
Projective Techniques for Student Environmental Attitudes Study

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Abstract

The relevance of the problem under study is due to the need to study ecological attitudes through projective techniques. The problem of the effective development of ecological attitudes with the use of educational technologies aimed at the formation of the structural components of ecological consciousness which includes ecological attitudes, ecological perceptible abilities of students, is becoming more and more urgent one. The main purpose of the paper is to study the main characteristics and structural components of the dominant ecological attitudes, using projective techniques; to identify in theoretical and experimental research the types of ecological attitudes and the level of ecological perceptual abilities. The leading method for the study of this problem is the author's projective techniques, the questionnaire method, which allows for a qualitative analysis of the characteristics of ecological attitude's leading type. The article presents a thorough and detailed analysis of the ecological attitude concept; the structural components of ecological attitudes are highlighted. The authors pay special attention to projective techniques that study the type of ecological attitudes and the level of environmental perceptual abilities. It is revealed that, taking into account the leading activities, it is possible to effectively develop ecological attitudes, especially its cognitive component. Using the projective technique, it is revealed that the first-year students are dominated by the aesthetic attitudes. The data obtained in the work can be used in social psychology, pedagogy, practical psychology, ecological psychology, sociology, as well as for further theoretical development of this issue.

Keywords: environmental awareness, ecological attitudes, types of ecological attitudes

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INTRODUCTION

The environmental problem is used either as a multiple or single component-based approach (Durkheim 1995, Girusov 1998, Zalygin 1992) and covers either the environment as a whole or some specific aspects of the environment. If attitudes to the environment belong to a multi-component approach, a distinction is usually made between the cognitive, emotional, and conative components of the attitude (proposed by Hovland and Rosenberg (1960)). Rene Descartes wrote "Determine the meaning of words and you will save the world from half the trouble" (Hovland and Rosenberg 1960) Indeed, any sociological study begins with the definition of basic terms. It is at this

stage that it is decided what point of view the researcher will take, what point of view of the problem will be taken as a basis, through the prism of which definitions will the phenomenon be considered.

The concept of *ecological attitudes* goes back to the middle of the last century. However, the basis for understanding the term of *attitudes* was laid by Spencer (2013) in his work *Basic Principles* in 1862. He writes that when making the right decisions on controversial issues, much depends on the position and attitudes that we have while we listen and take part in the dispute.

In Russian sociology, one of the main scientists involved in the study of attitudes was Vladimir

Aleksandrovich Yadov (1975), the author of the dispositional personality structure (Yadov 1975).

1. Initially, all three components of ecological attitudes affect knowledge (that is, cognition), and intention was used in parallel to predict environmental behavior. Recent versions of this approach vary: some offer a component of influence as a single indicator of environmental attitudes (Langeheine 1986, Newhouse 1990), others reject intent on environmental behavior (Dispoto 1977), while the third group uses environmental behavior as one indicator of environmental attitudes. In addition, instead of using these components of ecological attitudes in parallel, some approaches use concepts (knowledge, affects and intentions) in a more consistent way of predicting environmental behavior (Diekmann 1995). Sometimes attitudes with respect to the environment can become a one-component structure (Arbuthnot 1977, Harrington 1991, Van der Pligt 1985). If the attitude to the environment belongs to the one-component approach, this attitude can be predicted by knowledge, influence and intention, as it has been already mentioned. Sometimes, however, environmental attitudes are measured by signs, affects, and intentions (Hungerford, 1985; Axelrod, 1993; Leontiev, 1995; Markov, 1987).

If ecological attitudes are assessed by one component, regardless of the type of ecological attitudes, then usually the results show either a moderate connection between the ecological attitudes and environmental behavior, or a weak connection. However, at least some studies do not denote this relationship at all, and some show a strong link between the ecological attitudes and environmental behavior (Lynne and Rola 1988). If ecological attitudes are represented in the form of three components, for example, ecological knowledge, ecological values and intention on ecological behavior, the following is reported. Considering that actual environmental knowledge is a prerequisite for ecological attitudes, this knowledge should not be associated with environmental behavior, since its influence is mediated by both the environmental attitudes and environmental behavior (Uznadze 1977). Consequently, it is not surprising that in several studies no links between actual environmental knowledge and environmental behavior were found. When this attitude seems to be stronger, then knowledge of environmental behavior acts as this knowledge (that is, knowledge of what and how something can be done), and not actual knowledge of the environment, which is associated with

environmental behavior (Fortner 1994, Green and Stutzman 1982, Levenson 1974)

The definition that is most popular in the scientific literature is as follows: ecological attitudes — readiness, a person's predisposition to perception of future events and actions in the natural environment in a certain direction; provides a steady purposeful flow of relevant activities in the natural environment and serves as the basis for appropriate selective human activity in the natural world (Cherdymova and Sorokina 2013).

