ETHICAL OUTCOMES OF ECOLOGICAL VALUES IMPLEMENTATION INTO MORAL EDUCATION ANALYZED BY ANIMAL RESPECT QUESTIONNAIRE (ANIRE-QUE)

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Abstract

The study presents life ethics respect outcomes and egalitarian zoocentrism theory implemented into the author´s, diagnostic tool of *Animal Respect Questionnaire* (AniRe-Que). AniRe-Que is a valid and reliable tool for teacher´s action research to assess intervention programs effectiveness aimed at environmental intelligence support and nature protection sensitivity. Subsequently, by means of 504 university students (future teachers of various study fields) as a research sample we focused on estimation of animal respect level (R-score for animals considered as natural beings and the essence of moral reasoning). R-score was analyzed in the context of dominant study field at university, prevailing value education from primary and high school education and worldview. Significant differences were proved for worldview in favor of non-religious respondents, for prevailing value education in favor of secular ethical education and for teacher´s training study field in favor of students studying Ethical Education as their future teaching profession. The study discusses the importance of nature protection sensitivity programs implementation into the educational process.
Study was financially supported by KEGA project 028UMB-4/2021.

1. Introduction

The ecological crisis discussions are heard from everywhere today. Though, the educational reactions in a pupil's value education need to be considered in the context of its manifestations, cause identification, empathy lack of non-human life or underdeveloped understanding of natural free, wild and non-structured environment. We believe environmental crisis ethics can be interpreted as an evidence that it is impossible to formulate and clarify some basic questions, such as What does it mean to be a human? What is justice? What is value? What kind of a good man, s/he is?, without not taking into consideration the Earth and all Earthlings fate with the knowledge of their environment desolation. We start from the premise that (a) moral conduct is related only to a man, and we defend the position that it is manifested only in relation to beings (which is a broader concept than a man). We claim beings have moral status, either as feeling beings or as subjects of life. This issue opens up a question of man's relationship to animals (as non-human natural beings). We presuppose beings have a moral status and respect declaration requires their natural environment protection.

Slovak moral education at our schools covers significantly nature conservation topic, not only because human environment is in global ecological crisis, but also because ecological (or environmental) education is inherently a value education; revealing values and formulating moral norms with respect to non-human world. Therefore, in our research we focused on possible educational impact of the study field, or value/world orientation on animal respect. Our study provides a sociological survey focusing on the future teacher university students´ attitude towards animals, as we believe that the diagnostic tools for assessing attitudes towards nature do not sufficiently reveal the attitudes to animals (compare to Kaliský, Kaliská 2021).

We formulated three research questions. RQ1: *Are there differences in the animal respect from AniRe questionnaire (AniRe-Que) between a group of university students of Ethical Education Teacher´s Training study field and groups of other teaching study fields from Matej Bel University in Banska Bystrica, Slovakia?* RQ2: *Is there animal respect difference in relation to prevailing primary and high school value education?* RQ3: *Is there animal respect difference with respect to an individual´s declared worldview?*

2. Method

2.1. Research sample

Our research sample based on available and intentional sampling (in order to supplement male respondents) consisted of 504 future teacher university students (62% women, M_{age}=22.3; SD=4.1) of various study fields from three faculties of Matej Bel University in Banská Bystrica, Slovakia. Data were collected in 2018.

2.2. Method

We used the author's Animal Respect Questionnaire (AniRe-Que). Its creation process, validity, and reliability estimation were described and explained by Kalisky and Kaliska (2020). It consists of 15 items, assessing animal respect level labeled as R-score (R as respect), reaching values from 1 to 5, with 5 representing the highest level. The questionnaire is based on the ecological egalitarian and zoocentrism theory and identifies an individual´s respect for animals. The questionnaire covers the various areas of human-animal relation via three attitude dimensions – cognitive, affective and conative.

3. Results

RQ1. The statistical analysis of animal respect differences was focused on the interdisciplinary analysis (3 teaching faculties of MBU: Faculty of Education, of Arts, of Natural Sciences) vs. Ethical Education students. By Post-Hoc LSD test, we proved high significant interdisciplinary differences between students of Ethics and other study fields. The students of Ethical education were the only ones reaching maximum value (M = 5.00).

Table. 1. Differences in R-score of various future teacher study field students at MBU.

