

Content Analysis of Primary School Textbooks from The Perspective of Environmental Ethics

Original Paper

Received May. 15, 2016

Revised Jun. 17, 2016

Accepted Aug. 18, 2016

Haniehsadat Sadat Shekarabi¹ and Zohreh Saadatmand^{2*}

1. MA Curriculum Planning, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

2. Associate Professor, Department of Curriculum Planning, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

*Corresponding author: Saadatmand Z.

Abstract The current research was performed with the aim of analyzing the content of curricula Persian, Science and Heavenly Gifts of first period elementary based on environmental ethics. They include cleanness and environmental protection, cleanness and protection of human-made environment (urban), how to use energy resources, and protection of plants and animals. Thus, in this research Persian, Science and Heavenly Gifts textbooks of first period elementary were analyzed as most important educational resource to determine the extent to which moved in line with environmental ethics. Shannon entropy was used in research content analysis. Analysis unit was Persian and Science of first, second and third grades and Heavenly Gifts of second and third grades of first period elementary, which they include a total of 695 pages of Persian book, 318 pages of Science book, and 205 pages of Heavenly Gifts of first period elementary. The statistical society was Persian, Science and Heavenly Gifts textbooks of first period elementary in 2015 academic year. The results indicated that the most attention was paid in all Persian textbooks of first, second and third grades of first period elementary to environmental ethics namely cleanness and protection of human-made environment (urban) (258%) and protection of plants and animals (258%), in Science textbooks of first, second and third grades of first period elementary protection of plants and animals (266%), and in Heavenly textbooks of first, second and third grades of first period elementary to cleanness and environmental protection (0.24).

Keywords: Cleanness and Environmental Protection, Cleanness and Protection of Human-Made Environment (Urban), How to Use Energy Resources, Protection of Plants and Animals

Introduction

People during their life make decisions that directly or indirectly affect the environment. People to meet their basic needs; need environmental relation, producing environmental behavior (Sadafinezhad,2005)

Environment is one of the blessings of God that God has deposited human being and protection of life in the shadow teachings of Islam entrepreneurs is small manifestation of gratitude and thanksgiving for the unique creator. In this respect due to the human relationship with the environment is very important. In fact, humans are required to protect God's

creation and we must improve it. The teachings of Islam also emphasize that the use of environmental resources must be done in a particular context, the exploitation of waste and should be avoided. It is therefore important that environmental education and the promotion of ethics for the public, helping them to proper interaction with the environment (Melki, 2010)

The researchers believe that the best way to institutionalize positive habits is education, the teaching of the habit of childhood. Environmental protection is a habit that must be learned from an early age to turn to a subjective belief. The

subjective belief make the student make up the habitat in which it lives only in the best possible way to maintain (Bayat, 2011). Enter the associated environmental concepts in school textbooks of different makes the students from the beginning of the formative time of their characters, the environment, not only as a lesson but as a human responsibility domestically. In the official document of strategic development and public education system in the vision of twenty years, promote ideas and life skills, health and environmental policy is as objectives.

Since the content of textbooks (Words, sentences, shapes and images) from elementary school students are the most important means of knowledge and training are required for program planners, environmental practices in curriculum development and design of textbooks, environmental ethics are also considered. A textbook when the realization of the goals of education can help with design questions, tasks and principles and materials used in its preparation, it should be clear that does it provide the context needed to learn the rules, values and homework? To what extent flourish the capabilities and creativity of students? Textbook, that shape our attitudes and sensibilities and the consolidation and the formation of a specific value within our system has a considerable role. One of the good practices that will help us is to analyze the content of textbooks based on factors related to environmental ethics research using stake (1390) obtained and these components are: 1. Cleaning and protection of the natural environment 2-protecting man-made environmental (urban) 3. Use energy sources 4. Protecting of flora and fauna.

What is it that makes up the present study is that Persian textbook, how much attention has been paid to these components in Science and Heavenly gift

textbook of elementary school? How much training is provided to protect the environment? So that an appropriate revision of textbooks to be provided.

