Affective Sustainability. The Creation and Transmission of Affect through an Educative Process: An Instrument for the Construction of more Sustainable Citizens

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Abstract: Although for many years the debate on sustainability has focused on the generation of critical thinking based on the dynamic balance between the economic, social and environmental spheres, in the following text we propose to elaborate on the use of a primarily human condition, such as the capacity to love and create an emotional attachment, whether with our environment or our fellow men, as an initiator and main force for change to the building of a more sustainable model of development. To do so we shall begin from the concept coined by Adriana Bisquert in the 90s, that is Affective sustainability, by analyzing it, delving into its possible definitions by means of the development of the project for Environmental Education and Development called “Educating for a more sustainable citizenship” undertaken by the Spanish NGO (non-governmental organization) or ITACA Ambiente Elegido, and developed in the locality of Paterna de Rivera, Cádiz (Spain). This is a practical and real example, which is used to establish a work educational methodology that enables us to consider this concept as the real basis for an exportable and replicable work in a painstaking search for the creation of a more sustainable city.

Keywords: affective urbanism; participation; sustainability; environmental education; urban regeneration; affective sustainability; sustainable citizenship; non-governmental organization (NGO)

1. Introduction

Although for many years the debate about sustainability has focused on generating critical thought based mainly on the dynamic balance between the economic, social and environmental fields [1], various authors have recently started to pay attention to other problems and different paradigms. In this way, from issues linked to the spheres of ethics, aesthetics and culture [2] to intangible values, such as mutual support, solidarity or compassion, a host of studies have focused on the need to understand sustainability from a more human perspective prioritizing and valuing all those aspects linked to our condition as such.

Thus, in this article we propose to elaborate on the use of the eminently of the human condition (if not the most characteristic aspects of our species), such as the capacity to love and create an emotional attachment—whether with our environment or our fellow men—as an initiator and force for change when building a more sustainable model of development.

To do so we shall begin from the study and development of a concept coined by Adriana Bisquert in the 90s [3], that is affective sustainability, in which both aspects are brought together in a masterly fashion, by analyzing it, delving into its possible definitions and especially, by means of the development of a practical and real example, establishing a work methodology which enables us to consider this concept as the real basis for an exportable and replicable work in other geographical, social
and economic conditions, in a painstaking search for a response to the need underlined by the author; to consider that, for an urban environment to endure over time, “it must be affectively sustainable.”

Specifically, the initial hypothesis for shaping this methodology will be to commence this search for affection starting from another human quality, one of the most powerful instruments when modifying behavior, and the perception of society—education [4]. In this case, we shall direct our attention to one of its variants, so-called environmental education, understanding this as a possible origin of a process which is not only the creator—or recoverer—of values and/or ethical and moral responsibility towards an ecosystem, but also of the identification and emotional appropriation by the people who live in it.

In this way, via the description and analysis of the bases, the results and subsequent consequences of the project for Environmental Education and Development called “Educating for a more sustainable citizenship” undertaken by the Spanish NGO (non-governmental organization) ITACA Ambiente Elegido, and developed in the locality of Paterna de Rivera, Cádiz (Spain), we will put forward a work methodology aimed at achieving real, effective and specifically affective involvement of citizens in change and direct action. This work methodology consists of enabling the achievement, via an educational and participatory process, not only of greater social and environmental responsibility—considering the unsatisfactory current results—but also the provision of the bases for an urban model which, by including all citizens, enables a more sustainable and in particular more humane city to be created.

Thus, this qualitative research will focus on examining the possibility of creating a change of attitude process towards environmental, urban and civic problems by targeting a precise group of persons, as well as the consequences of this change of attitude over the citizenry.

To that end, the description of the theoretical framework on which the educational process is based will be carried out and will address three fundamental aspects and their relationship: (1) The city—as an educational instrument, (2) education—as an instrument of change in society; and (3) affection—as the concept that can put in relation the items mentioned above.

Subsequently, the work methodology that is behind this educational process will be described, focusing on the fundamental characteristics of the participants, as well as the two key concepts that structure it: Memory and time.

Finally, the different results will be evaluated from a qualitative and quantitative point of view, so that some solid conclusions can be reached.

To summarize, this article will present a reflection on how to use affect in the field of education for sustainability. By doing so, it will aim to verify—through a subsequent qualitative and quantitative research—the success of the possible generation of a process of transformation in the behavior towards environmental, urban and citizen problems. Its target is a group of specific individuals, who will reveal the impact of this change of attitude on the rest of the citizenship.

2. Theoretical Framework

To set said work methodology in a theoretical framework and make the results understandable, we shall first describe generally the state of the issue in which we shall include the scientific bases on which this reflection stands, and later link it to the work carried out in the province of Cádiz by the ITACA Association responsible for both its theoretical origins and its subsequent implementation.

