Headteachers' Contribution to Improving Quality of Education for Sustainable Development at Secondary Level

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Abstract *Headteachers are responsible for the provision of quality education to the children in their respective educational institutions. The study aimed to analyze Head Teachers' commitment to improving the education level for sustainable development and to suggest measures for further progress. The population of the study consisted of oof380 public sector secondary schools' headteachers (male &female) of Okara and Sahiwal districts. Sample of the study comprised of 240 headteachers (male &female) randomly selected from the population. A self-developed questionnaire comparison of Five-point Likert scale was used to collect data, which was later on analyzed and interpreted by using frequency percentages, mean score, standard deviation and t-value as statistical tools. It was concluded that the majority of respondents were in four that education for sustainable development (ESD) helps them in achieving sustainable development goals.*

Key Words: Headteachers, Awareness, Quality of Education, Sustainable Development

Introduction

Sustainable development is the drawn-out objective of finding ways to deal with assistance current masses without haggling the restriction of individuals later on to fulfil their own needs (UNESCO 2012). It is a thinking paradigm about future planning in which social, economic and environmental tiers are balanced for the quest of development and a further improvement in the quality of life. It was considered a central guiding principle for debate on the environment, energy and education (Bonnett, 2003). The U.N. General Assembly (GAUN) highlighted the urgent need for sustainable development and told people that it is time to re-equilibrium UNESCO's international relations, 2010.

The theme of the sustainable development has been estimated a solution to global s issues like economic, environmental and social challenges including poverty, water sustainability, income inequality, climate change, health insecurity, desertification, unsustainable food consumption, human right abuses, consumerism, harm to biodiversity and environmental issues. These issues have developed political unrest and armed conflict across the world (UNESCO 2009; Khataybeh et al., 2010)

Environment and Growth Conference in Rio de Janeiro (1992) Education (University preschool) Education was considered a significant factor for the promotion of sustainable development to deal environmental, Local, national, international, and global economic and social issues (Wals & Kieft, 2010). Similarly, Taylor (2016) also pointed out three main issues of sustainable development are economic growth, environmental protection and social equality.

Sustainable development education gains international credibility by adopting Resolution 57/254 of the United Nations General Assembly in December 2002, and the Decade for U.N. Growth Education (DESD) announced for 2005-2014. Researchers like Win & Maw (2018) claimed that education needed to achieve the objectives of sustainable development, and teachers needed to recognize the ESD concept and the ESD vision. It is an education sector that allows headteachers, teachers and students to find new ways to be active members of

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society through a role of transformation in shaping standards of life for the better future (UNESCO, 2014; Aye, Win & Maw, 2019).

Sustainable development for education has to face many challenges, and under compelling reasons, no country of the world can claim fully succeeded in achieving its goals in true spirit. Anyhow efforts are being carried out across the world to achieve Millennium Development Goals 2015, which highlights the challenges faced to humanity in achieving sustainable development for education. In the present era of science and information communication technology (I.C.T.), it has become an issue not only for Pakistan but at global level, how fruitful efforts can be carried out for successfully achieving education for sustainable development goals at all levels, especially at the school level. To achieve this objective headteacher needs I.C.T. related training courses based on modern information and communication technologies (Imran, Mahmood & Ahmad, 2020). Thus, this present study was conducted to explore head teachers' contribution to improving the quality of education in achieving sustainable development at the secondary level.

The emergence of modern technological tools revolute teaching-learning process. The objectives of the study were:

1. To find out the possibilities in the use of I.C.T. at university
2. To determine the hurdles in the use of I.C.T. at university level
3. To explore the relationship of possibilities and hurdles in the use of I.C.T.

The present research was a descriptive study. The population of the study comprises the academics teachers in the five universities in Sahiwal division. The researchers selected a sample of 250 teachers for the execution of the study. The questionnaire was pilot tested and checked the reliability and validity of the tool. The findings of the study informed us that teachers having access to I.C.T. resources within the premises of universities and teachers are using digital libraries for enhancing their knowledge. It is also found that computer labs have not sufficient numbers of computers. Teachers are reluctant and not enough confidence in the use of advance I.C.T. gadgets. The study informed us that teachers have the (81%) positive opportunities for the use of I.C.T. resources and tools in the universities whereas there are (34%) hurdles in the way of using I.C.T. tools and resources. It is concluded that effective teachers use of I.C.T. tools can enhance teachers' motivation and makes teachers more productive. The study recommends that universities may take steps to ensure proper teachers training facilities and also take steps in providing an adequate number of I.C.T. related courses at the university level and availability of experts for improving their technical knowledge based on modern information and communication technologies.

