

**124 - ECOLOGICAL BOARD: PROPOSAL FOR NEW LEARNING MATERIALS**

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**Introduction**

The study proposed to build ecological awareness to physical activity, aimed at encouraging environmental preservation in a playful way and benefit the quality of life.

Ecological awareness in schools is already worked through the reuse of materials from the early years of primary school, with the production of toys and activities in the classroom. However this has not been enough to contribute effectively to environmental awareness.

These attitudes are important in the formation of the population, it shows what was once considered waste, can be recycled into something new. The Curricular Proposal of Santa Catarina (2014) recommends that environmental education in schools should promote awareness, reflection on the actions impacting the environment, triggering the students the importance of the relationship between society and the shared medium.

Thus it can be seen that the reuse of PET bottles is very significant. The production of surfboards and "stand up paddle" made of this material and contribute to environmental awareness will encourage physical activity. The project of ecological boards began in 2007 when Jairo Lumertz fashioned the first board of PET bottles, with the aim of encouraging the sport, preserve nature and give opportunities to underprivileged children.

The study in question used the technique of making ecological boards with the goal of ecological awareness combined with physical activity. This study was based on students' interest in sport surf combined with the fact of living in a seaside town.

**Physical Education**

The Physical Education is committed to the integral formation of the student, seeking reasons for its practice through human development theories. According to the NCPs is defined as the area of knowledge that enters and integrates the student body in the culture of the movement, with leisure purposes, expression of feelings, emotions and affections, maintenance and improvement of health.

The NCPs also find cross-cutting issues in order to contribute to the construction of citizenship, including social reality, rights and responsibilities in relation to personal and collective life. In the cross-cutting themes are highlighted the issue of Ethics, Cultural Plurality, Environment, Health, Sexual Orientation and Labor and Consumption.

In this context, researchers and teachers of physical education have made efforts to enter the environmental dimension in the area of knowledge, understanding that beyond the pedagogical work with games, sports, gymnastics, wrestling, dance - rhythmic and expressive activities and knowledge of one's body, this course also aims to develop in the subject-learners, values and responsible attitudes towards the environment (Abreu, Carneiro, 2009, p. 6).

**Environmental Education**

It has long addressing various forms of reuse as waste which for many is no longer useful. One way for this to become reality is the environmental education to provide awareness of the use of materials correctly, and the development of a new utility.

They are understood to be environmental education processes through which the individual and the collectivity build social values, knowledge, skills, attitudes and competencies aimed at the conservation of the environment and of common use, essential to a healthy quality of life and sustainability (National Policy of Environmental Education - Law No. 9795/1999, Art. 1).

At school it occurs the formation of citizens, as it is required the implementation of environmental education in the curriculum of the new generations. In the view of Chalita (2002, p. 34), education is constituted in the most powerful of all the policy instruments in the world for the construction of new concepts and consequent change of habits.

This educational proposal is obligatory role of teachers based on the Curricular Proposal of Santa Catarina. It is necessary that the teacher assumes a reflective and critical attitude, developing practices that articulate education and the environment; it also needs to use creativity allowing it increased interest of students for classes (Jacobi, 2008).

**Achievement**

The achievement is a term often used to alert preservation of natural resources and the environment. Reuse means to use the new materials which most often are considered useless (Silva et al., 2004).

Along with population growth and the rapid development of industries, so does the demand for use of materials mainly in the packaging area, experiencing a high level of disposal often in inappropriate places, worsening environmental problems. Therefore the utilization of these wastes is of great importance to provide a reduction of the impacts (Forlin; Faria, 2002), recycle and reuse becomes an increasingly important approach to maintaining the health of the planet and people.

Students should understand that the reuse of solid materials before disposed irregularly enables us to contribute to a cleaner and affected world, assisting the maintenance of natural resources still left us. The use of these materials provides a more rational use of nonrenewable natural resources and a reduction in pollution of water, air and soil (Mota et al., 2009).

**Plastic Waste**

Plastics are used in almost all sectors of the economy such as construction, agriculture, footwear, furniture, food,

textile, leisure, telecommunications, electro electronics, automotive, healthcare and distribution. So it is one of the chemical components that are most frequently deposited in inappropriate places. The plastic has achieved great space in environmental projects because of their material is malleable, easily accessible and can be worked in various social classes and ease of reuse of the stuff completely (Sousa et al., 2012).

