

Journal of Peace, Development and Communication



Volume 06, Issue 01, Mar 2022
 pISSN: 2663-7898, eISSN: 2663-7901
 Article DOI: <https://doi.org/10.36968/JPDC-V05-I03-13>
 Homepage: <https://pdfpk.net/pdf/>
 Email: se.jpdc@pdfpk.net

Article:	Education for sustainable development: an analysis of primary education curriculum
Author(s):	Ijaz Ahmad Department of Education , International Islamic University Islamabad Pakistan.
	Dr. Nabi Bux Jumani Professor of Education, International Islamic University, Islamabad, Pakistan.
	Prof. Dr. Samina Malik Professor of Education, International Islamic University, Islamabad, Pakistan.
Published:	30 th Mar 2022
Publisher Information:	Journal of Peace, Development and Communication (JPDC)
To Cite this Article:	Ahmad, Ijaz., Jumani, B, Nabi. & Malik, Samina. (2022). "Education for sustainable development: an analysis of primary education curriculum" <i>Journal of Peace, Development and Communication</i> , vol. 06, no. 01, 2022, pp. 177–195, https://doi.org/10.36968/JPDC-V06-I01-13
Author(s) Note:	Ijaz Ahmad is serving as Lecturer at Department of Education, International Islamic University Islamabad Pakistan. Email: ijazsherpao@gmail.com
	Dr. Nabi Bux Jumani is serving as Professor of Education at International Islamic University, Islamabad, Pakistan Email: nbjumani@yahoo.com
	Prof. Dr. Samina Malik is serving as Professor of Education at International Islamic University, Islamabad, Pakistan. Email: Samina.malik@iiu.edu.pk

ABSTRACT

Education for sustainable development (ESD) provides great opportunities to our youth to participate and tackle the complex issues of sustainable development. In this article qualitative content analysis was used to describe the status of ESD in the primary school curriculum of Pakistan. Four subjects (General Science, Social Study, Urdu, and Islamic study) of grades 4 and 5 were scrutinized for different aspects of ESD. A coding scheme was developed for qualitative content analysis. Findings of the study revealed that some content about SD were present in the curriculum, however, the term sustainable development (SD) or sustainability was never mentioned in the curriculum. Overall the skill contents of ESD were the most concentrated element of ESD in the primary school curriculum followed by environmental and social content. Given their conceptual complexity economic element was among the least represented element of ESD in the curriculum. It indicates that the primary school curriculum was not developed according to the principles of SD. It is suggested that in the development or revision of primary education curriculum the principles of ESD must be considered

Keywords: Education for sustainable development, sustainability, curriculum analysis, social sustainability, skills and values

1. Introduction

Perhaps the imminent challenge of our time is “how to improve the well-being of ever growing population while maintaining the natural environment and the resources of our planet”. This massive task is tackled in the concept of sustainable development [SD]. Over the past three decades, the global community has agreed to jointly address sustainability. As a result, ‘Education for Sustainable Development’ (ESD) has been set up as one of the key answer to deal with SD (Pauw et al., 2015). In 2005, UN declared the decade of 2005-14, as a Decade of ESD and in 2015 approved Agenda 2030, “Transforming Our World”. Agenda 2030 for sustainability is considered as an ambitious plan that, for the first time, linked the eradication of poverty and inequity with the preservation of a safe and sustainable world. At the heart of this plan are the seventeen (17) Sustainable Development Goals [SDGs] that set the path for mankind to preserve human rights and to eliminate gender and racial discrimination across the world by 2030 (Nolet, 2017).

The SDGs are universal call of action to eradicate poverty, preserve the earth, and assure that every individual has equal opportunity to live a peaceful and prosperous life (United Nations, 2015). The 4.7 goal of SDGs aims that by 2030, all students will be empowered with skills, values and knowledge through ESD for Sustainability, which will help them to address “human rights, gender equality, promotion of peace and tolerance, global citizenship, and appreciation of cultural diversity and of culture’s contribution to SD” (United Nation, 2015, p. 19). As a consequence, ESD has been adopted globally and curricula have been reshaped worldwide for the purpose to empower individuals with SD skills through a holistic interdisciplinary perspective of content and with different student-centered active teaching approaches (Pauw et al., 2015). Despite of international commitment to ESD as a teaching methodology, there is very little empirical evidence of the implementation of ESD at primary level. The aim of the study was to find out the existence of knowledge content about social, environmental and economic sustainability along with the skills and values contents in the primary school curriculum.

1.1 Purpose of the Study

The main purpose of this qualitative content analysis is to explore the presence of knowledge, skills, and values about the environmental, social, and economic aspects of education for sustainable development in the primary school curriculum of KP, Pakistan. Education for sustainable development is a transformative learning process that empowers the learner with knowledge, skills, values, and attitudes to actively participate in the development of a sustainable future.

1.2 Research Question

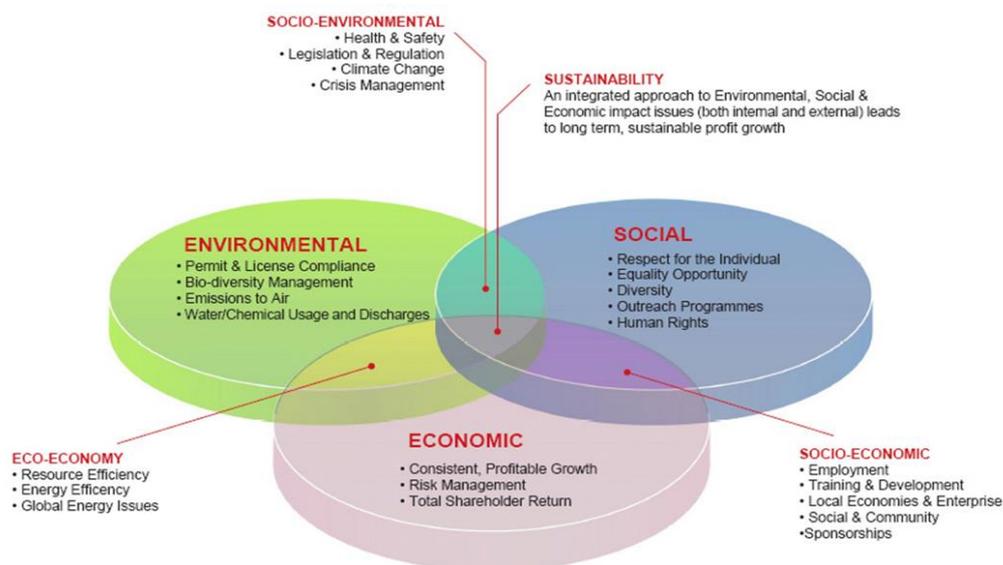
- a) How the knowledge content about social, environmental, and economic sustainability is presented in the primary school curriculum?
- b) How the sustainability skill contents are illustrated in the primary school curriculum?
- c) How sustainability values content are presented in the primary school curriculum?

