
The interdisciplinary formative education of student, teacher, and dean Ângela Paiva (1964-2019)

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Abstract

This article presents a historical-educational study of the formative education of Ângela Maria Paiva Cruz – teacher, researcher, and manager of the Federal University of Rio Grande do Norte – in the time span between her first schooling (1964) and the concluding stage of her doctoral course (2019). The theoretical formulations used to analyze the *corpus* of the research (interviews, educational legislation, school documents, etc.) come from the classic thinkers Émile Durkheim, John Dewey, and Anísio Teixeira, especially in relation to the precept of pedagogical renewal of school education and the principle of construction and reconstruction of formative experiences in line with socio-educational contexts over the course of school *life*. The main conclusion resulting from this research is that this precept and principle were part of Ângela Maria Paiva's formative and interdisciplinary education.

Keywords: Formative education. Interdisciplinary education. Pedagogical renewal of school education. Reconstruction of formative experiences.

A educação formativa interdisciplinar da estudante, professora e reitora Ângela Paiva (1964-2019)

Resumo

Este artigo traz um estudo histórico-educacional da educação formativa de Ângela Maria Paiva Cruz – docente, pesquisadora e gestora da Universidade Federal do Rio Grande do Norte – no intervalo de tempo decorrido entre sua primeira escolarização (1964) e o estágio conclusivo do curso de doutorado (2019). As formulações teóricas para análise do *corpus* da pesquisa (entrevista,

legislação educacional, documentos escolares etc.) são dos pensadores clássicos Émile Durkheim, John Dewey e Anísio Teixeira, especialmente em relação ao preceito da renovação pedagógica da educação escolar e ao princípio da construção e reconstrução das experiências formativas consentâneas com os contextos socioeducacionais ao longo do tempo da *vida* escolar. A principal conclusão resultante da pesquisa é que esse preceito e esse princípio foram partícipes da educação formativa e interdisciplinar de Ângela Maria Paiva.

Palavras-Chave: Educação formativa. Educação interdisciplinar. Renovação pedagógica da educação escolar. Reconstrução das experiências formativas.

La educación formativa interdisciplinar de la estudiante, profesora y decana Ângela Paiva (1964-2019)

Resumen

2

Este artículo presenta un estudio histórico-educativo de la educación formativa de Ângela Maria Paiva Cruz – profesora, investigadora y gestora de la Universidad Federal de Rio Grande do Norte – en el período comprendido entre su primera escolarización (1964) y la etapa final de su doctorado (2019). Las formulaciones teóricas utilizadas para analizar el *corpus* de la investigación (entrevistas, legislación educativa, documentos escolares, etc.) provienen de los pensadores clásicos Émile Durkheim, John Dewey y Anísio Teixeira, especialmente en relación con el precepto de la renovación pedagógica en la educación escolar y el principio de la construcción y reconstrucción de experiencias formativas en consonancia con los contextos socioeducativos a lo largo de la *vida* escolar. La principal conclusión resultante de la investigación es que ese precepto y ese principio formaron parte de la educación formativa e interdisciplinaria de Ângela Maria Paiva.

Palabras clave: Educación formativa. Educación interdisciplinar. Renovación pedagógica de la educación escolar. Reconstrucción de experiencias formativas.

If human life marches quickly in society, schooling for all will be much faster (Teixeira, 2007).

Introduction

During the first half of the twentieth century, classical thinkers from France, the United States and Brazil extensively systematized a literature of cosmopolitan purpose, the theoretical formulations conceiving precepts of the pedagogical renewal of school education through formative ideals, which praised the individual and social experiences of the younger generations in the circumstances of the act of studying and learning.

