Environmental education and citizenship in a prison environment: results of a study with inmates in Portugal[1]

Jesus Manuel Delgado-Mendez[i] ID
Federal University of Recôncavo da Bahia, Cruz das Almas, BA, Brazil

Sara Dias-Trindade[ii] ID
University of Coimbra, Coimbra, Portugal

José António Moreira[iii] ID
Open University, Lisbon, Portugal

Abstract
Inspired by the Council of Europe that defends that the prison population should have access to education and training programs, integrated in the pedagogical model adapted by Moreira (2017) and tested by Dias-Trindade and Moreira (2019) in Portuguese prisons and seeking to respond to the need to serve a sometimes excluded and growing population, this study presents the results of a project that explored, through a hybrid learning environment, the relationship between environment and citizenship among inmates from a prison in Porto (Portugal), in early 2020. The results, of qualitative content, allowed to define some beacons of mental images and personal positions, based on methodologies previously tested by Doménech and colleagues (2011) and Moreira and Dias-Trindade (2020). It is concluded that complementary dynamics, developed in these learning environments can contribute to the acquisition of knowledge, as well as citizen skills associated with the relationship between Man and Nature.

Keywords
Group dynamic. Distance education. Citizenship and education. Environmental education. Education in prison.

Educação ambiental e cidadania em ambiente prisional:

resultados de um estudo com reclusos em Portugal

Resumo
Inspirado no Conselho da Europa, que defende que a população carcerária tenha acesso a programas de educação e formação, integrado no modelo pedagógico adaptado por Moreira (2017) e testado por Dias-Trindade e Moreira (2019) em estabelecimentos prisionais portugueses e procurando dar resposta à necessidade de atender a uma população habitualmente excluída e crescente, este estudo apresenta os resultados de um projeto que explorou, através de um ambiente híbrido de aprendizagem, a relação entre ambiente e cidadania entre os reclusos de um Estabelecimento Prisional na região do Porto (Portugal) no início de 2020. Os resultados, de teor qualitativo, permitiram definir alguns balizadores de imagens mentais e posicionamentos pessoais, fundamentados em metodologias anteriormente testadas

---

[1] Versão em inglês traduzida originalmente do inglês por Marina Lima Pompeu.

1

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

por Doménech, López e Velasco (2011) e Moreira e Dias-Trindade (2020). Conclui-se que dinâmicas complementares desenvolvidas nestes ambientes de aprendizagem podem contribuir tanto na aquisição de conhecimentos como de competências cidadãs associadas à relação Homem-Natureza.

Palavras-chave
Dinâmica de grupo. Educação a Distância. Cidadania e educação. Educação ambiental. Educação na prisão.

Educación ambiental y ciudadanía en un entorno carcelario:

resultados de un estudio con presos en Portugal

Resumen
Inspirado en el Consejo de Europa, que defiende que la población penitenciaria tenga acceso a programas de educación y formación, integrado al modelo pedagógico adaptado por Moreira (2017) y evaluado por Dias-Trindade y Moreira (2019) en cárceles portuguesas y conscientes de la necesidad de atender a una población habitualmente excluída y en crecimiento, este estudio presenta los resultados de un proyecto que exploró, a través de un ambiente de aprendizaje híbrido, la relación entre medio ambiente y ciudadanía para reclusos de una prisión en la región de Oporto (Portugal) a principios de 2020. Los resultados cualitativos permitieron definir algunas referencias de imágenes mentales y posiciones personales, basados en metodologías previamente probadas por Doménech, López y Velasco (2011) y Moreira y Dias-Trindade (2020). Se concluyo que las dinámicas complementarias desarrolladas en estos ambientes de aprendizaje contribuyen a la adquisición de conocimientos y habilidades ciudadanas, asociadas a la relación entre Hombre y Naturaleza.

Palabras clave
Dinámica de grupo. Educación a distancia. Ciudadanía y educación. Educación ambiental. Educación en prisión.

1 Introduction

Because of the celebration of seven decades of the United Nations, it's important to highlight that education as a process has been accepted and defended as a right for all human beings, as it prepares individuals to face the realities of their respective nations or communities and makes them capable of finding the most appropriate economic and social development model.

