5th World Conference Educational Sciences 2013 - WCES 2013

Students’ Conative Component about the Environment In The Republic Of Macedonia

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Abstract

In this paper we tried to determine the level of students’ conative component about environment in the Republic of Macedonia. 1478 students from 38 primary and secondary schools were included in this research. The most of the students have shown their willingness for active participation in the situations where their environment is polluted. The results of this scientific paper will contribute to more comprehensive explanation of the conditions which lead to positive attitude of the student to the protection of the environment.

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Keywords: conative component, environmental education, students, primary schools, high school, Republic of Macedonia;

1. Introduction

Conative performances are acts of volition or will. Conation is the state of mind of having purpose, and conative knowing is choosing or willing to perform in relation to some set of circumstances or state of affairs. It is a state of knowing – to, as distinct from knowing – that or knowing how. Conative knowing is the state of willingness. But when a person achieves a state of ‘knowing – how’, it includes all the instances of emotional, imaginable, physical, physiological as well as linguistic knowing (Mohanty, A.).

One of the main goals of environmental education is to create a new behavior and lifestyle, which means that each student will engage and act in accordance to the needs of the environment. Srbinovski M. (2005b) defined environmental education as “a process of active learning in which individuals and groups attain elementary knowledge, understanding, and skills for decisive, motivated, responsible, and collective action to achieve and maintain the dynamic environmental balance”. Evidently, the definition constitutes numerous elements which can also be found in other sources (Stapp et al, 1969; IUCN, 1970; Belgrade Chapter, 1975; UNESCO, 1978; Lucas, 1980; Ramsey & Hungerford, 1989; Marcinkowski, Volk & Hungerford, 1990; NEEAC & US-EPA, 1996; IEEP
itn.). Hence, the ultimate goal of environmentally responsible behavior from students can only be achieved if the aforementioned elements are fully integrated in the curriculum.

The willingness of individuals to participate in an activity means "the sum of all his/her characteristics due to which he/she will act in one way rather than another" (Dictionary of Pedagogy, 1967). This term includes physical, psychological and moral components.


2. Methodology

The aim of this study is to determine the students' readiness to engage in situations when their environment is threatened. Readiness for action in protecting the environment is defined as the degree of individual's willingness to participate in the activities of the ecological character (Kundacina, 1991). It expresses the acceptance of possible way of students' engagement when their environment is contaminated.

These results represent willingness on the verbal level, which certainly can not be a complete indicator of the individuals' behavior in situations where their environment is in risk. From that, we have not examined the students' behavior, but their attitudes. It is important to emphasize that what you say and what you do are two different things. As reported by Brickman, Deutscher and Wicker (cited in Hines, Hungerford and Tomera, 1986), what people indicate on a questionnaire is often inconsistent with their actual behaviors.

For the credibility of these studies Novosel, P. (1963) supposes, "When our respondents say that in a situation they will act in a certain way, it still does not mean that it actually happened. It just means that in them there is a certain degree of readiness to act in that way". Siber I. (1984) argues that this is only a "latent disposition of the action."

There is a base ground for assuming that majority of our students is willing for action in situation when their environment is threatened. We have constructed the instrument Scale of activation (SA). Scores of this scale represent different levels of students’ readiness to participate in the activities of environmental protection. On this scale, responders chose one option that represents their readiness to participate in environment protection in certain hypothetical situations. These situations are referred to the rehabilitation of negative states in the environment. 10 hypothetical situations were so formulated that it allows us direct measurement of the student’s readiness degree on the four levels, without a middle category ("forced choice").
Table 1. Action’s modalities (Kundacina, 1991).

<table>
<thead>
<tr>
<th>No</th>
<th>Modality/level of students’ readiness for action</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Indifferent attitude (students do not think about the situation)</td>
<td>1</td>
</tr>
<tr>
<td>B</td>
<td>Passive-active attitude (students think, but not engage)</td>
<td>2</td>
</tr>
<tr>
<td>C</td>
<td>Students do something on their own initiative- active attitude (take action)</td>
<td>3</td>
</tr>
<tr>
<td>D</td>
<td>Collective attitude (take action and asks others to engage)</td>
<td>4</td>
</tr>
</tbody>
</table>

Metric characteristics of SA are given in the following tables.