The French sociologist Émile Durkheim, in his book *Éducation et Sociologie* (Education and Sociology), in his conceptual analyzes of education as a social practice and function of the State, through the prism of homogeneity, reflects on the understanding of school life as a formative initiation of the student, which is also social in its essence. For Durkheim (1978, p. 82), education as a renewed pedagogical practice "[...] is the means by which society perfects the conditions of [reproduction] of its own social existence". Boto (2004, p. 49) considers that "[...] perhaps it was Durkheim who for the first time signaled the effect of 'social reproduction' contained in the act of educating".

In the book *Experience and Education*, John Dewey (1979a) argues that a theory of pedagogical renewal that has as reference socio-educational practices subtended the principle of reconstruction of present individual experiences to thus better direct the subsequent experiential *continuum*. In the opinion of Dewey (1979b, p. 365), the renewal of pedagogical ideas and, therefore, the reconstruction of the individual educational experiences of the younger generations would occur "[...] due to the complete change of social existence, parallel to the progress of sciences, industrial revolutions and modern democracy".

The Brazilian educator Anísio Teixeira, inspired by the social and political philosophy of John Dewey, conceives renewed school education in line with the universality of equal formative opportunities. In the work *Educação é um direito* (Education is a right), Anísio Teixeira (2009, p. 61) reflects on the

reconstruction of individual experiences combined with "[...] the universality of equal formative opportunities for all citizens [which is] manifested by the right that everyone can participate in it and continue to the highest levels". Therefore, states Anísio Teixeira (1999b, p. 107): "It is on it [equal formative opportunities] that the subsequent fate of the entire culture of a modern people depends."

In these theoretical formulations of Émile Durkheim, John Dewey and Anísio Teixeira, there are, therefore, affinities with the precept of the pedagogical renewal of school education and the principle of the construction and reconstruction of the formative experiences of the individual/student of the younger generations, consistent with the socio-educational contexts.

In view of the *corpus* of the research (interview, educational legislation, school documents, etc.), we defined as the objective of this article as investigating such theoretical affinities in what is equivalent to that precept and that principle described in the circumstances of the formative education of Ângela Maria Paiva Cruz – who was a professor, researcher and manager at the Federal University of Rio Grande do Norte (UFRN, acronym in Portuguese) –, in the period of time that extends from her first schooling (1964) to the conclusive stage of the doctoral course (2019). Hence, our attention to *the continuum of the construction and reconstruction* of their formative experiences in the socio-educational contexts over the time of their *school life* (1964-1967; 1968-1971; 1972-1974; 1975-1980; 1990-1993 and 1998-2000). This article is part of the studies of the Women's Education Research Group in the 19th and 20th centuries, which focus on the education of women, with a view to producing new knowledge from the historical research developed.

4

Elementary education | 1964-1967

Born on August 6, nineteen fifty-five, at Sítio Serra Nova (Serra Nova District), belonging to the municipality of Martins (Rio Grande do Norte), Ângela Maria Paiva Cruz is the penultimate daughter of eight brothers (six women and two men) of Cecília Augusta de Paiva (who studied until the second elementary grade and was responsible for housework and educating her children) and Cícero de Paiva Chaves (who studied until the second

elementary grade and was a farmer in his own land).

The decade of Ângela's birth coincides with the wide diffusion of the precepts of New Pedagogy and the expansion of public elementary school for the population from six to twelve years of age beyond cities and villas, in small villages, farms and beaches, in the territory of Rio Grande do Norte.

Born in a Catholic family, with a relative tradition of school culture, Ângela was enrolled by her parents to start the first stage of her educational formation at Escola Isolada do Sítio Serra Nova (created by Decree No. 1,257, of April 19, 1944), later enrolled at Escola Reunidas de Várzea da Caatinga (created as Escola Isolada by Decree No. 267, of June 24, 1937) – multigrade school institutions –, where she studied from 1st to 4th elementary grade (1964-1967). His brothers attended elementary education in these same public schools.

