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marlenegavil@gmail.com

Correspondence:

Program for the training of knowledge and skills on conservation and protection of the environment

Programa para la formación de conocimientos y habilidades sobre conservación y protección del medio ambiente

Marlene Julissa García Vilca
Master's Degree in University Teaching and Management, Universidad Nacional Pedro Ruiz Gallo
Lambayeque Peru
marlenegavil@gmail.com ORCID: 0000-0003-2037-9954

Joel Núñez Mejía
Master in Applied Mathematics, Universidad Nacional Pedro Ruiz Gallo, Lambayeque, Peru, jonume_230@hotmail.com, ORCID: 0000-0002-7959-3608,

Anderson Jorge Robles Silva
Master of Science in Education; Universidad Enrique Guzmán y Valle, Lima Peru andersonroblessilva@gmail.com ORCID: 0000 - 0002 - 9330 - 9642

Juan Manuel Mickle Neyra
Master in Education, Universidad Cesar Vallejo, Lima Perú, mickleneyraj@gmail.com; ORCID: 0000-003-3199-4004

Abstract
The main objective of this article is to design a theoretical proposal of transversal contents in the primary level curriculum in the area of Science, Technology and Environment, on conservation and protection of the environment based on the Didactic Theory of Dr. Carlos Álvarez de Zayas, starting from the teaching-learning process and the different categories or components of didactics. This Proposal contains strategies that will allow qualitative changes in the development of the capacities and abilities in the area of C.T.A. and in the learning results of the students. At present our environment is threatened and is slowly deteriorating, especially if we do not contribute to its care from the formation of professionals in education. That is why we propose a change and it should start in the classroom, directly with the students, we teachers are responsible for reaching our students by providing them with real and interesting topics so that they gradually change their attitude and can be more responsible and considerate of others, avoiding further damage to our environment in which we live.
Key words: Knowledge, skills, Conservation and Environment.

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Resumen
El presente artículo tiene por objetivo principal de diseñar una propuesta teórica de contenidos transversales en el currículo de nivel primario en el área de Ciencia, Tecnología y Ambiente, sobre conservación y protección del medio ambiente con fundamento en la Teoría Didáctica del Dr. Carlos Álvarez de Zayas, partiendo del proceso enseñanza-aprendizaje y las diferentes categorías o componentes de la didáctica. Esta Propuesta contiene estrategias que van a permitir cambios cualitativos en el desarrollo de los capacidades y habilidades del área de C.T.A y en los resultados de aprendizaje de los estudiantes. En la actualidad nuestro medio ambiente se encuentra amenazado y se está deteriorando lentamente, sobre todo si nosotros no aportamos en su cuidado desde la formación de profesionales en la educación. Es por eso se propone un cambio y se debe empezar por las aulas, directamente con los alumnos, los profesores somos responsables de poder llegar a nuestros estudiantes brindándoles temas reales y de interés para que ellos poco a poco cambien de actitud y puedan ser más responsables y considerados con los demás evitando dañar más a nuestro medio en el que vivimos.
Palabras clave: Conocimientos, habilidades, Conservación y Medio Ambiente.

Introduction

For a long time we have sought to explain the reason for things, we have filled ourselves with knowledge to reach knowledge that will lead us to an increasingly better quality of life. However we have reached a lot of information of how to do, what to do, why it is done. Sanchez & Martinez, (2018) knowing that today we seek in addition to the man-man interrelationship, that of man-nature, thus creating a series of both favorable and unfavorable consequences.

Technology advances and that knowledge increases, and it is reflected, many times, thoughts in acts. But the technological progress that man achieves, translates into new problems, which we do not deal with and many do not take into account the pollution of the elements: air, soil and water that directly and indirectly affect nature and therefore man Alejandre, (2014).

It is important to remember that at present there are institutions and organizations that seek to maintain the balance between nature and mankind, for this reason it is presented for anyone who is interested in information about what the student population knows about environmental conservation.

The importance of the work is that for the first time the degree of knowledge and skills of the student population of the Professional School of Education - FACHSE Primary Level will be measured, results that will serve to improve the quality of education in terms of knowledge and skills on the conservation of their environment.

In addition to initiating in them a conscious participation in the care and protection of their environment and involving them in its constant care, the key to environmental care is in saving and consideration. That is, in not wasting resources (such as water or green areas) from which others can benefit and thus contribute to the balance of the planet and ultimately to a common

benefit, Castañeda, (2014) in his article, aims to study the relationship between knowledge and skills on environmental conservation, explaining how much they know and what attitudes students assume before the vision of the environmental reality in our department.

