovist differentiated the natural (innate) primitive background of will, which came from the specific and individual inheritance and the behavioural structure acquired by exogenous influences (social, physical or moral) to which the child would be subjected. This complex psychic function, when conditioned by a range of elements (instincts, psychological automatism and habits), education could do little. In the differentiation of abnormalities in the development of the child, that pedagogist, under the influence of the ideas of French-speaking pedagogues at the time of his formative stay in Belgium and Switzerland (Decroly, Schuyten, Claparède), distinguishes the pathological state of fatigue ('surmenage'), in the disparate manifestations of its symptoms (eyesight, brain congestion, headaches, nosebleeds, vertigo, boredom, difficult digestions, weakness,

nervousness and boredom), which was caused by the disinterested or demotivating work of the child at school (MARQUES, 1986, p. 660-668). The physical aetiology of fatigue was due to malnutrition, lack of physical exercise, immobility, heredity and family upbringing, social conditions, and the excess of teaching subjects. It was up to the teacher, on the scientific basis of the New School (genetic psychology), to know what the child could do "conforming to the prescriptions of a careful and scientific physical, moral and intellectual hygiene" (VASCONCELOS, 1909, p. 400) and adapting the teaching to the level of her development in order to progress healthily and integrally.

Therefore, the pedagogical genius of our pedagogue lay in his critical analysis of some ideas and theories in vogue at the time, for example, the biogenetic law which for A. Ferrière (1955) was an absolute whilst for Vasconcelos it was relative, as well as the relevance of the law of the autonomy of the child and the complementary laws of unity and solidarity of the psychic functions. The continuity versus discontinuity in the child's evolutionary process elucidates the continuity of many changes in the gradual development, despite some discontinuities, but tending to an improvement coming from the education and the teachers' action. This teaching action should be scientifically organised and related to the needs of learning, being essential that the teacher knew this relationship 'teaching development, based on appropriate activities for each stage of child development (MARQUES, 2012).

2.4 The basic assumption of pedagogical/anthropological humanism

Vasconcelos' pedagogical-anthropological humanism is very clear in his ideology of participation, intervention and publication, for instance, in the *Seara Nova* Magazine, in which he does not exhaust his scientific, idealist and "regenerating" inclination, since this ideology had an illuminist, rationalist and critical inclination. He defends an integral humanism evident in his pedagogical thought since the "integral culture" arising from the Vasconcelosian system is related to the (curricular) training of the regular teachers and the apology to the pedagogical and anthropological virtues essential to the exercise of the teaching profession as of accomplishment of a life ideal and practice of civic-social virtues. His action and praxis's epistemological and pedagogical matrix constitutes an influx of pedagogical naturalism (influx of Rousseau and Pestalozzi) (MARTINS, 2019b). For him, the child is conceived as a fragment of Nature and regulated by the law of growth or physical, intellectual, social, moral, sexual, aesthetic development, that is, by an integral development of all these dimensions present in the act of educating (SANTOS, 1919). This open naturalism coincided with some keynotes of the official republican pedagogical discourse, which defended the idea of the child being reintegrated into nature (FIGUEIRA, 2004).

Vasconcelos clearly shows the primacy he gives to the physical element in the growth and development of the human being, both in his work and in his experience at the New School of Bierges (VASCONCELOS, 1915, 2015). This is also true of his activity at IOP and in the educational worldview of João Camoesas' Reform Proposal in 1923, that is, in-depth he gives to the psychology/biology of intuition or in themes related to school problems (VASCONCELOS, 1921a). In the Preface of the work 'Lessons in General Psychology,' he states that the theoretical construction of what these lessons express "is previously based on the realisation of the experiments and observations that it is possible to make for a better understanding of the phenomena" (VASCONCELOS, 1925, p.7). Concerning psychic functions (attention, habitus, memory, association, consciousness and the unconscious), there are several explanatory theories and their relations with consciousness (Janet, Jastrow, Freud, de Baziillas, Binet). In this sense, of the conception of the unconscious, as in the case of the consciousness, the Portuguese scholasticist

denies the substantive character of existing reality 'per se', considering this construct as a qualifier of specific psychic processes, just as consciousness is a quality of another modality of phenomena (MARQUES, 1986).

In effect, Vasconcelos defends the existence of the same psychic activity, which manifests itself in the circumstances of life, under the form of conscious or unconscious activity, both having the same resources, memories, recollections, images, ideas, experiences and functions (VASCONCELOS, 1925, p. 408). Starting from the principles of the unity and solidarity of the psychic functions or phenomena, he considers that the unconscious or subconscious are not reduced to simple cognitive, affective, motor processes, since it was better to consider them as a 'capital' of affective, motor and intellectual forces/energies. In other words, these two psychic instances (unconscious, subconscious) could explain the invention, creative imagination, intuition or spontaneous discoveries in an active way, since both are conceived, not purely affective, but as a 'current of ideation', flow for the formation of ideas, the dynamism of possibilities and intellectual virtualities.

We recall that, at the time of Faria de Vasconcelos, the 'heredity environment dichotomy, which provoked many discussions and publications up to the present day, gave rise to several theories on child development, such as the psychoanalytic theory of S. Freud's psychoanalytic theory; Anna Freud's theory of recapitulation; E. Erikson's psychosocial theory; J. Piaget's genetic epistemology; L. S. Vygotski's cultural-historical psychology; H. Wallon's genetic psychology. All these theories have implied a conceptual framework that refers us to growth, change, continuity, stages/phases, interactions, knowledge, action, among many other terms, to understand this human development and hence the different conceptions about the detachable factors in this process. Take, for example, innatism (events occurring after birth are not relevant); empiricism or environmentalism (the strength of the environment as an intervening factor); interactionism (there are multiple constituent factors), understanding the individual as an active and interactive being in the world under various influences in its trajectory. The other controversy in child/infant development, which equally deserved scientific discussion was the conceptualisation of 'abnormal' and 'abnormal' or pathological (MARTINS, 2017), which in the case of 'abnormality', with the influence of medical discourses served as an instrument of social control to behaviours (thoughts, feelings) of situations of certain childhood/adolescence, coming from specific layers of society.