The Escola Isolada do Sítio Serra Nova was one of the 112 created in the government of the Federal Intervenor in Rio Grande do Norte General Antônio Fernandes Dantas (1943-1945), according to the Decree that instituted it "[...] with the guarantee for its operation of sufficient school population". The Escola Reunida da Várzea da Caatinga was one of the 50 created in the government of the Federal Intervenor in Rio Grande do Norte Rafael Fernandes Gurjão (1937-1943).

One and the other School were intended to benefit the school population from the transmitted education. This benefit translated, in principle, what Chizzotti (2020) thinks of a relative effort to equalize opportunities, which school education promotes.

In Rio Grande do Norte, school education instituted for childhood was in line with the Regulation of Elementary and Teachers' Education (approved by Decree No. 3,590, of February 1, 1960) and with the mandatory principle for all children from seven to thirteen years old. The study program should be adapted to the time of schooling of this stage of school life and basically prioritize the teachings of the basic knowledge of Language, Mathematics, Natural Sciences, Social Studies, recreation and games and diversified activities for the purpose of a practical notion of things, facts and situations related to common life.

In her interview (2023), Ângela recalls the disciplines taught in the

four elementary grades by her teachers – Francisca de Assis Paiva, her sister (first and second grades), and Raimunda Maria das Neves, her other sister (third and fourth grades). The disciplines were Language, Mathematics, Social Studies (which included History, Geography and Moral and Civic education) and Science, as well as diversified group activities related to school parties, instructional walks (around the school, with practical explanations about the flora, fauna, water sources) and civic parades. From this disciplinary set of minimum studies, she highlights the two disciplines she preferred: Language and Arithmetic.

For Dewey (1979a, p. 32), in education based on the principle of construction and reconstruction of the present school experiences, the educator must share with his students all the use "[...] of the physical and social conditions of the environment to extract from them everything that can contribute to a body of healthy, valid and effectively educational formative experiences".

In the multigrade classes that worked in her parents' house, Ângela and her 22 colleagues (10 girls and 12 boys) mostly exercised individual activities (calligraphy, dictation, writing, exercises in arithmetic calculations, homework, and tests). According to Cruz (2023, p. 3): "The written activities taught translated the values and beliefs in force." The teaching materials were mainly: schoolbooks, multiplication tables, line notebook, calligraphy notebook, pencil, and ruler. In general, Ângela's elementary education was preparatory for the high school course.

6

Secondary Education | 1968-1971

The principle of equalization of education opportunities, concomitantly with public policies of expansion and access to elementary schooling and subsequent study levels, favored Ângela's approval in high school, after having completed the mandatory entrance exam. According to her, she prepared herself for the book Programa de Admissão (Entrance Exam Program), authored by Aroldo de Azevedo (Geography), Joaquim Silva and José de Arrida Penteadó (History of Brazil), José Cretella Júnior (Portuguese) and Osvaldo Sangiorgi (Mathematics), in its first edition, of 1956.

The student Ângela passed the entrance exam for the high school

course of the State School Dr. Joaquim de Ignácio de Carvalho Filho, located in the small city of Martins (Rio Grande do Norte), which, according to Araújo's (2021) research, would be one of the 18 high school institutions in the state at the time, in view of state public policies to expand educational opportunities for youth of Rio Grande do Norte.

In this public institution, Ângela attended the four high school grades (1968-1971) when the Organic Law of Secondary Education was in force, related to this level of education, promulgated by Decree-Law No. 4,244, of April 9, 1942, successively reformulated, in the 1950s, through the so-called Equivalence Laws.

The school program formalized by that Organic Law of Secondary Education was consistent with the purpose of providing the adolescent with the formative studies of secondary school. According to Ângela's interview (2023), the high school of the State School Dr. Joaquim de Ignácio de Carvalho Filho contemplated a curriculum composed of nine serial disciplines, from the first to the fourth grade: Portuguese, Mathematics, English, Drawing, History of Brazil, Geography of Brazil, Natural Sciences, Religion and Physical Education, basically taught by teachers. Regarding the didactic-pedagogical materials, Ângela clarifies: "Each discipline had its basic books. The school library was very precarious. But my parents did their best to buy or borrow the indicated books" (Cruz, 2023, p. 7).