For (Parra & Cámara, 2017, p. 90) indicates that it reflects the problem in the students of the Primary Level of the EPE - FACHSE; they demonstrate to possess insufficient knowledge and minimal development of skills on conservation and protection of the environment, which is manifested through permissive and negative attitudes towards protection; these appreciations are based on empirical observations during class hours and intermediate moments. The object of study is the process of professional training in the area of science, technology and environment in the professional school of education FACHSE.

For which we focus on the following main objective which is to propose a program that strengthens the development of knowledge and skills on conservation and environmental protection in students of the primary specialty of the professional school of the FACHSE. Among the specific objectives we will analyze the current curriculum of the university, which is an average of eleven years old, and the current syllabus of the academic semester 2009 - I of the area of Science, Technology and Environment of the primary level, review the didactic and curricular theories and the current theory of the Society - Nature Conception, and finally propose the program of Transversal Contents. The field of action is in the program for the development of knowledge and skills on conservation and protection of the environment in the students of the primary level of the Professional School of Education - FACHSE of the National University Pedro Ruiz Gallo.

In the Education Curriculum, in the area of Science, Technology and Environment, there are insufficiencies in the precision of the expected learning, contents and methods linked to the development of knowledge and skills foreseen for the different areas, as well as the contribution of science, technology and environment in the formation of students, lacking at the same time a strategy that allows for a scientific solution to the problem of formation, conservation and protection of the environment.

Durán-García's research (2014) indicates that it is based on the conception that the student is the subject of his learning, participating actively and consciously in his teaching-learning process, where he sets goals and purposes, defines his problems together with his teachers, in a dynamic where priority is given to learning.

Materials and methods

The following types and designs of research will be used in this research:

The research is of a basic type, the basic characteristics of qualitative studies can be summarized in that they are basic research centered on the subjects, which adopt the perspective inside the phenomenon to be studied in an integral or complete manner. The inquiry

process is inductive and the researcher interacts with the participants and with the data, seeking answers to questions that focus on social experience, how it is created and how it gives meaning to human life. According to (Álvarez-BorrotoBorrotoet al., 2017, p.56) it is descriptive design, since this research aims to specify characteristics and properties of concepts, variables, phenomena or facts in a certain context. According to Escamilla et al., (2016). According to the data analyzed; the present research is of Qualitative approach since the objective of qualitative research is to provide a research methodology that allows us to understand the complex world of the lived experience from the perception of the people who live it according to (Fernandez, 2018, p. 21)

A census population was used, the total population was selected, comprising 98 students of cycles III, V and VII of the EPE-Primary Specialty. The ages ranged from 17 to 26 years old. The technique used was the survey; as a statistical method, descriptive statistics was applied for the levels of the variables, dimensions and inferential statistics for the contrast of hypotheses. In the stage of elaboration of the Transversal Contents Program, the tasks were the following:

- To elaborate and propose a Program of Transversal Contents based on the study of the Didactic Theory sustained by Dr. Calos Alvarez de Zayas, for the development of knowledge and abilities in the area of Science, Technology and Environment.

- Select the methods, techniques, the set of means and educational materials that will allow the application of the Didactic Theories.

- To elaborate a set of contents and strategies on which the learning dynamics are based for the elaboration of the Transversal Contents Program for the area of Science, Technology and Environment for students of the primary school specialty.

- The FACHSE has 1158 students in the entire Faculty of Education, of which the students of the primary specialty are 214 students, the III, V and VII cycle are the students who collaborated in the survey are a total of 98 students, data that will help us to develop a cross-cutting content program in the curriculum and to measure the degree of knowledge and skills they have.

Result

Descriptive statistics were applied for the levels of variables and dimensions and inferential statistics for hypothesis testing. Of the three teachers in charge of teaching the Science and Technology Area (CTA), only two responded to the interview.

Regarding the curricular aspect, specifically the CTA Area Summary, the teachers recognized that it does not exist, because it is 11 years old and is a copy of what was proposed by the Ministry of Education. Regarding the syllabi, teachers point out that since there are no summaries to guide their contents, they resort to their professional experience, seek a logical

development, and also consult the students beforehand and evaluate the contents at the end of the cycle.

The teachers consulted on what other topics of social, global and national interest should be included in the curriculum said: Teaching about the environment should be based on values. In education: Knowing the elements of the environment, identifying its problems and taking care of its resources. Teachers must master two methodologies; one in terms of the area and the other in terms of teaching it to students.

Regarding the question about which competencies should be developed in students, the answers were divided, Professor Sanchez said, "I do not agree that we should work based on competencies, they should be modified and work based on objectives that are more appropriate.

Professor Rodas stated: For me, three basic competencies should be worked on:

Scientific Competencies:

Mastery of the sciences

Science education

Emotional Competencies:

Relationships, contacts, teamwork, group work, etc.

