



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

Cultivating knowledge in adult education: a systematic review on education, work, and sustainability.

Cultivating knowledge in youth and adult education: a systematic review on education, work, and sustainability

Manoel Hélio Sousa Santos - Santa Úrsula University - manoelhelio@bol.com.br

Bruno Matos de Farias - Santa Úrsula University - bruno.farias@usu.edu.br

Summary

The cultivation of school gardens has become a relevant pedagogical strategy in Youth and Adult Education (EJA), especially in territories marked by social inequalities and the precarious insertion of youth into the world of work. This article presents the results of a systematic literature review with a qualitative approach, conducted according to the PRISMA 2020 protocol, with the objective of analyzing how recent academic production articulates education, work, and sustainability within the scope of EJA, with an emphasis on gardens as a formative practice. 156 documents were examined, of which 20 comprised the final corpus, including articles, institutional reports, legislation, and dissertations. Content analysis identified four categories: (a) informal work of peripheral youth; (b) education in EJA; (c) sustainability and environmental education; and (d) gardens as a formative practice. The results indicate that scientific production recognizes community gardens as a social technology capable of integrating ecological knowledge, cooperative practices, the building of autonomy, and income generation, being especially promising in contexts of socioeconomic vulnerability. It is concluded that the community garden constitutes a powerful pedagogical tool for adult education, articulating critical environmental education, popular economy, and emancipatory practices, contributing to curricular policies that value territories, sustainability, and social justice.

Keywords: Adult education. Youth. Work. Sustainability. School gardens.

Abstract

School gardens have emerged as a relevant pedagogical strategy in Youth and Adult Education (EJA), particularly in territories marked by social inequalities and the precarious insertion of young people into the labor market. This article presents a systematic qualitative literature review, conducted according to the PRISMA 2020 protocol, aimed at analyzing how recent academic production articulates education, work, and sustainability within EJA, with emphasis on gardens as formative practices. A total of 156 documents were screened, and 20 composed the final corpus, including scholarly articles, institutional reports, legislation, and dissertations. Content analysis identified four thematic categories: (a) informal work among peripheral youth; (b) education and training in EJA; (c) sustainability and environmental education; and (d) gardens as formative practices. The results indicate that the literature recognizes gardens as a social technology capable of integrating ecological knowledge, cooperative practices, autonomy-building, and income generation, particularly in contexts of socioeconomic vulnerability. It is concluded that gardens constitute a powerful pedagogical device for EJA, articulating critical environmental education, popular economy, and emancipatory practices, thus contributing to curricular policies that value, sustainability, and social justice.

Keywords: Youth and Adult Education. Sustainability. Informal work. School gardens.

1. Introduction

The relationship between education, work, and sustainability has proven to be a strategic field. a reflection for contemporary education, especially in the context of Youth and Adult Education. Adults (EJA), considering that it includes subjects historically excluded from school spaces and from the formal labor market, marked by interrupted career paths and experiences of



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

informal work. In this scenario, the school presents itself both as a learning space both as a territory for the reconstruction of identities, the exercise of citizenship and of Development of educational practices with social meaning.

The precariousness of work and the growth of the informal economy, highlighted by authors such as Nogueira and Carvalho (2021) and Antunes (2018) highlight the transformations in the ways of producing and survive in a society marked by inequality. At the same time, the popular economy and The solidarity model, proposed by Singer (2002), reveals possibilities for social organization based on cooperation and self-management, in contrast to the competitive logic of capitalism. This context It becomes urgent to reflect on the links between education and work, especially when it comes to peripheral populations facing conditions of vulnerability and exclusion.

In the field of education, authors such as Freire (1996), Arroyo (2005) and Saviani (2012) argue that EJA (Youth and Adult Education) should assume an emancipatory role, promoting learning that starts from... The reality of the individuals and contribute to their intellectual and social autonomy. When this training occurs It links environmental education and sustainability, as proposed by Sachs (2009), Gadotti (2008) and Jacobi (2003), it becomes even more relevant because it links human development to social and environmental responsibility.

The proposal to discuss cultivating vegetable gardens in small spaces as a formative practice. It fits within this horizon. More than just an agricultural activity, the vegetable garden is a pedagogical tool. which makes it possible to work on concepts of popular economy, entrepreneurship, ecology and citizenship of in an integrated way. Thus, understanding the formative potential of vegetable gardens in adult education is also to reflect on Education as an act of transformation and care, for life, for the environment, and for others.

Therefore, the objective of this study is to analyze, through a literature review, the The relationship between education, work, and sustainability, identifying how cultivating vegetable gardens can contribute to this. to configure as an emancipatory educational practice in the context of EJA (Youth and Adult Education).

The choice of the topic for this study is justified by the need to understand the contemporary transformations in the world of work and their impacts on the education of young people and adults in situations of social vulnerability. The expansion of the informal economy, coupled with Structural inequality and school exclusion have produced new configurations of life and... survival, especially in urban peripheries. In this context, many EJA (Youth and Adult Education) students They engage in precarious or informal activities, which requires the school to play a more active role in their education. For autonomy, citizenship, and sustainability.

The research proposes a theoretical reflection on cultivating vegetable gardens in small spaces such as formative practice in EJA (Youth and Adult Education), understanding it not only as a pedagogical activity, but as This is a concrete expression of the relationship between education, work, and the environment. This proposal contributes to the debate on sustainable educational practices, by integrating popular knowledge, agroecology and



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

solidarity economy, bringing school education closer to the socioeconomic and cultural realities of students.

From a scientific point of view, the study expands the theoretical body on critical thinking and emancipatory in EJA, based on authors such as Freire (1996), Arroyo (2005) and Saviani (2012), who advocate education as an instrument of liberation and social transformation. At the same time Time incorporates contemporary reflections on environmental education and sustainability from... Sachs (2009), Gadotti (2008) and Jacobi (2003), articulating perspectives that, although complementary, They are still poorly explored in an integrated way in academic literature.

Finally, this research directly engages with the Sustainable Development Goals. Sustainable Development Goals (SDGs) of the UN's 2030 Agenda, especially SDG 4 (quality education), SDG 8 (decent work and economic growth) and SDG 12 (responsible consumption and production). Thus, it is reaffirmed that education, when linked to work and sustainability, not only It transforms individuals, but it also builds new possibilities for the future of communities. complete, becoming an instrument of social justice and reinvention of educational practices in EJA (Youth and Adult Education).

The article is structured in five sections. After this introduction, the following is presented: Theoretical framework. Section three details Bardin's systematic review and analysis methodology. Section four presents the categorized results, followed by section five, which discusses the tensions. between theory and practice. Finally, the concluding remarks point to pedagogical and social paths forward.

2. Theoretical Framework

This work is based on four main axes. The first addresses the work informal youth from the periphery, based on the reflections of Nogueira and Carvalho (2021), who Discussing the precariousness of labor relations in Brazil, Antunes (2018), who analyzes the transformations in the world of work in the era of flexibility, and Singer (2002), who presents the Solidarity economy as an alternative to social exclusion.

The second axis deals with education and training in Youth and Adult Education (EJA). drawing on the contributions of Freire (1996), for whom education is a practice of freedom; Arroyo (2005), which recognizes EJA as a space of rights and emancipation; Saviani (2012), who defends an education linked to social transformation; and Di Pierro (2003), who analyzes the historical trajectory and public policies aimed at this type of education.

The third axis addresses sustainability and environmental education, engaging in dialogue with Sachs. (2009), which proposes a sustainable development model focused on social justice; Loureiro (2002), which emphasizes the importance of critical environmental education; and Gadotti (2008), which relates Sustainability, ethics, and citizenship.