The formative studies of secondary school to the adolescent admitted extra-school activities to diversify the experiences of the student's social life. In Ângela's words:

During the high school course, we made an excursion to the neighboring municipality (Riacho da Cruz) to know a large dam, a source of sustainable life for the residents of its surroundings and, at the same time, to know other places and people and strengthen bonds (Cruz, 2023, p. 8).

For Dewey (1979a), social life is a fabric of experiences of all kinds and, consequently, of continuous learning, with a view to educational formation. Explicitly drawn to the charms of reading beyond school books, Ângela resorted to the communal habit of lending books from hand to hand.

I liked to read, but the school offered little of these experiences. I sought, then, to fill this gap by borrowing literature books from my colleagues, especially from their parents and family members. My uncle Severino Paiva was one of them, who lent me the books he read, by Brazilian and Portuguese authors [...] I remember reading the novel *Amor de perdição* [Love of perdition] (Cruz, 2023, p. 8).

In addition, surrounding their formative experiences, there were educational cultural activities, offered by the city, the Catholic church, the family, and the secondary school itself.

Once a month, there was a movie screening in the parish hall, which I sought to watch. Through the scout movement, I had important lessons of solidarity and community life. At the family's initiative, I learned crochet, knitting, which was part of the female formation. At school, I participated in the recitation of poetry and some small plays rehearsed by the teachers, in a huge effort to face shyness (Cruz, 2023, p. 9).

8

Hence, Dewey's (1979a, p. 17) statement that educational and formative experiences generally "[...] influence fruitfully and creatively [in each case] in subsequent ones". It happens that, at the State School Dr. Joaquim de Ignácio de Carvalho Filho, the precepts of traditional pedagogy and/or traditional education prevailed, in which freedom of expression was subtracted from the student, among other initiatives. So much so that Ângela did not hesitate to make a critical assessment of this school, in general, and of the teachers, in particular.

The school followed the same conservative pattern as the elementary school. There were no activities to stimulate creativity and freedom of expression. [...] The best way to receive a good grade on a test or work was to write literally what was in the textbooks (Cruz, 2023, p. 9).

Anísio Teixeira (1999b, p. 171) observes that the right to public and free education, common to all – women and men – is added to the equality of formative-educational opportunities in the subsequent degrees of schooling, in "[...] that the same levels of studies are offered before the perspectives of modern life".

Secondary Education | 1972-1974

The years 1972 to 1974 comprise Ângela's stage of study in the evening scientific high school of the State College "Winston Churchill", of the capital Natal (created under the government of Monsignor Walfredo Gurgel, by Decree 4,846, of September 25, 1967). This institution maintained the observance of the theoretical matrix of the Organic Law of Secondary Education of 1942, in force, regarding the provision of mixed education.

However, Law No. 5,692, of August 11, 1971, had already been approved, establishing the guidelines and bases for the teaching of 1st and 2nd degrees. But, according to Germano's (2008, p. 107) studies, it was idealized under the influence of "[...] theory of human capital, although it resorted to democratizing interpretations of correction of social inequalities".

Under the terms of that Organic Law, it was the responsibility of secondary education to deepen the formative education provided in the high school course, with emphasis on the knowledge of Science in general. Regarding the set of serial disciplines taught in the scientific high school of the State College "Winston Churchill", Ângela indicates those from the studies of sciences in general, with which she most identified: Mathematics, Chemistry, Physics (studied in the three grades) and Biology (studied in the 2nd and 3rd grades). Ângela's testimonial manifests the symbolic character of the school book, especially for its instrumental formative function with a view to the entrance exam for university education:

In all disciplines, the books were excellent references for the preparation of the entrance exam for university. I remember that the Mathematics book used by the teachers was by Gelson Lezzi and the Physics book adopted by the teacher was by Dalton Gonçalves (Cruz, 2023, p. 10).