The concept of environmental ethics

In general ethics guide human action. Humans have always been faced with the question of what is the appropriate behavior? This command is gradually becoming a science and ethics. Reception is not empty nature of value can be seen as the beginning of environmental ethics. Environmental ethics is a kind of morality that after the expansion of urbanization and the development of technology and incidence of mental diseases has emerged. A branch of applied ethic is environmental ethics (Qaslymany,2011).

The concept of content analysis

Content analysis is a method that can be contained messages about a variety of literary works, articles, official documents, speeches, political statements, social reports, audio-visual programs and reporting guidelines applied interviews. The words that author, speaker or responsive to calls, their frequency, their positioning means including building rhetoric and how to develop it, are sources of information on which the researcher attempts to achieve recognition. This knowledge may itself be the speaker. For example, the ideology of a newspaper, imagine a person or an organization or a group of logic, the study of internal documents, or in its rhetoric about social situations that have been produced (Salehi,2013).

Mahdi loo and Mydani (2014), in a study entitled Environmental Protection in the mirror the primary school textbook content to the conclusion that in the first year 1.84 %, the second year of elementary 1.71 % and the third year of primary 2.44 % and fourth year of primary 0.95 % and fifth year 1.94 sixth year and 71% attended to environmental protection, which is

considered one of the environmental ethics as well as the highest importance to this components related to third and first grade of elementary school in science textbook.

Qislvtly and Taurus Oliveira (2012), in a study entitled "The integration of virtual learning environments and their ability for comprehensive learning environment", which aims to understand the complexity of environmental issues and stimulate a sense of belonging and social responsibility, were performed. With teachers and people involved in environmental education, environmental issues, practical training on the areas of cognitive (knowledge), mental (emotional, principles, ethics) and political interviewed. The results showed that virtual education alone is not effective environmental education, but it can be combined with other training.

Ardoghan et al. (2012), in a study entitled "Environmental Education run in the ninth to twelfth year of high school biology curriculum" to investigate the biology curriculum content in terms of volume were due to environmental factors. In this regard, the biology of the course curriculum, which was successfully implemented continuously since 2007 based on the factors to determine the environmental literacy and emphasize its components using content analysis method were analyzed. The results showed that targets the areas of biology curriculum of cognitive, emotional and psychological related, but more emphasis to goals related to cognition in this study than in the other areas.

Methodology

The content analysis method used in this study. Content analysis as a management technique, including methods of analysis, the aim of study such as all-purpose specialized in processing scientific data

management techniques to provide the knowledge, insight, picture of reality and a guide to action. Entropy is in individual information theory index to measure the uncertainty which expressed by a probability distribution on the basis that is known as the compensation model 2 content of Persian book and Science of the first, second, third grade and Heavenly gift textbook of second and third grade on the four primary components of the target (cleaning and protection of the natural environment, cleanliness and environmental protection man-made (urban), the use of energy resources and the protection of flora and fauna) classified.

Content analysis depends on the quality of its components which are made on the basis of research design and subject; in the present study the content analysis of Persian textbook and Science textbook of the first, second, third grade Heavenly gift textbook of second and third grade are concerned based on the foundations and component elements (cleanliness and protection of the natural environment, cleanliness and man-made environmental protection (urban), the use of energy resources and the protection of flora and fauna). After identifying measurement indicators based on the Shannon entropy is intended to gather information and analyze the information to be examined. And based on this model according to each of the indicators in Persian Book and Science of the first, second, third grade and Heavenly gift textbook of second and third grade expressed. This research basic is Persian textbooks and science textbook of first, second, third grade and Heavenly gift textbook of second, four grade in terms of cleanliness and conservation of the natural environment, cleanliness and environmental protection man-made (urban), the use of energy resources and the protection of flora and fauna and

including the 1213 page.