With great use of PET bottles the accumulation becomes inevitable, with this often are the waste disposed on land, rivers, sewers, seas and forests. These materials take a hundred years to decompose in the environment (Mano; Bonelli, 1994), this can result in large I gather garbage plus years and years, and these could be reused in a better way.

### **Physical Activity**

Physical activity is essential to have a healthy life, bringing many benefits to the body. But it has not been practiced by the world's population; many studies show a high inactivity rate in all age groups.

In physical education classes, there is a great difficulty for teachers working in different contexts than the big games and include recycling as a form of physical activity is much higher. Schools should provide students with programs intended to change education and behavior in order to encourage participation in extracurricular activities.

The sport in question is the surf that in addition to an intense physical activity, provides a direct contact with the environment, assisting in the assimilation of environmental preservation activity. The search for a healthier life through sports practice and man's connection to nature makes surfing is one of the major sports that enable this link, where practitioners are ocean lovers and active participants in their preservation (Filho; Moreno, 2015 web).

### **Materials and Methods**

The methodological procedures of the research are theoretical and bibliographic nature, field, qualitative, descriptive and exploratory. Given the nature of the research, it was decided to use participant observation and after a comparison with readings in articles and specialized books.

Participants involved in the study were 10 students attending the 5th and 6th in a private school; 10 students from 6th to 9th of a municipal school, and 30 students of the 2nd year of high school in a state school, all in the municipality of Itapoá - SC.

At the beginning of the workshop was given a lecture by an academic of Biological Sciences for encouragement of students to the preservation of the environment. Classes for the creation of surfboards and "stand up paddle" were from the academic physical education. The proposed activity happened as extracurricular activities in elementary school in the morning and afternoon periods, the state school work was developed during physical education classes.

First it was sent to parents the free knowledge and clarified allowing their children to participate in the workshop, indicating the day of the practical test of the boards on the beach. After the lecture mobilization was given the first task students: the collection of PET bottles. All the bottles were cleaned, some cut forming the slot to the other.

To the beginning of preparation of the plates already cut and cleaned bottles were engaged to the glue forming the columns of the boards after drying were placed side by side forming a structure of 7 x 7 bottle to the "stand up paddle" and 5 ranks x 6 columns bottles for surf board, being joined by adhesive polyurethane and PVC pipe for better fixation.

The EVA sheet was used to make the "deck" of the planks.

After the finishing process the students manufactured the oars to "stand up paddle" with PET bottles and PVC pipe. The study design was approved by the Research Ethics Committee of Univille parish with the No. 840.397.

### **Discussion Analysis and Interpretation of Results**

The research aimed to develop ecological awareness through the creation of surfboards and "stand up paddle" with PET bottles. The sample consisted of 50 students of the schools of the state, municipal and private. To collect the data we used participant observation with pre-established script, and after a comparison with readings in articles and specialized books.

During the manufacture of the boards, students were evaluated by observation, with pre-established script and after making a physical activity intervention were performed.

In private school realized the interaction of children with the project in a participatory manner, providing integration with other classmates and teacher. Showed good organization in the distribution of tasks, keeping the space clean, however, there was motor difficulty at certain stages of production.

It found students' understanding regarding the use as a tool for physical activity in a non-school environment, therefore the understanding of the overall objective was achieved providing opportunities for development of environmental awareness.

It was observed in the municipal school a different reality of the particular network environment. Students felt the importance of reuse, because if faced with such materials dumped anywhere daily. Children participated actively at work, making friends among them and with the teacher. Showed organization, beware of materials and the environment used to build the boards. For many of these students to reuse material was not new, but it being effective process in carrying out a physical activity caused them to look differently to the importance of environmental preservation.

Students at state school understood from the beginning the goal of the project, running the team on tasks in an organized fashion, being proactive in plank building process, only guided by the teacher. Engagement with the proposal it was noted, through questions concerning the preparation and the environmental issue, thus, providing a reflection to students about their actions.