2 Literature Review

The notion of sustainability that supports the simultaneous resolution of the gigantic and complicated issues of ecological declension and similarly huge and complex issues of humans’ development and the eradication of poverty in its all forms, was explored in the Brundtland

Commission and gave a widely accepted definition of SD, which focus on the intergeneration justice and sustainability in every aspect of development (UN-WCED, 1987). The sustainable development depends on the equilibrium between different aspects which defines the quality of life, in general. Thus, the concept of SD are thought to have three pillars: economic, social and environmental (UNESCO, 2005). These three pillars are interrelated to each other with humans at the center. This interdependencies are explained in the following figure.

Figure 1



Pakistan has vast land and a long coastline with a large number of natural resources such as natural gas, coal, iron ore, petroleum, copper, salt, limestone, and gold. The ever increasing population of Pakistan and the continued availability and use of natural gas resources and petroleum will increased greenhouse gas emissions. According to Eli, et al. (2020) “There are major conflicts of interest and sustainability challenges, in the continued development of renewable energy sources such as hydropower and wind power, as this adversely affects natural areas, ecosystem and biodiversity” (p. 795). There is a global understanding that SD needs a holistic approach that gives equal importance to all three pillars and also explains the interrelationships between these pillars in time and space (Koppelman, 2010; Wals A. E., 2012), relating respectively to the past, present and future, as well as to local and distant geographic relations in a global context (Eli, et al., 2020).

Education and SD are inextricably linked (McKeown, 2002), which causes reorientation of policies, curricula, teachers training programs, learning and practices in local schools, community and workplaces. It involves the process of nurturing the knowledge, skills, values and attitudes that influence the individuals, school and the community to shape a fair and just society, economic security, environmental capability and democracy (Pauw et al., 2015).

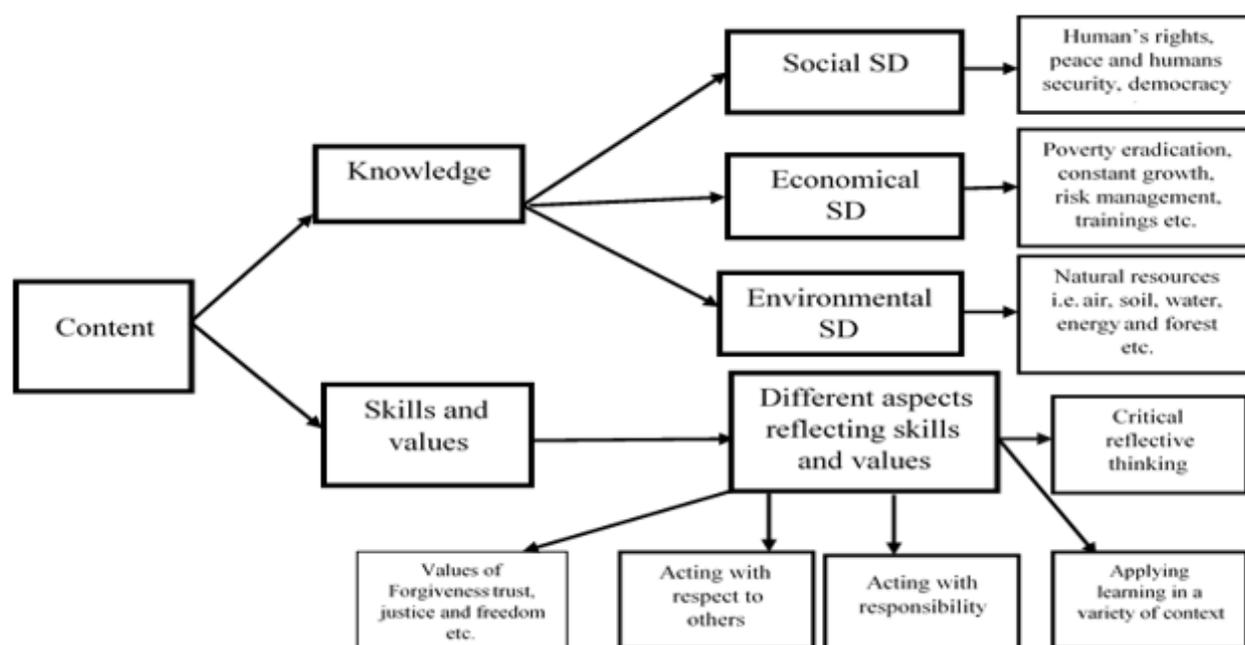
According to Kalsoom et al. (2018) and Kalsoom (2017) Pakistan made some efforts for reorienting ESD in national curricula at all levels especially at university level theme like biodiversity, climate change, plants, natural resources, Pakistan’s ecological zones, renewable energy are integrated in BS programs (Mirza, 2015; Saqib, et al., 2020). However, there is no research on the status and effectiveness of ESD in primary education of Pakistan. Recognizing

the importance of primary education in ESD and the need for ESD research in Pakistan. This study analyzed the status of ESD in the primary school curriculum of KP, Pakistan.

3 Research Methodology

This study is based on the qualitative content analysis of the primary school curriculum. A coding scheme was developed on the basis of UNESCO (2006) guideline of ESD and SD indicators presented in UN Agenda 2030 for analysis purpose. The coding scheme has a hierarchy of three level i.e. categories, sub categories and supplementary categories. The study used knowledge, skills and values as three main categories for analysis. The knowledge categories had three sub categories and each sub category had supplementary categories i.e. social SD (Human's rights, peace and health, democracy, gender equity, education etc.), Environmental SD (natural resources, water, soil, air, energy, etc.) and Economic SD (Poverty eradication, constant growth, risk management, trainings, accountability etc.). The value and skills aspects of SD had various sub categories such as acting with respect to others, acting with responsibility, critical reflective thinking, and applying learning in a variety of context etc. The sub categories were the main pillars of SD, while the supplementary categories were derive from the five P's of Agenda 2030 of the United Nations. The five P's represent People, planet, prosperity, peace and partnership. These five P's are the bases of SDGs (United Nations, 2015). See figure 2

Figure 2: Conceptual framework of Research Methodology



3.1 Population of the study

In Pakistan, the primary level consists of six grades. Different basic subject such as Urdu, English, mathematics, Social Studies, General Knowledge, General Science and Islamic Studies are taught in these grades. The number of subjects vary in different grades, however the total numbers of textbooks in all these 6 grades are 43, which constitutes the population of this study.