Finally, the fourth axis addresses the cultivation of vegetable gardens as a formative practice, drawing on Altieri.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

(2012), which grounds agroecology as a science and social practice; Jacobi (2003), which highlights the participatory environmental education; and again in Freire (1996), whose pedagogy of dialogue inspires Educational action aimed at autonomy and collectivity.

Together, these authors support the understanding that work, when mediated Through education and collective practice, it can be transformed into an instrument of liberation. Autonomy and sustainability, especially in the context of marginalized youth enrolled in adult education programs.

2.1 Informal work of marginalized youth

Informal workers face significant challenges, as reflected by Vasconcelos *et al.* *al.* (2023), as they lack stability and are “vulnerable to precarious working conditions and wages “Low wages, lack of social protection, and job insecurity.” Corroborating this statement, Nogueira and Carvalho (2021) state that informal work is characterized by insecurity and vulnerability. Therefore, without the security of labor laws, the informal worker does not There is no guarantee of social protection.

Antunes (2018, p. 68) discusses the situation of informality in Brazil, where the “workers subjected to successive temporary contracts, without job security, without registration in “Portfolio, working inside or outside the productive space of companies.” In this view, the author shows Informal work is not limited to being self-employed, as it also includes those who perform their duties within Contracts with a company that offer temporary employment are also informal, as they are subject to the same rules. instabilities faced by informal, self-employed workers. In addition to those who, despite working... They have a fixed position in a company, but are not formally registered as employees.

Informal work, despite being a daily reality in marginalized communities, It is not suitable for reversing social inequalities. In this sense, Singer (2002, p. 36) states that These inequalities would be produced by capitalism, and if the economy were based on a In a solidarity-based model, society would be less unequal. The author conceptualizes solidarity economy as being... “mode of production, whose basic principles are the collective or associated ownership of capital and the “The right to individual freedom.” That is, instead of establishing an individual productive model in In small spaces, he suggests that production should take place in collective spaces, where everyone can participate. equal opportunities allow them to contribute their labor, but with self-management characteristics where Everyone manages that space in a democratic way.

To understand the extent of social inequalities associated with young people from certain areas. To understand the periphery, we first need to formally and didactically grasp what a periphery is. Silva (2022, p. 1) states that peripheral areas “[...] are regions of the city where public policies arrive at different times from other regions of the city. These are areas where, often, the public authorities do not “It arrives in the same way it arrives in others.” From this perspective, it is possible to understand who the The inhabitants of these communities and how inequalities occur.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

According to Goes *et al.* (2021), through the Atlas of Peripheries in Brazil, published by

According to the Institute for Applied Economic Research (IPEA), this year the total peripheral population amounts to...

11,425,644 people, distributed across 6,329 peripheral areas throughout the country. Of these, 30.6% were white and 68.6% were black, and three years later, the situation hasn't changed. This scenario is represented...

The atlas portrays the reality of Brazilians marked "by the consequences of structural racism."

born from the denial of reparation policies for the black population after slavery" (Oliveira, 2021,

p.350).

The youth of the periphery, as defined by the Tricontinental Institute for Social Research (2020, p.

1) as being "a youth that fights, that hustles, and is also a youth that dreams, that

"Creates, invents beyond the misery of the present." That is, they are young people who work hard, who

They seek better living conditions, innovating every day to survive, where the

Formal job opportunities are challenging. Despite all their efforts, young people face challenges.

with income inequality, when compared to young people from urban centers, and consequently,

with social inequalities, motivated by the historical construction of helplessness.

Despite recent economic changes in Brazil, which have reduced the unemployment rate

Even for those discouraged, the national job market still presents many challenges. According to the

Continuous National Household Sample Survey (PNAD Contínua), referring to the third

The rate for the first quarter of 2025, released by the Brazilian Institute of Geography and Statistics (IBGE), is...

Unemployment reached 5.6% of the working-age population, representing a decrease of 0.2 percentage points.

percentage increase compared to the previous quarter and 1.2 percentage points compared to the first quarter.

quarter of the year. During the same period, the percentage of discouraged workers showed a slight decrease of 0.1 percentage point.

The percentage remained at 2.4%. The informality rate among the employed population also remained stable.

at 37.5%, which shows that, although there has been progress, the country still faces significant challenges.

to guarantee more stable and formal labor relations (IBGE, 2025).

The popular economy gained strength in Brazil at the end of the 20th century, as a consequence of...

High rates of precarious formal employment, social exclusion, and rising unemployment.

(DIEESE, 2009). To understand how this type of economy works, it is important to define

the concept. In the words of Diniz (2017, p. 45), it is an economy conceived "as the whole

economic activities and social practices developed by members of the working classes

"Based on the use of their own labor and resources."

In Brazilian cities, the informal economy takes on multiple forms, expressing the

The capacity for resistance and adaptation of the working classes in the face of exclusion from the formal market.

employment. The advance of neoliberal policies, outsourcing, and the reduction of job opportunities.

Salaried work has intensified, especially since the 1990s, the growth of activities

autonomous and informal work as a means of survival (Antunes, 2018; DIEESE, 2009).



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

This economy, based on the use of one's own workforce, on the mobilization of resources.

Family and community involvement, and the creative occupation of urban space, encompasses everything from commerce

From street vending to construction, food production, clothing manufacturing, beauty services, etc.

cargo transport, among others (Kraychete; Gonçalves, 2023). Far from being restricted to

Marginalization: the urban popular economy reveals itself as a structural component of the dynamics.

of Brazilian cities, supporting a significant portion of the population that is marginalized

formal labor relations and the social protection system, considering that "the activities

The activities carried out by workers in the urban informal economy are not occasional, temporary or

Circumstantial, but permanent activities: 52% of these workers perform the same activity.

for more than five years" (Kraychete; Gonçalves, 2023, p. 196).

In urban peripheries, the informal economy also plays a fundamental social and territorial role. It is through these activities that many residents, especially those...

Women build their networks of support, solidarity, and belonging, transforming spaces.

of the city in territories of work and coexistence (Ferreira et al., 2023; Simões and Medeiros, 2025).

Thus, the urban informal economy reveals itself as a structuring element of the peripheries.

highlighting the creative and organizational capacity of the working classes in the face of inequalities and...

absence of effective public policies for employment and income.

2.2 Education and training in EJA

Adult and Youth Education (EJA) has two main objectives: to reduce

to combat illiteracy and increase the educational attainment of those who did not have access to education at the age of majority.

appropriate. Next, the structure of EJA (Youth and Adult Education) and its contribution to the constitution of is discussed.

citizenship, as well as analyzing its social role.

The 1988 Federal Constitution is the first legal milestone to recognize education as

Education is a right of all and a duty of the State and the family, ensuring, in article 208, item I.

Fundamental, compulsory and free, including for those who did not have access at the appropriate age.

(BRAZIL, 1988). This constitutional provision establishes the basis for the construction of policies.

public institutions focused on Youth and Adult Education (EJA), understood as an instrument of reparation.

historical and promoting citizenship.

The Law of Guidelines and Bases of National Education (LDBEN), Law No. 9.394/96, was a landmark.

important for the consolidation of EJA (Youth and Adult Education), by establishing that it should be "intended for those who do not

had access to or continuity of studies in primary and secondary education at the appropriate age" (Brazil,

(1996). The LDBEN (Brazilian Law of Education) stipulates that EJA (Youth and Adult Education) should consider the characteristics, interests, and conditions of

Life and work for students, guaranteeing them opportunities to continue their studies and

recognizing the right to lifelong education.