We shall start, therefore, from a theoretical reflection which will arise from studying and combining three major fields: (2) The city and urban environments—as the most representative areas of the problems which so-called sustainable development faces; (2) education—linked to basic issues, such as participation, critical thinking and above all its transforming condition; and (3) affection—as the maximum representation of a human condition which brings together and makes possible the individual and social—emotional link of a community with the territory where it lives. These three aspects will be discussed independently, although key interrelations will be highlighted.
2.1. The Current Starting Point: Sustainable and Educational Cities

Jaume Lerner said that “the city was not the problem but the solution” [5]. It is clear that for several years society and its demands have been exceeding the regenerative capacities of the planet on which we live [6–8]. Furthermore, a host of documents demonstrate that the majority of the world population already lives in cities [9] making said urban areas become the main source of these demands on the environment. Cities which, as shown by the uninterrupted increase in the number of the so-called “megacities”, that is, cities with more than 20 million inhabitants [10], are increasingly large.

In this sense, we can find international documents, such as the new Sustainable Development Goals [11], whose objective 11 “Sustainable Cities and Communities” aims for, within 15 years, all cities and human settlements to be inclusive and safe, besides resilient and sustainable. This approach is more than logical if we consider, on the one hand, that cities will occupy scarcely 3% of the planet, but represent between 60% and 80% of energy consumption and 75% of carbon emissions. If we also consider that 95% of the urban population will live in cities located in the so-called developing countries [12], it becomes more than apparent that the struggle for more sustainable development, as well as for equality and social justice will have urban areas as their main battlefield. Therefore, these urban environments represent a major challenge, but at the same time, as the Brazilian architect clarified for us, must be deemed the main hope, rather the only one, not just for achieving a better future from the environmental point of view, but also, by means of fostering aspects, such as solidarity or cooperation [13], to really improve living conditions for the majority of human beings living on this planet.

However, we wish to start this reflection by calling attention to an often forgotten or unconsidered issue, and it is the fact that understanding the duty of cities to progress to a sustainable and inclusive development model, must pass through the creation of a real desire on the part of the majority of its inhabitants to change and improve them. An intention for change that will start, without fail, from a reflection and a review of the role that each of these inhabitants has in said change, as well as the search for a critical look. This must not only include the global and abstract scale of society in which we find ourselves, but also start from introspection and the knowledge that each of us has, and through this knowledge, from the modification of some habits and the choice of other more responsible ones [14]. Only in this way will we be able to construct a more sustainable future. Only in this way will it be possible to achieve real change, which, besides, will be mutual: enhancing our cities by transforming its inhabitants/enhancing their inhabitants, transforming the places where they live.

It is precisely linked to this transforming and “enhancing” action, both of the inhabitants and the environment where they live (and vice versa), where education in general, and so-called environmental education in particular, will play a crucial role.

The first theoretical reflection from which we will start and which presents cities as the possible source of future solutions, will be: can the city, and the urban environment in general, therefore, be considered an educational element in itself, capable of changing the perception of its settlers, not only towards certain overall behavior habits, but also towards way of behaving and relating to these environments in their day-to-day living?

To answer this question, we will start by briefly introducing some of the most well-known examples in which the Education-City equation plays a fundamental role, the one, perhaps, with the greatest international repercussion known as the “Educating Cities Charter”.

As covered in this document, the development of this text arises from the conviction that the development of the inhabitants of a city cannot be left to chance, Education being understood

“as the key instrument, capable of achieving that each person will be aware of their potential, their creativity and their responsibilities towards the physical and urban environment where they live, and all this without forgetting the role and responsibility that public and political institutions possess in said process”. [15]

In line with this international document we also find a host of both theoretical referents, some of the most important of these being the case of the sociologist Anthony Colom and his so-called
Urban Pedagogy [16], but also of political experiences, such as the so-called Pedagogical Urbanism promoted by the former mayor and governor of Antioquia (Colombia) Aníbal Gaviria, which consider the government to be the main pedagogue and its function, that of citizens being educated to know, construct, transform and thus enjoy their city, or of course more recent technical proposals aimed at linking urban planning, educational planning and pedagogy from the point of view of architecture and urban design, as is the case of the work of Ian Banerjee defined as “Educational Urbanism” [17]. All of these, although promoted from different sectors, shows us two main aspects, on the one hand, the latest and innovative use of cities and of the future urban environment as an educational instrument, and, on the other hand, their potential as a tool for transforming and changing both everyday human and urban relationships existing in our cities, and the perception that individuals have of themselves.