Thus, digital technology is at the disposal of educational processes and can collaborate to expand this right to all human groups and help a greater number of people in a country to have access to education. In this sense, it's necessary to show advances in the digital world, to develop effective and versatile platforms, to take teaching to all

2

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

possible spaces and at a low cost, this has been the work of all who believe in digital education. Naturally, it's important to think about the inclusion of the prison population, creating training programs that contribute to the return of these people to society, a thought that is in line with the ideas of social justice (BOLÍVAR, 2012; MURILLO TORRECILLA; HERNÁNDEZ CASTILLA, 2011).

Taking into account the study by Campos (2015), which confirms the need to prove that the rates of relapse for those who have been incarcerated decrease proportionally with the efforts dedicated to the educational-training processes of those who went through the prison system, the experiment described here adopted as the pedagogical model that developed by Moreira (2017) and as an evaluation method the virtual adaptations made by Doménech, López and Velasco (2011), by Dias-Trindade and Moreira (2019) and by Moreira and Dias-Trindade (2020).

Considering that those who lose momentarily or permanently their freedom is can't experience an invaluable asset, even if each person may not have this vision, it was decided to include the ecological-environmental theme because in some way we are also "stuck" with invisible forces because the natural world affects the human world. Just as the prison attacks this intangible value called "freedom" and it forces people to obey specific rules in prison, Nature leads the human being to obey its rules in all the activities of human life, besides its even more restrictive when it is attacked, violated and it appears to be unaware of such rules until it is understood that the "freedom" of the human being depends on the freedom that Nature has to follow its evolutionary course. This parallel guided the experiment and the inclusion of the dynamics here under analysis.

This study is part of the project "Education and eLearning in Prisons in Portugal", developed by Universidade Aberta de Portugal. The objective was to introduce some group dynamics during a university extension course held in a Porto prison facility, in early 2020, using hybrid sessions to put the strategies designed into practice.

Two different group dynamics, all with a socio-environmental theme, were developed in the program, to extract elements that can be classified as cognitive and social to the chosen methodology, in addition to the behavioral element. This last element, the behavioral one, appeared transparently in the participants' analyzes.

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

2 Reasons to focus on prison systems

The study understands that crime can be partially inhibited with the help of re-socialization programs (including educational ones), even if it undergoes some questioning by decision-making sectors in any country, it's fundamental to mitigate what Dores (2018) points out as different in the relationship between the dynamics of incarceration and crime. Also, Díaz-Torres (2017) highlights that social exclusion requires an educational response.

Statistics about the prison population are worrying, as they warn society and its corresponding judicial, security and penitentiary systems. With each passing year, it's increasingly urgent to assume and dedicate effective efforts to facilitate the reintegration of this population, so that there is no recurrence. At least that is what the Council of Europe (2013) pointed out in Recommendation 89 (12) of its Committee of Ministers when referring to education in European prisons as a policy to make these citizens more human and facilitate their return to society.

In the Portuguese reality, as Moreira, Monteiro, Machado and Barros (2016) point out, "there is also an awareness that education in the context of seclusion must be a reality", highlighting the cooperation between the Ministries of Justice and Education through Joint Order 451/MJ/ME, of June 1, 1999. It was on that same day that teaching in prisons was regulated in all the Portuguese territory, at the level of all teaching. The arrival of the digital signal in some Portuguese prisons, within the scope of the protocol signed in April 2016 between the Open University (UAb) and the Direção Geral de Reinserção e Serviços Prisionais (DGRSP), allowed for new dynamics of training, learning and the development of training activities with results in the acquisition of learning skills (DIAS-TRINDADE; MOREIRA, 2019; MOREIRA; DIAS-TRINDADE, 2020).

We hope that this work will join the existing programs, always following the premises that the development of digital competencies is one of the aspects of social inclusion, as defended by Moreira, Machado and Dias-Trindade (2018) and Warschawer (2004).

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

3 Methodology

As mentioned above, the dynamics introduced in the extension course in a prison, in the region of Porto (Portugal), formed part of a research based on DBR - Design-Based Research, based on the model being executed in the Portuguese prisons of use of cinema as a strategy for the development of learning contexts (DIAS-TRINDADE; MOREIRA, 2019; MOREIRA; DIAS-TRINDADE, 2020). It's an effort that promotes "strict and reflective research", useful in learning environments where theory and practice are reconciled (WANG; HANNAFIN, 2005).

Within a hybrid learning ecosystem, that combined face-to-face sessions with virtual ones, 17 students/inmates of Portuguese, Brazilian, and Mozambican origin participated (with the number of participants varying in each dynamic). These same dynamics took place in the classroom and the virtual learning environment Moodle On@Pris, from Universidade Aberta, at the Educonline@Pris Virtual Campus (in operation since the end of 2018), to complement the planned activities.

