

## *Investigating the Environmental Education Components in the Textbooks of the First Secondary School with the Emphasis on the Statement of the Second Step of the Revolution*

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### *Abstract*

A healthy environment is a divine blessing in which the well-being of all beings is considered and God Almighty has made its proper use as a guarantee for the survival of beings, including man, and a provider of his physical and mental health. Education is a high-yield investment in the development process, especially sustainable development, and is one of the accelerating factors for creating change and transformation in order to prevent environmental degradation. In this research, descriptive methods and content analysis is used to the answer questions. A little emphasis has been given to the Shannon entropy method, so after studying the theoretical foundations and research background of environmental education, components were extracted and then a content analysis checklist was compiled. Then, based on that, the amount of attention to these components in textbooks was examined. The statistical population was the textbooks of the first year of high school. The unit of analysis was also the sentence. In this regard, the upstream documents (document of fundamental change in education, national curriculum document and 20-year vision document, the fifth five-year development plan of the Islamic Republic of Iran, the sixth development plan of the Islamic Republic of Iran and the declaration of the second step of the revolution) have been analyzed. Findings obtained from the abundance of components have shown that the components of environmental education in primary school textbooks do not have a normal distribution, while some components have received more attention than others.

**Key Words:** Environmental Education, Second Step Statement, First Secondary

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### **Introduction**

life of humans and creatures. Despite not interfering in its formation, human beings have played a great role in its destruction and damage, and by using it indiscriminately in the form of technology and industry, they have faced an environmental crisis that threatens their widespread danger from the depths of the earth to the atmosphere. If no action is taken, this crisis will only result in a threat to human health and the depletion of resources. A healthy environment is a divine blessing in which the welfare and comfort of all beings is considered and God Almighty has made its proper use as a guarantee for the survival of beings, including human beings and provides their physical and mental health (Hassanzadeh et al, 2019). According to In the historical course of the change and evolution of the environmental content of textbooks from 1291 to 1388, it can be said that environmental education in the ,current system of education despite much progress compared ,to previous years, still it has a long way to go to reach the desired situation. Our country is a country that has a great diversity in terms of climate, geography, land, plants and animals. It is necessary to provide environmental education according to the diversity, needs and interests of students so that these educations can be institutionalized in them and thus make them responsible and

sensitive to the preservation and protection of their environment (Kargozar 2018).

Popular participation has been proposed as one of the strong tools to solve environmental problems and the only way to achieve the ideal of a healthy society and sustainable development (Lahijanlian, 2017) The purpose of creating and forming the field of participation is to raise a generation that is aware, responsible, active and hopeful for the future. The field of environmental activities is the field of conscious, compassionate, caring, and voluntary future action of individual and group. This field can be achieved only with teachings in the framework of macro goals that is thinking and faith, science, practice and ethics at the same time and in an internal connection with each other. This field can be achieved only with teachings in the framework of macro goals, that is thinking and faith, science, practice and ethics at the same time and in an internal connection with each other. Issues such as migration, dangerous diseases and environmental damage are not in themselves a direct threat to the territorial integrity or maintenance of the regime, but when they affect economic capabilities, natural resources and manpower, they are a threat to national security. For example, the Chernobyl nuclear power plant and the damage it did to the health of its citizens and overshadowed the economic

potential of Ukraine's neighboring countries, made it a threat to the national security of these countries (Jajarmi et al, 2013). Vision Document 1404 Iran has important and special security requirements ahead of it. Dimensions of security The vision document can be divided into five approaches: cultural, economic, political, and military environment, and the realization of this document requires a multifaceted view of security. (Eftekhari et al, 2011).

Because they make up about 30% of the world's population . Secondly, they are the next generation and thirdly, they are against all kinds of pollution Environmentals are vulnerable. Fourth, there is a high level of receiving and learning in childhood and adolescence, and they learn more and more quickly. Take . Unfortunately, very little research has been done on environmental education in general and environmental education for students ( Arjmandi , 2018 ).

teacher should use this opportunity and teach Things like methods Provide students with environmental protection and strengthen their sense of responsibility(Hoody , 1995 ) . Environmental education and raising public awareness, especially in developing countries, is considered a serious and effective solution to stop the rapid movement of destruction of the environment and nature. Long

steps have been taken towards sustainable development because any kind of planning with the aim of solving environmental problems without the intervention of individual and social elements, in other words, citizen participation can not be .successful(World Commission on Environment and Development, 1987).

