Reinterpretation of brazilian artistic works using recycled material with students from youth and adult education

Releitura de obras artísticas brasileiras utilizando material reciclado com alunos da educação para jovens e adultos

Sandra Fernanda Loureiro de Castro Nunes
Doctor in Farmacy
Institution: Universidade Estadual do Maranhão
Address: Cidade Universitária Paulo VI, Avenida Lourenço Vieira da Silva 1.000, São Luís – MA, CEP: 65055-310
E-mail: sandranunes@professor.uema.br

Jackson Ronie Sá-Silva
Doctor in Education
Institution: Universidade Estadual do Maranhão
Address: Cidade Universitária Paulo VI, Avenida Lourenço Vieira da Silva 1.000, São Luís – MA, CEP: 65055-310
E-mail: jacksonsilva@professor.uema.br

Fabianna Viégas Raposo
Graduating in Biological Sciences
Institution: Universidade Estadual do Maranhão
Address: Cidade Universitária Paulo VI, Avenida Lourenço Vieira da Silva 1.000, São Luís – MA, CEP: 65055-310
E-mail: fabianna.20210005572@aluno.uema.br

Ana Beatriz Campos Mello
Graduating in Biological Sciences
Institution: Universidade Estadual do Maranhão
Address: Cidade Universitária Paulo VI, Avenida Lourenço Vieira da Silva 1.000, São Luís – MA, CEP: 65055-310
E-mail: ana.20210005509@aluno.uema.br

Kerllyane Carvalho Mendes
Graduating in Biological Sciences
Institution: Universidade Estadual do Maranhão
Address: Cidade Universitária Paulo VI, Avenida Lourenço Vieira da Silva 1.000, São Luís – MA, CEP: 65055-310
E-mail: kerllyane.20210005302@aluno.uema.br

Danielly Cristina Teles Silva
Specialist in Educational Guidance
Institution: Centro Educa Mais Paulo VI
Address: Rua 203, s/n, Campus da UEMA, São Luís – MA, CEP: 65058-172
E-mail: danielly1977@gmail.com
Maria Albertina Morais dos Santos  
Bachelor of Science, Mathematical Qualification  
Institution: Centro Educa Mais Paulo VI  
Address: Rua 203, s/n, Campus da UEMA, São Luís – MA, CEP: 65058-172  
E-mail: albertinamoreis024@gmail.com

Lyzette Gonçalves Moraes de Moura  
Doctor in Science, Chemistry and Phisical-Chemistry  
Institution: Universidade Federal do Maranhão  
Address: Av. dos Portugueses, 1966, Vila Bacanga, São Luís - MA, CEP: 65080-805  
E-mail: lgmdemoura@gmail.com

ABSTRACT
This paper presents the results of an outreach project carried out with students of the Youth and Adult Education (YAE). The theme was developed from the idea of associating artistic culture with the recycling of solid materials. The project’s goal was to introduce students to the practice of separating solid waste produced in their homes, at school, and in other environments, as well as to promote cultural actions, through the creation of creative reinterpretations of works of art by Brazilian artists. To achieve this goal, two themes were addressed: the Sustainable Development Goals (SDGs) and naïve art, a style of painting in which artists express themselves spontaneously, also known as “spontaneous art”. Knowing this, the students were challenged to create their own reinterpretation of naïve works of art using reusable materials. This project provided formative and socio-environmentally significant learning by helping the students understand the outreach practices. The dissemination of the UN SDGs through the actions carried out (visits, production and delivery of folders, lectures, reinterpretations of works of art) enabled the construction of ethical and environmentally responsible knowledge.

Keywords: sustainability, recycling, SDGs, reinterpreting art.