Core Competencies:

Reading proficiency, logical reasoning, verbal reasoning, etc. (Question 8).

Regarding the proposed theme of care and conservation of the environment, they pointed out: Yes, we must work, but in terms of the Curricular Structure, and I always instill this in my students, we make posters, banners, etc.

On the other hand, Professor Rodas said: "Students are encouraged to make guided visits to different tourist areas of our department, such as Motupe, Olmos, Chaparri, etc.

Likewise, they consider that the proposal to work on environmental care and conservation as cross-cutting content in the different cycles of the CTA Area is innovative.

According to the final question on what; conceptual, procedural and attitudinal aspects in the area of CTA should be incorporated in the training process of the future teacher (University student). 50.5% did not answer, training in values and developing skills, conducting workshops in the laboratory and didactic field trips, redesigning the curriculum with values, encouraging research, predisposition and appreciation, developing topics to know the environment and be

able to take care of it, implementing a good laboratory, raising awareness to develop good work plans, 3.2% respectively.

Use laboratories, guided visits and innovative methods, Conduct field work more often, Encourage knowledge of the region, Conduct field work more often, Encourage knowledge of the region, Develop ecological topics with appropriate methods and techniques, Encourage care of the environment through projects; among others.

Criticism: A high percentage of respondents indicated that the CTA curriculum is in line with conceptual, procedural and attitudinal aspects; however, they did not express an opinion on which aspects should be improved.

The article reflects that the problem in the students of the Primary Level of the EPE - FACHSE; demonstrate insufficient knowledge and minimal development of skills on conservation and protection of the environment, which is manifested through permissive and negative attitudes towards protection; these appreciations are based on empirical observations during class hours and intermediate moments.

The object of study is the process of professional training in the area of science, technology and environment in the professional school of education FACHSE.

For which we focus on the following main objective which is to propose a program that strengthens the development of knowledge and skills on conservation and environmental protection in students of the primary specialty of the professional school of the FACHSE. Among the specific objectives we will analyze the current curriculum of the university that has an average of eleven years old and the current syllabus of the academic semester 2009 - I of the area of Science, Technology and Environment of the primary level, review the didactic and curricular theories and the current theory Concepción Sociedad - Naturaleza and finally propose the program of Transversal Contents.

The field of action is in the program for the development of knowledge and skills on conservation and environmental protection in primary school students of the Professional School of Education - FACHSE of the National University Pedro Ruiz Gallo.

In the Education Curriculum, in the area of Science, Technology and Environment, there are insufficiencies in the precision of the expected learning, contents and methods linked to the development of knowledge and skills foreseen for the different areas, as well as the contribution of science, technology and environment in the formation of students, lacking at the same time a strategy that allows a scientific solution to the problem of formation, conservation and protection of the environment. The conception that the student is the subject of his learning, participating actively and consciously in his teaching-learning process, where he sets goals and purposes, delimits his problems together with his teachers, in a dynamic where priority is given to learning.

The hypothesis of the research is that if a program of Transversal Contents in the Curriculum based on the Didactic Theory of Dr. Carlos Alvarez de Zayas is designed and proposed for students at the Primary Level, then the development of knowledge and skills on conservation and protection of the environment in the subject of Science, Technology and Environment would be achieved. In Peru, the educational model is a competency-based model, especially in public universities. López et al., (2017) concluded the importance of critical thinking as a competence within the activities that favor the development of the university student, which leads to see the relevance of critical thinking in the field of higher education; it is here the present work, tries to contribute to give validity to this construct in educational practice thus answering the concern of (Davó-Blanes et al., 2018, p. 34).

Conclusions

In the Faculty of Historical, Social Sciences and Education of the Pedro Ruiz Gallo National University, students show a positive relationship between their knowledge and skills about environmental conservation, that is to say, their knowledge is put into practice and they show a lifestyle. However, it should be noted that if they had more theoretical and practical training, their knowledge and skills would be much greater. The students of the Faculty of Historical, Social Sciences and Education of the National University Pedro Ruiz Gallo, have medium level knowledge about environmental conservation, which allows them to inform about Environmental Education, Sustainable Development and others, however, being future teachers, the expected level should be high, in order to be able to transmit this information to their students.

The students of the School of Historical, Social Sciences and Education have different skills in relation to Environmental Conservation, capable of carrying out projects, events, campaigns, district participation, exercising functions, ethical responsibility and values. The students who were interviewed in this research have different curricular formations, which leads us to think that there is a deficiency in their formation, which is manifested in the average level reached by the students. In the current curriculum, for example, the subject of Environmental Education is no longer taught, unlike students between the fifth and tenth cycles.

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