Table 2. Metric characteristics of SA.

<table>
<thead>
<tr>
<th>N. of. question</th>
<th>905</th>
<th>Minimum</th>
<th>10.00</th>
<th>Variance</th>
<th>30.465</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>26.426</td>
<td>Maximum</td>
<td>40.000</td>
<td>Skewness</td>
<td>-0.939</td>
</tr>
<tr>
<td>Confid. – 95%</td>
<td>26.066</td>
<td>Lower quartile</td>
<td>24.000</td>
<td>S. E. Skewness</td>
<td>0.081</td>
</tr>
<tr>
<td>Confid. + 95%</td>
<td>26.785</td>
<td>Upper quartile</td>
<td>30.000</td>
<td>Kurtosis</td>
<td>1.469</td>
</tr>
<tr>
<td>Median</td>
<td>28.000</td>
<td>Std. deviation</td>
<td>5.520</td>
<td>S.E. Kurtosis</td>
<td>0.162</td>
</tr>
<tr>
<td>Sum</td>
<td>23968</td>
<td>Standard Error</td>
<td>0.183</td>
<td>Miss. Cases</td>
<td>98.000</td>
</tr>
</tbody>
</table>

Thus we have got instruments with relatively good metric characteristics.

We included 1487 students from 38 primary and secondary schools in the Republic of Macedonia from 1999 to 2009. We decided to include final classes, because the students learn environmental issues in all grades, so these students represent a kind of rounding of an educational level. From that, we can conclude that our sample is intentional and systematic. It is intentional because we included final classes, and systematic because we chose each n-th class. Because a range of coincidental moments influenced which students will be found in these classes, we can consider that our sample is coincidental and representative enough.

3. Results and discussion

The students’ level of preparedness to engage in environmental protection is shown in the following table.

Table 3. Distribution of responses (by situations).

<table>
<thead>
<tr>
<th>Hypothetical Situation</th>
<th>A</th>
<th></th>
<th>B</th>
<th></th>
<th>C</th>
<th></th>
<th>D</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
<td>f</td>
<td>%</td>
</tr>
<tr>
<td>1</td>
<td>152</td>
<td>10.66</td>
<td>289</td>
<td>12.13</td>
<td>376</td>
<td>26.37</td>
<td>608</td>
<td>42.64</td>
</tr>
<tr>
<td>2</td>
<td>93</td>
<td>6.74</td>
<td>222</td>
<td>16.09</td>
<td>396</td>
<td>28.7</td>
<td>667</td>
<td>48.33</td>
</tr>
<tr>
<td>3</td>
<td>195</td>
<td>13.57</td>
<td>432</td>
<td>30.06</td>
<td>349</td>
<td>24.29</td>
<td>458</td>
<td>31.87</td>
</tr>
<tr>
<td>4</td>
<td>98</td>
<td>7.34</td>
<td>209</td>
<td>15.64</td>
<td>374</td>
<td>27.99</td>
<td>651</td>
<td>48.73</td>
</tr>
<tr>
<td>5</td>
<td>132</td>
<td>10.36</td>
<td>444</td>
<td>34.85</td>
<td>286</td>
<td>22.45</td>
<td>407</td>
<td>31.95</td>
</tr>
<tr>
<td>6</td>
<td>132</td>
<td>9.81</td>
<td>307</td>
<td>22.81</td>
<td>329</td>
<td>24.44</td>
<td>572</td>
<td>42.5</td>
</tr>
<tr>
<td>7</td>
<td>120</td>
<td>10.84</td>
<td>315</td>
<td>28.46</td>
<td>276</td>
<td>24.93</td>
<td>389</td>
<td>25.14</td>
</tr>
<tr>
<td>8</td>
<td>426</td>
<td>30.06</td>
<td>363</td>
<td>25.62</td>
<td>254</td>
<td>17.93</td>
<td>366</td>
<td>25.83</td>
</tr>
<tr>
<td>9</td>
<td>192</td>
<td>13.38</td>
<td>514</td>
<td>35.82</td>
<td>263</td>
<td>18.33</td>
<td>457</td>
<td>31.85</td>
</tr>
<tr>
<td>10</td>
<td>144</td>
<td>10.11</td>
<td>314</td>
<td>22.04</td>
<td>356</td>
<td>24.98</td>
<td>601</td>
<td>42.18</td>
</tr>
</tbody>
</table>