Training is a tool for achieving sustainability. A study of the history of the evolution of environmental education from the nineteenth century to the present shows the fact that as human awareness of the environment has increased, so has the fear of environmental destruction. This fear, of course, has caused human beings to seek a way out of threats against the environment ( Zare et al, 2018) Currently in Iran, the titles of environmental education are included in the books of experimental sciences and geography in a combined way. Has been a student (Soleimanpour et al ,2013) . Considering the necessity of influencing the content of curricula with topics related to environmental education on high school students and the adaptation of environmental education titles based on sustainable development to the environmental problems of Iran and the world today, the present study tries to respond to The following two questions are a step towards improving the environmental education curriculum in junior high school

and getting closer to the goal of sustainable development.

**Background:**

Azadkhani et al. In a study entitled "Study of environmental education and environmental protection behaviors of high school students in Ilam" concluded that the higher the level of literacy and environmental education, the more responsible and better environmental behavior is performed. In this study, poor performance Educational institutions and the unavailability of environmental educational resources were proven (Azadkhani et al, 2018) . In order for environmental education reform to be effective, effective policies must be considered to adapt to the current situation in order to address the challenges of environmental education (Birjandi, 2017) Karimi et al ., In a study entitled "Designing an environmental education curriculum for the Iranian primary school" concluded that environmental education for children, especially elementary school students, is of particular importance. In fact, emphasizing the basics of environmental vitality, being the caliph of God man, instilling environmental values and other principles mentioned for teaching environmental to children in this study, can be said to promote moral and social values, increase self-esteem and spread emotions in students and eventually follow the beauty of the Earth. (Karimi et al, 2017).

In this research the following questions was followed:

Question 1: What are the components affecting environmental education in junior high school based on sustainable development indicators?

Question 2: What is the status of the components affecting environmental education in the first secondary school based on sustainable development indicators?

**Methodology**

In this study, to answer the questions from descriptive method and quantitative content analysis with emphasis on Shannon entropy method has been done, so after studying the theoretical foundations and research background of environmental education components were extracted and then the content analysis checklist was compiled and based The level of attention to these components in the textbooks was examined. The statistical population was the textbooks of the first year of high school. The unit of analysis was also the sentence. In this regard, the upstream documents (document of fundamental change in education, national curriculum document and 20-year vision document, the law of the fifth five-year development plan of the Islamic Republic of Iran and the sixth development plan of the Islamic Republic of Iran and the declaration of the second step of

the revolution) have been analyzed.

### **Finding**

Content analysis of junior high school textbooks of sustainable development environmental components. The findings of this study include quantitative and qualitative analysis of textbooks in the first year of high school based on environmental components . The data obtained using Shannon entropy method are normalized data. Then, in the second step of Shannon entropy method, the amount of uncertainty of the data obtained from the mentioned tables are given respectively. Then, using the third step. Shannon entropy method, the significance coefficient of the information obtained from Tables is shown.

Table 1- Normalized data Paying attention to the components of environmental education in seventh grade textbooks

Components of environmental education Book titles	population	Desert and desert	and non-renewable	Exploitation of the environment	animals	Sea, river, lake	global warming in the	Ozone layer erosion	humans in environment	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Science	0.000	0.000	0.959	1,000	0.356	0.586	0.000	0.000	0.429	0.500	0.600	0.000	0.194	0.531	0.103	0.498
Math	0.036	0.000	0.041	0.000	0.007	0.059	0.000	0.000	0.000	0.000	0.000	0.000	0.066	0.088	0.086	0.032
Social studies	0.873	0.000	0.000	0.000	0.094	0.204	0.000	0.000	0.571	0.000	0.114	0.000	0.036	0.175	0.149	0.179
Persian(reading)	0.000	0.000	0.000	0.000	0.013	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.053	0.113	0.034	0.009
Persian (writing)	0.000	0.000	0.000	0.000	0.000	0.020	0.000	0.000	0.000	0.000	0.000	0.000	0.036	0.015	0.006	0.000
Heavenly messages	0.000	1.000	0.000	0.000	0.235	0.026	0.000	0.000	0.000	0.333	0.086	0.000	0.000	0.015	0.023	0.135
Quran	0.000	0.000	0.000	0.000	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.005	0.006	0.013
Arabic	0.000	0.000	0.000	0.000	0.094	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.102	0.005	0.069	0.009
Culture and Art	0.000	0.000	0.000	0.000	0.161	0.013	0.000	0.000	0.000	0.000	0.000	0.000	0.421	0.000	0.291	0.004
Business and Technology	0.000	0.000	0.000	0.000	0.000	0.013	0.000	0.000	0.000	0.167	0.171	0.000	0.063	0.046	0.217	0.094
English language	0.091	0.000	0.000	0.000	0.027	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.002
Thinking and research	0.000	0.000	0.000	0.000	0.013	0.020	0.000	0.000	0.000	0.000	0.029	0.000	0.016	0.005	0.017	0.026