Upon reaching the shore were students with high expectations if the material made by them would work. With the use of the board at sea could observe the item efficiency in practice. The test on the beach indifferent pointed out that the age of the students, everyone was conducted as tested himself constructed object.

Given the above it can be seen that environmental education should be worked in any way in the schools, but not significantly with their reality.

It finds that the lack of environmental awareness among students stems from the educational structure with outdated methods, without touch with reality, generating citizens with habits and behaviors harmful to the environment, not because they wanted to be, but for lack received an education with methods that suit the reality (Lopes et al., 2015 web).

Kindel (2006 apud Lopes, 2015 web) also states that environmental education will only be effective if it leads students to have awareness of the world around them, involving them in order to awaken a critical consciousness that seeks solutions to the problem.

Insert activities thinking about environmental awareness since the beginning of elementary school is required to live in a cleaner world and ecologically correct. Throughout our life, we hear talk that the school-based is flawed, so it is difficult to be able to future success. It should invest in environmental education in elementary school, it is the moment that develops the basis of our learning, allowing children awareness actions that it should rather use natural resources, but to meet our basic needs and providing for future right generations to meet their own needs (Lopes et al., 2015 web).

In this sense, it is essential that the critical environmental education, dialogue, part of your reality, so that the child can create and express these relationships, expanding their worldview (Rodrigues, 2007 cited Martins, 2015 web).

In high school also it is important to stress the aim of environmental education, because at this age many of the students already are or will be leaving the school, maybe being the last contact with this theme.

Environmental education contributes to the inclusion of the individual from the moment that deals with man's relationship with society and nature, and takes the student to think and act, raising it a critical view of environmental reality (Silva, 2015 web).

Because of environmental education is directly related to the way of life of people, how they live and coexist in society, it is necessary that the environment where one lives is perceived in its entirety, their characteristics and their problems, seeking to educate the student of their role in society, emphasizing solidarity, sharing and respect (Medeiros, 2011).

One should think in a world in which everyone has right to enjoy the present environment and the future quality. In Barbosa's vision (2008) "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

The main function of the educator is to give meaning to the work so that students understand the real purpose of it. The educator should seek to put students in situations that are forming in front of an environmental aggression or environmental conservation, with the means of understanding the environment (Berna, 2004 apud Saraiva, 2008).

### Final Considerations

It was noted that reuse is one of the effective actions that can be developed in schools. To contribute to reducing the environmental impact of urbanization and industrialization and a consumerist society. These activities allow the use of materials which could be deposited at inappropriate locations in a direct object of use for the development of physical activity.

The survey confirmed the importance of environmental education in schools. So it must be entered from the early years of elementary school to achieve greater effectiveness. It is at this moment that develops the citizen first, relating the social context with the environment.

The teacher plays a key role in the realization of environmental education in society. Because it's his role to create opportunities for activities that develop the students' perception with environmental preservation. So that in future these students effective environmental awareness.

It is suggested further study on environmental education in schools, in order to create new teaching materials that facilitate a greater understanding of the proposal. It is also necessary to consider a larger number of schools enabling involve society.

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**ECOLOGICAL BOARD: PROPOSAL FOR NEW LEARNING MATERIALS****ABSTRACT**

We live in a society with high industrialization rate, triggering the excessive consumption of natural resources, occurring so high pollution rates. The theme of environmental education in schools in order to reduce the impacts of unsustainable activities to the environment, through the formation of conscientious citizens should be addressed. This study sought to encourage environmental preservation in order to develop environmental awareness combined with physical activity. This is an experimental field study. Attended by 50 students attending elementary school to high school in a school municipal network, a state and a private school in the city of Itapoá - Santa Catarina. The action was carried out in three stages: the first included storage and pet bottles of cleaning, the second the preparation of a board of "stand up paddle". The third stage was the trial of the board on the beach. The making of ecological boards showed a possibility of integrating environmental education in physical education classes. It stressed the importance of reuse and taught a new way to include it in schools as an environmental education strategy and encouraging physical activity.