In this study, because all Persian textbook and Science textbook of the first, second, third grade Heavenly gift textbook of second and third grade has been studied. This is not the sampling. Persian textbook and Science textbook of the first, second, third grade Heavenly gift textbook of second and third grade chosen because of containing components expectation of cleanliness and conservation of the natural environment, cleanliness and environmental protection man-made (urban), the use of energy resources and the protection of flora and fauna. In this study, the content analysis method will be used and four component cleanliness and protection of the natural environment, cleanliness and environmental protection man-made (urban), The use of energy resources and the protection of flora and fauna in Persian and Science of the first, second, third and second and third base heavenly gifts will be examined first.

Results

Question 1: To what extent primary school textbooks (Science, heavenly gifts, Persian) have concerned to cleanliness and protection of the natural environment? Table 3 shows the most attention to this index has been observed in third grade of heavenly gifts textbook.

Question 2: To what extent primary school textbooks (Science, heavenly gifts, Farsi) have concerned to cleanliness and protection of the human environment (urban)?

Results Table 5 shows the attention to cleanliness and environmental protection, human factors (urban) with 9.0, 8.2, 7.0 percent, respectively, in science textbooks of the first, second, third grade.

Table 4 shows the most attention to this indicator has been observed in Persian textbook of second grade.

Table 6 shows the most attention to this

index in third grade has been observed heavenly gifts.

Question 3: To what extent primary school textbooks (Science, heavenly gifts, Persian) concerned on the of use energy resources?

Table 7 shows the most attention to this index has been observed in third grade of Persian textbooks. Table 8 shows the results of the use of energy sources with respect to the components 5, 10.4, 1.9 percent respectively concerned in experimental science textbooks of the first, second, third grade of elementary school. Table 9 shows the most attention to this index has been observed in heavenly gifts textbook of third grade.

Question 4: To what extent primary school textbooks (Science, heavenly gifts, Persian) concerned on the protection of flora and fauna?

Table 10 shows the most attention to this index has been observed in third grade Persian textbooks.

Table 11 shows the results regarding the protection of flora and fauna components with 1.6, 6, 3.1 percent respectively have been concerned in science textbooks of the first, second, third grade.

Table 12 shows the most attention to this index in third grade has been observed in heavenly gifts textbook.

Question 5: How to supply concepts related to environmental ethics in terms of horizontal and vertical in the first year of primary school (Science, heavenly gifts, Persian)?

According to the data in the table, it is clear that there is a horizontal, vertical relationship between textbooks. The fact that their Frequency of numbers changing, and not increased from low to high, is not cause of lack of relationship because it has not been evaluated in terms of quality. Maybe 42% of third grade Frequency to 43% frequency of second grade has greater depth. At this point, we are working on various concepts related to environmental

ethics which exist in different textbook grades.

Table 13 shows that Persian books of the first, second, third grade concerned on components protecting and preserving the natural environment (33 pages), cleanliness and environmental protection man-made (urban) (23 pages) The use of

energy resources (23 pages), protection of flora and fauna (page 31). Most concerned to components, cleaning and protection of the natural environment (33 pages) and less concern for cleanliness and environmental protection, human factors (urban) and use of energy resources (23 pages).

Table 1.Frequency distribution according to the component pages' cleanliness and protection of the natural environment in the Persian books of the first, second, third grade

Cleanliness and protection of the natural environment	Frequency	Percent
Attention	33	4.8
Inattention	657	95.2
Total	690	100

Table 2. The two-dimensional distribution per page due to component cleanliness and protection of the natural environment in the book of experimental science of the first, second, third grade

textbook	In each book separately	Total
Science text book of first grade	24.3	7.9
Science text book of second grade	7.8	2.5
Science text book of third grade	4.5	1.5

Table 3. The distribution of pages due to component cleanliness and protection of the natural environment in the book of Heavenly gift textbook of second, third grade

Cleanliness and protection of the natural environment	Frequency	Percent
Attention	14	6.8
Inattention	191	93.2
Total	250	100

Table 4. Distribution of pages' cleanliness and protection of the environment due to human factors (urban) in the Persian books of the first, second, third grade

textbook	In each book separately	Total
Persian text book of first grade	23	3.3
Persian text book of second grade	667	96.7
Persian text book of third grade	690	100