2.2. Education and Sustainability: Generating Critical Thinking: Improving Inhabitants for Improving Cities

“The challenge of urbanism nowadays comprises raising this other look, that of the urbanism of affection, in very few cases achieved, in others lost and in the majority ignored. This look which recovers in cities the next scale, that of day-to-day living and creates spaces, and an adequate physical environment where there is room for other spaces, emotional ones. It is a case of providing a new perspective, a new approach, which changes the scale of values, because only human ones justify urban ones”.[18]

Having highlighted the importance that cities possess in the search for a more sustainable future whether as the source of problems or the container of possible solutions, and emphasized the importance of the role that the inhabitants of these possess in the transformation and improvement of current urban conditions, it becomes necessary to focus our attention on the instruments and mechanisms responsible for guaranteeing, or at least enabling, the involvement of the inhabitants in the processes of change and decision-making. Change that we must remember, for it to be real, must implicitly have effective, and affective, participation by citizens without regard to age, race, physical and mental capabilities or gender.

From this point of view, a host of authors relate environmental education with participation, considering this latter an essential instrument for defining and enhancing environmental sustainability, and linking it to three basic issues: necessary participatory justice [19], social interaction, and above all the achievement of a perception of success on the part of those participating [20].

What is certain is that according to many authors, participation, and especially the right to do so, is a vital aspect for achieving change which will enable a better environment [21], as well as creating and planning new, more inclusive and integrating urban models and as such, we find it currently reflected in the majority of the most important urban documents and those with the most far-reaching international effects.

Thus, from the very concept of educating cities taken and redrafted by the European Union, to the new Sustainable Development Goals [22,23] and to the already mentioned Goal 11 where the need appears by 2030 to “enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management”, via documents, such as the recent Quito New Urban Agenda (2016) [24], which explicitly set out the need to engender active citizens, stating literally its commitment in favor of a paradigm urban change which “will adopt people-centred(sic), integrated approaches to urban and territorial development”, it is made clear not only the current and ideal nature of a proposal that aims at having an effect on participatory issues, but also the importance of establishing a work methodology which enables all the urban goals and intentions to be tackled and resolved, working from the human sphere.

It was precisely in this attempt to use education and the city as new key instruments for re-drafting models which would allow innovative, collaborative building processes for a more sustainable urban environment—as it is evident observing the logo of the association that it’s possible to find in Figure 1—, which in 2012 led a cross-disciplinary group of experts: architects, urban planners, environmentalists, educationalists and experts in international cooperation, to found a not-for-profit association Ítica.
Ambiente Elegido [25] and to start to draw up a work methodology based on an aspect, affection, extensively studied by disciplines, such as psychology [26] or even geography [27], but practically unexplored in the field of architecture and urban design.

Figure 1. The NGO (non-government organization) Itaca Ambiente Elegido logo. (Source: [Link to Logo]

Therefore, we cannot dismiss the fundamental issues which lie behind decision-making, which make us responsible citizens, or not, in respect of the sustainability of our planet. These issues have their origins in very human, and in their subjective aspects—such as the possible generation of a real intention to act [28], or at least to be willing to take on the job that this behavior and responsibility requires [29]. Issues implicit in our human condition often overlooked, and directly linked to our state of mind, the perception or attitude with which inhabitants tackle certain environmental problems or relate to their closest environment.

In this way, and along the lines of other authors [30], the priority for influencing through education on some aspects, such as empowerment for sustainability becomes evident, focusing on routine matters, and on the power that all citizens have to enhance our environment by making gestures and employing common habits. A call for passive resistance linked to daily living and common and ordinary citizens that De Certeau [31] referred to, by educational actions targeted at and linked to usually forgotten or traditionally overlooked users [32].

In this sense we must digress briefly to highlight another fundamental aspect of the concept, Affective Sustainability, coined by Bisquert, and it is the direct link with enhancing the role performed by a series of users, specifically women, children, the elderly and those with a disability [14], as active defenders and representatives of this other city, one with emotional spaces [33]. Citizens normally invisible and overlooked in participatory urban processes or in decision-making, and, therefore, especially needing attention and prominence, who, however, as we shall see later in the practical example, will occupy a central role, not just as possible promoters of new, more sustainable, inclusive and egalitarian models, but also especially due to their ability to be the source of a series of affective synergies [25] linked to the creation and conservation of a common and shared landscape.

Based on this link to the groups requiring prominence, the first two conclusions will arise, which will be at the base of the subsequently developed work methodology. The first will, therefore, be the need to understand the participatory process, especially if we understand it as an educational and socially transforming process, it will need to cover a prior stage [34] in which we work towards and foster a new, positive and active attitude towards change [35], on the part of the participants.

Likewise, and on the other hand, we must not forget that one of the great potentials intrinsic to education, is its capacity to create a social awareness for denouncing a reality [36] through the teaching of critical thinking [37]. A transformation of conscious observation of our daily routine from enhanced knowledge, which will be the source not only of a sense of co-responsibility, reinforced by that prior empowerment, but also above all by the creation of a wish that said enhancement be carried out [38] and through it, of a future commitment to change and conservation on the part of the inhabitants, whether involved or not.