To analyze the data resulting from face-to-face dynamics, Bardin's content analysis (1977) was used, with a fluctuating reading of all responses to the research, to align common themes and particularities, depending on the individuality of each case.

The research project of which this work is part hasn't been submitted to an ethics committee but has followed the ethical guidelines published by the Portuguese Society of Educational Sciences (SPCE, 2014). Thus, throughout the investigative process, the authors maintained high levels of vigilance and self-reflexivity concerning ethical issues, as defended by Mainardes and Carvalho (2019).

The program was designed based on cinema as a didactic-pedagogical instrument and organized in six face-to-face sessions (with fourteen-day intervals between each session, during which debates continued in the virtual environment). The dynamics under analysis were included in the program, in two different sessions, always before viewing the films in the prison's library. The students/prisoners received information and specific material in each session, using the physical space and the virtual space afterward, to discuss the issues prompted by the films and the dynamics themselves.

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

The dynamics prepared by the researchers were used in this experiment in the face-to-face steps, with the intention that their results were integrated into the debates held in the virtual environment. Accordingly, the first dynamic carried out tried to identify the elements of the nation considered most important for possible reconstruction, after a hypothetical elimination. For this same identification, the main question to be answered was: what would be the ten most important things that could be protected from the total destruction of the country, in the supposed case of being able to save them without any restriction of any kind?

The second dynamic consisted of performing a "Semantic Test", according to the model of analysis based on Valdez Medina (1998) and following the recommendations of Doménech, López and Velasco (2011). This test, without requiring further debate, launches results that allow, starting from the central concept of citizenship, to explain the organization of information in humans, as advocated by Sarmiento Silva and colleagues (1992). Thus, students/prisoners were asked to leave in writing the first familiar concepts that would appear in their minds when they were stimulated by a word called the word "Node", as proposed by the adopted methodology. The motivating word was: "Citizenship". The words requested are called: "Defining Words".

For this dynamic, and following the methodological process adopted, the values obtained to allow the analysis of the responses of students/prisoners. In this case, there are four values: SAM (greater semantic weight); J (total number of words); PS (semantic weight), and DSC (semantic distance between words) which respectively translate as follows.

The SAM value, more than a value, is the group of words that obtained the highest semantic weights (PS). This value or group of words represents the core of what may be the psychological meaning of the central word chosen in the dynamic.

The "J" value is the total of different defining words identified and includes all those that can be called synonyms or equivalents. In this first analysis, the rigor of the interpretation of what could be equivalent wasn't strict. In any case, this value becomes a tool to assess the richness of the semantic network.

Another highlighted value is the "PS", or semantic weight, the product of the sum of all multiplications, of the number of occasions that the defining word appears, times the value of the hierarchy given to that word; that is, if a word appears twice with hierarchy

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

one and elsewhere with hierarchy four, the PS of that word will be the sum of (2 * 5) + (1 * 2); therefore, PS = 12. Thus, the higher the hierarchy, the greater the multiplier; the higher the frequency of the appearance of a word, the greater the product, or PS.

Once the PS is obtained, it's necessary to calculate the semantic distance between the words. This is the DSC value, a quantitative value expressed as a percentage that separates the defining words from the whole set. That word with the highest semantic weight represents 100%, from which the relative distances of the other defining words will start.

As the central theme revolved around environmental citizenship, concepts like ecology; sustainability; natural resource; bio-cyber laws; exponential growth, among others, were all highlighted in the debates as human elements compatible with natural mechanisms. All of this didn't prevent reflection and debate about their own pre-reclusion experiences, as professionals and people. Participants discussed with propriety about the current state of development of their nations.

Each of these dynamics was articulated with the movies that were watched, preceding the viewing, providing an initial motivation that would later be integrated into the debate held after the viewings and was prepared to take into account the importance of the teaching mediation processes (THERRIEN; AZEVEDO; LACERDA, 2017) in the creative development of pedagogical activities based on the use of social experience (KONDRASHOVA *et al.*, 2020).

4 The project "Environmental education and citizenship in a prison environment": results and discussion

First dynamic

After the official presentation of the course and the description of its characteristics and conditions to be fulfilled, and before the presentation of the documentary "An Inconvenient Truth", the first dynamic was launched. The results are presented by classes in table 1. It deals with the hypothesis of a nuclear holocaust. Participants were asked to form a council with unlimited power to save the ten most

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

important things they considered necessary to rebuild the country and make it a new nation in the event of destruction.