Ecological attitudes are a developing, dynamic phenomenon, which is based on the ability to emerge and develop; therefore it can be both a subject of diagnostics of its presence or absence, and a subject of purposeful formation. At the same time, the attitudes have a stable structure, and in order to change it, clear, consistent actions are necessary.

The following components are distinguished in attitudes:

A) Cognitive (awareness of the ecological attitudes' object);

B) Affective (emotional evaluation of a natural object, revealing a feeling of sympathy or antipathy towards it);

C) Behavioral (conative) (consistent behavior in relation to a natural object), where the ecological attitudes are defined as awareness, assessment and willingness to act.

At the same time, it should be understood that the attitudes in the system of consciousness is an element not isolated, and that changes in one part entail changes in all its parts.

MATERIALS AND METHODS

Study Methods

In the research process, the following methods were used:

Method of questionnaire survey. This method is a universal method, as it allows solving the following tasks:

- Questioning allows one to mentally model many of the situations that a researcher needs, appealing to a person's internal mechanisms and his/her experience.

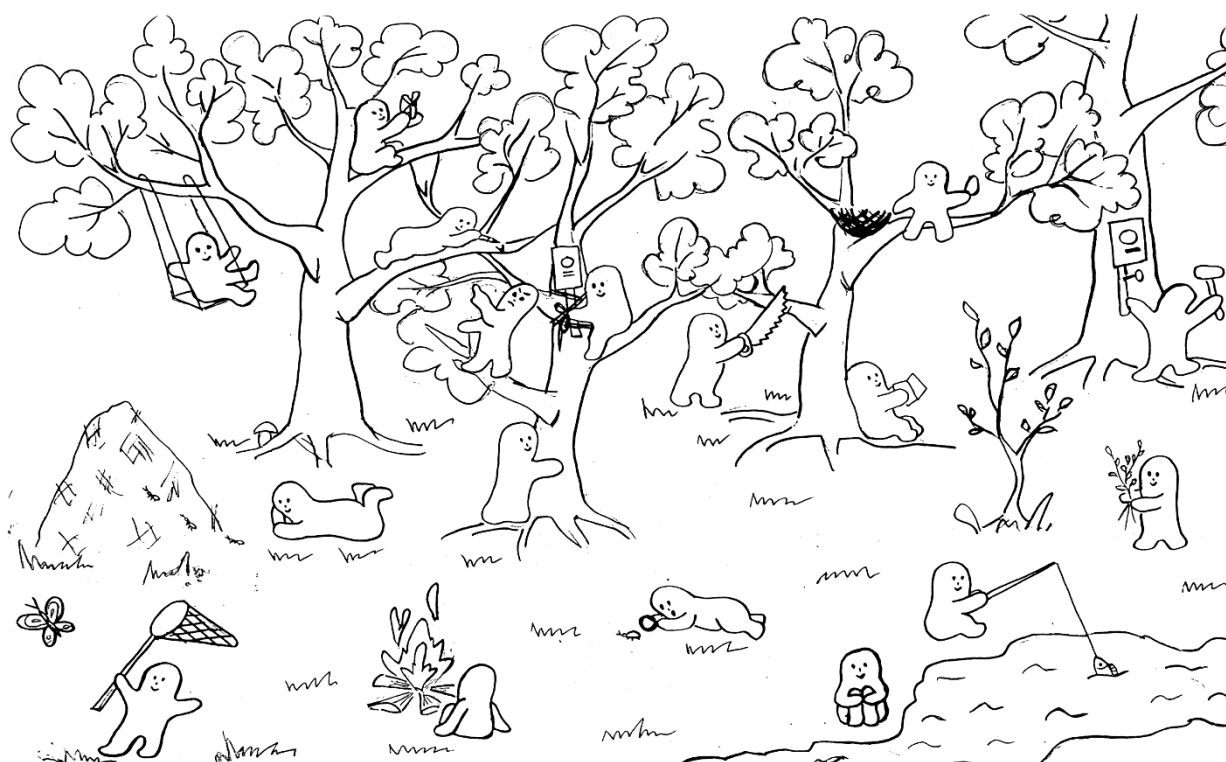


Fig. 1. Stimulus material for the study of ecological installations personality

- It provides an opportunity to penetrate into the inner world of people and learn about their motives, assessments, aspirations, plans, etc.
- The results of the questionnaire survey lend themselves to various types of mathematical processing, which, with modern computer programs, gives researchers ample opportunities. In total, 66 students were interviewed. The study used a target sample. Data analysis was carried out using the SPSS 17.0 for Windows software package.

1. To identify the features of ecological attitudes' development, the projective technique Cherdymova (2013) were used

Determining the type of ecological attitudes

Objective: To identify the type of ecological attitudes.

Required material: a form with pictures.

Instructions: This picture shows people in nature. Each of them is busy with his/her business. Imagine that you are with them. Without thinking - find yourself in the picture.

You can color the little men (see **Fig. 1**).

Interpretation:

All statements of the subject are accepted for analysis. Attention is drawn to what kind of little man first attracted the attention of him/her. Next, the type of ecological attitudes is defined.

Each man has his/her own cipher, which designates the following types of attitudes:

M - *Aesthetic attitudes*, nature is perceived as an object of magnificence;

P - *Ethical attitudes*, nature is perceived as an object of protection;

S - *Cognitive attitudes*, nature is perceived as an object of study;