The frequency distribution of environmental education components in the seventh grade textbooks shows that in total the pages of the seventh grade textbooks have 468 items for water component, 304 items for forest and tree components, 194 items for air component, 175 items for soil component, 152 items for sea component and 149 life items 55 cases to the population component, 49 cases to the renewable and non-renewable resources component, 35 cases to the pollution component, 14 cases to the environmental exploitation component, 14 cases to the human role component in environmental protection, 6 cases to the desert component and 6 cases to the component. The role of technology in environmental protection is discussed, and the components of wetlands, ozone depletion, and global warming are not mentioned at all.

Table 2 Normalized data Paying attention to the components of environmental education in eighth grade textbooks

Components of environmental education/ Book titles	population	Desert and desert	non-renewable	Exploitation of the environment	animals	Sea, river, lake	warming in the	Ozone layer erosion	in environmental	technology in the	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Science	0.08	0.33	0.70	1.00	0.19	0.14	0.00	0.00	0.80	0.50	0.38	0.00	0.11	0.34	0.22	0.25

Math	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.07	0.04	0.34	0.04
Social studies	0.68	0.00	0.00	0.00	0.02	0.43	0.00	0.00	0.20	0.00	0.13	0.00	0.01	0.37	0.01	0.26
Persian(Reading)	0.00	0.00	0.00	0.00	0.01	0.07	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.04	0.19	0.14
Persian (writing)	0.00	0.00	0.00	0.00	0.04	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.05	0.03	0.04
Heavenly messages	0.09	0.00	0.30	0.00	0.09	0.05	0.00	1.00	0.00	0.50	0.38	0.00	0.08	0.06	0.05	0.07
Quran	0.00	0.67	0.00	0.00	0.05	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.02
Arabic	0.00	0.00	0.00	0.00	0.28	0.13	0.00	0.00	0.00	0.00	0.00	0.00	0.12	0.02	0.00	0.02
Culture and Art	0.00	0.00	0.00	0.00	0.19	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.10	0.02	0.01	0.00
Business and Technology	0.00	0.00	0.00	0.00	0.07	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00	0.12
English language	0.15	0.00	0.00	0.00	0.01	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.05	0.05	0.07	0.00
Thinking and research	0.00	0.00	0.00	0.00	0.02	0.06	0.00	0.00	0.00	0.00	0.13	0.00	0.03	0.00	0.08	0.04

The frequency distribution of attention to the components of environmental education in the eighth grade books shows that in total the pages of the eighth grade books have 269 items for water component, 129 items for forest and tree components, 113 items for air component, 74 items for soil component, 110 items for sea components and 20 items for marine components. 65 cases to the population component, 10 cases to the renewable and non-renewable resources component, 16 cases to the pollution component, 3 cases to the environmental exploitation component, 5 cases to the human role component in environmental protection, 3 cases to the desert component and 6 cases to the component The role of technologies in environmental protection and 5 cases of ozone depletion have been discussed and the components of wetlands and global warming have not been mentioned at all.