The secondary education, observed and fulfilled by the students, grouped the exercise of the experience of coeducation (mixed gender classrooms), the evening school calendar and the social heterogeneity of the student youth of this shift. Ângela thus succinctly describes this conjunction:

In the *secondary education evening shift*, the classes were numerous, with fewer female students than male students. The maximum was 20 students per class. In my class, almost all the colleagues were students who worked during the day (Cruz, 2023, p. 11, emphasis added).

In the *continuum* of formative experiences, and according to the intrinsic precept of traditional and New School pedagogies, secondary education extends at the level of the public sphere and the domain of specialized studies. First, formative school education stood out as a methodical sociability of learning, self-discipline, contextual circumstances, and coordination of associated activities.

In Winston Churchill College there was a relative Student Movement. Because I worked all day in a pharmacy, in the center of the city, when I arrived at the College, I would have a snack and, sometimes, I would stop by student council to talk or even attend a meeting, before the beginning of the first class of the evening. At the end of the last class, I had to take a bus to return to our home, have dinner and dedicate time to studies (Cruz, 2023, p. 11).

10

At the State College "Winston Churchill," the political-democratic ideals of the student youth were opposed to the rigid discipline of the director, who was a military man identified with the civil-military government that had assumed political power on March 31, 1964. According to Germano's (2008, p. 85) studies, by all means, military sought to shape students in this period according to "[...] the order and discipline of the Army and the armed forces in general". According to Cruz (2023, p. 11), the students of "Winston Churchill" school "[...] aimed to exercise the freedom to think, act and choose their destinies. But there were, on a daily basis, restrictive measures to intimidate them."

Evidently, Ângela's academic formation at the "Winston Churchill" College was mainly due to the *continuum* of school experiences, through which she rose to the fascination with reading in general and with growing learning. For her, the high school level, through systematized studies, provided her with a reasonable understanding of the scientific and empirical basis of the human and physical universe, in addition to the visible contradictions of life in a society of social classes. School education, in accordance with its formative

purposes, clarifies Durkheim (1978, p. 80), "[...] consists of the methodical socialization of each new generation".

Anísio Teixeira (1999, p. 80 and 83) points out that common formative and self-formative knowledge "[...] open [more or less] to that equality of educational opportunities [...] against the excessive inequality that capitalism causes, whenever the people lack the expansion of public education at all levels".

University Education | 1975-1980

In the year following the conclusion of the high school (1975), Ângela was approved in the entrance exam of the Federal University of Rio Grande do Norte (UFRN) to attend the undergraduate course in Mathematics-Baccalaureate and undergraduate courses for teachers (Department of Mathematics of the Center of Exact Sciences) – and the short undergraduate course for teachers in Sciences, with more or less ten female students. Fifteen years had passed since the federalization of the University of Rio Grande do Norte (Law No. 3,849, of December 18, 1960, sanctioned by President Juscelino Kubitschek de Oliveira), six years since the creation of the Mathematics-Baccalaureate and undergraduate course for teachers (Resolution No. 46/69 – CONSUNI) and three years since the authorization of the operation of the short undergraduate course for teachers in Sciences, provided for by Ministerial Ordinance No. 432 (Schemes I and II).

In the 1970s, the *stricto sensu* university policies of this university institution were in line with some prescriptions of the military regime in Brazil, which, according to Germano (2008, p. 83), "[...] was of a regime of order".

The Resolutions of the University Council (CONSUNI, acronym in Portuguese) and the Council for Education, Research and Extension (CONSEPE, acronym in Portuguese), which define student policies, make it clear that they underlie the prism of order and, by extension, the exercise of discipline. Along with this intertwining, the student scholarship system was outlined, according to this 1965 Resolution:

Establishes the system of scholarships, food assistance and accommodation to UFRN students. The Dean is *responsible for*

granting and maintaining said scholarships (Resolution No. 01/65 – CONSUNI, emphasis added).