B - *Pragmatic attitudes*, nature is perceived as an object of benefit

If the tested has painted the little men, then it is necessary to find out what color the tested has the most favorite, and what is the most unpleasant. It is necessary to pay attention to whether these colors were used when coloring. What kind of colors used the tested for little people when he/she painted them.

Table 1. Types of ecological attitudes (% of respondents number by column, N = 66)

Ecological attitudes.				
	M (aesthetic attitudes)	S (cognitive attitudes)	P (ethical attitudes)	B (pragmatic attitudes)
1st year students				
%	42%	24%	13%	21%

Experimental Research Base

An empirical study was conducted on the basis of schools in the city of Samara.

Stages of the Study

The study of the problem was carried out in three stages:

Stage 1 - preparatory. Development of the program of the experiment. Development of a research tool - questionnaire, preparation of a diagnostic technique for studying the level of ecological attitudes development.

Stage 2 - Conducting diagnostic techniques and questioning.

Stage 3 - Analysis of the study results of ecological attitudes development level.

RESULTS

Magnificence is aesthetic attitudes; nature is perceived as an object of beauty. *Study* is cognitive attitudes, nature is perceived as an object of study, *Protection* is ethical attitudes, nature is perceived as an object of protection, *Benefit* is pragmatic attitudes, nature is perceived as an object of benefit. Attitudes are also an element of the structure of ecological consciousness. The prevailing attitude towards nature is an aesthetic attitude - 42%, this may be due to the narrow notion of the purpose of nature, considering it only from the point of view of the source of aesthetic pleasure. The cognitive and pragmatic attitudes are roughly equally distributed - 24 and 21%, respectively, and 13% of attitudes are associated with a security attitude - this may be evidence of a lack of understanding by students of the nature function and human functions in relation to nature, the education of consumer attitude.

From **Table 1** it can be seen that the first-year students are dominated by an aesthetic attitude, the largest number of respondents, and especially 42%, perceives nature as an object of magnificence, that is, emotionally prevails - value attitude to the world around.

Slightly less, namely 24% of respondents perceive nature as an object of study. This is typical for this group of respondents, since educational activity is significant in this age category. Slightly lower rates among

respondents who perceive objects of nature as an object of protection- 13%. 21% are respondents who perceive nature as an object of benefit. If we compare the results of first-year students and second-year students, we will see that the *aesthetic* attitudes are dominant in both age groups.