RESUMO
Apresenta-se neste artigo os resultados de um projeto de extensão executado com alunos da Educação para Jovens e Adultos (EJA). O tema foi desenvolvido a partir da ideia de associar a cultura artística e a reciclagem de materiais sólidos. O projeto visou despertar nos alunos a prática da separação de resíduos sólidos produzidos nas suas casas, na Escola e em outros ambientes, bem como promover ações culturais, estimulando a criação de releituras de obras de artistas brasileiros com criatividade. Para isso, foram abordadas duas temáticas, os Objetivos de Desenvolvimento Sustentável (ODS) e a arte naïf, um estilo de pintura em que os artistas se expressam espontaneamente, sendo também conhecida como “arte ingênua” ou “arte espontânea”. Sabendo disso, foi lançado o desafio para os alunos criarem sua própria releitura de obras de arte naïf empregando materiais reutilizáveis. A aprendizagem que este projeto proporcionou aos estudantes para que compreendessem o sentido das práticas
extensionistas foi formativa e com grande significado socioambiental. A divulgação dos ODS da ONU através das ações realizadas (visitas, produção e entrega de folders, palestras, releitura de obras) possibilitou a construção de conhecimentos éticos e ambientalmente responsáveis.

**Palavras-chave:** sustentabilidade, reciclagem, ODS, releitura de arte.

### 1 INTRODUCTION

The generation of solid waste results from any and all human action, from the simple task of preparing food to the technological processes that aim to optimize life on Earth. Based on this problem, it is possible to analyze the importance of recycling, as described by the United Nations in 2015: recycling is a process of transforming used materials into new products, being used in the recovery of part of the solid waste produced (UN, 2015).

Thus, garbage is composed of solid waste and objects that are no longer used because they have served their purpose and are no longer useful (Freire, 2002), such as books, fluorescent lamps, concrete, cans, plastic packaging, bicycles, batteries, car tires, and waste from bus stops and public bathrooms (Santana et al., 2022). However, these materials can be recycled and reused, regaining value in the hands of children and adolescents and, if used well, can serve as pedagogical material, primarily in early childhood education, but also in elementary and high school.

This project is based on the idea of guiding students from the Youth and Adult Education (YAE) program of the Centro Educa Mais Paulo VI (São Luís, Maranhão) to reinterpret works by Brazilian artists using recycled material. Therefore, students were introduced to some Brazilian artists of *naïve art*, such as Tarsila do Amaral, Gerardo da Silva, Antonio Porteiro, Romero Brito, and Maria Celeste Neves.

The term *naïf* originates from French, meaning “that which is natural, without artifice, spontaneous,” thus, naïve art is a style of painting in which artists express themselves spontaneously. In this style, the works usually depict scenes and elements that they know well, such as parties and celebrations of the place...
in which they live or their daily lives. Some artists make social criticism, as is the example of the work "Abaporu" by Tarsila do Amaral. Others only express their creativity, as is the case of Romero Brito, who does not limit himself in his use of colors. These artists do not focus on maintaining proportions or the precision of the lines of the figures represented in the work. Instead, they incorporate numerous details in the scene portrayed and usually use vivid colors, as they believe that everything is art (Silva, 2020).

Therefore, during the execution of the outreach project, we sought to understand the following questions with the students: Have you heard of the SDGs? Do you know the meaning of the acronym SDG? What is the importance of recycling solid materials? What is the need to reduce, reuse, and recycle? Are we going to start separating discarded solid materials to reinterpret works of art?

2 LITERATURE REVIEW

The word “recycle” emerged in the 1970s, due to the concern with environmental issues, emphasizing the need for preservation (Sousa et al., 2016). Recycling is a process of transforming used materials into new products, used in the recovery of solid waste produced daily.

The 2030 agenda for sustainable development discloses the 17 Sustainable Development Goals (SDGs) encompassing 5 themes: People, Planet, Prosperity, Peace and Partnerships. As a result, all people, including public authorities, non-governmental organizations, the private sector, and civil society must promote actions around the 2030 agenda (Mattioli, 2021).