Table 1 – Frequency of the ten most important elements for reconstruction

Class	Subsistence	Architectural Heritage	Ecological heritage
Element	People / Population **(2)** Food **(2)** Water **(2)** Schools Roads Airports Cultivation Fields Hospitals Animals Plants Health care Assorted materials National Library	Jerónimos **(2)** Santuário de Fátima **(2)** Palácio de Belém Torre do Tombo Museums Churches Torre dos Clérigos Palácio da Pena Castelo de Guimarães Castelo de São Jorge Baixa Pombalina	Tejo River Estuary **(2)** Serra da Estrela **(2)** Pinhal de Leiria Buçaco Ecoss. Miranda do Douro Serra de Sintra Complexo Arrábida Compl. Peneda-Girês
Total (50)	16	13	10
%	32	26	20
Class	Intangible heritage	Intangible values	Others
Element	Douro Wine Zone **(2)** Fado Alentejano Singing Pauliteiros de Miranda Mirandesa language	Knowledge Wisdom Humillity	National Assembly **(02)**
Total	06	03	02
%	12	06	04

Source: Author's own.

The collected data correspond to a sample of 33% of the participants because only six people participated in this session. Thus, table 1 shows the frequency of the chosen elements, obeying the chosen classification, and not all of them wrote the 10 words requested, table 1 has a total of 50 words.

Examining the data obtained, some observations may induce a kind of thinking that is quite common in this type of dynamics, the participants tend to focus their reconstruction thinking on those elements that guarantee their physical survival, such as the elements on food, and to them offer physical and mental health, in addition to having a minimum number of human beings to carry out this task. However, as indicated by Page (2018), even with the opportunity to start over, there is always a greater concern to

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

save what the country already has, in the case of Portugal: the basic service infrastructure and means of subsistence. One-third of the group, 32%, chose these elements first.

Another aspect that draws attention is the importance that students/prisoners gave to architectural aspects of historical-anthropological character, as 26% of them valued buildings and monuments that seem to constitute essential elements in the lifestyle of the Portuguese citizen (PAGE, 2018). Add to that the 12% who chose an intangible heritage, which somehow also form part of the imagery and history of the participants, mostly born in Portugal.

In the same way, the awareness about the ecological importance of national environments is surprising, which for 20% of the elements is identified as an element worth saving for a nation under construction. This shows that there is a certain concern for the ecology of Portugal, essential for survival and that it needs to be protected.

Finally, regarding this first dynamic, it can be said that, while 68% of the elements chosen in a certain way represent what the country even has in abundance, those elements that seem to be the most criticized for their absence worldwide, as is the case of intangible human values - essential to drive progress and political and economic programs in any country - were the least cited.

Thus, only three elements out of 50 (6% of the total) correspond to those that always seems absent when talking about the model of human progress adopted in many countries of the world. Concerning "Wisdom" and "Humility", these were the only intangible values mentioned that together with "Knowledge / Training", despite being more of a human right than a value, were considered important elements to administer, govern or manage a new country. In this specific case, the imagination of students/prisoners isn't much different from free citizens. It's the absence of awareness about the importance of these intangible elements that the course would focus its attention on later sessions.

Second dynamic

Reinforcing what is mentioned in the methodology, the dynamic in question tries to establish what is known as the "semantic network", a technique that comes from

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

psychology and aims, according to Doménech, López e Velasco (2011), to give meaning to a certain issue, subject or object, after understanding the organized individual or collective concepts that give it meaning.

It's important to highlight that the dynamic allows individuals to be stimulated to bring from their semantic memories words or concepts that, according to Garofalo, Galagovsky e Alonso (2015), are long-term information stored arbitrarily in their memories.

Table 2 – Defining words of the central concept (node) "Citizenship"

F/R	D1	D2	D3	D4	D5
1	Volunteering	Peace	Legislation	Integration	Equality
2	Education	Politics	Sociality (?)	Learn	Share ideas
3	Care for others	Solidarity	Good behavior	Cleaning	Love people
4	Commitment	Rules	Society	Rules	Order
5	Libety	Respect	Order	Education	Fraternity
6	Education	Environment	Participate	Future	Human
7	Society	Well Being	Behaviors	Coherence	Justice
8	Rights	Duties	Help	Cooperation	Rules
9	Respect	Rights	Duties	Obligations	Reules
10	People	World	Nature	Rights	Duties
11	Humanity	Interpersonal network	Opportunities	Inclusion	Accept differences
12	Respect	Accept differences	Contribute	To preserve	Innovate
13	Justice	Iquality	Fraternity	Work	Health
14	Humility	Social differences	Rights	Education	Education
15	---	---	---	---	---
16	Caracter	Personality	Objectives	Experience	Local
17	Good citizen	Look at each other	Responsible	Preserve	Respect the elderly

Source: Author's own.