The National Education Plan (PNE), established by Law No. 13.005/2014, reinforces the



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

The relevance of this approach in establishing goals aimed at eradicating illiteracy and...

Raising the average schooling level of the population. Among the goals, the one that seeks to universalize stands out.

providing school services for the population aged 4 to 17 and improving the quality of education offered to young people and adults.

18 to 29 year olds who have not completed basic education, promoting the articulation of EJA (Youth and Adult Education) with the vocational education (BRAZIL, 2014).

The National Curriculum Guidelines for Youth and Adult Education (Opinion)

CNE/CEB Resolution No. 11/2000 and CNE/CEB Resolution No. 1/2000 represent another essential milestone, as

They guide the curricular organization, methodology, and evaluation, emphasizing the need for a

a pedagogical proposal that considers the diversity of EJA (Youth and Adult Education) students, their knowledge, experiences and... life trajectories.

In 2006, Decree No. 5,840 established the National Education Integration Program.

Professional with Basic Education in the EJA (Proeja) modality, integrating school education with

professional qualification and expanding the possibilities for social and productive inclusion of students.

Subsequently, Resolution CNE/CEB No. 3/2010 updated the national standards for EJA (Youth and Adult Education).

consolidating the flexibility of curricula and the formal recognition of completed studies.

In addition to these legal instruments, complementary programs such as the Brazil Literate program are also important.

(Decree No. 4,834/2003) and the Territorial Agenda for Literacy and EJA (2008) reinforce the

The State's commitment to literacy and continuing education for young people and adults.

especially in regions with greater social vulnerability.

In this sense, authors such as Arroyo (2005) and Paiva (2006) emphasize that EJA should be

understood as a space for inclusion, dialogue and empowerment, in which the right to education is

effective from the concrete realities of the subjects. Arroyo (2005) emphasizes that the true meaning

The role of EJA (Youth and Adult Education) is to listen to and recognize the life trajectories of the students, while Paiva

(2006) understands it as a field of social struggles and affirmation of the popular classes.

Despite legal and conceptual advancements, EJA (Youth and Adult Education) still faces significant challenges in...

Brazil, including school dropout rates, lack of infrastructure, and the need for continuing education...

teachers and the connection between education and the world of work. However, its importance for the

The guarantee of the right to education and social justice remains unquestionable, reaffirming its role.

as an instrument for individual and collective transformation.

Brazilian legislative frameworks establish that Youth and Adult Education (EJA) is

an important instrument to guarantee the right to education for those who, for various reasons, do not

They had access to school at the appropriate age. In this way, this modality assumes three functions.

fundamental social rights: the restorative function, which seeks to restore the denied right to education in

due time; the equalizing function, aimed at expanding educational and social opportunities.

social inclusion; and the qualifying function, which recognizes education as a continuous process and



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

permanent throughout life (Oliveira *et al.*, 2021).

However, understanding EJA (Youth and Adult Education) solely from its legal functions would be insufficient.

As Freire (1996) points out, education should be understood as a practice of freedom, that is, a

A process that allows the individual to recognize themselves as the protagonist of their own story.

From this perspective, EJA (Youth and Adult Education) is not limited to repairing access to schooling, but is configured as a space for...

awareness and empowerment, where students can problematize their realities and build

New meanings for knowledge and work.

Arroyo (2005) complements this view by stating that EJA is, above all, a right.

human and social, whose realization depends on the recognition of the life trajectories of the subjects who

Those who participate in it. For the author, the social function of EJA (Youth and Adult Education) goes beyond the provision of content: it lies in...

Valuing the experiences, identities, and stories that each student brings with them. Thus,

The school becomes a space for listening, welcoming, and rebuilding life projects.

Along the same lines, Saviani (2012) advocates for an education committed to

social transformation, guided by a critical understanding of reality and the pursuit of overcoming...

inequalities. Therefore, EJA (Youth and Adult Education) plays an essential role in promoting an education that articulates...

Combining school knowledge with reflection on the world of work, citizenship, and sustainability.

indispensable dimensions for building a more just society.

Di Pierro (2003) highlights the historical and political relevance of EJA, showing that its

The journey in Brazil is marked by social struggles and the resistance of educators and movements.

popular. The author points out that EJA (Youth and Adult Education) emerged and consolidated itself based on the demands of the working classes.

working women, becoming a field of symbolic and political disputes in defense of the right to

quality public education.

In this way, the social function of EJA (Youth and Adult Education) goes beyond the compensatory aspect and assumes a...

formative, emancipatory and transformative dimension. Inspired by Freirean principles and in

Contributions from Arroyo, Saviani, and Di Pierro establish it as a space for collective construction.

of knowledge and strengthening the autonomy of individuals, reaffirming the commitment of

Education combined with freedom, dignified work, and social justice.

2.3 Sustainability and environmental education

Sustainability is a concept that has undergone significant changes over time.

transformations. Initially associated only with environmental conservation, today it encompasses dimensions

social, economic and cultural aspects, seeking a balance between human development and...

preservation of natural resources. According to Sachs (2009), sustainability must be understood

as an eco-development, that is, a model that articulates economic growth, equity

social and ecological prudence. For the author, it is not possible to think about sustainable development without

Consider the living conditions of the population and the fight against poverty.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

In this same vein, Jacobi (2003) highlights that sustainability involves the construction of a new ethic of collective responsibility, based on citizen participation and awareness of interdependence between society and nature. Gadotti (2008) expands on this reflection by stating that the Sustainability is also an educational principle that should permeate all dimensions of the school, promoting an education focused on solidarity, care, and respect for life in all its forms. Thus, thinking about sustainability in EJA (Youth and Adult Education) means understanding that the education of young people and adults... It needs to integrate scientific knowledge with popular knowledge, encouraging practices that combine knowledge, Autonomy and socio-environmental responsibility.

From this perspective, environmental education emerges as an essential path to... consolidation of a sustainable culture. However, as Loureiro (2002) observes, it is necessary to go beyond the traditional and instrumental view of environmental education, restricted to changing individual behaviors. The author advocates for a critical environmental education that problematizes individual behaviors. Structural causes of environmental degradation, such as consumerism and social inequalities, proposing a political perspective on the relationships between human beings, work, and nature.

According to Reigota (1994), the environment should be understood as a space of relationships, social and cultural factors, and not just a set of natural elements. In this way, educating environmentally, it means stimulating a critical reading of the world, as proposed by Freire (1996), enabling individuals to recognize their responsibility and their transformative role in society. In this context, educational practices in EJA (Youth and Adult Education) can promote dialogue among... scientific knowledge and the life experiences of the students, valuing collective actions and An ethical commitment to the planet.

The relationship between sustainability and income generation is also a relevant aspect. In the contemporary debate on education and work, Singer (2002) advocates for a solidarity economy, as an alternative to unemployment and social exclusion, based on cooperation, self-management and Valuing human labor. For him, sustainable development requires the democratization of means of production and the strengthening of economic practices based on solidarity. In a way Converging, Altieri (2012) presents agroecology as a scientific and social proposal that seeks To reconcile food production, social justice, and ecological balance.

These ideas resonate with the practices of community and school gardens, which They integrate environmental education, popular economy, and sustainability. The cultivation of vegetable gardens in small... Creating spaces using recycled materials, such as tires and PET bottles, represents not only a strategy for income generation and food security, but also a pedagogical tool, which encourages cooperation, environmental awareness, and active participation among EJA (Youth and Adult Education) students.