In other words, to make the educational process of environmental improvement more effective, it becomes necessary, furthermore, to work on the building of an attitude, on the attainment of a greater
aptitude on the part of citizens to analyze reality covering the maximum number of fields possible: urbanism, ecology, economics, politics, etc.

Despite this, and although the transmission of information and knowledge increases the capacity of citizenry to exercise their power [39–41] it seems to us fundamental to emphasize a final issue that we will develop in the next section, and it is that the simple knowledge or availability to be able to carry it out does not guarantee in itself possible changes.

In this sense, we find how a host of examples demonstrate a fundamental issue, and it is that it is much more effective, and the results are more evident when at the heart of the educational and empowering action a real and direct example by the people involved is given [14]. Collective action for change and improvement of a situation close to those involved will bring with it a greater commitment to participation and personal involvement of the persons affected. [42–45]

As clearly illustrated in the case study, everything described so far, raises, therefore, a new way of understanding our role in the creation of more sustainable development, which, through work on aspects, such as confidence, creativity or collaboration at the heart of participatory processes [46], will take us from being simple technicians or educators, to true facilitators of an autonomous process of transformation and construction of values and affection on the part of the persons involved, whether towards the place where they live, or towards themselves and their understanding of community.

2.3. Education as an Instrument for Creating Affection: Memory and Time

The true name of any transforming education is that it is humanizing. It will then be liberating to the extent that it triggers, accompanies and challenges learning about the human condition (….) The human condition refers insurmountably to love, which, because of it and in it, is what makes humans what we are. [47]

To complete this theoretical reflection, and once the link between the educational processes and the creation of critical awareness and citizen empowerment has been established, we shall introduce the last issue, and this will be the understanding of said educational and participatory process, as an affection-generating process, associated with the very bases of our human condition.

As we have clarified, it will be essential to understand environmental education, through its role as a creator of critical thinking, as a transformer of reality and a source of new alternatives for more sustainable development. But as we introduced in the previous section, for said “process of awareness raising” Paolo Freire [48] based on education, to be the real starting point of improvement, we must introduce other issues and points of view, being one of the main ones, the development and reinterpretation of the existing dialectic in Action-Reflection equation [49].

In this way, the last of the aspects to highlight in the work methodology proposed, and which will characterize the project carried out in Paterna de Rivera, and the work of the Ítaca Association, which will be the use and search for new alternatives of combining thinking and practice. A series of proposals, which as we shall see subsequently in the Cádiz case, will materialize in the fact of including in all educational processes real action for change, making said transforming action the source, not only of real social and urban improvement, but also through the creation of an experience shared and remembered by all the participants, an affective link between them, and with the place to which they have collaborated in improving. From the very first day, there was a relaxed and friendly atmosphere as can be seen in Figure 2.

In this sense, we must remember that Bisquert associated the building of that Affective Sustainability in our cities to two basic concepts: time and memory [3]. Two diverse, yet complementary, aspects of understanding cities is as a container of experiences: Some past, and, therefore, remembered; and others current and routine. Both ways contain sentimental and emotional relationships with the place where we live will be underpinned.
It will, therefore, be by means of setting in motion said transformation of a degraded reality, which, as already stated, will not only reinforce the expectations and involvement of citizens demonstrating that change is possible, but, what is more important, will also give rise to time and a series of experiences, which, from the very moment in which they are shared by a specific group, will become *shared experiences*, forming the fundamental elements on which this affective link will be founded.

Taking into consideration, on the one hand, that, as Maturana said, “*learning is the same as coexisting*”, insomuch as all learning is “*the transformation that takes place in coexistence*” [50] and, on the other hand, starting from the premise that affection is to be found in the structural base of all knowledge [51] as well as in all we are and do [52], we can finally set out the last piece of a methodology based on the construction of a sentimental and emotional link, whether it be with the group involved in the change, or with the placed transformed. Collective action, coexistence, which subsequently will become a memory, for the enhancement of the urban and/or natural environment in which we live and which will be the basis for the creation of a new affective link, or sometimes a recovered one, which will endow said group with the characteristics of a living organism [53] capable of working for the conservation and enhancement of the sustainability of the ecosystem in which it lives and not destroy it and exploit it.

In this way we can state that affection is not only a source of motivation for all knowledge [54,55], but is also the main driver of ethics [56]. Therefore, by starting from the creation of affection, it will be possible to pose new forms of transforming our societies [57] and enhance our cities to thus achieve truly sustainable development.

We must, therefore, highlight the main conclusion for this critical reflection, which reveals the link existing between a purely human condition, such as affection, and a whole series of fields of work apparently far removed from said emotive capacity, as were the necessary search for sustainability, the design of urban environments and environmental education, Moreover, it is love which is the characteristic which best defines us as human beings [47], and as such, it will be only via this condition that we can conserve our environment, since we will only value and want to protect that which we love and to which we feel emotionally attached. A methodology and mutual relations that we could summarize in Figure 3.