Immediately after being asked to enumerate the five words, participants were asked to organize them according to what they understood to be their degree of importance, allowing them to establish a hierarchical order of personal relevance (table 3).

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

Table 3 – Defining words of "Citizenship", hierarchized

F/R	H1	H2	H3	H4	H5
1	Peace	Equality	Integration	Volunteering	Legislation
2	Educatiob	Share ideas	Learn	Sociality (?)	Politics
3	Love people	Care for others	Solidarity	Good behavior	Cleaning
4	Rules	Society	Order	Commitment	Rules
5	Education	Respect	Order	Liberty	Fraternity
6	Education	Future	Participate	Environment	Human
7	Society	Justice	Coherence	Behaviors	Well Being
8	Help	Duties	Rights	Rules	Cooperation
9	Respect	Rights	Duties	Obligations	Rules
10	World	Nature	People	Rights	Duties
11	Humanity	Accept differences	Inclusion	Interpersonal network	Oportunities
12	Respect	To preserve	Contribute	Inovate	Accept
13	Justice	Equality	Work	Health	Fraternity
14	Rights	Humility	Social differences	Education	Education
15	---	---	---	---	---
16	Character	Personality	Objective	Experience	Local
17	Good citizen	Look at each other	Responsible	Preserve	Respect the elderly

Source: Author's own.

As can be seen, 80 words were identified that define "Citizenship" for students/prisoners, initially grouped into 54 different words, thus obtaining more than 40% similarity in a group of 16 people who responded.

The dynamic aimed to identify some patterns of attitudes and behaviors, which, influenced by the knowledge built up over time, could guide the debate on environmental issues more directly related to the central theme of the course: environmental citizenship. As stated by Doménech, López and Velasco (2011), much of the information obtained by this semantic method allows for further intervention measures for a defined social reality.

As established in the methodological proposal, table 4 presents the SAM set and its other three accompanying values.

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

Table 4 – SAM set of the main defining words of "Citizenship" (Semantic Weight and Distance)

SAM	Value J	PS	%	DSC	
1		**17**	100	0%	Education
2		**14**	82.4	17.6	Society / Humanity
3		**14**	82.4	17.6	Rights
4		**10**	58.8	41.2	Respect / To respect / Elderly
5		**10**	58.8	41.2	Duties / Obligations
6		**9**	52.9	47.1	Good Citizen / Citizen with others
7	54	**9**	52.9	47.1	Justice
8		**9**	52.9	47.1	Rules / Compliance with Rules
9		**9**	52.9	47.1	Good Behavior / Behaviors
10		**8**	47.1	52.9	People / Loving people
11		**8**	47.1	52.9	Equality
12		**7**	41.2	58.8	Accept Differences
13		**6**	35.3	64.7	Order
14		**6**	35.3	64.7	Preserving / Preserving the Environment

Source: Author's own.

The previous table shows the values obtained when processing the information offered by students/prisoners, which suggests an analysis before launching the potential conclusions derived from this semantic test incorporated in an educational experiment in a prison environment. An element that confirms the purpose of bringing higher or basic education to a country's prison and the penitentiary system is that it, "education", is seen by prisoners as a defining element of Citizenship. Not only does coincide with the sometimes empty speech of some political leaders when referring to the importance of education for a nation, sometimes without connection to the imaginary of those who are suffering the consequences of their behavior, finding themselves in a situation of deprivation of liberty. Adding the PS of the first three defining elements of citizenship (Education 17 e, Society / Humanity and Rights 14) the total is 45 points, thus occupying almost one-third of the participants' mental semantic space, with emphasis on "education" with 20 %, 85 points, in the supposed case that everyone had placed such an element in the first hierarchy (17x 5).

To further this last observation and make a final analysis of this dynamic, figure 1 represents all the distances between the defining words, starting from the word

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

"Education" which with 17 points of PS was the most identified with the central word "Citizenship".