Table 5. The two-dimensional distribution per page due to man-made component cleanliness and protection of the environment (urban) in science textbook of the first, second, third grade

textbook	In each book separately	Total
Science text book of first grade	2.9	0.9
Science text book of second grade	8.7	2.8
Science text book of third grade	1.8	0.7

Table 6. Distribution of pages' cleanliness and protection of the environment due to human factors (urban) in the heavenly gift textbooks of second and third grade

Cleanliness and protection of the man-made environment(urban)	Frequency	Percent
Attention	9	4.4
Inattention	196	95.6
Total	205	100

Table 7. Pages' frequency components due to the use of energy resources in the Persian textbooks of the first, second, third grade

The use of energy resources	Frequency	Percent
Attention	23	3.3
Inattention	667	96.7
Total	690	100

Table 8. Two-dimensional distributions of components per page due to the use of energy resources in the book of experimental science textbook of the first, second, third grade

textbook	In each book separately	Total
Science text book of first grade	15.5	5
Science text book of second grade	32	10.4
Science text book of third grade	5.4	1.9

Table 9. Pages' frequency components due to the use of energy resources in the heavenly gift textbooks of second and third grade

The use of energy resources	Frequency	Percent
Attention	7	3.4
Inattention	191	96.6
Total	205	100

Table 10. Pages' frequency components due to the protection of flora and fauna in the Persian books of the first, second, third grade

protection of flora and fauna	Frequency	Percent
Attention	31	4.5
Inattention	659	95.5
Total	690	100

Table 11. Controversial two-dimensional distributions of flora and fauna protection components per page, according to science textbook of the first, second, third grade

textbook	In each book separately	Total
Science text book of first grade	4.8	1.6
Science text book of second grade	18.4	6
Science text book of third grade	8.9	3.1

Table 12. Pages' frequency components due to the protection of flora and fauna in the whole book of the heavenly gift of second and third grade

protection of flora and fauna	Frequency	Percent
Attention	14	6.8
Inattention	191	93.2
Total	205	100

Table 13. Frequency of concepts related to environmental ethics

Books	grade	Persian	Science	Heavenly gift
	First grade	25	49	-
	Second grade	43	69	12
	Third grade	42	21	32

Table 14. Distribution of environmental ethics according to the Farsi pages of the first, second, third grade

Component textbook	Cleanliness and protection of the natural environment	Cleanliness and protection of the man-made environment(urban)	The use of energy resources	protection of flora and fauna
Persian text book of first grade	5	7	4	9
Persian text book of second grade	16	10	8	9
Persian text book of third grade	12	6	11	13
Total	33	23	23	31

Conclusion

With regard to the first question can be said the total of 38 pages of the 318 page book dedicated to component cleanliness and protection of the natural environment which is less concerned in first-grade science textbook. Bayat study (2011) showed that most of his information regarding the components of Bioethics in primary school and also Mahdloo and Meydani study (2014) the results of his study showed that the most attention is to environmental ethics component related to third and the first grade science textbook. According to tables Question1 the importance of factor cleanliness and the protection of the natural environment is 0.239 which shows that have been less concerned in all first-grade school science textbooks. According to the tables Question 1 it can be said that cleanliness and protection of the natural environment components involved in totaling 14 pages of the 205 page of heavenly gift textbook of first-grade that have been most concerned in Heavenly gift textbook. In the Bayat (2011) studies the results of his study showed that the least attention is to environmental ethics component is heavenly gift textbooks of first grade of Elemnray School. In total, according to the researcher, the findings of this study best matched with Haddadi Studies (2008)

According to the tables Question 2 can be said that cleanliness and protection of manmade environment (urban) dedicated 14 pages of the 318 page of science textbooks of the first grade with a factor importance of 0.245 That have been concerned in science textbook of second and third grade moderately. According to the tables Question 2 it can be said that cleanliness and protection of the manmade environment (urban) components involved in totaling 9 pages of the 205 page of heavenly gift textbook of first-grade by 0.289 important factor that have been concerned in Heavenly gift textbook of third grade moderately. According to the tables Question 2 can be said that cleanliness and environmental protection, manmade (urban) dedicated totaling 23 pages of the 695 page of Persian of first grade with importance factor 0.258 which have been most concerned in Persian books of first and second grade.