These concepts lead to the understanding that in order to recycle, it is necessary to obtain solid waste, which results from industrial, domestic, medical, commercial, agricultural, material collection, and other service activities, which can be presented in solid or semi-solid form, according to the Brazilian Association of Technical Standards (ABNT, 2004). Unlike garbage or refuse, which can be understood as something disposable and impossible to reuse, solid waste is considered reusable, based on the assumption that this waste can be raw material in the production of new objects (Andreoli et al., 2014).
In this context, it is possible to reinterpret a work of art, which can be defined as a new interpretation, with a new style, new materials, or techniques, but without losing the original composition and theme. Thus, faced with the problem of improper disposal of solid materials, it is possible to work with the 8 R's of Sustainability, the goal of which is to minimize the environmental impact caused by these materials: 1. Reduce: it is necessary to evaluate the rate of consumption to avoid producing excess waste; 2. Reuse: it is necessary to choose durable and sustainable consumer goods that remain in the system for longer; 3. Refuse: not to acquire unnecessary goods; 4. Rethink: each person must reconsider the need for consumption and how to properly dispose of waste; 5. Repurpose: find new ways to use goods already owned; 6. Regift: give the materials that are no longer used to someone else who can use them; 7. Repair: fix and reuse objects whenever possible; 8. Recycling: last resort for materials that no longer have the quality or capacity to be used for their original purposes (Riesememberb, 2014).

To use recycled material in a playful context and make it a learning tool, it is first necessary to initiate a discussion with students about which recycled material could be used, where they can find it, and what they can do to contribute to the environment. It would be interesting to have a space in the school or the student's own home to offer opportunities for students to play with these materials or even reuse them, stimulating intellectual development, therefore "provoking" the cognitive process of problem-solving and acquiring knowledge (Marques; Lelis, 2022).

The purpose of this teaching approach is not meant to overemphasize the establishment of behaviors to the detriment of other subjects, but rather it emphasizes that the simultaneous approach of these concepts is necessary and indispensable for the intended integral formation of the student as a citizen. It is from this perspective that LDB 9394/96 highlights: “The purpose of basic education is to develop in the student the necessary skills needed for good citizenship, assuring the ability to progress in work and further studies.” (Brasil, 1996, p. 17., art. 22).
Applying the practice of recycling within art can be a great challenge, and it is necessary to understand how art can contribute to this process. The National Common Curriculum Base states:

Art, as an area of human knowledge, contributes to the development of students’ reflective, creative, and expressive autonomy through the connection between thought, sensitivity, intuition, and playfulness. It is also a driving force for the expansion of the subject's knowledge about himself, others, and the shared world. It is in learning, research, and artistic expression that perceptions and understandings of the world expand and interconnect in a critical, sensitive, and poetic perspective in relation to life, which allows subjects to be open to new perceptions and experiences, through the ability to imagine and redefine daily lives and routines (Brasil, 2018, p. 482).

Thus, art should not be seen as something complementary, but rather as basic and fundamental in the teaching curriculum, promoting and stimulating inventiveness, innovation, and the dissemination of ideas and knowledge, since art facilitates the development of artistic thinking and aesthetic perception (Bragueto; Silva, 2016).

3 METHODOLOGY

This work was a qualitative study with a foundation based on the SDGs, the practice of recycling and the approximation of culture through the reinterpretation of Brazilian works of art, including Maranhenses, through the presentation of some examples of works of art, and the challenge of preparing a reinterpretation of works of art for exhibition.

First, the project team completed a collective study so that all members were properly prepared. In this process, there were three orientation meetings with the advisor, in addition to the preparation of the project folder, which addresses themes such as the 17 Sustainable Development Goals, sustainability, selective collection, and the 8 R's of sustainability (Figure 1).

This folder was taken to the school and distributed among students and teachers. It is worth noting that the folder is a printed material that has at least one fold, using images, pictures, or words in larger fonts to highlight the key ideas.
The purpose is to communicate quickly to the reader, without tiring them (Paula; Carvalho, 2014).

Figure 1: Folder distributed to students of the Youth and Adult Education program of the Centro Educa Mais Paulo VI (São Luís, MA).

Source: Authors, 2023.
An example of a reinterpretation of a work of art was constructed to present as a didactic resource on the day of the visitation at the school (Figure 2) and, again, there was a meeting with the advisor to evaluate and correct the project's execution plan. Then, the first visit was made to the Educa Mais Paulo VI Center, in the city of São Luís, Maranhão, to develop the theoretical part of the project, with the application of a questionnaire to identify the students' degree of prior knowledge about the SDGs (Figure 3).

In the second visit, the application of the theoretical part was finalized and the students were challenged to create their own reinterpretation of works of art for the exhibition. On the third and final visit, the reinterpretations were exhibited and certificates were handed out to all the students who completed the challenge.