In turn, student policies can be perceived by the chain of the student's formative experiences beyond the citadel of the university *campus*, reaching communities in the interior of the country as if they were correlated and complementary experiences. This is what can be seen from this 1972 Resolution:

Students are free to participate in the Rondon, Mauá and Centro Rural Universitário de Treinamento e Ação Comunitária – CRUTAC projects, without disengaging from school commitments (Resolution No. 64/72 – Consepe, emphasis added).

According to Law No. 5,540, of November 28, 1968 (which established the rules for the organization and functioning of higher education), university-level education should allow the student body opportunities to progress in formative experiences, considered indispensable for the realization of an awareness of the rights and duties of the citizen. For this, it was necessary to diversify and expand the student scholarship system as a university policy, which happened through Consuni Resolution No. 63/75: "The Work, Extension, Research, Sports, Art, Food, Accommodation, Award and Special Scholarships are created."

It can be said that, in those years from 1975 to 1980, a period in which Ângela studied Mathematics-Baccalaureate and undergraduate course for teachers, in addition to a Short undergraduate course for teachers in Sciences, there were few young students who did not expect one or more scholarships from the university system, with its rules intrinsic to the formative activities to be experienced.

The "awards" student scholarships were awarded to university students who distinguished themselves academically. For this university policy, Ângela was awarded the Medal of Student Merit "[...] for having been classified as the Best Undergraduate of the second academic period of 1977, of the Science Course – 1st Degree of the Center of Exact Sciences". In addition, she was awarded the Medal of Student Merit "[...] for having been classified as Best Undergraduate of the first academic period of 1980 of the undergraduate course for teachers of Mathematics at the Center of Exact Sciences".

The serial studies of the disciplines of the course of Bachelor's and undergraduate course for teachers of Mathematics (Mathematics I, II, III, IV), Calculus (I, II, III), Logic (I and II), Methodology of Sciences (I and II), in addition to the subsequent good concepts achieved in the set of the two study programs (10, 9.5, 9.0), made it possible for Ângela - after fulfilling these prescribed steps - to be one of the students selected for a monitoring scholarship to assist teachers of Logic and Methodology of Sciences in the courses of Mathematics, Philosophy, Medicine, Mathematics, Geography and Law.

If the monitoring pre-fixed the initiation to teaching, the curriculum of the Mathematics undergraduate course for teachers re-recorded the teaching practice internship to be completed in a public school, which Ângela completed at the João XXIII Municipal School. One of the extension activities she participated in took place at the Rondon Project, in the city of Recife (visiting electrical product factories).

In those years (1975-1980), there seemed to be a certain tolerance on the part of the Federal University of Rio Grande do Norte administration with some of the rebellions of the student leaders. As Ângela (2023, p. 13) recalls, her participation in the activities of the student movement took place "[...] in the meetings promoted by the Central Student Directory (DCE, acronym in Portuguese) at the University Restaurant and at the School of Engineering".

However, since April 1968, the University Council, through Resolution No. 21/68, had approved the dean's decision prohibiting concentrations and meetings in the grounds of the University Restaurant. Eight years after the approval of this 1968 Resolution, the University Council, through Resolution No. 02/76, prohibited the Central Student Directory from any participation in matters of a political-partisan and religious nature.

It can be said, with Alejandro Celetti (2019, p. 19-20), that, in the university environment, "[...] there would be a possible institutional regulation, for a freedom to think and do [...] to avoid its fearsome materiality [...]". The ultimate aspirations of this generation of young university students of which Ângela was one of the members, more than ever, were for the ideals of freedom, equality of opportunity and emancipation.