- With regard to the tables question 3 can be said the total of 34 pages of the 318 page of science text book dedicated to component protection of flora and fauna which is most concerned in first-grade science textbook. In total, according to the researcher, the findings of this study best matched with Bayat Studies (2011) According to tables Questio3 the importance of factor protection of flora

and fauna is 0.266 which shows that have been most concerned in all first-grade school science textbooks. According to the tables Question 3 it can be said that protection of flora and fauna components involved in totaling 14 pages of the 205 page of heavenly gift textbook of first-grade that have been most concerned in Heavenly gift textbook. In the Bayat (2011) studies the results of his study showed that the least attention is to environmental ethics component is heavenly gift textbooks of first grade of Elemntray School. As well as in the study Mohamdjany (2013) as global examination of the content of textbooks to primary school environmental education component Using indicators forest animal's rights and the protection of plants and...showed that the most attention to this component is in Persian textbooks of primary school.

- With regard to the tables question 4 can be said the total of 55 pages of the 318-page book dedicated to component the use of energy resources which is more concerned in first-grade science textbook. In total, according to the researcher, the findings of this study best matched with Bayat study (2011) and Esmaili studies (2003) According to tables Question4 the importance of factor the use of energy resources is 0.249 which shows that have been most concerned in all first-grade school science textbooks. According to the tables Question 4 it can be said that the use of energy resources involved in totaling 7 pages of the 205 page of heavenly gift textbook of first-grade that have been less concerned in Heavenly gift textbook. In total, according to the researcher, the findings of this study best matched with Bayat study (2011)

With regard to the tables question 5 can be said horizontal and vertical communication exist between the books. In total, according to the researcher, the

findings of this study best matched with Bayat study (2011)

Horizontal communication is, in fact, represents the integration in the curriculum. Integrating means integrate and communicate the content and processes that lead to integrity learning and student learning and the vertical segmentation in fact, is a theme based on time intervals. In fact, the vertical communication is expected to be the focus and depth on a topic over more time. The findings matched with numerous research studies including Agha Soleymani(2011), Changizi (2008) on the protection of flora and fauna, and on cleanliness and protection of the natural environment, the results of this study match with the results Abedi sarvestani and Vali and Mohaghegh (2007), Rafiye and Amirnejad (2009), Salehi and Ghaemi asl (2013), Robert (2003) and also the results best match with results of environmental ethics with the results Weiner (2001), Maleki (2010).

References

- Bayat , T. (2011), the environmental ethics in the curricula of primary, master's thesis, Faculty of Education and Psychology, University of Al-Zahra
- Erdogan M, Bahar M, Usak M.2012. Environmental education in high school 9th-12th. Biology course curricula started to be implemented in 2007. Educational Sciences: Theory and Practice. 3: 2230-2235.
- Ghisloti lared V, Torres de Oliveira H. 2012. Integration of distinct educating spaces and their potential for a more comprehensive environmental education. International Electronic Journal of Environmental Education. 2: 129-148.
- Mahdloo, Maral andMeydani , Mahmoud (2013), article environmental protection in the mirror elementary

school textbook content, the second national conference on environmental protection and sustainable development planning

Maleki .A (2010), article environmental ethics, environmental planning and management conference

Qaslymany, H (2011), check the contents of the first year of high school textbooks on environmental education components of teachers and students, Master's thesis, Faculty of Education and Psychology, University of Al-Zahra

Salehi , Sadegh and ghaemiasl, Z. (2013) investigate the relationship between environmental education and environmental protection behaviors, Journal of Environmental Education and Sustainable Development

SidqiNezhad , R. (2005), appropriate social behavior from the perspective of social psychology, Tehran, Press inflorescence