4 RESULTS AND DISCUSSION

The objectives of highlighting the need to understand and apply the SDGs in the school environment were achieved from the bibliographic research to the preparation by the project team to the school visits. By highlighting artistic culture through the reinterpretations of works by Brazilian artists using recyclable materials (Figure 2), environmental awareness was also promoted, contributing to a greater awareness of the relevance of environmental protection. For Morin (2011), activities using play and psychomotor development are part of the knowledge necessary for future education, constituting a learning instrument for social life and stimulating brain development.

Figure 2: Reinterpretation of the work “The Apple”, by Romero Britto, produced by the project team.

Source: Authors, 2023.
According to Carvalho (2013), the approach of investigative learning comprises a series of activities focused on a specific topic of the curriculum, each activity planned to promote an interaction between a student’s prior knowledge and new learning, making it possible for a spontaneous experience to become scientific knowledge through the shaping of the student’s previously acquired knowledge.

This investigative process took place from the first visit to the school through to the application of a questionnaire to the 83 students who were present, testing their previous knowledge about the SDGs. Chart 1 shows the questions of the questionnaire and Figure 3 shows the results obtained.

Chart 1: Questionnaire applied at the “Centro Educa mais Paulo VI” with YAE students.

| Q1 | What does sustainability mean to you? |
| Q2 | Have you heard of the SDGs? If yes. Name at least 2 that you know of: |
| Q3 | What does the acronym SDG mean? |
| Q4 | From your perspective, what is the importance of solid waste separation? |
| Q5 | What are the colors that identify the selective collection bins and what does each one represent? |
| Q6 | SDG 15 addresses life on land which aims to protect, restore, and combat desertification and biodiversity loss. Based on this SDG, how can you collaborate to achieve this goal? |

Source: Authors, 2023.

Figure 3: Qualitative result of the questionnaire applied at the “Centro Educa mais Paulo VI” with YAE students (Chart 1).
In the first question, there was a significant percentage of answers obtained, and some students understood sustainability: "To preserve the lives we have here on earth" and "It is to take good care of things".

In the second question, 60% of the class was able to answer and 40% could not. Some answers received were: "No, I've never heard of it, sorry." and "Yes, eradicating poverty and health and well-being". In the third question, 75% of the class was able to answer, with some students’ answers being: "Protect the environment", "I don't know" and "The goal of sustainable development". The fourth question had the highest percentage of responses in the class, showing that even though students may not be familiar with the SDGs, they are aware of the relevance of solid waste separation as a beneficial practice for the environment, as emphasized by some of the answers obtained for this question: "This practice helps the environment by reducing the impact of consumerism.", "To help get recycled," and "To improve recycling.".

The fifth question presented the same percentage as the second question, however, most of the answers were generic, as can be seen in these examples: "Blue, green, red", "Brown: organic; green: glass; blue: metal; yellow: paper." and "Green, yellow, blue, red." In the last question, the majority of students did not answer, but some of the answers provided were: "Save water.", "Avoid throwing garbage in the river.", "Do not put garbage in the forests and avoid cutting down the trees."

It was noted that while most of the students answered the questionnaire, the answers showed that many of them did not know what the SDGs are. These results are consistent with the data discussed by Santos and Cândido (2023), who state in their work that students in rural schools lack knowledge about the environment and environmental education. These authors also conclude that school represents the ideal place to promote changes in behavior and stimulate children and adolescents to "a new way of environmental thinking", representing a pillar in society for citizenship education.

Because of this, the content was applied carefully and precisely so that students could absorb it in the best possible way. The idea of reinterpreting works
of art was presented so that students could visualize how to practice this technique with solid waste.

According to the National Curriculum Guidelines for Art: art is a source of humanization and through it, the human being becomes aware of his individual and social existence; he perceives and questions himself, and he is led to interpret the world and himself. Art teaches that to unlearn the principles of obviousness attributed to objects and things, it must be challenged, as it exposes contradictions, emotions, and the meanings of its constructions. For this reason, the teaching of art must engage and expand the senses, the worldview, and sharpen the critical spirit, so that the student can situate himself as a subject of his historical reality (Brasil, 2008).