Table 3-Normalized data Paying attention to the components of environmental education in ninth grade books

Components of environmental education/Book titles	population	Desert and desert	Renewable and non-	Exploitation of the	animals	Sea, river, lake	warming in the	Ozone layer erosion	environmental	The role of technology	Pollution	Wetlands	Forest and tree	Air	Soil	water
Science	0.244	0.000	0.758	0.500	0.676	0.484	1.000	0.000	0.267	0.000	0.619	0.257	0.468	0.687	0.447	0.466
Math	0.000	0.000	0.000	0.000	0.000	0.008	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.002	0.004	0.024
Social studies	0.153	0.000	0.000	0.000	0.023	0.081	0.000	0.000	0.000	0.000	0.143	0.005	0.006	0.197	0.047	0.141
Persian (Reading)	0.000	0.000	0.000	0.000	0.051	0.097	0.000	0.000	0.000	0.000	0.000	0.000	0.115	0.010	0.118	0.026
Persian (writing)	0.000	0.000	0.000	0.000	0.019	0.032	0.000	0.000	0.000	0.000	0.000	0.000	0.119	0.010	0.106	0.043
Heavenly messages	0.297	1.000	0.032	0.000	0.043	0.065	0.000	0.000	0.000	0.000	0.095	0.757	0.025	0.000	0.082	0.105
Quran	0.000	0.000	0.000	0.000	0.009	0.032	0.000	0.000	0.000	0.000	0.000	0.003	0.000	0.000	0.004	0.000
Arabic	0.094	0.000	0.000	0.000	0.083	0.113	0.000	0.000	0.000	0.000	0.000	0.006	0.008	0.000	0.012	0.033
Culture and Art	0.063	0.000	0.000	0.000	0.028	0.016	0.000	0.000	0.007	0.000	0.000	0.006	0.035	0.000	0.012	0.000
Business and Technology	0.150	0.000	0.211	0.500	0.037	0.040	0.000	0.000	0.667	0.000	0.143	0.000	0.009	0.015	0.018	0.148
English language	0.000	0.000	0.000	0.000	0.003	0.008	0.000	0.000	0.000	0.000	0.000	0.009	0.000	0.000	0.006	0.000
Thinking and research	0.000	0.000	0.000	0.000	0.028	0.024	0.000	0.000	0.000	0.000	0.000	0.002	0.000	0.000	0.129	0.000

The frequency distribution of attention to the components of environmental education in the ninth grade textbooks shows that in total the pages of the ninth grade textbooks have 467 items for water component, 338 items for forest and tree components, 202 items for air component, 85 items for soil component, 124 items for sea component and items. According to the animal component, 320 cases to the 648 population component, 95 cases to the renewable and non-renewable resources component, 21 cases to the pollution component, 4 cases to the



environmental exploitation component, 15 cases to the human role component in environmental protection, 3 cases to the desert component The component of wetlands and 3 cases of global warming are discussed and the components of ozone depletion and the role of technologies in environmental protection are not mentioned at all.

Frequency distribution of attention to the components of environmental education in the total of three levels It shows that in total the pages of the first grade high school textbooks are 1204 items for water component, 771 items for forest and tree components, 509 items for air component, 334 items for soil component, 386 items for sea component and 1006 items for animal component, 440 items for population component, 154 items. The component of renewable and non-renewable resources, 72 cases to the component of pollution, 21 cases to the component of environmental exploitation, 34 cases to the component of human role in environmental protection, 12 cases to the component of deserts and 12 cases to the component of technologies in environmental protection. 5 cases deplete the ozone layer, and 3 cases deal with the global warming component.

Table 4-Normalized data Paying attention to the components of environmental education in the three-base set

Comp onents of enviro nment al educat ion/ Book titles	population	Desert and desert	Renewable and non-renewable	Exploitation of the	animals	Sea, river, lake	The role of global warming in	Ozone layer erosion	The role of humans in	The role of technology in the	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Science	0.189	0.083	0.818	0.905	0.528	0.425	1.000	0.000	0.412	0.500	0.556	0.250	0.300	0.550	0.216	0.429
Math	0.005	0.000	0.013	0.000	0.004	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.043	0.041	0.123	0.031
Social studies	0.320	0.000	0.000	0.000	0.034	0.228	0.000	0.000	0.265	0.000	0.125	0.000	0.044	0.226	0.093	0.182
Persian (Reading)	0.000	0.000	0.000	0.000	0.038	0.060	0.000	0.000	0.000	0.000	0.000	0.000	0.109	0.057	0.090	0.045
Persian (writing)	0.000	0.000	0.000	0.000	0.021	0.028	0.000	0.000	0.000	0.000	0.000	0.000	0.104	0.022	0.036	0.026
Heavenly messages	0.230	0.750	0.039	0.000	0.081	0.044	0.000	1.000	0.000	0.417	0.153	0.750	0.025	0.022	0.045	0.109