Figure 1 – Quantitative semantic distance (DSC) (based on Doménech, López e Velasco, 2011)

1. Education

2. Society / Humanity

3. Rights

4. Respect / Elderly

5. Duties / Obligations

6. Good citizen / Care

7. Justice

8. Compliance with rules

9. Good behavior

10. People / love them

11. Equality

12. Acceptance of difference

13. Order

14. Preserve the environment
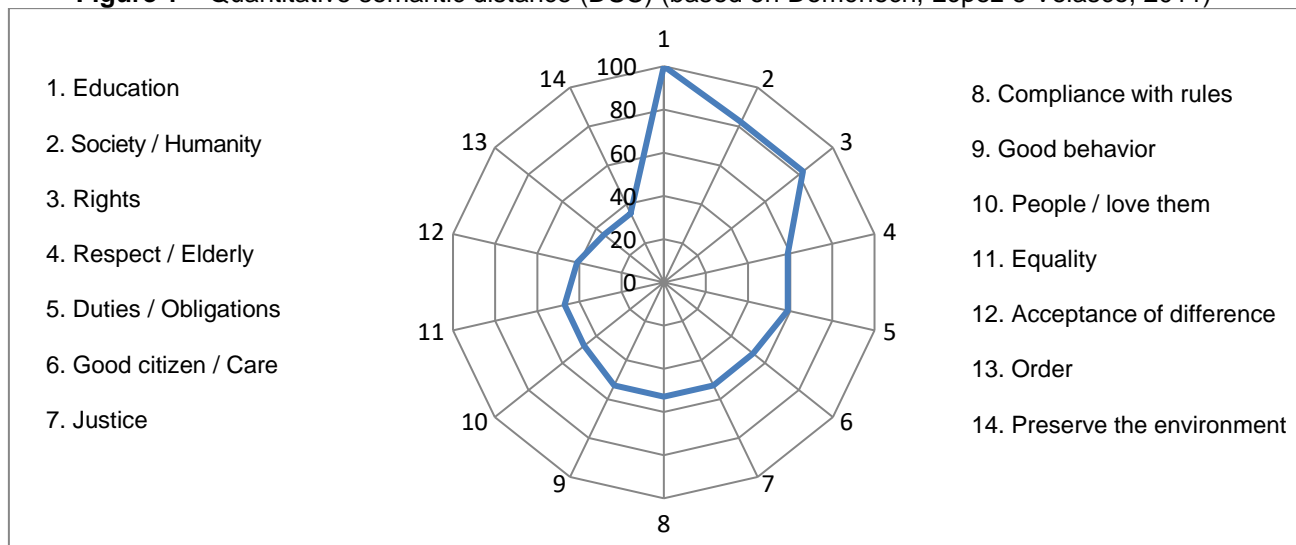
Source: Author's own.

Figure 1 shows graphically the results of its corresponding table 4. Both highlight the 14 highest values given to the defining words of the central theme "Citizenship". It is, therefore, the SAM value. The concepts that make up this value impress by the importance they have to build "Citizenship", which is intended that men and women who make up society enjoy this citizenship, together with inmates are also part of that society. Simultaneously, the result is impressive because such concepts in the SAM set reached a high value of their PS, which in turn influences their semantic distance, translating into homogeneity of thought among the participants in the dynamics (semantic test).

So, not only was there a certain homogeneity among students/prisoners about the central theme, although the rest of the elements listed as defining the "Citizenship" concept isn't expected to be spontaneously mentioned by a group of people who are punished for society itself with the suppression of its freedom, isolated most of the time from national development and subjected to a series of restrictions for security reasons. All of these elements allow us to conclude that it is worth reinforcing the defense of the right to education throughout life, regardless of the time when a convicted person has to find themself suppressed from this intangible asset, their freedom.

13

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

5 Final considerations

Like all scientific experience, in Education as well as in other social sciences, there is a clear objective that guides all the work described here, from its design to its evaluation. In this case, it was an attempt to evaluate a variation included in a previously tested pedagogical model, with the participation of individuals who attend higher education in a situation of seclusion, seeking, as in other studies carried out and referred to in this work, to create dynamics that are motivating and that offer students/prisoners opportunities to prepare for their return to society.

The results produced in this project brought very interesting conclusions, reinforcing the idea that it is worth investing in the education and training of professionals to wor with the population deprived of liberty. If the human being is capable of destroying nature in search of gold, then it is worth panning to rescue other human beings and return them to society.