Therefore, discussing sustainability in the context of Youth and Adult Education is... to understand that environmental education is not limited to the preservation of nature, but constitutes as



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

a process of integral formation of the subject. In light of the contributions of Sachs (2009), Loureiro (2002), Gadotti (2008), Jacobi (2003), Reigota (1994), Altieri (2012) and Singer (2002), it is possible to affirm that sustainability, when integrated into educational practice, fosters autonomy, citizenship and the construction of new relationships between education, work and the environment, pillars fundamental for a more just and supportive society.

2.4 Cultivating vegetable gardens as a formative practice in adult education

Growing vegetable gardens in school and community spaces represents an educational practice rich in pedagogical and social possibilities. In the context of Youth and Adult Education (EJA), This activity takes on an even deeper meaning, as it brings school knowledge closer to reality from the students' life experiences, connecting practical, scientific, and cultural knowledge. The vegetable garden School can be understood as a space for vibrant learning, where values are developed linked to cooperation, collective work and sustainability, strengthening the bond between education and social reality.

According to Freire (1996), education should start from the concrete reality of the learners and To promote a critical reading of the world, so that the knowledge built in school has meaning in their lives. From this perspective, cultivating vegetable gardens makes it possible to experience a pedagogy of practice and through reflection, in which the student learns to observe, plan, and transform the environment in which they live, developing a stance of autonomy and co-responsibility. Freire (1986, p.29) states that "not There is more knowledge or less knowledge: there are different kinds of knowledge," and this idea materializes in EJA (Youth and Adult Education) when... The school values the traditional knowledge brought by the students about planting and caring for the plants. Land and the use of natural resources.

Altieri (2012), when discussing agroecology, emphasizes that the sustainable cultivation of food is It is also a social and educational practice, capable of integrating ecological principles and traditional knowledge. For the author, the vegetable garden is not just a space for production, but a territory for learning and citizenship, which encourages reflection on consumption, the responsible use of resources, and appreciation of manual labor. This approach aligns with the proposal of EJA (Youth and Adult Education), which seeks to unite knowledge scientific input into the work culture, recognizing the formative value of everyday experiences.

Similarly, Jacobi (2003) points out that participatory environmental education has The vegetable garden plays an essential role in building a collective awareness focused on sustainability. In this context, it becomes a laboratory for citizenship, in which students can understand, in practice, The importance of cooperation, respect for the environment, and the conscious use of resources. Furthermore... Furthermore, by working with recyclable materials, such as tires, PET bottles, and repurposed boxes, the The school encourages creativity and an ethical commitment to reuse and waste reduction.

Gadotti (2008) complements this perspective by arguing that school should be a space of "education for sustainability," forming critical and responsible individuals. For him, education



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

Environmental awareness is not limited to the transmission of content, but must be present in the organization of... spaces, in human relationships and in everyday pedagogical practices. In this sense, the school garden It becomes an instrument for curricular integration, as it allows for addressing cross-cutting themes such as Healthy eating, grassroots economics, citizenship, and solidarity.

Within the context of EJA (Youth and Adult Education), working with vegetable gardens can also contribute to development. autonomy and income generation are essential aspects for students who are often... embedded in informal work. By learning to cultivate and produce sustainably, the student It develops skills that can be applied in daily life, promoting self-esteem and... empowerment. Thus, the practice of gardening goes beyond the school space and extends to the community. Strengthening social bonds and expanding the reach of education as an instrument of transformation.

Therefore, cultivating vegetable gardens in EJA (Youth and Adult Education) represents more than just a didactic activity: it is a A formative practice capable of uniting theory and action, education and work, the individual and the community. Inspired In the ideas of Freire, Altieri, Jacobi, and Gadotti, this practice reaffirms that meaningful learning It arises from the dialogue between popular knowledge and scientific knowledge, and sustainability is built upon that understanding. In our daily lives, in the relationships we cultivate with nature and with each other.

2.5. Linking education, work and sustainability

The analysis of the theoretical axes presented allows us to understand that Youth and Adult Education Adult Education (EJA) is a space for knowledge construction that goes beyond the function of remediation. educational and to assert itself as an instrument of social emancipation. The dialogue between work and education. Sustainability reveals that the training of EJA (Youth and Adult Education) students must be anchored in practices that... Recognize the value of experience, community, and autonomy.

The first axis, focused on the informal work of marginalized youth, highlights the the need to understand work not only as a means of survival, but as an expression of creativity and resilience in the face of inequalities. Informality, although marked by Precarious employment can also be a space for reinvention and learning, provided it is mediated by public policies and transformative educational practices.

In the second section, which addresses education and training in EJA (Youth and Adult Education), the contributions stand out. de Freire (1996), Arroyo (2005), Saviani (2012) and Di Pierro (2003), who reaffirm EJA as a right. Social and liberating practice. This modality enables young people and adults to resume their processes. formative, giving new meaning to their trajectories through dialogue and the valuing of popular knowledge. and critical awareness of the world of work.

The third axis, focused on sustainability and environmental education, broadens the perspective on... The social function of the school in incorporating the ecological and ethical dimensions of education. Authors such as Sachs (2009), Loureiro (2002), Gadotti (2008) and Jacobi (2003) point out that environmental education should To promote collective responsibility and social transformation, forming individuals aware of their...



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

a role in preserving life and building a more just future.

Finally, cultivating vegetable gardens as a formative practice in EJA (Youth and Adult Education) emerges as a pedagogical proposal capable of uniting the three axes discussed. The school garden, as an educational space, articulates knowledge. Combining scientific knowledge with popular wisdom encourages cooperation and collective work, and promotes income generation and reinforces the commitment to sustainability. Inspired by the concepts of Freire, Altieri, Jacobi and Gadotti, this practice becomes a symbol of emancipatory education, the kind that teaches and raises awareness and it transforms.

Thus, the theoretical foundation shows that the connection between education and work Sustainability is essential for a pedagogical practice that promotes autonomy and dignity for... students in EJA (Youth and Adult Education). Based on these references, the research proposes to reflect on education as A tool for rebuilding lives and strengthening communities, reaffirming the role of School as a space for social and human transformation.

3. Materials and Methods

This study is characterized as a systematic literature review, with an approach... qualitative, with the aim of analyzing how recent academic production articulates education, Work and sustainability in the context of adult education, especially with regard to cultivating vegetable gardens. as a formative practice. To ensure scientific rigor, the methodological approach was based on PRISMA 2020 (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) protocol, in the stages of Bardin's Content Analysis (2016). This instrument was chosen due to its recognized effectiveness in the analysis of qualitative research, as adapted to the context. Brazilian study conducted by Ursi (2005) and recommended in integrative reviews by Mendes, Silveira and Galvão (2008).

3.1 Methodological procedures

The literature review was conducted between March and October 2025. Searches were conducted in databases of broad academic relevance and in repositories. Official institutional sources. The sources consulted included: SciELO (Scientific Electronic Library) Online), Google Scholar and the CAPES Periodicals Portal, in addition to the technical collections of the Institute. Institute for Applied Economic Research (IPEA), of the Inter-Union Department of Statistics and Economic Studies Socioeconomic data from DIEESE and the Brazilian Institute of Geography and Statistics (IBGE).

To retrieve the documents, the following descriptors were used in combination and Keywords, combined using Boolean operators: "Youth and Adult Education", "EJA" (Youth and Adult Education), "informal work", "popular economy", "sustainability", "environmental education", and "vegetable gardens". schoolchildren".

The constitution of the corpus for analysis followed rigorous eligibility parameters.

Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026
 organized in Table 1 below:

Table 1 – Inclusion and exclusion criteria for the systematic review.