Quran	0.000	0.167	0.000	0.000	0.017	0.039	0.000	0.000	0.000	0.000	0.000	0.019	0.004	0.003	0.011
Arabic	0.068	0.000	0.000	0.000	0.125	0.073	0.000	0.000	0.000	0.000	0.000	0.000	0.097	0.006	0.039
Culture and Art	0.045	0.000	0.000	0.000	0.081	0.110	0.000	0.000	0.029	0.000	0.000	0.000	0.198	0.006	0.159
Business and Technology	0.109	0.000	0.130	0.095	0.039	0.023	0.000	0.000	0.294	0.083	0.125	0.000	0.031	0.049	0.123
Language English	0.034	0.000	0.000	0.000	0.009	0.008	0.000	0.000	0.000	0.000	0.000	0.000	0.013	0.016	0.015
Thought thinker	0.000	0.000	0.000	0.000	0.025	0.034	0.000	0.000	0.000	0.000	0.042	0.000	0.017	0.002	0.060

Table5- Uncertainty(information load, Ej) from each of the categories in seventh grade books

Category	population	Desert and desert	Renewable and non-renewable resources	Exploitation of the environment	animals	Sea, river, lake	the role of green warming in the	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Ej	0.130	0.000	0.069	0.000	0.591	0.422	0.000	0.000	0.140	0.407	0.370	0.000	0.670	0.467	0.663	0.489

Table6- Uncertainty (information load,  $E_j$ ) from each of the categories in the eighth grade books

Category	population	Desert and desert	Renewable and non-renewable resources	Exploitation of the environment	animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
$E_j$	0.39	0.25	0.24	0.00	0.81	0.74	0.00	0.00	0.20	0.27	0.50	0.00	0.87	0.66	0.71	0.78

Table7- Uncertainty (information load,  $E_j$ ) from each of the categories in the ninth grade books

Category	population	Desert and desert	Renewable and non-renewable resources	Exploitation of the environment	animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
$E_j$	0.67	0.00	0.26	0.27	0.52	0.71	0.00	0.00	0.32	0.00	0.43	0.22	0.70	0.38	0.69	0.67

Table8- Uncertainty ( , information load,  $E_j$ ) from each of the categories in the three-base set

Category	population	Desert and desert	Renewable and non-renewable resources	Exploitation of the environment	animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
$E_j$	0.54	0.29	0.24	0.12	0.62	0.59	0.00	0.00	0.33	0.36	0.40	0.22	0.77	0.44	0.79	0.58

Table9- Importance coefficient (W j) of the components of environmental education in seventh grade textbooks

population	Desert and desert	Renewable and non-Exploitation of the environment animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental education	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water	Significance factor (W j)
0.031	0.000	0.015	0.000	0.130	0.090	0.000	0.000	0.033	0.092	0.084	0.000	0.154	0.100	0.153,266

Table 9 shows that the highest importance factor among the components of environmental education in the seventh grade books is related to the water component in total(3.266)and the lowest importance factor is related to the components of ozone depletion, wetlands, the role of global warming in the environment and Exploitation of the environment is ziro(0)

Table10- Importance coefficient (W j) of environmental education components in eighth grade textbooks

Category	population	Desert and desert	Renewable and non-Exploitation of the environment animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental education	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Significance factor (W j)	0.060	0.040	0.038	0.000	0.126	0.115	0.000	0.000	0.031	0.043	0.078	0.000	0.135	0.103,110,121

Table 10 shows that the highest coefficient of importance among the components of environmental education in the eighth grade books is related to the component of forest and tree in total(0.135)and the lowest coefficient of importance is related to the components of ozone depletion, wetlands, the role of global warming in Environment and exploitation of the environment (0) .

Table 11- Importance coefficient (W j) of the components of environmental education in the ninth grade textbooks

Category	population	Desert and desert	Renewable and non-renewable resource	Exploitation of the environment	animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Significance factor (Wj)	0.114	0.000	0.044	0.047	0.089	0.120	0.000	0.000	0.055	0.000	0.073	0.038	0.119	0.065	0.118	0.115

Table 11 shows that the highest coefficient of importance among the components of environmental education in the ninth grade textbooks is related to the component of forest and trees in total(0.119)and the lowest coefficient of importance is related to the components of technology role in environment, ozone layer erosion, heating role. The planet is in the environment and the exploitation of the environment and the desert and the desert(0).