1st and 2nd degree and university teaching | 1981-2019

In the 1980s, Ângela was a Mathematics teacher at the State Department of Education and Culture of Rio Grande do Norte, teaching in Natal, at the State Schools *Professor Luis Antônio*, *Professor Acrísio Freire* and *Professor Luiz Soares*. At the same time (1981), she was a Mathematics teacher at the Municipal Secretariat of Education of Natal to teach at the *Municipal Schools Juvenal Lamartine* and *Monsenhor Joaquim Honório*. In addition, he taught Mathematics at the National Campaign of Community Schools, at the Helvécio Dahe High School, at evening shift.

In this decade, she was also approved in the contest for collaborating professor of the Higher Magisterium of Federal University of Rio Grande do Norte, hired (1983) to teach at the University campus of the city of Santa Cruz, in the area of Logic and Methodology of Science. In the four-year period 1990-1993, as a scholarship holder of the Coordination for the Improvement of Higher Education Personnel (Capes, acronym in Portuguese), she took a master's degree in the Graduate Program in Philosophy at the Federal University of Paraíba (UFPB), in which he defended the dissertation entitled: *On paraconsistent deontic logic: paradoxes and dilemmas*. The master's student was part of the Logic Research Group (UFPB/UFRN/CNPq).

With a master's degree in Philosophy, she began to teach, in the Department of Philosophy at Federal University of Rio Grande do Norte, the disciplines Logic, Methodology of Science, Philosophy of Science, Theory of Knowledge, Contemporary Philosophical Ideas, among other complementary ones.

The constellation of philosophical knowledge in the areas of language and logic and the intercomplementary ones were, *a priori*, the fundamental readings of Ângela in the master's degree in Philosophy.

The readings in the master's degree in Philosophy were dedicated to the philosophers of The Thinkers' collection, in addition to the philosophers indicated by the teachers, especially those of the Philosophy of Language and Logic, such as: Ludwig Joseph Johann Wittgenstein, Friedrich Ludwig Gottlob Frege, Bertrand Arthur William Russell, Willard Van Orman Quine, among others (Cruz, 2023, p. 16).

Academic formation in line with the complex thinking of classical authors, according to Morin (2010), supports the awareness of the incompleteness of the knowledge of the Human Sciences. Perhaps that maxim of Anísio Teixeira (1999a) that learning increasingly is undoubtedly the pleasure of pleasures, already inspired her.

In the three-year period 1998-2000, Ângela studied for her doctorate in the Graduate Program in Education at Federal University of Rio Grande do Norte, and defended the doctoral dissertation entitled: *Representation of the structure of cubation geometry*. The doctoral student was part of the Scientific Culture and Knowledge Production in the Sciences Research Group (UFRN/CNPq).

The universe of readings of the classics in the area of Education, Philosophy and Human, Physical and Mathematical Sciences extended to these thinkers:

Paulo Freire; Carl B. Boyerr; David Hilbert; David Bhom; George P. Lakoff; Mario A. Bunge; Newton C. Affonso da Costa; Saul A. Kripk; Steven A. Pinker; José Saramago; Italo Calvino; Plato and others (Cruz, 2023, p. 16).

From then on, academically forming the new generations of teachers as researchers and managers in the future, with interdisciplinary formative experiences, corresponded to a set of expectations in relation to the consolidation of institutional plans and projects, dear to the generation, which had formed them in undergraduate and graduate studies.

Ângela mentions, in the text of the interview, in the last decade of the twentieth century and in the first three decades of the twenty-first century, her multiple institutional responsibilities: head of the Department of Philosophy (1994-1996 and 1997-1998); vice-director of the Center for Human Sciences, Letters and Arts (2003-2007), vice-rector (2007-2011), dean (2011-2019), in addition to coordinator of the research group of the project Knowledge Representation: formal logical aspects and mechanisms of creativity and the project Logical Modeling of Normative Discourse (2003-2004). For one year (2016-2017) she was president of the National Association of Managers of Federal Institutions of Higher Education – Andifes (acronym in Portuguese)

– which comprised about 63 deans of Federal Universities.