3.2 Sampling

According to Elo, et al. (2014) in a qualitative content analysis sampling method is rarely mention but Krippendorff (2004) stated that if the “universe of text to be examined is too large

then the researcher should select a manageable body of text” (p. 111). Similarly, Creswell (2012) mentioned the importance of the sampling method in qualitative research. The purposive sampling technique is commonly used for qualitative content analysis (Ward, 2012; Elo, et al., 2014). In order to get relevant information about sustainability, a purposive selection of text books was made. Four subject Urdu, Islamic Studies (Islamite), General Science and Social studies of Grade 4 & 5 were selected for analysis purpose.

3.4 Development of Coding Scheme

Selecting the categories and sub categories the UNESCO mid-term report (Wals A. , 2009) and Agenda 2030 were considered, The UNESCO guidelines consist of Knowledge, skills and values to reorient the existing curriculum and are included in as main categories in the coding scheme. The knowledge segment was further divided into three sub-categories i.e. environmental (K.ECO), social (K.S) and economic (K.E). The general elements related to these subcategories are adopted from Agenda 2030. The social aspects of SD deal with human rights, peace, and gender equality not only between individuals but also between different social groups (K. S1- K.S6).

The environmental segment comprises a logical sequence i.e. natural resources, air, water, soil, energy, agriculture, biodiversity, and pollution. Similarly, separate references were made about climate change, rural development, natural disasters, and waste (K. Eco1- K.Eco11). The economy segment includes references to poverty, planetary boundaries, production and consumption, and a market economy (K. E1- K.E5).

The skills and values categories are developed on the basis of the UNESCO mid-term report. The report outline 14 learning outcomes but the researcher adopted only 12 outcomes relevant to primary education. The skills category of the coding frame contained critical thinking, future thinking, identifying values, applying learning in a variety of contexts (S.1- S.6). The value aspect contains “acting with responsibility locally and globally, acting with respect for others, justice, and forgiveness.

3.4 Data Collection

The qualitative content analysis is conducted to identify knowledge, skills and values about the three dimensions of SD in the primary education curriculum. Four textbooks of grade 4 and 5 were selected and were first unitized into small packages (Krippendorff, 2004), these included, sets of sentences or paragraphs (Bengtsson, 2016). The predetermined codes are assigned to each package or meaning unit and marked with different colors. Then the text was re-read and compared with the marked text to ensure that all the relevant texts were included

4 Results and discussion

The analysis revealed that SD or sustainability is not mentioned directly in the primary education curriculum. However, when the curriculum was scrutinized and analyzed some content about knowledge, skills, and values of SD were found in all subject curricula. The content analysis of the primary education curriculum revealed that overall the skills content of ESD are the most represented element of ESD mentioned in the selected four subjects of primary education curriculum followed by environmental content and then social. Details of analysis about each aspect of SD and ESD with examples of actual sentences or paragraphs are presented in the following sections. However, the examples from textbooks written in national

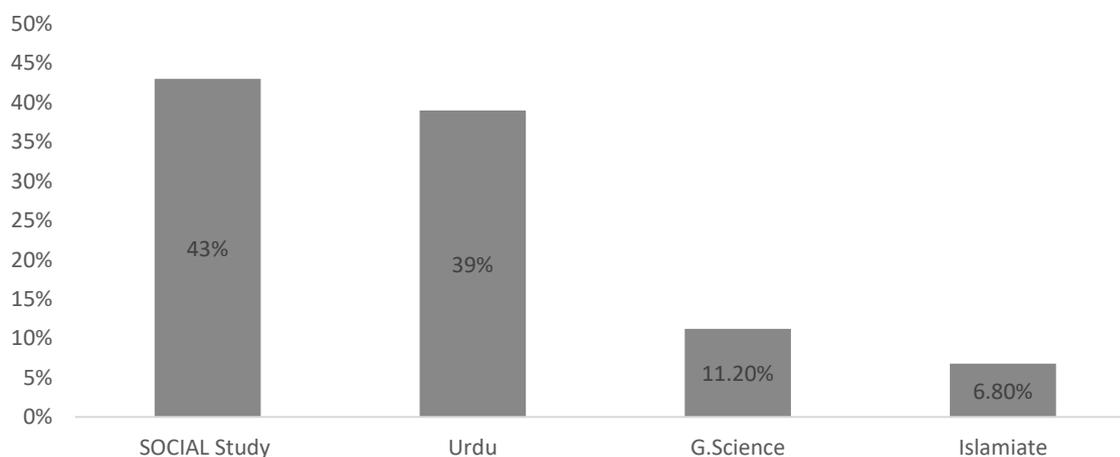
or mother languages were presented in the unofficial translation of English for research purposes only.

4.1 Knowledge Content about Social SD

The socio-cultural aspect of SD refers to issues related to “human rights, peace and human security, gender equality, cultural diversity, and intercultural understanding, health, HIV & AIDS and new forms of governance” (Wals, 2009, p. 28). The analysis revealed that the emphasis of social sustainability in primary education curriculum is mostly on health and hygiene, cultural diversity and intercultural understanding, and human rights, while peace and security, new forms of governance and gender equality are the least represented elements of social sustainability. New forms of governance are represented only 2 times in the primary education curriculum, once in social study and Islamite respectively, while Urdu and General science have zero representation of the concept. This concept is vital for SD because it enables learners to become aware of the inclusion of SD in political decisions making and state ruling (Domazet et al., 2012). Similarly, gender equality is the least represented element of social sustainability in primary education curriculum. It appears once in social study of grade five stating that “women are respected in our society”. It seems that gender equality is not an issue in Pakistani society. It might be because of strong traditional family system, where women play the role of a mother, housewife or a submissive person. It is a big loss to ESD, because gender equality is the main issue of post 2015 discussion and teaching it through curriculum is an essential element of ESD (UNESCO, 2013). Women discrimination is the most common form of discrimination (Domazet et al., 2012). A prosperous society value education, has strong civic concession and always makes transparent, democratic, equitable decisions, which cannot be achieved without the participation of all citizens. A sustainable society deals all its member fairly regardless of their gender because each individual possesses unique qualities and he/she has a role to play for the development of their society (UNESCO, 2014a). It is also a big loss for ESD as without equal participation of all members a democratic and healthy society cannot be developed (Domazet et al., 2012)

The analysis indicates that the subject Social study (about 43%) and Urdu (about 39%) has the most numbers of signs and indicator regarding social sustainability, while Islamite has the least numbers (6.8%), (See graph 1).