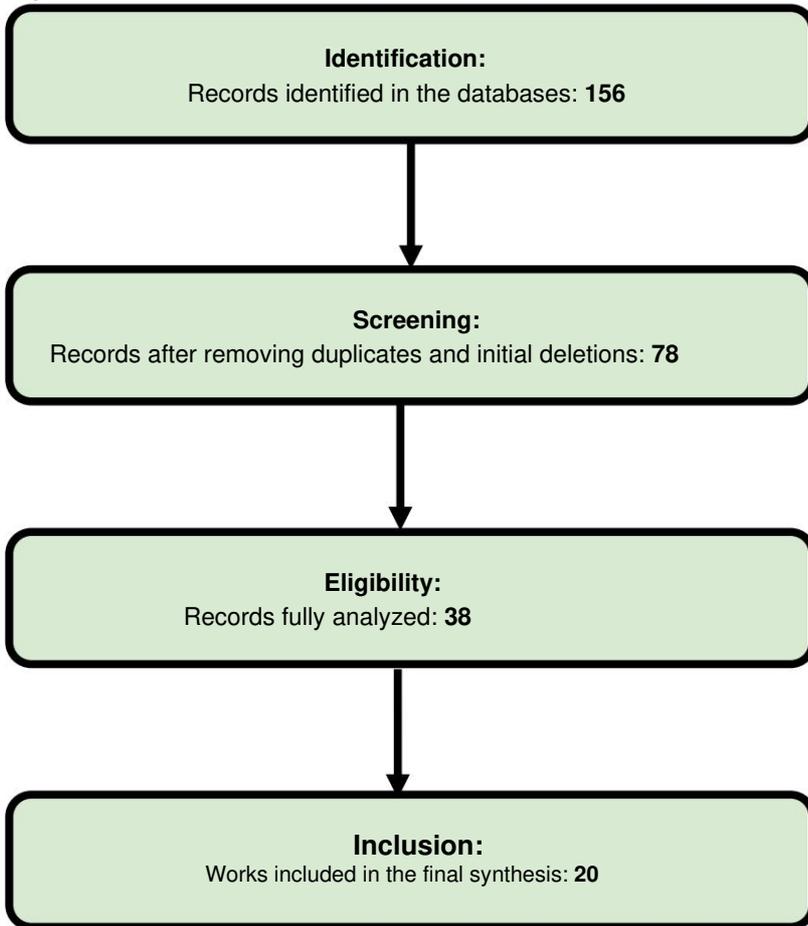
Parameter	Inclusion criteria	Exclusion criteria
Time frame	Publications made in the last decade. Publications prior to 2015. (2015–2025).	
Language	Materials written entirely in the original language. Portuguese.	Materials in a foreign language without translation.
Document typology	Scientific articles, dissertations, theses, extended abstracts,	reviews, editorials, legal documents, and technical reports. Opinion pieces and duplicate texts in the databases.
Thematic relevance	Works that address the articulation between at least two axes: education, work and agronomy, without interfacing with the sustainability/vegetable gardens dimension.	educational or social aspects of EJA (Youth and Adult Education).

Source: Prepared by the author (2025).

It is noteworthy that the defined time frame (2015–2025) is justified by intentionality. to analyze the state of contemporary art. The year 2015 represents a global historical milestone with the promulgation of the UN's 2030 Agenda and the Sustainable Development Goals (SDGs), central benchmarks for current discussions. Furthermore, in the Brazilian context, this period encompasses the worsening of job insecurity and the emergence of new forms of informality (uberization), phenomena that directly impact the adult education audience.

The application of these criteria followed the methodological screening flow detailed in Figure 1. This selection process followed the PRISMA 2020 recommendations. Initially, the following were identified: 156 records. 38 duplicates were removed. In the screening by title and abstract, 64 were excluded due to... Lack of adherence to the themes of 'EJA' (Youth and Adult Education), 'work', and 'sustainability'. Another 34 documents were... rejected in the eligibility stage for not meeting the criteria of typology, time frame or thematic scope. Thus, 20 works comprised the final corpus submitted to content analysis.

Figure 1 - PRISMA flowchart for article selection.



Source: Prepared by the author (2025).

It can therefore be concluded that the selection process represented in the figure ensured that Consistency of the review, ensuring that only studies aligned with the defined objectives and criteria are included. They were included in the final corpus.

3.2 Evaluation of the quality of the included studies

Considering the heterogeneity of the documentary corpus, the evaluation of the quality of The study was conducted using a Methodological Criteria Matrix, constructed from the This tool is an adaptation of the checklist from the Critical Appraisal Skills Programme (CASP, 2018). widely used in qualitative systematic reviews to verify rigor, credibility, and relevance of the research.

For the present investigation, 10 evaluation criteria were defined, encompassing everything from... The clarity of the objectives and the final scientific contribution were all factors. Each criterion received a score. ranging from 0 to 2 points, totaling a maximum score of 20 points. The detailed structure of The assessment can be found in Table 2.

Table 2 – Matrix of criteria for evaluating methodological quality.

Criteria Evaluated	Indicator Description	Score Maximum
1. Clarity of objective	The research problem and objectives are explicitly stated. 2.0 defined?	
2. Suitability of the method	The chosen methodology is appropriate for answering question 2.0. search?	
Theoretical-methodological coherence 2.0	There is alignment between the theoretical approach and the procedures. 3.0 adopted?	
4. Description of the scenario/context	The research context (adult education, periphery, school) is well 2.0 Characterized?	
5. Data collection	Was the data collection strategy explained and is it relevant?	2.0
6. Analytical procedures	Is the data analysis process described rigorously?	2.0
7. Theoretical Framework	Does the study engage with relevant and up-to-date literature on the topic? 2.0	
8. Articulated discussion	Are the results discussed in light of the theory and not just described? 2.0	
9. Consistent conclusions	The conclusions address the objectives and are supported by the 2.0 data?	
10. Scientific contribution	The study offers relevant advances or reflections for the field of 2.0. EJA/Sustainability?	
TOTAL	Maximum Possible Score	20.0

Source: prepared by the author (2025).

Based on the final score, the studies were classified according to their methodological quality and relevance to this review into two strata: "Excellent" (17 to 20 points) and "Good" (11 points).

(16 points). The detailed score for each selected work can be found in Appendix A.

3.3 Organization and analysis of data

For the treatment and interpretation of the 20 selected works (the final corpus), the following approach was chosen:

Content analysis, in thematic or categorical mode, based on Bardin (2016). This

This methodology allows us to go beyond a superficial reading of the texts, revealing the core meanings that

The communication analyzed comprises the elements of the communication being analyzed.

The analytical process was structured in the three phases advocated by the author:

1. Preliminary analysis: Initially, a preliminary reading of the selected material was carried out, with the aim of identifying general meanings and recurring themes related to the axes "working youth", "EJA" (Youth and Adult Education), "sustainability" and "vegetable gardens". This stage allowed the construction of the analytical corpus and the definition of interpretative hypotheses: to understand how the literature articulates education, work and sustainability and to identify the formative role of vegetable gardens in the context of EJA.
2. Exploration of the material: the works were subjected to analytical reading, in which recording units, passages with complete meaning, were extracted and assigned initial codes that represented the thematic cores. Subsequently, similar codes were grouped to form subcategories, which later gave rise to the final categories, aligned with the four thematic axes of Table 3.

Table 3 - Coding process and category formation.