The reaction of the participating group to environmental-participatory specific issues introduced by the dynamics seems to have demonstrated that the pedagogical model developed and tested by Dias-Trindade and Moreira (2019) and Moreira and Dias-Trindade (2020) is adapted to different dynamics and which still allows us to present a mature notion of what modern society should be, as well as indicating the importance that human activities have for the construction or destruction of Man-Nature relations.

The possibility of interaction with students/prisoners in person and extending the debates and discussions beyond the prison walls, through the digital signal, reinforces the educational possibilities, allowing those who feel more comfortable with face-to-face dynamics to interact in these moments and that others who prefer digital environments can also be involved actively.

Both the pedagogical model used and the activities evaluated proved to be an incentive for those who, dedicated to education, will continue to make efforts to educate and train for the return of this excluded population to contemporary society.

The analysis of the results was carried out separately according to each dynamics, having been obtained, in each case, two groups of results that were presented on a virtual platform, for the knowledge of students/prisoners and further discussion. As can be inferred, the inclusion of such dynamics, in addition to not obstructing the normal

EDUCAÇÃO & FORMAÇÃO
Revista do Programa de Pós-Graduação em Educação
da Universidade Estadual do Ceará (UECE)

performance of the programmed activities required by the model used, proved to be a valuable material for 1) enriching the debate on the virtual platform; 2) to get to know each participant better during the face-to-face sessions and, 3) as a last, but not measurable value, to have the motivation to continue efforts to defend training and education in prisons, at least, as recommended by the Council of Europe (2013) and UNESCO (2010) - since a portion of all prisoners, through lifelong education, have means and moral desires to be reincorporated in society, as a second opportunity, and preferably with environmental and citizen awareness.

The quality of critical positions, the self-criticism presented in the virtual debates and the interaction between the participants, renew the faith that educators must remain firm in the purpose of rescuing those who want to contribute to their return to society.

With this study, we conclude that the construction of citizenship and natural laws have an intimate relationship; that the prison ecosystem, even if it seems utopian, can be converted into an ecosystem, like the natural one, that produces benefits for all parties, without having to trample human rights and thus facilitate an effective transition of resocialization of an excluded population.

6 References

BARDIN, L. *L´analyse de contenu.* Paris: PUF, 1977.

BOLÍVAR, A. Justicia social y equidad escolar: una revisión actual. *Revista Internacional de Educación para la Justicia Social*, Madrid, v. 1, n. 1, p. 9-45, 2012.

CAMPOS, S. M. C. S. *Sistemas prisionais europeus.* 2015. Dissertação (Mestrado em Direito e Segurança) – Pós-Graduação em Direito, Universidade Nova de Lisboa, Lisboa, 2015.

CONSELHO DA EUROPA. *Recomendação (89) de 12 de outubro de 2013.* Dispõe sobre as regras das prisões europeias. 2013.

DIAS-TRINDADE, S.; MOREIRA, J. A. Pedagogical scenarios enriched with audiovisual technologies and their impact on the promotion of the learning skills of inmate students in Portugal. *Digital Education Review*, Barcelona, n. 35, p. 97-110, 2019.

DÍAZ-TORRES, J. M. Exclusión social y educación superior: la respuesta pedagógica. *Educação & Formação*, Fortaleza, v. 2, n. 6, p. 3-16, 2017.

DOMÉNECH S. J. M.; LÓPEZ, E.; VELASCO, A. E. *Manual para obtener la estructura de una red semântica*. Ciudad de México, DF: Universidad Nacional Autónoma de México, 2011.

DORES, A. P. Presos são eles; presos estamos nós. *Revista Eletrônica da Faculdade de Direito da Universidade Federal de Pelotas*, Pelotas, v. 4, n. 1, p.13-46, 2018.

GAROFALO, S. J.; GALAGOVSKY, L. R.; ALONSO, M. Redes semánticas poblacionales: un instrumento metodológico para la investigación educativa. *Ciência & Educação*, Bauru, v. 21, n. 2, p. 361-375, 2015.

KONDRASHOVA, L. V. *et al.* Desenvolvimento do potencial criativo de futuros professores: estratégia para melhorar a qualidade do ensino superior pedagógico. *Educação & Formação*, Fortaleza, v. 5, n. 3, p. 1-15, 2020.

MAINARDES, J.; CARVALHO, I. C. M. Autodeclaração de princípios e de procedimentos éticos na pesquisa em Educação. *In*: ANPED (org.). *Ética e pesquisa em educação*: subsídios. Rio de Janeiro: ANPEd, 2019. p. 129-132.