Graph 1 : Subject Wise Representiton of social SD



Some of the examples of social sustainability that can be found in the textbooks are listed below

Meaning Unit	Subcategory	Subject/Grade/page
As a good citizen, we must respect human rights. Our religion Islam also teaches us to respect humans' rights. We should care for our neighbors.....	Humans Rights	URDU/4 th /138
Section 8.28 of the constitution deals with humans, rights. For example, the right of freedom and living, right of profession, right of religion, rights of language and culture.....	Humans Rights	Social study/5 th / 92
According to Misaqa e Madinah (treaty of Madinah) Muslims and Jews will have full religious freedom and all the stakeholder will have equal responsibilities and rights.....	Humans Rights	Islamite/5 th /62
A good citizen always care for others, "he choose for others, what he chose for himself. In societies, where such people are in abundance, love, peace and brotherhood prevail.....	Peace and security	Urdu/5 th /37
Misaqa Madinah (treaty of Madinah) is the biggest example of tolerance, peace and security	Peace and security	Islamite/5 th /61
Hazrat Muhammad used to treat servants with special compassion. He (PBUH) said " these are your brothers feed them with what you eat and clothe them with what you wear"	Gender Equality	Urdu/4 th /12
women are highly respected in Pakistan	Gender Equality	Social study/5 th /108
Right of equity and ownership and protection from discrimination in jobs	Gender Equality	Social study/5 th /93
The guide told them that the ruins of Mohenjo-Daro indicate the lifestyle of that time and show that they inhabited the city with a proper plan.....	Cultural Diversity and Intercultural Understanding	Urdu/5 th /62

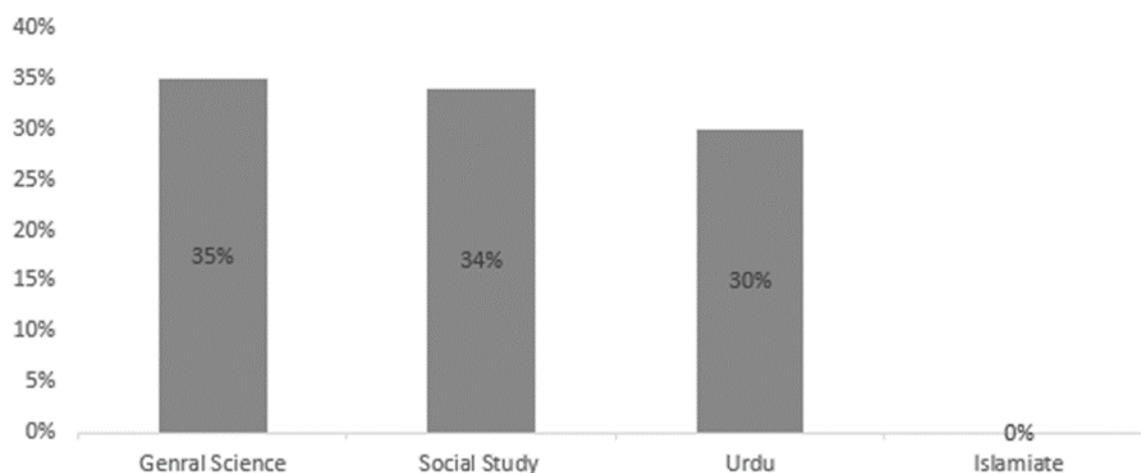
4.2 Knowledge content about Environmental SD

Environmental aspects are the second most represented elements of SD in primary education curriculum. It seems that primary education curriculum is mostly concerned with pollution and biodiversity, while natural resources, air, soil, energy, agriculture, climate change and waste management has the least representation, still it cannot be said that overall environmental elements are underrepresented in the primary school curriculum. However, to preserve this unique and sensitive planet for our future generations all the above topics must be inserted in primary education curriculum with clear vision and rationale of ESD. Pakistan is an agricultural country and about 64% its population is living in rural areas depending mostly on agriculture (Alvi, 2018) it has a big influence on any country landscapes and the quality of its environment (Domazet et al., 2012). "Pakistan's agriculture sector plays an essential role in the economy as it contributes 18.9 percent to GDP and absorbs 42.3 percent of labor force" and also an important source of foreign exchange (Economic_Survey, 2018, p. 13) but very few speculations were found about agriculture in primary education curriculum. Similarly, our world has limited resources and humans are consuming these limited resources with a very speedy rate (WWF, 2006; UNESCO, 2011) and a change in consumption pattern and human behavior through education is required (UNESCO, 2002) but there is almost zero representation of this aspect in the selected text books of primary education curriculum, which provides ESD an opportunity to be inserted in primary education.

Similarly, there is nothing in the primary education curriculum about fossil fuels which are the main source of pollution and global warming (Denchak, 2018). Similarly, there is nothing on renewable or clean energy in the curriculum. Therefore, there is an urgent need of inserting

content about this concept according to ESD vision and rationale in primary education curriculum. Outlining the pros and cons of fossil fuels and their potential replacement will help in changing students' attitude toward the use of these sources of energy. The ultimate goal of this concept might be the Speedy transition to a clean, renewable energy, which will help a great deal in reducing the dangerous carbon pollution that causes climate change. Analysis also revealed that general science (35%) has more signs and indicators followed by social study (34%) and then Urdu (30%). it is represented in graph 2.

Graph2: Subjectwise representation of Environmental SD



The analysis revealed that the content of primary education curriculum dedicated to the preservation of environment but still there is space for improvement as some of the aspects of environmental SD are not mentioned at all.