*Figure 2.* The first day of educational activities. In the foreground is a poster of the environmental education program.
3. Materials and Methods

It is worth to clarify that this educational project has a two-fold objective: one is to strengthen the critical view of a variety of groups that appear invisible in connection to their local environmental problems, as well as to work on their attitude towards those, leading them from passive citizens to active agents in the battle for change. A complementary objective is to turn those groups into a demonstrative example of transformation for the whole citizenry.

In order to achieve these theoretical and practical goals, which are in line with the proposed conceptual framework of this applied research, a methodology based on participation has been selected. A number of local players have created a management group responsible for leading the process at the local level and undertaking the proposed work.

The constituent members and idiosyncrasy of the management group will be presented in the following section, while the techniques and work methodology to achieve each of the proposed objectives will be described later.

3.1. Location and Groups Involved in the Project

Starting from the prior theoretical reflection, and in order to exemplify this work methodology and justify the subsequent conclusions, we shall take as an example the project called “Educating for more sustainable citizenship” undertaken in Paterna de Rivera, located in the province of Cádiz (Spain) (Figure 4), and conducted by the local NGO, ÍTACA Ambiente Elegido through a program of Education for Development promoted and financed by the area of International Cooperation of Cádiz County Council.

Firstly, we want to make it clear from the outset what we have already defined as one of the main characteristics of this work methodology: attention and intention when choosing the participants in the project. In this way, and as we have already made sufficiently clear, said methodology would prioritize the work with women, children, the elderly and the disabled.

Specifically, and following this guideline, this project initially concentrated on the work of two groups in this locality, which structure the transformational group. The intergenerational and gender approach the group has reached, as well as the added value that these aspects mean for this research, is remarkable:

- The “elderly adult” group included in the program “the Active Elderly” in Paterna also belonging to Cádiz County Council, which included women between the ages of 65 and 85 years.
- The group of five-year-old boys and girls from the state primary school “el Llano” in this locality.
A previously formed group belonging to the public program called “Active Elderly” was selected to participate in the project. This group turned out to be constituted only by women, which was one of its fundamental characteristics, regardless their age or studies level. In fact, most women had a basic level of studies and lacked post-secondary qualifications.

In contrast, it was deemed appropriate that the elderly group should interact with a class of five-year-old children (in which girls predominate), with an average socioeconomic level and a high knowledge among themselves, as they belong to the same small urban area (5,530 inhabitants).

Figure 4. Location plans of Paterna de la Rivera (Cádiz, Andalucía, Spain) (Source: Wikipedia).

Figure 5 summarizes the fundamental characteristics of the two groups that will make up this management group.

TRANSFORMATIONAL GROUP:

1. - Elderly

- Gender........................................100% Women - 0% Men
- Age............................................ from 67 to 82 years.
- Educational level ..........................0% University Studies - 40% Basic - 60% Without studies

2. - Children of “El llano”.

- Gender........................................54% Girls - 46% Boys
- Age.............................................from 5 to 6 years.

Figure 5. Characteristics and configuration of the transformational group.

In this way, and as we shall see in more detail below, between June and December 2016 work was done on a weekly basis with said users at sessions which were sometimes individual and at others mixed, where different groups worked jointly and in a coordinated fashion.
In this manner, as explained below, this group of elderly people worked weekly through interviews and group activities—therefore, using revitalization techniques and collective thinking—and including the group of five-year-old children in some of these sessions.

These groups played different roles, the main work being undertaken with the group of 15 elderly women between 65 and 85 years of age all born in this locality, given that they both initiated the process, and served as educators and facilitators for the rest of the participants. All of these issues are summarized in Figure 6.

Finally, and added to the qualitative study focused on the two parties that formed the transformational group, we must also remember that to understand the ability of this group to become a facilitator of a process, a quantitative research was carried out measuring the number of participants in the various collective activities achieved at different times, linking them together.

3.2. Memory: Theoretical Definition of the Work Methodology—Education that Transforms and Creates Critical Scrutiny

Having once described and set out the first of the features of this methodology, i.e., the intentional choice of the groups involved, we shall go on to describe the second, which we have theoretically outlined in the previous section and which comprised the work and creation of a positive attitude of the participants and a greater level of aptitude in respect of decision-making.

Therefore, generally the sessions comprising the educational process were divided into two main goals: Training and empowerment of the users, on the one hand, by encouraging critical thinking thanks to improving their levels of comprehension of current urban problems (sustainability, planning regulations, accessibility, equality, etc.) and at the same time, carrying out awareness work related to the importance of their role as the main protagonists in the processes of change in their urban environment. This has been summed up in the graph below (Figure 7).