MOREIRA, J. A. A pedagogical model to deconstruct moving pictures in virtual learning environments and its impact on the self-concept of postgraduate students. *Journal of e-Learning and Knowledge Society*, v. 13, n. 1, p. 77-90, 2017.

MOREIRA, J. A. *et al. Sistemas prisionais*: história e desafios educacionais da era digital. Santo Tirso: Whitebooks, 2016.

MOREIRA, J. A.; DIAS-TRINDADE, S. Online learning environments enriched with audiovisual technologies and its impact on the construction of virtual communities in Higher Education in prison context. *Journal of e-Learning and Knowledge Society*, v. 16, n. 2, p. 9-16, 2020.

MOREIRA, J. A.; MACHADO, A.; DIAS-TRINDADE, S. Educação a distância no ensino superior em contexto de reclusão enquanto política de formação humana em Portugal. *Education Policy Analysis Archives*, Arizona, v. 26, n. 118, p. 1-22, 2018.

MURILLO TORRECILLA, F. J.; HERNÁNDEZ CASTILLA, R. Hacia un concepto de justicia social. *Revista Iberoamericana sobre Calidad, Eficacia y Cambio en Educación*, Madrid, v. 9, n. 4, p. 8-23, 2011.

PAGE, M. *A primeira aldeia global*: como Portugal mudou o mundo. Alfragide: Casa das Letras, 2018.

SARMIENTO SILVA, C. *et al.* Hacia una reconceptualización del "modelo de redes semánticas naturales". *Revista Mexicana de Psicología*, Ciudad de México, DF, v. 2, p. 165-174, 1992.

SPCE. *Carta Ética*: instrumento de regulação ético-deontológica. Porto: SPCE, 2014.

16

THERRIEN, J.; AZEVEDO, M. R. C.; LACERDA, C. R. A racionalidade pedagógica nos processos de mediação à produção de sentidos e de aprendizagem aos saberes. *Educação & Formação*, Fortaleza, v. 2, n. 6, p. 186-199, 2017.

UNESCO. *Relatório global sobre aprendizagem e educação de adultos*. Brasília, DF: Instituto da Unesco para a Aprendizagem ao Longo da Vida, 2010.

VALDEZ MEDINA, J. L. *Las redes semánticas naturales, usos y aplicaciones en Psicología Social*. Ciudad de México, DF: Universidad Autónoma del Estado de México, 1998.

WANG, F.; HANNAFIN, M. Design-based research and technology-enhanced learning environments*. Educational Technology Research and Development*, v. 53, n. 4, p. 5-23, 2005.

WARSCHAWER, M. *Technology and Social Inclusion*. Rethinking the digital divide. Cambridge: MIT, 2004.

Jesus Manuel Delgado-Mendez, Federal University of Recôncavo da Bahia, Center for Agrarian, Environmental and Biological Sciences, Social and Environmental Intervention Laboratory
[i] https://orcid.org/0000-0001-5730-7925
Graduated in Agronomic Engineering at UFSM-RS/ Brazil (1975), Master in Policy and Resource Planning at Cornell University-NY/USA (1981), PhD in Forest Conservation at ESALQ-USP/Brazil (2008) and Post-Doctorate in Use of Information and Communication Technologies at the University of Coimbra/ Universidade Aberta/ Portugal (2020).
Author contribution: Main author and responsible for the empirical part of the project.
Lattes: http://lattes.cnpq.br/5977100256638854
E-mail: jmdelgadomendez52@gmail.com

Sara Dias-Trindade, University of Coimbra, Department of History Faculty of Arts
[ii] http://orcid.org/0000-0002-5927-3957
PhD in History Didactics from the University of Coimbra. Professor at the Department of History, European Studies, Archeology and Arts of the Faculty of Arts of the University of Coimbra. Integrated Researcher at the Center for Interdisciplinary Studies (CEIS20) of the University of Coimbra.
Author contribution: Text revision.
Lattes: http://lattes.cnpq.br/3448198763825569
E-mail: sara.trindade@uc.pt

José António Moreira, Open University, Department of Education and Distance Learning
[iii] https://orcid.org/0000-0003-0147-0592
Doctor and Master in Educational Sciences from the University of Coimbra. Associate Professor at the Department of Education and Distance Learning at Universidade Aberta. Integrated Researcher at the Center for Interdisciplinary Studies (CEIS20) of the University of Coimbra.
Author contribution: Text revision.
Lattes: http://lattes.cnpq.br/9800508476476626
E-mail: jmoreira@uab.pt