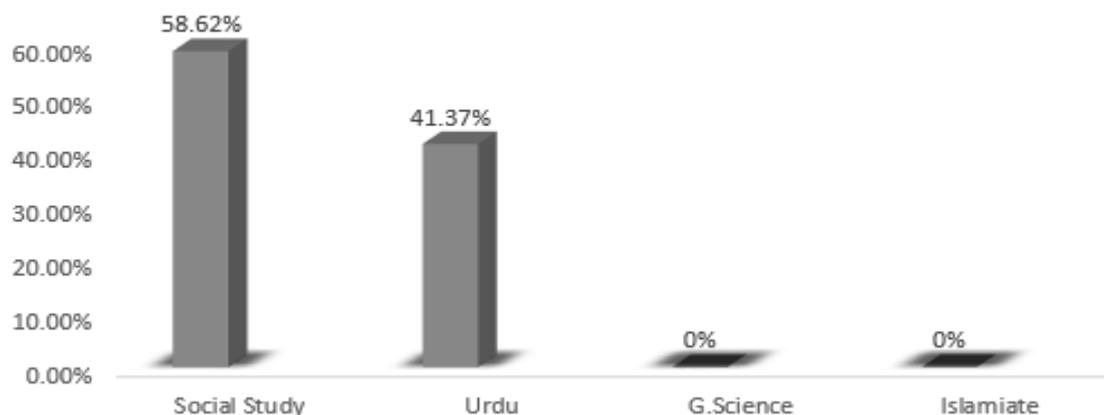
Some of the qualitative examples of environmental sustainability that can be found in the textbooks are listed below

Meaning Unit	Subcategory	Subject/Grade/page
.....All of us, use water, air and land to live. These things make environment. Our activities pollute this environment. Let's learn, how to keep it clean for life. There are three main types of pollution.....	Pollution	General science/5 th /49
Soil makes up the outer most layer of our earth. It support the growth of plants, roots and provides a living place for different animals.....	Soil	General science/5 th /125
Pakistan is an agricultural country. Therefore, agriculture is the biggest profession. Most people work in the fields and earn their living. But now modern methods are also being adopted..... Pakistan is earning a lot of foreign exchange by exporting agricultural commodities to other countries.	Agriculture	Urdu/5 th /53
.....There are many types of environment. All types of environment have two components. Non-living components (air, soil, water, light etc.) and living components (animals, plants, bacteria, fungi).....	biodiversity	General science/4 th /31
.....Global warming due to greenhouse gasses result in melting the glaciers on poles, rising of the sea level, increase of natural disaster and unexpected change in seasons.....	Climate change	Social study/5 th /42
.....To reduce the effect of greenhouse gasses the world community, especially developed countries must develop a common roadmap. In factories waste must be reduce to minimum level.	Waste	Social study/5 th /43

4.3 Knowledge content about Economic SD

The coding scheme about economic SD contain sub-categories of poverty, planetary boundaries, production and/or consumption, population growth, market economy. Given its conceptual complexity, economic elements were expected to be among the least represented ESD content in primary school curriculum (Domazet et al., 2012). This did indeed turn out to be the case in Urdu, general science and Islamite but in social study it is represented as much as environmental aspects of SD. Social studies of grade four and five have separate units with title “Our Economics” and “Economy” respectively. In these unit’s information about how scarcity of resources and choices regarding production, distribution and consumption of goods and services affect the wellbeing of the individual and society, are given. Similarly, content about Pakistan’s economic system is also outlined in these units that how this system work to facilitate production, consumption and exchange of goods and services. These units also describe the challenges and benefits of trade for consumers, producers and government. Similarly, it has content about the population and the effect of growing population on basic human needs and economy. Urdu contain content about production and consumption of goods, distribution of services and the role of industries in foreign exchange. General science and Islamite do not have any content regarding economic SD. The analysis shows that the emphasis of primary school curriculum regarding economic SD is mostly on production and consumption and other aspects are missing. The overall representation of this concept is so low that no additional statistically significant information about it can be given. The analysis showed that 59% of content about economic SD were found in social study while Urdu had 41% of these content (see graph 3)

Graph3: subjectwise representation of economic SD



The analysis also revealed that 100% content of economic sustainability represent only two aspects of economic sustainability i.e. production and consumption and market economy. While, other aspects like poverty, planetary boundaries, population growth and its effect on economy are missing.

Some of the qualitative examples of environmental sustainability that can be found in the textbooks are listed below

Meaning Unit	Subcategory	Subject/Grade/page
Agriculture is the backbone of Pakistan's economic system International trade, imports and exports play an important role in Pakistan's economic development.....	Production and/or consumption	Social study/5 th /139
Many people in Pakistan earn their living by working in factories and mills. Major cities in Pakistan have factories for textiles, cement, fertilizers, medicines and daily necessities. Our industry is slowly developing.....	Production and/or consumption	Urdu/5 th /55
Sometimes we make choices among two different things and select the most needed/important one. Because it will benefit us more than the other one.....	Production and/or consumption	Social study/4 th /99
An economic system is a system that runs the country's economy. The federal government takes a number of steps to develop the country's economy e.g. receiving technical, financial support and manpower from other countries.....	Market Economy	Social study/5 th /138
.....Pakistan's economic system is a capitalist system.....	Market Economy	Social study/5 th /139

4.4 Skills Content

The coding scheme for skills content consists of seven codes and sub categories i.e. critical reflective thinking, futures thinking, ability to identify and clarify values, negotiating and consensus building, dealing with crisis and risks, applying learning in a variety of contexts, basic scientific skills. Some of these are derived from single concepts while, others are deliberately expanded, so as to obtain a more detailed view of the curriculum e.g. Basic scientific skills that have been deliberately expanded to explicit key science processing skills. The coding scheme for skills content was derived from concepts related to ESD definitions, listed in UNESCO mid-term report about DESD (Wals, 2009). The analysis of skills content revealed that overall the most represented skill content in the primary education curriculum is the critical reflective skills followed by skill of applying learning in a variety of contexts and then skill to identify and clarify values. While, dealing with crisis and risks is the least represented skill in all the selected textbooks. In General science however, the most represented aspect of skills content is the basic science skills as it has a large number of content and activities that encourage students to think and develop their skills of performing experiments, writing observation, measuring, labeling, inferring, classifying, predicting and to communicate their finding in a variety of ways. The second most represented skills content in General Science is the critical thinking skill as it has content that encourage students to think critically to develop their problem solving skills and skill of making appropriate choices. For example, general science of primary education has content that encourage students to ask questions about different events and objects in the immediate surrounding and develop ideas how these questions might be answered. Similarly, it contains activities that help students to develop solutions to problems through reasoning, observation and investigation (Ministry of Education, 2007). The analysis of these subjects show that students are expected to ask questions about

society, collect data from different sources (such as books, newspaper, community, internet etc.), analyze data in order to answer these questions and make informed decisions (Ministry of Education, 2006a,). Similarly, students are expected to present the findings in an appropriate way. Primary education curriculum of social study and Urdu also lay emphasis on local and national problems and students are expected to understand different perspectives of these problems and take appropriate actions and work collaboratively to address these problems (Ministry of Education, 2006b).