Both in the educational process and in the choice of this group of elderly women as the original and main underpinning of the project, another essential aspect was taken into consideration when creating, or recovering, an already existing affective link, and it is the role of memory, as the recall of a time of coexistence and attachment to a place, by these women. Specifically, and as we shall see below, thanks to the recall of the affection towards a particular place, the participants chose as a space to initiate the transformation and enhancement of a natural area at the time not only degraded, but also forgotten and overlooked by the majority of the inhabitants of the locality: La Fuente de la Negra, which location and geographical characteristics can be seen in Figure 8a,b.
In this way, and in particular, besides lots of prior coordination meetings, 12 work sessions were held over the months of October to December 2016. Below we briefly describe said sessions as well as their main content:

- **23 September 2016**: First project session in which, by means of their dynamics and various training actions, work was undertaken on the perception each one of them had of the village and issues were introduced relating to a possibly more sustainable development of the locality. Besides all this, possible places of interest were identified within the municipality which, from their point of view, could or should be improved from a sustainable and participatory point of view, as can be checked in Figure 9.

- **30 September 2016**: Second project session in which by means of their dynamics and various training actions, work was undertaken on making each of the participants aware of the influence and capability they had for improving the environmental, social and urban degradation that existed in their locality by emphasizing the various potentialities and possibilities that all of them had for improving them.

- **7 October 2016**: With the collaboration of a specialist entity, the place to be acted upon decided by the participants was visited. This was called Fuente de la Negra, and work was done on concepts linked to sustainability, such as xeroscaping or permaculture, besides starting to generate ideas about what the modifications to be carried out could be in order to improve this area.

**Figure 7.** Synthesis of the learning process of the management group focused on the generation of a critical look and a behavior change.

**Figure 8.** (a) Location of the area named ‘Fuente de la Negra’ in Paterna; (b) Detail of ‘Fuente de la Negra’ zone. (Source: Google Maps)
• 14 October 2016: Fourth project session in which, by means of their dynamics and various training actions, and thanks to the reflections made in the previous session, the participants drew up several proposals for projects to improve and modify the area called Fuente de la Negra.

• 19 October 2016: Intergenerational session. Once the proposal had been drawn up and they had been made aware of its potential to change Paterna, a session was held with three classes of third-year primary school children from El Llano Primary School in the village. As can be seen in Figure 10a in this session our participants not only explained the importance of the place they had chosen, but were also part of the process of getting the pupils to generate new ideas and proposals to improve the area in question (Figure 10b).

• 29 October 2016: Preparation session for material to be used in the final project session. Together with several volunteers, as well as representatives of the Active Elderly group and the Secondary School in Paterna, the Ítaca staff prepared throughout the whole day the various materials which would be used in the participatory action on Monday 31, for the improvement of the Fuente de la Negra area.

![Image 9](image9.png)

**Figure 9.** Images of some educational activities developed by the Paterna Active Elderly Program.

![Image 10a](image10a.png)

(a)

![Image 10b](image10b.png)

(b)

**Figure 10.** (a) Images of some educational activities developed by the Paterna Active Elderly Program, and the collaboration with the students of the Llano Primary School.; (b) Some works and intervention proposals for the regeneration of the Fuente de la Negra elaborated by the children of El Llano with the help of the women of the Paterna Active Elderly Program.

3.3. **Time: Description of the Real Action for Change—The Case of Restoration of the Fuente de la Negra Park**

Finally, and being consistent with the theoretical development set out in the previous section, the methodology contemplated a final essential feature, an educational instrument included in the process
and aimed principally at generating this shared time, this working together on which the building of an affective link would be built, whether between the groups and the citizens involved, or between the latter and the area where they live.

In this way, the educational process included a transforming action and real enhancement of the specific environment. In other words, after a theoretical process, we sought, by performing an urban and collaborative action, real and personal involvement of each of the citizens in the improvement of an area chosen by them, who were united by bonds of affection, and about which, during the educational process, they had decided, analyzed and previously planned further improvements.

Specifically, to carry out the transforming action, it was decided to work on the environment of the area called Fuente de la Negra. A natural area at that time totally degraded and used as an illegal rubbish dump, but of enormous historical value (linked to an old fountain where the elderly went to draw water when they were children), ecological and environmental value (being the largest urban open space in the locality), landscape and symbolical value (providing one of the best views and visual relationships with the nearby farmland), etc.

It was, therefore, at this place known as Fuente de la Negra, where on 31 October 2016, the following groups came together to carry out the citizens’ sustainable restoration work: The Paterna Active Elderly Program, El Llano Primary School, Parafán de Rivera Primary School, the State Secondary School of Paterna de Rivera, the disabled group ASDIPAR, the Paterna Bike Sports Club, the culture association Impresiones, Town Hall staff, Civil Defence and several volunteers, besides the project coordinators from the Ítaca Association and the collaborating entity Ecoherencia.