With the goal to combine the SDGs and artistic culture, in the second visit to the school for the application of the project, reinterpretations of Brazilian works of art were presented and, in this context, the students were challenged to create reinterpretations of art using reusable materials (Figure 4).

Figure 4: Presentation of the reinterpretations of works of art (a), with the work "The Apple", by Romero Britto as an example (b).

Figures 5, 6, and 7 show the exhibition of the reinterpretations of works of art prepared by YEA students. Exhibiting the reinterpretations and sharing the process of preparation of the material and choice of the work of art among the school community was of paramount importance for the dissemination of artistic knowledge and primarily, the idea of reusing recyclable materials. In line with this
sharing of ideas, it is possible to associate this project with the workshop completed in the project entitled "The Reinterpretation of Works of Art as a Form of Expression of Students in YAE" by Barbosa (2022).

Thus, learning through observation, when images are disseminated and incorporated into everyday life, becomes necessary for the teaching and learning of infants and children during a phase of cognitive development. In addition, the teaching of visual arts, when well employed by teachers, can promote the acquisition of this knowledge that we need so much to understand our culture and the culture of others (Barbosa, 2022, p. 9).

The students chose the following works: "Woman with a vase of flowers" by Oscar Pereira da Silva, made with pencil shavings, used notebook pages and EVA (Figure 5); "Abaporu" by Tarsila do Amaral, made with CD and EVA (Figure 6); and "Operários", by Tarsila do Amaral, made with wooden skewers, and EVA with glitter (Figure 7).

Figure 5: Artwork "Woman with a vase of flowers", by Oscar Pereira da Silva, (a) and reinterpretation using pencil shavings, used notebook sheets, and EVA (b).


The painting "Woman with a Vase of Flowers" is an undated work created by Oscar Pereira da Silva (1867-1939), an artist relevant to the historiography of Brazilian art in the nineteenth and twentieth centuries (Moreira, 2022). The reinterpretation did not follow all the characteristics of the original work, however,
it did follow the idea of using solid materials by using used notebook pages and pencil shavings to construct the work.

Figure 6: Work "Abaporu", by Tarsila do Amaral, (a) and reinterpretation using CD and EVA (b).

(a) (b)

Source: (a) Fuks, 2023. (b) Authors, 2023.

According to Fuks (2023), the work "Abaporu" by modernist painter Tarsila do Amaral was created in 1928, inspired by the prominent colors of the national flag, referencing Brazilian culture. The reinterpretation followed the same color pattern as the original work and used the CD as a recycled component.

Figure 7: Work "Operários", by Tarsila do Amaral, (a) a reinterpretation using wooden skewers and EVA with glitter (b).

(a) (b)

Source: (a) Salgado, 2023. (b) Authors, 2023.
The painting "Operários" is one of the best-known works of the painter Tarsila do Amaral. It is an oil painting made in 1933, which depicts fifty-one workers. It symbolizes the hard-working people of industries and the ethnic diversity of our society (Salgado, 2023). By drawing attention to the varied ethnicities of the original work and using wooden skewers, the YAE students fulfilled the project’s proposal: to benefit the environment by reusing solid waste.

5 FINAL THOUGHTS

This outreach project provided a formative experience for the scholarship students as they came to understand the meaning of the objectives of the project. The dissemination of the UN Sustainable Development Goals through the actions carried out (visits, production and delivery of folders, lectures, reinterceptions of artistic works) enabled the construction of ethical and environmentally responsible knowledge. Central to the project was the practice of reusing solid waste to create reinterceptions of Brazilian works of art in the style of naïve art, which provided the understanding that art is a useful and powerful learning tool to exercise creativity in non-formal educational contexts.

The development of the project led to the understanding that it is possible to produce knowledge for the citizenship training of students of the YAE program using art concepts, since this project enabled the creation of reinterceptions of works of art by Brazilian artists and the perception of the potential of reusing solid waste, thus leading to the understanding of the concept of sustainable citizen development.

ACKNOWLEDGMENTS

We thank the State University of Maranhão (UEMA) and the Dean of Extension and Student Affairs - PROEXAE for the opportunity, technical and financial support.

Thank you to Jillian Amaral, native from the USA, for translating this paper from Portuguese to English.
REFERENCES