**KEYWORDS:** Ecological Boards, Environmental Awareness, Physical Education.

**CONSEIL ECOLOGIQUES: PROPOSITION D'UN NOUVEAU MATÉRIEL 'APPRENTISSAGE****RÉSUMÉ**

Nous vivons dans une société avec un taux d'industrialisation élevé, le déclenchement de la consommation excessive de ressources naturelles, de pollution survenant taux si élevés. Le thème de l'éducation environnementale dans les écoles afin de réduire les impacts des activités, non durables, de l'environnement, à travers la formation des citoyens de conscience doit être adressée. Cette étude visait à encourager la préservation de l'environnement afin de développer la conscience environnementale associée à une activité physique. Ceci est une étude expérimentale sur le terrain. Fréquenté par 50 élèves qui fréquentent l'école élémentaire à l'école dans un réseau municipal de l'école, un Etat et une école privée dans la ville de Itapoá - Santa Catarina. L'action a été menée en trois étapes: la première inclus stockage et de bouteilles en PET de nettoyage, la deuxième la préparation d'un conseil d'administration de "position up paddle." La troisième étape a été le procès de la carte sur la plage. La fabrication de cartes écologiques montrée une possibilité d'intégrer l'éducation environnementale dans les classes d'éducation physique. Il a souligné l'importance de la réutilisation et a enseigné une nouvelle façon de l'inclure dans les écoles comme une stratégie d'éducation à l'environnement et encourager l'activité physique.

**MOTS-CLÉS:** conseils écologiques, la conscience environnementale, l'éducation physique.

**JUNTA ECOLÓGICA: PROPUESTA DE NUEVOS MATERIALES DE APRENDIZAJE****RESUMEN**

Vivimos en una sociedad con una alta tasa de industrialización, lo que provocó el consumo excesivo de los recursos naturales, que se producen por lo altos índices de contaminación. El tema de la educación ambiental en las escuelas con el fin de reducir los impactos de las actividades, no sostenibles, el medio ambiente, a través de la formación de ciudadanos conscientes deben ser tratados. Este estudio trata de fomentar la preservación del medio ambiente con el fin de desarrollar la conciencia ambiental combinada con la actividad física. Se trata de un estudio de campo experimental. Con la asistencia de 50 alumnos que asisten a la escuela primaria a la secundaria en una red municipal de la escuela, un estado y una escuela privada en la ciudad de Itapoá - Santa Catarina. La acción se llevó a cabo en tres etapas: la primera incluyó botellas de almacenamiento y de compañía de limpieza, la segunda la elaboración de una tabla de "stand up paddle". La tercera etapa fue el juicio de la junta en la playa. La fabricación de tableros ecológicos mostró una posibilidad de integración de la educación ambiental en las clases de educación física. Destacó la importancia de la reutilización y enseñó una nueva forma de incluirlo en las escuelas como una estrategia de educación ambiental y fomentar la actividad física.

**PALABRAS CLAVE:** tableros ecológicos, conciencia ambiental, de educación física.

**PRANCHA ECOLÓGICA: PROPOSTA DE UM NOVO MATERIAL PEDAGÓGICO****RESUMO**

Vivemos em uma sociedade com alto índice de industrialização, desencadeando o consumo exagerado dos recursos naturais, ocorrendo assim altas taxas de poluição. Deve ser abordado o tema educação ambiental nas escolas com sentido de diminuir os impactos causados pelas atividades, não sustentáveis, ao meio ambiente, através da formação de cidadãos conscientes. O presente trabalho buscou incentivar a preservação ambiental com intuito de desenvolver a consciência ecológica aliada a atividade física. Trata-se de um estudo experimental em campo. Participaram 50 alunos que frequentam do ensino fundamental ao ensino médio em uma escola da rede municipal, uma estadual e uma escola particular do município de Itapoá - Santa Catarina. A ação foi realizada em três etapas: a primeira contemplou arrecadação e limpeza de garrafas pet, a segunda a confecção de uma prancha de "stand up paddle". A terceira etapa foi a experimentação da prancha na praia. A confecção das pranchas ecológicas mostrou uma possibilidade de articular educação ecológica nas aulas de Educação Física. Reforçou a importância da reutilização bem como ensinou uma nova forma de incluí-la nas escolas como estratégia de educação ambiental e incentiva a prática da atividade física.

**PALAVRAS-CHAVE:** Pranchas Ecológicas, Conscientização Ambiental, Educação Física.