Excerpt from the corpus	Initial code	Subcategory Final	Category
"In the peripheries, the proletariat was born imbued with the condition of precariousness" (Antunes, 2018, p. 68).	precarious employment	youth working conditions	(1) Informal work of marginalized youth.
"[...] many EJA students are workers and due to personal demands (family and social), it becomes almost impossible to attend school every day of the week" (Miguel, 2022, p. 162).	work as an educational principle	resume and work experience	(2) Education and training in EJA
"[...] the implementation of urban gardens, combined with actions of Environmental education can play a fundamental role for the community surrounding the garden. [...]" (Cereali & Wiziack, 2021, p. 486).	social and environmental awareness	sustainability practices	(3) Sustainability and environmental education
"The school garden emerges as a strategy for teaching and learning about..." food cultivation in natura [...]" (Carneiro et al., 2023, p. 3)	vegetable garden as a social technology	agroecological practices	(4) Vegetable gardens as a formative practice

Source: prepared by the author (2025).

3. Treatment of results and interpretation: In this final stage, the codes were synthesized and interpreted, articulating them with the Freirean theoretical framework, agroecology, and literature on youth and work. The grouping of the codes resulted in the four thematic categories that structure the presentation of the results, as shown in Table 3. These categories allowed us to understand how the literature integrates educational, productive, and environmental dimensions in the context of EJA (Youth and Adult Education).

4. Results and Discussion

The analysis of the documentary *corpus*, processed through Content Analysis, resulted in Selection and categorization of 20 works that form the basis of this review. To facilitate visualization and... For a better understanding of the analysis, Table 3 presents the distribution of the selected productions according to... with the four thematic axes that structure the research.

Table 3 - Works selected and categorized by thematic area.

Thematic axis	Selected works (authors/year)
1. Informal work of marginalized youth	Antunes (2018); Nogueira & Carvalho (2021); Todos pela Educação (2024); Marques (2021).
2. Education and training in EJA Reibnitz	2021); Miguel (2022); Brazil/MEC (2025); Santos <i>et al.</i> (2022).
3. Sustainability and education environmental Cereali & Wiziack	Wiziack (2021); Center of Excellence against (2024); Garcia (2016); Vieira <i>et al.</i> (2024); Oliveira <i>et al.</i> (2024); Fiocruz (2021).
4. Cultivation of vegetable gardens as a formative practice	Botrel <i>et al.</i> (2020); Carneiro (2020); Garcia & Franco (2024); Carneiro <i>et al.</i> (2023); Nagib (2024); Tirlone & Blümke (2025).

Source: Prepared by the author (2025).



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

Regarding the relationship between youth and the world of work, the systematic review highlights a scenario of structural precarization. The analysis by Nogueira and Carvalho (2021) points out that work informality is not merely a transitional phase, but a persistent condition resulting from flexibility of labor laws. This data directly relates to Antunes (2018), who identifies in "Uberization" and intermittent work: the new faces of labor exploitation affecting the working class worker.

The statistical documents reinforce this qualitative interpretation. The IBGE survey (2025) reveals high rates of workforce underutilization, especially among individuals with lower levels of education. The Todos Pela Educação report (2024) qualifies this data as To demonstrate that informality has a color and a specific address: it predominantly affects young Black people. residents of the outskirts of cities, the priority target audience of EJA (Youth and Adult Education). Marques (2021) further elaborates on this discussion by to map the trajectories of these individuals, showing that, in the peripheries, informality oscillates between survival strategy and a "popular entrepreneurship" forced by the absence of formal opportunities.

Regarding pedagogical practices and the structure of EJA (Youth and Adult Education), the results reveal a The gap between legislation and the reality of schools. The Diagnosis of National Education. (BRAZIL/MEC, 2025) highlights the precariousness of funding and the inadequacy of materials. specific teaching materials for this audience. Miguel (2022) corroborates this scenario by identifying gaps severe limitations in initial and ongoing teacher training hinder the implementation of curricula. that engage with the reality of the working student.

Despite the structural difficulties, the review found successful experiences. Reibnitz (2021) empirically demonstrates that the use of research as an educational principle in EJA strengthens the The intellectual autonomy of students, allowing them to investigate their own contexts. By On the other hand, Santos et al. (2022) warn about the subjective dimension: their results indicate that the The social representations that students have of themselves are still marked by the stigma of failure. requiring pedagogical practices that positively reconstruct student identity.

In this area, the works analyzed indicate a paradigm shift: sustainability. It is no longer treated solely as ecological preservation, but incorporates social dimensions and nutritional. The Fiocruz Agroecology Dictionary (2021) and Garcia's study (2016) position Agroecology as a strategic field for public health and social justice, overcoming the purely technical view. production.

The results of Cereali and Wiziack (2021) confirm this trend by linking vegetable gardens Urban factors directly impact food security in vulnerable areas. This perspective is reinforced by... report from the Center of Excellence against Hunger (2024) and by the research of Oliveira et al. (2024), which They highlight community management as a key factor in the success of environmental projects.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

However, Vieira et al. (2024) point to a pedagogical challenge: the difficulty of integrating these themes.

Agroecology is integrated across the school curriculum, although there is still resistance to linking it with other approaches. the traditional preparatory subjects.

The final section consolidates the findings on the practical application of vegetable gardens. Botrel et al. (2020) Carneiro (2020) describes school gardens as living laboratories where learning takes place. through direct experience, fostering cooperation and collective responsibility. Carneiro et al. (2023) expand on this view by demonstrating the positive impact of these practices on education. feeding, creating healthy habits that spill over into families.

Beyond the pedagogical aspect, the results point to the political and social dimension of the vegetable gardens. Nagib (2024) and Garcia and Franco (2024) characterize urban gardens as forms of activism and appropriation of public space, fundamental for the development of citizenship. Finally, in view of In the context of hunger and scarcity, Tirloni and Blümke (2025) present practical recommendations for the The use of vegetable gardens as a strategy to mitigate food insecurity suggests that schools can... To act as a hub for disseminating low-cost social technologies to the community.

Returning to the objective of the review, to analyze the connection between education, work and Regarding sustainability in adult education through vegetable gardens, it is observed that the literature converges on the understanding... of community gardens as powerful formative practices in vulnerable contexts. They operate at the intersection between work and learning, creating spaces for building autonomy, cooperation and environmental awareness.

Singer's theory (2002) proposes the solidarity economy as an alternative to the logic exclusionary to capitalism, based on self-management. However, the results of this review, based on Marques (2021) and IBGE data (2025), they show that the reality of Youth from marginalized communities in adult education programs are still far from this ideal of solidarity. What predominates is a... "Informal survival," or "the hustle," as described by the Tricontinental Institute (2020).

There is, therefore, an important contradiction: while the theory envisions collective work As for emancipation, reality imposes precarious, individualized work as a necessity. immediate. However, Antunes' (2018) thesis on structural precarization is confirmed: the EJA school It specifically targets individuals who have been excluded from the formal market. In this sense, the proposal for community gardens... Schools emerge as a point of mediation. By teaching cultivation and management techniques, the school can to equip this student not only for individual subsistence, but also for collective organization. As proposed by Singer, transforming "grunt work" into social entrepreneurship.

The framework of Paulo Freire (1996) and Arroyo (2005) advocates for an EJA (Youth and Adult Education) that recognizes the The results found in Reibnitz (2021) confirm this theory by demonstrating that, when research is used as In educational terms, students do indeed develop greater autonomy. However, Miguel's findings...



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

(2022) and the MEC diagnosis (2025) expose a mismatch: the precariousness of teacher training.

And the lack of funding prevents Freirean pedagogy from becoming the norm.