Table12- Significance factor (W j) of environmental education components in the total of three levels

Category	population	Desert and desert	Renewable and non-renewable resource	Exploitation of the environment	animals	Sea, river, lake	The role of global warming in the environment	Ozone layer erosion	The role of humans in environmental protection	The role of technology in the environment	Pollution	Wetlands	Forest and tree	Air	Soil	Water
Significance factor (Wj)	0.086	0.046	0.039	0.020	0.093	0.090	0.000	0.000	0.052	0.058	0.064	0.032	0.129	0.066	0.120	0.092

Table 12 shows that the highest coefficient of importance among the components of environmental education in the first grade of high school textbooks is related

to the soil component in total (0.126)and the lowest coefficient of importance is related to the components of ozone depletion, the role of global warming Is(0).

## **Discussion and conclusion**

According to the content analysis of the textbooks of the first secondary school (seventh, eighth, ninth) a total of 1621 cases in the seventh books, a total of 1017 cases in the eighth books and 2239 cases in the ninth books have been discussed in relation to key concepts of environmental education. Thus, 16 components are water, soil, air, forests and trees, wetlands pollution, the role of technology in the environment, the role of humans in environmental protection, ozone depletion, the role of global warming in the environment, sea, river, lake, animals, exploitation From the environment, renewable and non-renewable resources, desert and desert, and are distributed in 36 volumes of textbooks for the first year of high school in the academic year of 1997-98 in 13 titles of experimental sciences, mathematics, studies Social, Persian (reading), Persian (writing), Messages sky, Quran, Arabic Culture and Art, Business and Technology, English language, thinking and research, defense readiness. Also, the findings from the abundance of components have shown that the components of environmental education do not have a normal distribution, while some components have received more attention than others. In contrast, some components were given less attention. Also, the obtained frequency is not normally distributed among textbooks. As the highest frequency of environmental education belongs to the books of experimental sciences (cases 2086) and the lowest frequency is related to English language books (55 items) and Quran (65 items)

In the books of all three junior high schools, the most attention among all environmental components was the water component with 1204 cases and the least attention was paid to the role of global warming in the environment with 3 cases. To the soil component (0.126) and the lowest importance factor is related to the ozone layer erosion component and the role of global warming in the environment (0). Therefore, the results of the analysis of the textbooks of the first year of high school show that in the content of the curriculum of this course, there is no balanced attention to environmental education and its components. In the documents (The law of the five-year development plan of the Islamic Republic of Iran and the law of the sixth development plan of the Islamic Republic of Iran and the declaration of the second step of the revolution) the issue of environment, necessity and importance of its preservation and ways of its protection have been explicitly mentioned as one of the important and underlying dimensions of development in various dimensions. It is also mentioned in the national curriculum of our country that the function of the book of experimental sciences in the social dimension can establish the honorable survival and sustainable development of Islamic Iran. Nature, as a part of divine creation, aims to honor, develop and learn from it to play a constructive role in improving the standard of living of individual, family, national and global. And provides science-based attitudes, especially to the environment, by studying vital

processes and organisms, the earth and its surroundings, changes in matter and energy, nature and processed materials, but according to the objectives set out in the science textbook Experimentally observed, not all environmental components have received the same attention. In the centralized education system of our country, the content of the curriculum has potentials that can be used in environmental education and adolescents' familiarity with the environment and its challenges. All these school years, the most critical stages of growth for all members of the society can be used in order to be educate them in this regard.

In order to integrate environmental education with other courses, it is necessary to review and make necessary corrections in the books or programs related to them, and to pay attention to environmental education as a goal in designing and compiling program..

The results of content analysis of first grade high school textbooks based on environmental components based on sustainable development showed that some environmental

Therefore, in order to have the desired quality of education in the field of environmental behavior, we must change the conditions and educational methods so that we can use our mental and practical abilities.