Therefore, the pedagogical/anthropological representation is much wider of openness than the enunciation of the principles we have dealt with above, and it is not exhausted in the phenomenal manifestations of psychophysical dynamism. We know that the purposes of education and the human being, the values (axiological dimension) and the ideals defined and characterised by Vasconcelos, under the psycho-pedagogical influx, were manifested in his action and intervention in his life in Latin American lands (in defence of the indigenous population in Bolivia in favour of solidarity multiculturalism) and then in Portugal, from 1920 onwards (MARTINS, 2019b).

Ideas to retain...

We have addressed the psycho-pedagogical imperatives underlying the characteristics of contemporary pedagogy based on pedology (VASCONCELOS, 1921b). When Vasconcelos stayed in Belgium, he became aware of this science dedicated to child development and the object of great diffusion in the Free University of Brussels. He accompanied its foundation, in 1906 and 1909, respectively of the Société Belge de Pédotechnie and Institute Natural Belge de Pédotechnie, with emphasis on the figures of O. Chrisman (impact of his work 'Pédologie: Esquisse d'une Science de l'enfant'), of Decroly and Schuyten (MARTINS, 2019a).

The Portuguese scholasticovist defends, among other assumptions derived from the New School, the autonomy of the child, the adaptation of education to its natural, physical-psychic or mental, social, aesthetic and moral development, emphasising culture (physical, intellectual and social) in these stages of growth, with emphasis on the school role of manual work, school excursions, the impact with nature and with the culture of the communities, favourable to an 'integral culture' of the capacities of the child/adolescent. At the same time, he gives specific attention to the didactic and methodological work of the teacher/educator in accompanying this development, allowing him to adapt the teaching to the needs and interests of the child, besides experimenting and observing, diagnosing, analysing and intervening in his educational process. Faria de Vasconcelos welcomes the medical-pedagogical intervention in the school, having dedicated since IOP to analyse the school problems of 'school abnormality' in schools (students with learning difficulties), classifying them as follows (VASCONCELOS, 1922, p. 20): into 'educable abnormals' for re-education schoolchildren and special classes; and large 'ineducable abnormals' destined for asylums-schools and agricultural colonies; and the cases of child psychiatry (mental pathology) and the deaf-mutes.

Pedagogically, Faria de Vasconcelos builds his thought regarding the development of the child/adolescent in the school context, in the physical, intellectual, moral and social culture. The natural environment and the 'infrastructural' or 'propedeutic' physical activities practised in the New School - type in Bierges constitute the basis of the "school to children" (VASCONCELOS, 1915, p. 24) in connection with the 'self-government' system. He considers physical education as the prelude to intellectual, moral and social education, stemming from the conception, organisation and pedagogical practice of the New Schools, which effectively is "the most generous preparation for the culture of the spirit, the heart and the character of the child" (VASCONCELOS, 1915, p. 67). The exact implementation of the school, located in the countryside, expresses environmentalism or naturalism that the child's natural environment constitutes the favourable condition for their physical development and moral education. Hence his pedagogical concern for the spaces and the characteristics of the school buildings, which should have ateliers and laboratories/workshops, a school library and playgrounds. Now, the physical vigour and health, especially the corporal hygiene and the life regime (nutritional), were necessary, not only to the body culture but also to the intellectual and social culture and, therefore, he analyses (experiments in the Bierges school) aspects such as sleep, food, hygiene, weekly lessons, playful activity, sports and gymnastics (pedagogical), manual work, walks and excursions, (VASCONCELOS, 1915, p. 43-44). The observations and the control of the rhythm of physical development should be rigorous and registered by the doctor and teacher and communicated to the parents/family to motivate them to better the child/young person. The principles of continuity and solidarity of the psychic functions within the psychophysical connection are connected with that physical culture of the body, with the intellectual, moral and social culture (VASCONCELOS, 1915, p. 67-68).

Regarding the intellectual education for our scholasticovist was based (VASCONCELOS, 1909) on the study of 'child-adult and 'child-life relations, with nature and manual work as the privileged surroundings; on the adaptation of teaching and education to the natural evolution of the child, according to his needs, needs and curiosities, hence the study of living languages; on the adaptation of teaching to the historical evolution of sciences based on the assumptions of the natural evolution of the species, taking into account the principles of psychology, of the genesis of cognitive structures; on suitable working methods, as principles of educational instruction.

Therefore, for him, the way to act of the human being, within the scope of psychology (cultural-historical) and of Pedagogy, involves overcoming, cooperation and emancipation (autonomy) of the subject, this being the conquest of freedom of thought and action. Now Faria de Vasconcelos considers the psycho-pedagogical principles of human development founded

in pedology as fundamental to understanding this development, whether in the forms of individual or collective behaviour or cooperation with other people, becoming inner functions. Thus, child development centred on the constitution of a psychological system, articulation with the role of the environment, the mental functions and relationships, and the idea of meaning and experiences. Therefore, as in the Vygotskian theory, the affective aspect is at the base of this psychism development, in which subjectivity acquires a great relevance in the constitution of the child itself. Thus, the configuration of physical-psychic and mental development is the core of education, not only in detecting the facets that influence it but also to provide subsidies for an organised educational practice to promote the transition from one stage to another of child development.

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