All these groups, as can be seen in Figure 11, carried out a series of improvement actions consisting of:

- Clearing and removing rubbish from the area;
- Building and installing urban furniture;
- Painting an artistic mural;
- Creating posters and new signage for the place;
- Planting of shrubs and aromatic plants;
- Reforestation;
- Organizing leisure activities (community meal).

Figure 11. Images before and during the final action of Fuente de la Negra regeneration.
4. Results

Before going on to describe the specific results obtained we must clarify that we were facing an environmental education project aimed at making aware and training two particular groups: (1) The elderly included in the program, called the Active Elderly, and (2) the children, aged 5, from El Llano Primary School, reinforcing their role as active citizens and ones responsible for generating and taking on more sustainable habits in their locality.

To this general goal we must add, as part of this research a further two:

(1) On the one hand, the ability of this work methodology to reinforce and at the same time to create an affective bond between the participants and their immediate environment.

(2) On the other hand, their role as boosters and generators of affective synergies by involving other groups and achieving the transmission sharing across the whole of the citizenry in general of this affection and sentimental relationship. A capacity to generate synergies and to initiate a process of change, represented in Figure 12.

![Figure 12. Synthesis of the transmission of affection and changes in the citizenry induced by the group.](image)

Finally, and although the main objective was the work on citizenship and not on the physical space, we must highlight the result (as can be seen in Figure 13) of this educational process participatory rehabilitation through the use of “low cost” of the public space known as “La Fuente de la Negra”.

![Figure 13. Images of La Fuente de la Negra after the action of participatory environmental rehabilitation.](image)
In this way, as an evaluation of the expected results in this educational process, we used two types of research tools linked to each of the aforementioned objectives. To measure the level of involvement regarding environmental care and the improvement of the general urban ambience of Paterna, and specifically in the place called “La Fuente de la Negra”. The study of the change of attitude in the members of the motor group was carried out a qualitative study by means of a series of individual open interviews with each of the participants.

On the other hand, to evaluate the objective of transmitting and generating affection and involvement in the rest of the citizens, a quantitative study was carried out based on the calculation of assistants to each one of the intervention phases of the project and the study of its evolution.

In order to provide an overall understanding of these concepts, two ways of evaluating the results have been summarized in Figure 14.

![Figure 14. Analysis of the results and the tools to check them.](https://www.youtube.com/watch?v=_9Q3zFd65hQ)

<table>
<thead>
<tr>
<th>Evaluation of Results</th>
<th>Change in ATTITUDE</th>
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<td>Collective involved</td>
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4.1. General Results: Evaluation of the Affectivity Increase and Involvement Level in Environmental Improvement (Qualitative Research)

As mentioned before, after carrying out the educational process, a series of open interviews were held with all the members of the “management group”. An attempt to find out more about the assistants’ experience and the changes suffered as throughout the educational process was made. This evidenced the increase of affection experienced by the people interviewed.

The most outstanding results of these interviews were:

1. Elderly Group.
   - The majority affirms that at the beginning of the educational program they already knew the space of La Fuente de la Negra and had visited it;
   - Eighty-seven percent of the interviewees declared that at the beginning of the program they thought that they would not be able to change and improve that space environmentally by their own;
   - After the process, they have all brought their memories back and feel attached to that space again;
   - All women, in some way, recognize that now they can change and improve things if they believe in their actions;
   - All the interviewees are in some way convinced to continue working on improving the space known as La Fuente de la Negra;
   - Most of the interviewees stated that what they liked the most about the experience is having been able to remember their youth and their time spent in that space. They advised that having been able to share time together with the children (many of them, their grandchildren) transmits those memories to them.

2. Group of Children from “El Llano”.

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Figure 14. Analysis of the results and the tools to check them.

[76x355]were held with all the members of the “management group”. An attempt to find out more about
• At the beginning of the process, nobody knew the space by the name “La Fuente de la Negra”, and most of them had never physically been in that space;
• After the project, 100% of them declare in some way their intention to continue working to improve this space;
• At the end of the process, 100% of the children declare having felt involved and listened to when deciding the actions to be carried out in this space;
• The majority of them declare that the issues that have most satisfied them have been sharing the experience with other children and especially with the elderly women.

An extract of those interviews can be watched in the following links:

• https://www.youtube.com/watch?v=_9Q3zFd65hQ
• https://www.youtube.com/watch?v=alcOLlgrrwA

4.2. Transmission of Affection to the Rest of the Groups: Initial Results.

Regarding the involvement and training of the groups, we were able to witness, by the attendance and the quality of the interventions, that the goals were more than met. Besides this, the following process was added the restoration of a degraded natural area.

On the other hand, and referring to the ability to influence other groups, we must remember that the expected outcomes of this project were to make aware:

• Fifty primary school pupils;
• Twenty female citizens included in the Active Elderly program;

However, in the final action aimed at the real restoration of the area known as Fuente de la Negra, the results obtained from the point of view of participation in this project were:

• Sixty primary school pupils and five teachers from El Llanito School;
• Fifteen female citizens included in the Active Elderly program;
• Twenty-five pupils and three teachers from the CEPR Perefán from Ribera de Paterna;
• Fourteen pupils and two teachers from the State Secondary School in Paterna de Rivera;
• Two members of the cultural group Impresiones;
• Five members of the Paterna Byke Sports Club;
• Six members of the disabled group ASDIPAR.