U-score	Min	Max	**M**	SD	Median	F-test	p	Post-Hoc test p	d
1/ **Ethical Education** (N=53)	2.13	5.00	**3.61**	.57	3.53	8.188	.000	1 vs 2 = .416 1 vs 3 = .005 1 vs 4 = .000	1 vs 2 = .12 1 vs 3 = .47 1 vs 4 = .63
2/ Faculty of **Education** (N=232)	1.53	4.93	**3.54**	.59	3.47			2 vs 3 = .002 2 vs 4 = .000	2 vs 3 = .35 2 vs 4 = .50
3/ Faculty of **Arts** (N=120)	1.67	4.87	**3.33**	.62	3.27			3 vs 4 = .273	3 vs 4 = .15
4/Faculty of **Natural Sciences** (N=88)	1.40	4.80	**3.24**	.60	3.20				

RQ2. We were analyzing the influence of prevailing value class participation at primary and high school. We found out a possible tendency of R-score difference, with low practical effect-size difference, in favor to class-taking of Ethical Education rather than a class of Religious Education.

Table. 2. Animal Respect differences according to prevailing value education at primary and high school.

		Min	Max	**M**	SD	t-test	p	d
Ethical Education (N=294)	U-score	1.67	5.00	**3.50**	.61	-1.96	.051	.18
Religious Education (N=197)		1.40	4.80	**3.39**	.59			

RQ3. A statistically significant Animal Respect difference (p≤.05), but with small effect-size, was estimated only in favor of a higher score for atheists vs. Christians. Other differences are statistically insignificant.

Table. 3. R-score differences according to a respondent's worldviews.

	Min	Max	M	SD	Median	F-test=2.43 p=.07
1 Christian worldview (N=365)	1.40	4.87	**3.40**	.59	3.33	**1 vs 2 p=.04 (1 vs 2 d=.23)**
2 Atheistic worldview (N=94)	2.33	5.00	**3.54**	.61	3.53	1 vs 3 p=.24 1 vs 4 p=.09 2 vs 3 p=.71
3 Agnostic worldview (N=11)	2.67	4.73	**3.61**	.74	3.47	2 vs 4 p=.63
4 Other spiritual worldview (N=27)	1.87	4.93	**3.60**	.76	3.53	3 vs 4 p=.96

4. Conclusions

Our research data showed a normal distribution and its average R-score was 3.44. In the context of central distribution tendency, we assume that the average animal respect score is in the range of <2.83 - 4.05> as a standard or average animal respect score. If the score drops below 2.83, we consider it as a low level of animal respect, and if the average score rises above 4.05, we consider it as a high level of animal respect.

We found out the Ethical Education students achieved an average R-score, though this score is still significantly higher (M=3.61, $p \leq .001^{***}$) than R-score of other study field students. We believe the ecological intelligence as defined by Goleman, (2009), is given more emphasis within the ethical education curriculum, and as we argue environmental education is a value education and therefore it is significantly related with moral development (or ethical education). The Ethical education students in Bachelor university degree must take *Eco-ethics and Ecological Value* courses. There is also an option for them to choose an optional course *Forest as a teaching and learning environment* based on experiential pedagogy. In the Master university degree, the course of *Conversations about Nature* is also offered. This type of pedagogical intervention seems to be meaningful for internalizing the desired and wished for behavior related to nature protection. Environmental education in this extent is not offered within other study fields preparing future teachers.

The animal respect differences related to prevailing value education at primary and high schools (taking classes of ethical or religious education at primary and high schools) were estimated, though not at the expected level (p=.05), just with a tendency to support ethical classes participation. White began the discussion on environmental attitudes with respect to biblical message by the study on *The historical roots of our ecological crisis* (1967), which became inspiring firstly for theoretical and then for empirical verifications (e.g., Guth et al. 1995; Hand, Van Liere , 1984; Hartwig 1999). Schultz, Zelezny and Dalrymple (2000) postulated a similar hypothesis to ours (that the worldview is related to the environmental attitude) when they surveyed people whose worldview was more dependent on biblical texts and at the same time they scored higher in the anthropocentric and lower in the ecocentric environmental orientation. Their research was the first international study of White's hypothesis and their conclusion was based on the attitude analysis of 2160 respondents from 14 countries. We do not claim the Christian orientation leads to a lack of interest in environmental problems, only that its interest is rooted in the interconnectedness of environmental problems to a man. Significantly lower scores in AniRe-Que also suggest this possible assumption. Animals are part of nature, they are natural entities and non-Christian worldview of our research sample (atheistic, agnostic, other spiritual worldview) achieved higher R-score level. Due to the participant´s number, a significantly higher difference was estimated only in atheistic orientation (M=3.40 vs. M=3.54, p=.04, d=.23). However, this issue is more complex and would need to be searched more comprehensively further on.

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