Legend: A- Indifferent attitude, B - Passive-active attitude, C- takes action, D- Collective attitude
On the basis of these results we can conclude that most students have a positive attitude towards their own participation in environmental protection. Very important is the fact that about 2/3 of them are ready to engage in environmental protection. Thus, we accept the hypothesis that students are substantially ready for engagement in situations where the environment is in jeopardy.

The respondents have not equal attitudes towards offered situations. Their readiness for action depends on the kind of the problems. They have shown more willingness to act in the school’s activities about environment. This could mean that they consider themselves as competent authorities for implementation of the activities in the environment. Indifferent attitude of students was reported in 12.8% of cases. This percentage indicates that their willingness for action is lower than the needs of the society. This passive attitude of students is determined by large number of factors from the social and school environment. Some of them influence positively and some negatively, which leads to student’ disorientation. In this context, some previous studies have not confirmed the dominant position of the school’s contribution in the field of environmental education (Kundacina 1991, Srbínovska 2001, Srbínovski, 2005b and 2003b). In our opinion, this is the result of a number of weaknesses that characterize the current education system. In fact, many authors believe that our educational system is still too closed, uniform, slow, overloaded with tradition, and not sensitive enough and ready for change.

Kundacina (1990) found a statistically significant correlation between the willingness of young people to participate in the environmental protection on the one hand, and environmental atmosphere in the family, urbanization of residence, social status, financial status of the family, on the other hand. The same author believes that "the students’ activities are determined by a number of factors that can be divided into those who make the internal motivation and those who do situational circumstances. Readiness for action is the product of the value’s orientation of the individual and his feelings and beliefs in the need to engage".

Srbínovski M. (2005a, 2005b) on the representative sample of 2154 students found that the conative component is on higher level among young students than the older ones. The same author found low correlation (0.16 and 0.21) among cognitive and conative component (Srbínovski, 2005a, 2005b). This means that the conative component can not be statistically significant develop only through this component. Kundacina (1991) confirmed that the conative and other students' environmental qualification are not statistically significant related. On the relationship between cognitive and conative component indicate McVittie & Chamberlain (2000). Similar results were obtained by Srbínovski (1997) with students in experimental classes in "J. Rade Korčagin" in Skopje and "Kiril Pejčinovic"-Tetovo, high schools, (1996b). Stojanovic et al, (1997) found a positive relationship between studying of environmental content and students' behavior toward nature.

The positive students’ attitude towards their own participation in environmental protection shows that they are willing to learn the contents in the field of ecology. Unfortunately, content analysis of the curriculum and didactic materials has shown that there are many weaknesses and gaps in terms of their quality and quantity (Srbínovski, 2001, 2002a, 2002b, 2002c, 2003a, 2003b, 2003c, 2003d and 2003). There are several reasons for this. One of them is still not fully established right place of environment in the educational system.

4. Conclusion

Bearing in mind previous findings, as well as the average assessment level of students’ readiness for action (62 %), we can conclude that the most of students are ready for action in the situation where their environment is threatened. From that, we can partially confirm our hypothesis. It is an indisputable fact that the younger generation aware of the importance of preserving the environment and they are adequately prepared to protect it. On the other hand, they are motivated to successfully learn their own environmental courses. However, at this level is not their educational system. The need for harmonious action of the school and social factors is greater than ever. Social community must be aware of the role of educational systems in the field of environmental protection. From that, in accordance to the environmental goals and principles, we must permanently advancement our educational system, especially in the field of environment and sustainable development. Just in this way, we could professionally and competently...
respond to this social need, particularly as young people showed their awareness and readiness for active involvement in situations when their environment is threatened. This conative attitude towards the environment actually has to be one of the ultimate goals of environmental education. And he can only be achieved if the whole society becomes a powerful educational community.

References