In this way, we saw an increase in those involved which went from the initial 70 persons to the 137 who finally took part in the project.

A summary of the action of the restoration of a degraded natural area can be watched in the following links:

• https://vimeo.com/203814300 (Supplementary Materials Video S1)
• https://vimeo.com/278468964 (Supplementary Materials Video S2)

4.3. Transmission of Affection to the Rest of the Society: Final Results

As we have clarified, we believe it is of interest to analyze the outcomes obtained in two separate stages in time to really understand the level of involvement of the participants.

From this point of view, we must draw attention to the host of activities that the various groups have been carrying out here since then, which go from celebrations like the Day for Peace commemorated by all the schools in the locality to care and maintenance undertaken by the group of elderly persons who still proclaim themselves responsible for and protectors of this area, and use it continuously as a place for various leisure activities: Meals, poetry readings, etc.

Included in these activities we should like to highlight a particular detail, and this was the appearance at Fuente de la Negra some months after the intervention of a series of acts of vandalism.
Faced with this, the groups involved in the restoration of this space organized a demonstration condemning these acts on 17 November. More than 600 people marched behind a large banner on which could be read the slogan “I love Paterna, respect her” (Figure 15).

![Figure 15. Images of the demonstrations carried out to denounce the vandalism that took place at the Fuente de la Negra.](image)

This last manifestation of the convening power and transmitting affection from the transformational group allowed us to continue with the quantitative analysis of the results by means of a study of the increase in the number of participants, which, as we can see in Figure 16, increased exponentially during the few months of the project.

![Figure 16. Quantitative analysis of the evolution in terms of implication and affectivity generated by the management group.](image)

5. Discussion

With everything we have described in this document we wanted, firstly, to reconstruct the theoretical reasoning which enables us to bring together apparently unconnected topics, such as sustainability and the restoration of degraded urban spaces, education and love and affection as a human condition, by developing and providing new insights into the term, Affective Sustainability, coined by Bisquert [3].
Once these theoretical bases were established, a work methodology has been outlined, which has been developed and implemented by the NGO ITACA *Ambiente Elegido* and which is based on three main aspects: The importance of choosing the participating groups, the prior training and empowerment work and finally, the undertaking of a real action for change and enhancement by those involved.

Lastly, we have started from a real case, that of the “Educating for a more sustainable citizenry”, undertaken in the small municipality of Paterna de Rivera, Cádiz (Spain), in which the application of the educational methodology to the case by a little more than a dozen elderly women from the locality, and three classes of 5-year-old primary school children, managed to generate the mobilization in defense of a natural space, of its conservation and restoration, of practically half of the village of Paterna.

An example of environmental responsibility that made clear at the demonstration was the recovery of the affection of the population of the locality for space, which, until then, has been ignored, degraded and abandoned.

We think it is important to point out a series of relevant issues:

1. The first of them has to do with the political aspect and citizen participation.
   Although we received the support of the City Council of Paterna during the process, we must underline that all the actions and activities carried out both during the educational program and afterwards were set in motion by the citizenship, while the municipality had a support and control of compliance with the law role, but in no case developer. This shows the very strong relationship between the generation of affection by citizens and the political awareness of their role as active actors for change.

2. Both the educational project and the environmental improvement action of the space understood as La Fuente de la Negra was done with little economic investment (the budget was 150 Euros), since for this transformation action we only used recycled elements and those directly provided by the participants or collaborating social entities. Not only did this serve to make evident to the citizens of Paterna their capacity to improve the spaces in which they live despite the lack of resources, but it also made it evident to the Town Hall the importance of involving citizens in both the taking of decisions and the implementation of urban proposals.

3. Finally, it is crucial to emphasize the educating power on the one hand, and transmission of affection on the other, which can be observed in certain educational methodologies, such as the one developed by ITACA. The evolution experienced in little less than a year reveals this. For instance, the number of participants in the activities carried out in La Fuente de la Negra space confirm their involvement, even without adding the media coverage that the manifestation had before described appearing in all type of media both local and national.

Therefore, and by way of conclusion, both this methodology and the reflection outlined in this article, attempt to stress the power that research into purely human conditions: Creativity, solidarity, happiness, affection, etc., has when introducing new variants and points of view even in widely studied topics, such as sustainability or environmental education, contributing not only innovation and the creation of new lines of work, but also, thanks to its links with a practical application aimed at improving a specific urban situation, a real and immediate contribution, which should be the main objective of all researchers, and all human beings, to really make a better future possible.


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