Some of the qualitative examples of skills content that can be found in the textbooks are listed below

Meaning Unit	Subcategory	Subject/Grade/page
..... investigate the effect of heat on particles' motion during change in states..... demonstrate and explain the process that involve in change of states	Critical reflective thinking	General Science/5 th /60
Measure and record the body temperature using thermometer	Basic science skill	General Science/4 th /52
Gather and interpret information, and draw conclusion using maps and other geographical tools about provinces, country, rivers etc.	Critical reflective thinking	Social study/5 th /12
Make a five- or ten-question questionnaire and talk to people around you about the growing deforestation problem and then pass it on to your peers.	Future thinking	Social study/4 th /75
.....If wars are resolved peacefully, countries will focus on human development rather than gun and ammunition..... More and more consensus is needed to solve problems - when people unite for achieving their goals.....	Negotiating and consensus building	Social study/5 th /66&72
Activity: develop a short questionnaire and collect data about your friends family i.e. total members, numbers of male and female, their profession and education	Basic science skills	Social study/4 th /71
Listen to conversations or speeches, listen to instructions and announcements, analyze them, pay attention to important things and perform the desired action.	Critical reflective thinking	Urdu/5 th /42

4.5 Values Content

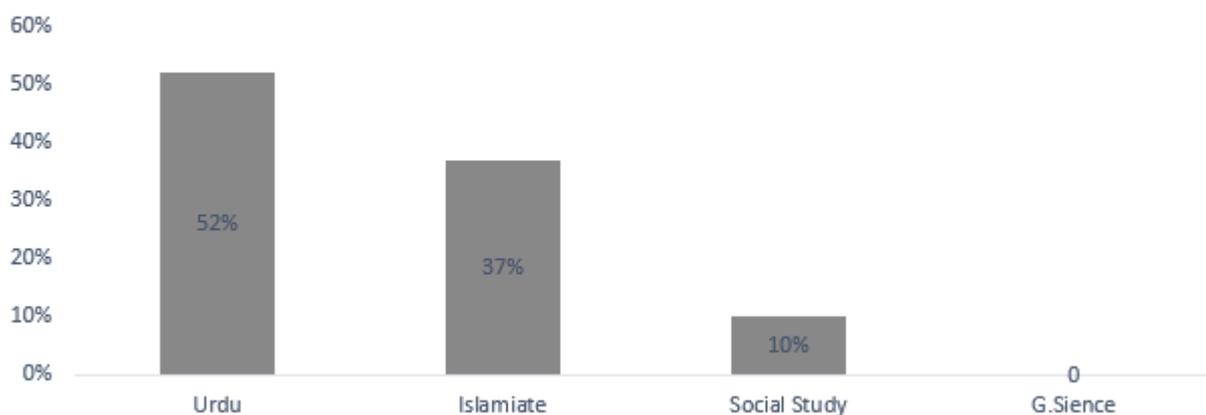
Being an Islamic republic, it is expected that the national curriculum of Pakistan is to be value laden. It is confirmed by curriculum analysis, as the aim of curriculum is to promote brotherhood, unity, Solidarity and Tolerance, equity, justice, Sincerity, honesty, social welfare and human rights and students are expected to learn about these values and apply it in their real life (Ministry of Education, 2006a, 2006b). The analysis shows that Urdu and Islamiate have the most numbers of content that represent values aspect of SD. In urdu content about acting with respect to others, forgiveness, solidarity and tolerance, justice and freedom are included. It has different easy containing values content. e.g. in Rahmate Lil Aalameen content about acting with respect to others and forgiveness are included. Similarly in “Darde Dil ke Waste Paidia kia Insan” content about acting with responsibility locally and globally and acting with respect to others are included. Another easy “scouting” contains content about acting with responsibility locally and globally.

In Islamiate there is a separate unit, covering honesty, simplicity, forgiveness, tolerance, equality, austerity and islamic brotherhood. In social study of 5th grade there is a section with

title “values”(translated), but only provides information about how values of different societies develop and how it differ among individuals and nothing else is included in this section of social study that represent sutainable values. Similarly “influence of importantan people on history”(transltd) content about equity, respect and tolarance are included.

The analysis shows that 52% of value content are presented in Urdu, 37% in Islamite and only 10% in social study, while genral science does not contain any content that represent sustainable values (see graph 4).

Graph 4: Subject Wise Representation of Value Content



The presence of these aspect supports the national educational goals of Pakistan which aims to endow the learner with high qualities such as tolerance, justice and fairness, equality, honesty and love and respect for other countrymen in order to play their role in the development of a peaceful society (Ministry of Education, 2006a).

Some of the qualitative examples of skills content that can be found in the textbooks are listed below

Meaning Unit	Subcategory	Subject/Grade/page
.....Subhan Allah! Look at the glory of this great conqueror that the servant's son is seated on the camel he is riding.....	Acting with respect to others	Urdu/5 th /13
.....The prophet (PBUH) says: "today, there is no grip on you, you all are free"..... This great prophet (PBUH) has not only conquered Makkah but also the hearts of the people of Makkah due to his great morals and forgiveness.	Forgiveness	Urdu/5 th /15
.....In a society where good people abound, an atmosphere of love, peace and tolerance prevails.....	Acting with responsibility locally and globally	Urdu/5 th / 37
.....a good man is that, who's useful to other and don't hurt others.....	Acting with respect to others	Urdu/5 th /37
.....scout is a students' organization, which helps people in the time of disasters like earthquake and flood etc.	Acting with responsibility locally and globally	Urdu/5 th / 43
Islam teaches us forgiveness and tolerance. Allah Forgives people and commands them to forgive each other's mistakes and those who forgive have a special place in Islam.	Forgiveness	Islamite/5 th /91
.....Islam allows people of other religions to live according to their religion and ideology and Muslims are advised to be tolerant when inviting to Islam.....	Solidarity and Tolerance	Islamite/5 th /97
Nelson Mandela raises voice against racism in South Africa and fought for the rights of their people.	Equality	Social study/5 th /59
.....Subhan Allah! Look at the glory of this great conqueror that the servant's son is seated on the camel he is riding.....	Acting with respect to others	Urdu/5 th /13