There is a clear tension between the official discourse (which advocates a holistic education) and the practice. everyday (often content-heavy and infantilized). In addition, the study by Santos *et al.* (2022) reveals that the stigma of school failure still weighs on students, indicating that the function The "reparative" aspect mentioned in the legislation (the social function of EJA) has not yet been able to heal the scars of... exclusion, requiring pedagogical practices that raise students' self-esteem.

In the field of sustainability, a strong convergence can be observed between the theory of Sachs' (2009) ecodevelopment and recent findings on food security (Cereali & (Wiziack, 2021). Sachs argues that there is no ecological sustainability without social justice. The articles The analyses confirm this premise by demonstrating that, in EJA (Youth and Adult Education), environmental education only makes sense. It makes sense when linked to combating hunger and generating income.

Unlike traditional conservation approaches (simply "don't pollute"), the practices The successful examples of school gardens described by Carneiro (2020) and Nagib (2024) embody the "Pedagogy of the Earth by Gadotti (2008). The vegetable garden is confirmed as the "pedagogical device" capable of uniting the Loose ends: it brings popular knowledge (valued by Freire), promotes food security (required) based on social reality) and promotes cooperation (the basis of the solidarity economy).

However, the review points to a critical weakness: the lack of institutionalization. While Altieri's theory (2012) positions agroecology as a science, the results of Tirloni and Blümke (2025) suggest that school gardens often depend on isolated initiatives or Volunteers, with no guarantee of continuity. Therefore, for the garden to fulfill its emancipatory role, It needs to stop being an "extra activity" and become an integrated curricular public policy.

5. Final Considerations

The purpose of this study was to examine, through a systematic review of literature, the connections between informal work, youth in EJA (Youth and Adult Education) and educational practices aimed at sustainability, with emphasis on the cultivation of vegetable gardens as a formative, emancipatory and potentially income-generating. By bringing together academic productions, official documents and Drawing on classic and contemporary references, the study showed that EJA (Youth and Adult Education) remains a space for dispute and affirmation of rights, especially for subjects historically made precarious by social, educational and environmental inequalities

The results indicate that informal work, while presenting itself as As an immediate alternative for economic survival, it keeps young people and adults in conditions of Vulnerability, lacking social protection and with restricted access to more stable professional opportunities. In this context, pedagogical practices that integrate education, sustainability, and the popular economy.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

They prove relevant because of their ability to bring the school closer to the lifestyles of the periphery.

recognizing local knowledge, promoting community ties, and enabling training.

It should have concrete meaning for the students.

The literature reviewed demonstrates that the cultivation of vegetable gardens, especially those built...

In small spaces, using tires, PET bottles, or recycled materials, it not only articulates

It also strengthens concepts of environmental education, agroecology, and solidarity economy, but also strengthens

Subjective dimensions such as autonomy, self-esteem, and belonging. Even though it hasn't been

It is possible to examine specific empirical experiences within the scope of EJA (Youth and Adult Education), as reviewed in the studies.

They converge in defending sustainable practices as pedagogical tools that engage with the

territory, addressing climate emergencies and the daily lives of working youth.

Despite the theoretical consistency built, this research has some limitations.

The analysis was based exclusively on secondary sources, which makes it impossible to verify how the...

Proposals for educational gardens are put into practice in real classroom contexts. Furthermore, the

The research may not have encompassed the entirety of the available academic output, especially texts.

of restricted circulation or studies developed in smaller municipal networks, which frequently

They are not indexed in the major databases.

The time frame (2015–2025), although justified by its relation to the 2030 Agenda and by

Recent changes in EJA (Youth and Adult Education) have also implied the exclusion of important parts of the debate.

historical context. These limitations, far from compromising the study, point to fruitful avenues for further research.

Future research is recommended. Empirical investigations that follow up on this are advised.

Implementation of educational gardens in adult education, analyzing their impacts on student development.

in work dynamics, income generation, and relationships with the territory. Future research

They can also explore participatory methodologies, such as action research, school ethnography, or...

longitudinal case studies, in order to understand more deeply the meanings that

Students attribute this to sustainable practices. Another important field of investigation concerns...

The potential of vegetable gardens as an integrating axis of the curriculum, linking Environmental Education and Science.

of Nature, Mathematics, Languages, Technology and Solidarity Economy.

It is concluded that the dialogue between education, work, and sustainability, when anchored in

The reality faced by students in Youth and Adult Education expands educational possibilities and redefines the role of the school.

as a space for social transformation. The community garden, as a simple pedagogical practice,

Accessible and well-located, it reveals itself as a concrete possibility to integrate environmental care and training.

Critical analysis and economic alternatives for young people and adults in vulnerable situations. More than

a cultivation technique, it presents itself as a way to strengthen meaningful learning and

To promote social development aligned with contemporary agendas of environmental justice and inclusion.

productive and human rights.



References

ALTIERI, Miguel A. *Agroecology: scientific basis of sustainable agriculture*. São Paulo: Expressão Popular, 2012.

ANTUNES, Ricardo. *The Privilege of Servitude: The New Service Proletariat in the Digital Age*. São Paulo: Boitempo, 2018.

ARROYO, Miguel G. *The Craft of Teaching: Images and Self-Images*. Petrópolis: Vozes, 2005.

BARDIN, Laurence. *Content Analysis*. São Paulo: Edições 70, 2016.

BOTREL, Maria Carolina Gaspar; GONÇALVES, Luciano Donizete; SILVA, Johnisso Xavier. Educational proposals for environmental education using school gardens. *Research, Society and Development*, v. 9, n. 12, 2020.

BRAZIL. *Constitution of the Federative Republic of Brazil of 1988*. Brasília, DF: Federal Senate, 1988.

BRAZIL. Law No. 9,394, of December 20, 1996. Establishes the guidelines and bases of national education. Brasília, DF: Official Gazette of the Union, 1996.

BRAZIL. Law No. 13.005, of June 25, 2014. Approves the National Education Plan (PNE). Brasília, DF: Official Gazette of the Union, 2014.

BRAZIL. Opinion CNE/CEB No. 11/2000. National curriculum guidelines for youth and adult education. Brasília, DF: MEC/CNE, 2000.

BRAZIL. Decree No. 5,840, of July 13, 2006. Establishes the Proeja program. Brasília, DF: Official Gazette of the Union, 2006.

BRAZIL. Resolution CNE/CEB No. 3, of June 15, 2010. Defines national standards for the education of young people and adults. Brasília, DF: Official Gazette of the Union, 2010.

BRAZIL. Resolution CNE/CEB No. 1, of July 5, 2000. Establishes the national curriculum guidelines for youth and adult education. Brasília, DF: Official Gazette of the Union, 2000.

BRAZIL. Decree No. 4,834, of September 8, 2003. Establishes the Brazil Literate Program. Brasília, DF: Official Gazette of the Union, 2003.

BRAZIL. Ministry of Education. *Diagnostic document of national education / National Education Plan*. Brasília: MEC; Joaquim Nabuco Foundation, 2025.

CARNEIRO, Aline O. School garden and food security: pedagogical tool and didactic knowledge. *Cadernos Macambira*, v. 5, n. 1, 2020.

CARNEIRO, MTS; OLIVEIRA, JA; CRUZ, JV; DANIEL, LO. Agroecological garden in the context of early childhood education: a space for food and nutritional education. *Brazilian Journal of Development*, v. 9, n. 5, 2023.

CARVALHO, Isabel Cristina de Moura. *Environmental education: the formation of the ecological subject*. 7th ed. São Paulo: Cortez, 2018.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

Center of Excellence Against Hunger. *Good practices in school gardens and education. Food and nutrition*. 2024.