According to the statement of the second step of the revolution, which is the beacon of light for the future of the Islamic Republic of Iran, the Curriculum planning specialists need to plan in such a way that the opportunity And position Provide opportunities for children and adolescents to educate and learn how to properly communicate with the community and the environment.

components have been neglected, so it is recommended to design textbooks for all biological components. Environment should be considered and neglected components should be considered. A research with the same title should be done on other educational levels. Quality(positon) of the current situation of environmental education in practice according to teaching methods, evaluation should be considered.

in Ilam" Quarterly Journal of Man and Environment, No. 44, Spring 2015.

Eftekhari, A; Naderi Bab Anari, M; Misemi, H, (2011) Reading the security requirements of the vision document of the Islamic Republic of Iran on the horizon of 1404. Strategy Quarterly, Year 20 Issue 3

Bagheri Varkaraneh, A,(2003) A Survey of High School Students' Awareness and Interest in Environmental Ethics. Master Thesis of Islamic Azad

## References

Arjomandi. R, (2018). "Environmental Strategy for Sustainable Agriculture" PhD Thesis in Environment, Islamic Azad University, Science and Research Branch, Tehran. (in Persian).

Azadkhani, P; Sadatnejad, M; Sharafkhani, J,(2015) "Study of environmental education and environmental protection behaviors of high school students

[Biannual Journal of Education Experiences, Vol 5, No 1, Winter & Sprig, 2022,](#)



University, Research Sciences Branch

Birjandi, M,(2017) "Main Policies in Developing and Implementing Environmental Education Strategies in the Sixth Development Plan" Strategy Quarterly, Volume 26, Number 84

Cooper, h. Hedges, L V.(2009). Research Synthesis as a scientific process. A chapter on: The Handbook of Research synthesis and meta-Analysis, Second Edition. Russell Sage

Fahimi, A, (2013). "Civil liability due to environmental degradation in jurisprudence and law of Iran". Islamic Center of Science and Culture, Institute of jurisprudence and law. p112-127. [In Persian]

Jamiz Babar and Michael Smith. (1994). "The Nature of Foreign Policy". Translated by Dr. Seifzadeh. Tehran: Gomes Publication.E1

Jajarmi, Kazemi; Pishgahi Fard, Z; Mahkouei, H, (2013) Assessment of Environmental Threats in Iran's National Security, Strategy Quarterly, Volume 22, Number 7

Hassanzadeh, H; Adibi Mehr, M; Dadash Nejad Delshad, D; Baghizadeh, M, J,(2019). The role of the jurisprudential rule of harmlessness in the management of environmental crises. Scientific Quarterly, Environmental Education and Sustainable Development, Seventh Year, No. 3, Spring 1998, pp. 127-146) .(in Persian).

Heidari, L, (2003). Western Civilization, Islamic Civilization and Westernism, translated by Fazlollah Hosseini, Tehran, Shlak Publishing. (in Persian).

Hoody, L '1995,' the Educational Efficacy of Environmental Education", state Education & Environment Round Table. San Diego. California.

Kargozar, M (2018), PhD thesis "Design and feasibility study of the optimal model of environmental education curriculum in primary school with an integrated approach", Tarbiat Modares University. (in Persian).

Karimi, B; Ali Asgari, M; Kian, M, (2017). Designing an environmental education curriculum for the elementary school of Iran, Yazd University. (in Persian).

Lahijanian, A,(2017). "Teaching Public Participation in Environmental Management" Volume One, Publisher of Islamic Azad University, Research Sciences Branch, Tehran. (in Persian).

Shirvani, Ali. (2007), "Nahj al-Fasaheh". Qom: Dar Al Fekr. E3. [In Persian]

Soleimanpour Omran, M; Yar Mohammadian, M,H; Keshtiarai, N, (2013) A Study of the Approach and Theories of Environmental Ethics on Environmental Education, the First Conference of the Scientific Association of Biological Education and Sustainable Development of Iran-Tehran. .(in Persian).

Tabarsi, Fazl ibn Hasan. (2018), "Assembly of Al-Bayan". Investigating: Seyyed Mohammad Rasouli Mahallati. Birout: Daralmarrof. E1. [In Persian]

Zare, S; Zeinlipour, H; Zarei, I, (2017) "Content Plan of Sustainable Development Education Curriculum in Iran's

Higher Education System"  
Environmental Education and

Sustainable Development Sixth  
Winter 2017 No. 2