5 Conclusion

The findings of the study lead to important conclusions regarding the status of ESD in primary education curriculum in KP. Although some content was found in the curriculum that represent different dimensions of SD still it does not give a clear view about SD or ESD, although the primary education curriculum was developed in the beginning of UN, DESD (2005-2014). It indicates that the UN, DESD (2005-2014) was not successfully implemented in Pakistan (Kalsoom et al., 2018) and that primary education curriculum was not developed according to the principles of SD. Economic aspect of ESD was the least represented in all the subjects. Environmental aspect was the most represented element of ESD in primary education curriculum followed by social aspects of ESD. The environmental aspect was well represented in all the subjects, while the economic aspect was limited to social study only. Social study contains knowledge content (social, environmental and economic), skills content and values content of SD. While general science has a large number of sustainability skills content and has some content about the environmental aspect of SD. However, Islamite contain mostly values content. The emphasis of environmental aspect is mostly on pollution and biodiversity, while social aspect emphasis on health and hygiene, cultural diversity and intercultural understanding and humans' rights. Similarly, production and consumption is the main focus of economic aspect in primary education curriculum. The ESD skills and values are well represented in the primary education curriculum, which supports the national educational goals of Pakistan aiming to endow the learner with high qualities and skills.

5.1 Recommendations

According to UNESCO (2005) a complete ESD requires the integration of social, Environmental and economic dimensions, and a curriculum that contains all these aspects of ESD and enable learners to differentiate between sustainability and unsustainability, and if primary education curriculum provide the foundation for a later appropriate domain specific factual knowledge then the curriculum is on the right track (Domazet et al., 2012). The researchers believe that ESD has many formative resources and it represents an important educational asset, which must be more present in the primary education curriculum of Pakistan. It is therefore recommended that:

1. When choosing a criterion for textbook development, the Ministry of Education, as an authority, must ensure that textbook authors and reviewers observe the principles of ESD, if the nature of the subject allows these.
2. To make the primary school curriculum a true ESD curriculum, the presence of social and economic aspect must be increased (Bratovic, Lopic, & Kadic, 2011; Bregvadze, 2011).
3. Similarly, to ensure the implementation of ESD aspects in primary school setting, teachers must be trained about ESD to adopt the most appropriate students centered teaching methodology in the primary school setting.

References

- Domazet, M., Dumitru, D., Jurko, L., & Peterson, K. (2012). *Civil rights and obligations are connected to environmental issues in the curricula? A comparative analysis of education for sustainability content in 9 European countries*. Zagreb: Network of Education Policy Centers (NEPC).
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative Content Analysis: A Focus on Trustworthiness. *SAGE Open*, 1-10. doi:DOI: 10.1177/2158244014522633
- Kalsoom, Q., Qureshi, N., & Khanam, A. (2018). Teacher Education for Sustainable Development in Pakistan: Content Analysis of Teacher Education Curriculum and Standards. *Journal of Research and Reflections in Education*, 13(1), 15-34.
- Ministry of Education. (2007). *national curriculum for social study grade iv to v*. Islam Abad: Ministry of Education govt of Pakistan.
- Alvi, U., & Aziz, A. (2002). *Environmental Education: Study Guide*. Karachi: The Aga Khan University-Institute.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *Nursing Plus Open*, 2, 8-14.
- Bratovic, E., Lepic, S., & Kadic, A. (2011). *Education for sustainable development: Bosnia and Herzegovina: Research report*. Sarajevo: proMENTE social research.
- Bregvadze, T. (2011). *Education for sustainable development: Georgia: Research report*. Tbilisi: International Institute for Education Policy, Planning and management.
- Carmichael, C. (2003). *A primer on sustainable technology and development*. Retrieved 11 23, 2018, from <https://www2.isye.gatech.edu/~ctovey/courses/2030/lectures/PRIMER.pdf>
- Creswell. (2015). *30 Essential Skills for the Qualitative Researcher*. London: SAGE.
- Creswell, J. w. (2012). *Educational Research: Planning, Conducting, and Evaluating Quantitative and Qualitative Research* (4th ed.). University of Nebraska–Lincoln: PEARSONS.
- Denchak , M. (2018). *Fossil Fuels: The Dirty Facts*. Retrieved from NRDC: <https://www.nrdc.org/stories/fossil-fuels-dirty-facts#:~:text=Coal%2C%20crude%20oil%2C%20and%20natural,lived%20millions%20of%20years%20ago>.
- Dhindsa, T. (2016). Education for Sustainable Development: challenges in Pakistan. In R. N. Gorana, & P. R. Kanaujia (eds.), *Reorienting Educational Efforts for Sustainable Development, Schooling for Sustainable Development* (pp. 165-178). Springer. doi: 10.1007/978-94-017-7622-6_10