CEREALI, Mariana; WIZIACK, Suzete Rosana de Castro. Urban gardens as a tool for environmental education, food security and quality of life. *Brazilian Journal of Environmental Education*, v. 16, n. 3, 2021.

CRITICAL APPRAISAL SKILLS PROGRAMME. *CASP qualitative checklist*. Oxford: CASP, 2024.

Inter-Union Department of Statistics and Socioeconomic Studies.

Bibliographic survey on aspects directly related to social vulnerability. São Paulo: DIEESE, 2009.

DINIZ, Sibelle. Popular economy and social solidarity economy: from precarious to plural. In: NATIONAL MEETING OF THE NATIONAL ASSOCIATION OF POST-GRADUATE STUDIES AND RESEARCH IN URBAN AND REGIONAL PLANNING, 17th, 2017. *Proceedings*. São Paulo: ANPUR, 2017.

DI PIERRO, Maria Clara. *The education of young people and adults in Brazil*. São Paulo: Ação Educativa, 2003.

FERREIRA, Adriana Cristina Xavier Deiga; SILVA, Ronalda Barreto; SILVA, Roberto Marinho Alves da. Women collectors of recyclable materials: living conditions, work and organizational strategies in Brazil. *Labor Market: Current Situation and Analysis*, v. 29, n. 75, 2023.

FREIRE, Paulo. *Pedagogy of Autonomy: Essential Knowledge for Educational Practice*. São Paulo: Paz e Terra, 1996.

FREIRE, Paulo. *Education and change*. 2nd ed. São Paulo: Paz e Terra, 1986.

Oswaldo Cruz Foundation. *Dictionary of agroecology and education*. Rio de Janeiro: Fiocruz, 2021.

GADOTTI, Moacir. *Education and sustainability: a new paradigm for the school*. São Paulo: Instituto Paulo Freire, 2008.

GARCIA, Mariana Tarricone. *Urban gardens and the construction of environments that promote adequate and healthy eating*. 2016. Doctoral thesis – University of São Paulo, São Paulo, 2016.

GARCIA, Mariana Tarricone; FRANCO, Jéssica Vaz. Food environments and urban gardens.

In: BÓGUS, Cláudia Maria; COELHO, Denise Eugênia Pereira (org.). *Urban community gardens: promoting health and food and nutritional security in cities*. São Paulo: Instituto de Saúde, 2024.

GIL, Antonio Carlos. *Methods and techniques of social research*. 6th ed. São Paulo: Atlas, 2008.

GOES, Fernanda Lira; VIEIRA, Maria Gabriella Figueiredo; REIS, Talita Rocha; OLIVEIRA, Flávia Adriane Pestana de; LUNELLI, Isabella Cristina. *Atlas of the peripheries in Brazil: racial aspects of infrastructure in subnormal agglomerations*. Rio de Janeiro: Ipea, 2021.



Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

Brazilian Institute of Geography and Statistics. *Continuous PNAD: unemployment rate and underutilization rate*. Rio de Janeiro: IBGE, 2025.

Tricontinental Institute for Social Research. *Research on youth in urban peripheries*. 2020.

JACOBI, Pedro Roberto. Environmental education, citizenship and sustainability. *Cadernos de Pesquisa*, no. 118, 2003.

KRAYCHETE, Gabriel; GONÇALVES, Vinicius. Economics of the popular sectors: work, social inclusion and citizenship. *Labor Market: Current Situation and Analysis*, v. 29, n. 75, 2023.

LAYRARGUES, Philippe Pomier; LIMA, Gustavo Ferreira da Costa. The political-pedagogical macro-trends of Brazilian environmental education. *Environment & Society*, v. 20, n. 3, 2017.

LEFF, Enrique. *Environmental rationality: the social reappropriation of nature*. 2nd ed. São Paulo: Cortez, 2019.

LOUREIRO, Carlos Frederico Bernardo. Environmental education and social movements in the construction of ecological and planetary citizenship. In: LOUREIRO, CFB; LAYRARGUES, PP; CASTRO, R. S. (ed.). *Environmental education: rethinking the space of citizenship*. São Paulo: Cortez, 2002.

MARQUES, Léa (ed.). *Trajectories of informality in contemporary Brazil*. São Paulo: Perseu Abramo Foundation, 2021.

MENDES, Karina Dal Sasso; SILVEIRA, Renata Cristina de Campos Pereira; GALVÃO, Cristina Maria. Integrative review: a research method for incorporating evidence in health and nursing. *Texto & Contexto – Enfermagem*, v. 17, n. 4, 2008.

MIGUEL, José Carlos (ed.). *Youth and adult education: theory, practices and politics*. Belo Horizonte: Autêntica, 2022.

NAGIB, G. *Urban gardens and activism: practices in São Paulo*. 2024.

NOGUEIRA, Mauro Oddo; CARVALHO, Sandro Sacchet de. *Precarious work and informality*. Rio de Janeiro: Ipea, 2021.

OLIVEIRA, AV. *Agroecology in rural education in Ceará, Brazil*. 2024.

OLIVEIRA, Denílson Araújo de. *The spatial inscription of the racial question in urban space*. Rio de Janeiro: Ipea, 2021.

United Nations. *2030 Agenda for Sustainable Development*. New York: UN, 2015.

PAIVA, Jane. *Youth and adult education: law, diversity and citizenship*. Rio de Janeiro: DP&A, 2006.

REIBNITZ, Cecilia de Sousa. Research as an educational principle: a working methodology for the education of young people and adults. *Essay: Evaluation and Public Policies in Education*, v. 29, n. 111, 2021.

Year VI, v.1 2026 | Submission: 05/03/2026 | Accepted: 07/03/2026 | Publication: 09/03/2026

REIGOTA, Marcos. *What is environmental education*. São Paulo: Brasiliense, 1994.

SACHS, Ignacy. *Pathways to sustainable development*. Rio de Janeiro: Garamond, 2009.

SANTOS, Vinícius Vieira dos; PEREIRA, Antonio Serafim. Research as an educational principle: social representations. *CriarEdu*, v. 11, n. 2, 2022.

SAVIANI, Dermeval. *School and democracy*. Campinas: Autores Associados, 2012.

SILVA, Eliana Sousa. Peripheries are regions of the city where public policies arrive at different times. *USP Journal*. São Paulo, 2022.

SIMÕES, G.; MEDEIROS, J. Urban peripheries as a fertile environment for social change. *Brazilian Journal of Urban and Regional Studies*, v. 27, n. 1, 2025.

SINGER, Paul. *Introduction to the solidarity economy*. São Paulo: Perseu Abramo Foundation, 2002.

TIRLONI, Neusa; BLÜMKE, Adriane Cervi. Food and nutritional security situation in a municipality in northwestern Rio Grande do Sul. *Food and Nutritional Security*, v. 31, 2025.

ALL FOR EDUCATION. *Yearbook: education for young people and adults*. 2024.

URSI, Elizabeth S. *Prevention of perioperative skin lesions: an integrative literature review*. 2005. Dissertation (Master's in Nursing) – University of São Paulo, Ribeirão Preto, 2005.

VASCONCELOS, Eveli Freire; COSTA, Ana Karolyna Branquinho da; OLIVEIRA, Gabrielle da Valle; PEREIRA, Katiusci Lemes. Informality and psychosocial vulnerability. *Interações*, v. 24, n. 3, 2023.

VIEIRA, DD; PACHECO, CSGR; FLORÊNCIO, RR; SANTOS, MHLIC. Teaching agroecology in basic education: an integrative review. *Educational Scenes*, v. 7, 2024.



APPENDIX A – Classification of the 20 selected studies according to methodological quality.