These words of Morin (2010, p. 361), in an interview with Djénane Kareh Tager, could have been uttered by Professor Ângela: "I am on my way, in fact as I have always been all my life. It's my fate". The destiny, of course, of an interdisciplinary formation that gave rise, throughout his life, to the interdependencies established in the light of different theories and logic, the exercise of the creation and development of intellectual work, always in public institutions and based on universal classical thinkers.

Final Considerations

In its concrete dimension, the construction and reconstruction of the formative experiences of the student Ângela Cruz were relatively intermediated by the selective precepts of Traditional Pedagogy and New Pedagogy. The study carried out here shows adaptations, continuities, discontinuities, and/or theoretical and practical displacements that, in the end, participate in the precept of the pedagogical renewal of school education and the principle of the construction and reconstruction of the formative experiences of the younger generations. We would add here the idea of Anísio (2009, p. 68) that the construction and reconstruction of formative experiences would, in fact, "[...] a *sine qua non* condition of the renewal of the individual's human and social existence".

Assuming that theoretical formation and generational school formative experiences have exceptions, we found that at least three hypotheses emerge from the research *corpus*.

The first is that, to provide a renewing formative education as a pedagogical procedure that must be cultivated by teachers for the new generations and of interdisciplinary extension, the exposition of reasons that accompanied the Organic Law of Secondary Education of 1942 would invoke its inspiration in the Philosophy of Education of John Dewey. The then Minister of Education and Public Health Gustavo Capanema Filho stated:

The reform of secondary education is generally inspired by the fruitful pedagogical truth that education must be life [...]. The

pedagogical work must be full of life and that it is always, according to *the Deweyan precept, a reconstruction of the experience* (Exposição de Motivos..., 1942, p. 2798, emphasis added).

The second hypothesis stems from the publication of the theoretical formulations of Émile Durkheim, John Dewey, and Anísio Teixeira. It is that the experiences of formative education, almost always analyzed *a posteriori*, show evidence that, partially and in different situations, such formulations, widely shared, raised new sociabilities in the socio-educational contexts of Ângela's school life, through factual particularities of the stages of child and youth life and the socio-historical environment. In her interview she says:

The school experiences [in the four years of elementary education] allowed me a basic literacy that was indispensable for access to the other level of school education and the development of some skills (Cruz, 2023, p. 5).

The third hypothesis unfolds from the legislation presented. The enactment of national and state laws that affirm and confirm education as a right of all and a primary duty of the public authorities (Brazilian Constitutions of 1946 and 1967, for example) is presented as correlated to the obligation of the student to go to the school institution and remain there, to the equality of educational and formative opportunities and to the extension as a prolongation of the duration of schooling, equally for men and women. About the *continuum* of public school education and formative experiences, since elementary schooling, Ângela says:

[...] the high school level provided, through systematized studies, a reasonable understanding of the scientific and empirical basis of the physical and environmental universe, in addition to the contradictions of life in a society of social classes (Cruz, 2023, p. 11).

After all, teacher Ângela's formative education keeps the intersections of the three hypotheses defended. Hence, the relevance of Snyders' (1974, p. 202) thesis to define the teacher's formative education, in view of generational and intergenerational coexistence: "It is with the experiences apprehended [preserved and at the same time outdated and/or renewed], that the person

builds the experiential syntheses. Instead of stopping points, they become organizing lines of the whole of living."

In addition, they corroborate the classic theoretical formulations pertinent to the equalization and/or equality of educational opportunities for all men and women, especially those authored by Anísio Teixeira. That is, the prospect of carrying out, with their own hands and with social thinking, new descriptions, enlightening socio-educational analyzes and appropriate scientific treatments, reflecting, like a mirror, the democratization of schooling throughout interdisciplinary socio-educational life.

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21

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