- Economic_Survey. (2018). *Agriculture*. Islam Abad: Finance Division Government of Pakistan.
- Eli, Munkebye, Scheie, E., Gabrielsen, A., Jordet, A., Misund, S., . . . Øyehaug, A. B. (2020). Interdisciplinary primary school curriculum units for sustainable development. *Environmental Education Research*, 26(6), 795-896. doi:<https://doi.org/10.1080/13504622.2020.1750568>
- Elliot, V. (2018). Thinking about the Coding Process in Qualitative Data Analysis. *The Qualitative Report*, 23(11), 2850-2861. Retrieved from [m https://nsuworks.nova.edu/tqr/vol23/iss11/14](https://nsuworks.nova.edu/tqr/vol23/iss11/14)
- Flannery, T. (2002). *The future eaters: An ecological history of the Australian lands and people*. Sydney: Grove.
- Gay, L., Mills, G. E., & Airasian, P. (2012). *Educational Research Competencies for Analysis and Application (10th Ed.)*. Englewood Cliffs, New Jersey: pearson.
- Government of Pakistan National Frame work. (2018). *SUSTAINABLE DEVELOPMENT GOALS (SDGS): NATIONAL FRAMEWORK*. Islam Abad: Ministry of Planning, Development and Reform Planning Commission.
- Hales, S., & Corvalan, C. (2006). Public health emergency on planet Earth: Insights from the millennium ecosystem assessment. *EcoHealth*, 3(3), 130–135.
- Hedefalk, M., Almqvist, J., & Östman, L. (2015). Education for sustainable development in early childhood education: a review of the research literature. *Environmental Education Research*, 21(7), 975-990. doi:<http://dx.doi.org/10.1080/13504622.2014.971716>
- Kalsoom, Q. (2017). *Esd Literacy-Based Model for Preservice Elementary Teachers: A Focus on Critical and Environmental Consciousness and Effective Teacher Development*. Unpublished PhD. thesis. Punjab, Pakistan: Lahore College For Women University.
- Kerkhoff, L., & Lebel, L. (2006). Linking Knowledge and Action For Sustainable Development. *Annual Review of Environmental Resources*, 31(2), 445–77.
- Koppelman, J. (2010). Are we Really Educating about Sustainability. *Journal of Sustainability Education*, 5, 1-6.
- Krippendorff, K. (2004). *Content Analysis: An Introduction to Its Methodology (2nd eds)*. Thousand Osaka: Sage Publications.
- Léal Filhó, W. (2000). *Communicating Sustainability* (Vol. 32). Peter Lang Scientific Publishers. doi:10.3726/978-3-653-04538-3
- Mckeown, R. (2002). Education for Sustainable Development Toolkit. Unpublished PhD thesis. University of Tennessee.

- Miles, M. B., Huberman, A. M., & Saldaña, J. (2013). *Qualitative data analysis: A methods sourcebook (3rd ed.)*. London, UK: SAGE.
- Ministry of Education . (2006b). *National curriculum for Urdu grade 1st to 12th* . Islam Abad: Govt of Pakistan Ministry of education .
- Ministry of Education. (2006a). *National curriculum for islamiate grade 3 to 10*. IslamAbad: Government of Pakistan Ministry of Education islamabad.
- Mirza, M. S. (2015). Transforming teacher educators for re-orienting teacher education programs for sustainable development. *International Journal of Quality in Education*, 1(1), 28-53.
- Mustard, F. (2000). Early childhood development: The base for a learning society. *Paper presented at the HRDC/OECD Meeting, December 7, in Ottawa, Canada*.
- Nolet, V. (2017). Quality Education: Cultural Competence and a Sustainability Worldview. *Kappa Delta Pi Record*, 54(3), 162-167. doi:10.1080/00228958.2017.1369276
- Pauw, J. B.-d., Gericke, N., Olsson, D., & Berglund, T. (2015). The Effectiveness of Education for Sustainable Development. *OPEN ACCESS sustainability*, 15693-15717. doi:10.3390/su71115693
- Pavlova, M. (2009). *Technology and Vocational Education for Sustainable Development Empowering Individuals for the Future* (Vol. 10). Springer. doi:10.1007/978-1-4020-5279-8
- Rauch, F. (2010). What do regulative ideas in education for sustainable development and scientific literacy as myth have in common? In I.Eilks, & B. R. (Eds.), *Contemporary science education* (pp. 35-46). Aachen: Shaker.
- Redclift, M. (1992). Sustainable Development and Global Environmental Change: Implications of a Changing Agenda. *Global Environmental Change*, 2(1), 32-42.
- Richards, L. (2015). *Handling Qualitative Data : A Practical Guide*. London: SAGE.
- Saqib, Z. A., Zhang, Q., Ou, J., Saqib, K. A., Majeed, S., & Razzaq, A. (2020). Education for sustainable development in Pakistani higher education institutions: an exploratory study of students' and teachers' perceptions. *International Journal of Sustainability in Higher Education*, 21(6), 1249-1267. doi: <https://doi.org/10.1108/IJSHE-01-2020-0036>
- Syed, M., & Nelson, S. C. (2015). Guidelines for establishing reliability when coding narrative. *Emerging Adulthood*, 3(6), 375-387.
- Taylor, N., Quinn, F., & Eames, C. (2015). *Educating for Sustainability in Primary Schools, Teaching for the Future*. AW Rotterdam, Netherlands: Sense Publishers.
- UNESCO. (2002). *Report of the World Summit on Sustainable development*. New York.

- UNESCO. (2005). *The UN Decade of Education for Sustainable Development (2005-2014): International Implementation Scheme*. Paris: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000148654>
- UNESCO. (2005a). *Teaching and Learning for A Sustainable Future*. Retrieved from <http://www.unesco.org/education/tlsf>
- UNESCO. (2006). *Education for Sustainable Development Toolkit No1*. Paris: UNESCO.
- UNESCO. (2011). *National Journeys towards Education for Sustainable Development 2011*. Paris: UNESCO.
- UNESCO. (2013). *education for sustainable development: Good practices from Pakistan*. Islam Abad.
- UNESCO. (2014a). *Education for All Global Monitoring Report 2013-2014: Teaching and Learning: Achieving Quality for All*. Paris: UNESCO. Retrieved from <http://unesdoc.unesco.org/images/0022/002256/225660e.pdf>
- United Nations. (1992). *AGENDA 21: United Nations Conference on Environment & Development Rio de Janeiro, Brazil 3 to 14 June 1992*.
- United Nations. (2015). *Transforming our world: The 2030 Agenda for Sustainable Development*. New York, NY: United Nations Resolution A/RES/70/1. Retrieved from http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E
- UN-WCED. (1987). *Our Common Future*. Retrieved 2018, from <http://www.undocuments.net/wced-ocf.htm>
- Wals, A. (2009). *Review of contexts and structures for education for sustainable development 2009*. Paris: UNESCO, Section for DESD Coordination.
- Wals, A. E. (2012). *Shaping the education of tomorrow: Report on the UN Decade of Education for Sustainable Development*. Paris: UNESCO. Retrieved from <https://unesdoc.unesco.org/ark:/48223/pf0000216606>
- Ward, J. H. (2012). *Managing Data: Content Analysis Methodology. Unpublished Manuscript, University of North Carolina at Chapel Hill*.
- World Wildlife Fund. (WWF). (2006). http://www.panda.org/news_facts/publications/key_publications/living_planet_report/index.cfm.