The measurement of perceptual abilities included in the visual recognition of familiar natural objects revealed that 37% of respondents have a high level of ecological perceptual abilities, while an average level belongs to 52% of respondents. The ability to differentiate the essential from the secondary in the visual images of natural objects at a low level is developed among 11% of students.

Students themselves believe that projective techniques are an effective tool for studying ecological attitudes. In assessing the predictability of this technique, the majority of students noted its effectiveness (76%).

DISCUSSIONS

Ecological consciousness is not only a photograph, a plaster cast of the known laws of biogeocenosis, it includes not only an impressive component, but necessarily forms, on the basis of the information received, plans and structures of behavior that allow an adequate response to the environment and its change. In other words, in the environmental consciousness there is always an active component that provides for the organization and conduct of not only retaliatory, but also *initiative* actions in relation to nature. The motivating reason for these actions is the ecological attitudes associated with the need to meet the needs and protect against dangerous, harmful and damaging factors.

From this standpoint, environmental consciousness can be viewed as a very complex, self-regulating (i.e. having the ability to change goals, functions, and links by itself) system formed to solve problems of establishing, stabilizing, or changing relationships with nature and its objects that arise in the process of human satisfaction their needs.

Ecological consciousness includes in such behavior plans formed by it such properties as perseverance, initiative, and conviction in the possibility and

effectiveness of active actions, or opposite to them. It is realized through the mind, feelings, motives, interests, positions, attitudes, deeds, actions and activities.

On the basis of individual and social experience in the form of opinions, knowledge, concepts, etc., environmental consciousness forms its values reflecting the duality of man as a subject opposing him/herself to nature, and as a subject being an inseparable part of this nature. In the space of ecological consciousness, these values constantly collide, the results of which are realized in actions.

Thus, environmental awareness can be defined as a complex formation consisting of structural (environmental attention, environmental memory, environmental perception, environmental affect, environmental thinking, environmental will) and functional components (environmental goal setting, environmental knowledge, environmental planning, environmental programming, ecological forecasting, ecological attitude, ecological self-consciousness, ecological assessment, ecological self-assessment, ecological self-control, environmental intent). Four basic psychological characteristics can be distinguished in the structure of individual ecological consciousness: a set of ecological knowledge; position in relation to the world of nature (ecological position), ecological attitudes and ecological intent. Each of these components of ecological consciousness can be diagnosed using projective attitudes.

CONCLUSION

The problem of studying the ecological consciousness of the individual as a psychological phenomenon, as well as the development of methods of psychological diagnosis and the formation of environmental consciousness, is becoming increasingly acute. Overcoming the ecological crisis requires the formation of such a consciousness in people, such an attitude to nature and man (that is, to him/herself and other people), which should be based on the realization that man is not opposed to nature. How we and our children will live tomorrow depends on how the younger generation will deal with our planet today,

what will be its attitude to the preservation of cleanliness on the planet.

Modern students are the people who will create our country, our Earth, bring up new generations in the near future. And it is necessary to influence their environmental consciousness today, now. From a biological point of view, the student time is a *transitional phase from maturation to maturity* - the completion of physical and puberty period. From the general psychological point of view, the student time is a period of intense socialization of a person, the development of higher mental functions, the formation of the entire intellectual system and the personality as a whole. This period of time is associated with the development of self-awareness, the solution of the tasks of professional self-determination and the entry into adulthood. From a social point of view, student time is characterized by a high educational level, high cognitive motivation, the highest social activity and a fairly harmonious combination of intellectual and social maturity.

The central mental processes of adolescence are the development of consciousness and self-awareness. The new formations of adolescence include: the development of independent logical thinking, figurative memory, individual style of mental activity, interest in scientific research.

The most important formation of this period is the development of self-education, that is, self-cognition, as well as the meaning of life. It is very important that the development of environmental awareness and, as a result, environmental behavior becomes one of the leading directions in the sense-of-life orientation in adolescence, as the complex environmental situation in the world and the low level of environmental awareness of the population create the need for more persistent improvement of environmental education and awareness.

In our opinion, it is necessary to pay special attention to the development and use of projective techniques for the diagnosis of environmental consciousness and its structural components, since this type of tests contributes to its more effective study.

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