Study Objectives

The aim of this study was to highlight world-wide education and learning trends which demonstrate the potential and challenges of ESD at each level of education, particularly at the school level, by exploring the contribution of headteachers to improve the quality of education to achieving sustainable secondary education.
This research had primary objectives;

1. To explore the concept of education for sustainable development.
2. To find out the role of Head Teachers in developing secondary education for sustainable growth.
3.

Research Questions

For this purpose, answers were sought the following research questions;

1. What is the aim of sustainable development education?
2. What is the role of Head Teachers in improving secondary education for sustainable development?

Review of Related Literature

Sustainable development has been suggested at globalized level to address environmental problems. The WCED report (1987) emphasized that sustainable development does not compromise the needs of future generations and seeks to ensure that the requirements of the existing generation are satisfied. The WCED report stresses the

importance of sustainable development. As a solution to human-environmental issues, the concept of sustainability was put forward for social change (Adawiah & Esa, 2012).). Moreover, development at the same time and addresses processes of change which could lead to significant changes in local circumstances (UNESCO 2005a).

Sustainable development's main goal is to inspire present and future generations to achieve their wishes by integrating a way into the social, environmental and economic facets of life. It does not include poverty, no hunger, no public health, better and quality education, equality of gender, clean water and sanitation, renewable resources, peace and justice, a favorable climate are the main objectives to be accomplished in due course of time (UNESCO, 2014).

Education for sustainable development is a dynamic force, helps in bringing positive long-term change in society (Ansell, 2006; Rauch, 2002). It provides a new direction for learning and enables individuals to perform their future responsibilities in better ways (Gadotti, 2010; Haan, Bormann & Leicht, 2010) The reorientation of current education at all stage, e.g. rehabilitation of educational programmes, analysis of training strategies, programmes et practices, is also a factor at resolving potential problems (Howe, 2009). In addition to informal education, it covers all areas of education at all levels, especially official education. It further helps about 'rethinking and revising education from nursery school to university levels (Khataybeha, Subbarinia & Shurmana, 2010). It integrates principles, values, skills, holistic thinking, education practices and curriculum with more innovative manners. Moreover, it enables people to evaluate and find alternative visions of a sustainable future (ESD & GC, 2007; Ofsted, 2008; UNESCO, 2007). It has further been elaborated by UNESCO (2013) as;

> ""*Sustainable development Education involves integrating key education and learning issues into sustainable development, for instance, climate change, the risk reduction of disasters, biodiversity, reduction of poverty and sustained consumption Participatory training and education methods must also empower and enable students to alter behaviour and take steps in favour of sustainable growth. Sustainable education thus encourages skills such as strategic thinking, imagining future scenarios and taking collective decisions" (UNESCO, 2013).*

The Education for Sustainable Development (ESD) is a sort of education, helps all learners to be an active member of the society for bringing change in the current traditional system as per global changes for shaping a better future. It includes all the values, skills, perspectives, knowledge related to sustainable development issues that are integrated into all aspects of learning. It will bring changes in behaviour that can promote the formation of a sustainable society (McKeown, 2002). It focuses on ensuring that all facets of education and learning with sustainable development standards, ideals and practices are incorporated between them (UNESCO 2014). It can be elaborated by as the process of learning sustainable development (Porritt, 2005; Tlibury, 2004). It helps people to become a socialized member of the civilized society for a better sustainable future. Its main function is to promote positive societal transformation in society. It must be part of education and must be implemented in sustainable development (Ciferri and Lombardi, 2009).

It is the Education for Sustainable Development which is considered a motivational and directional force helps learners of all levels to actively participate in future sustainable activities. It also helps to solve current and potential problems, depending on the focus of existing education at all levels towards reforming education structures, by revisiting a variety of Gadotti education strategies, programme, and activities, 2010. In order for the sustainable future to enhance development, decision making and the quality of life, the learners should become better people, citizens, families and societies as needed by society and the world community (McKeown, 2002; Ciferri & Lombardi, 2009). In the present era, knowledge about EfSD is necessary for all to ensure the successful integration of EfSD in teaching to minimize the effects of human activities on the environment.

The concept of ESD was developed by feeling the dire need of education for addressing rapidly rising environmental issues facing in this modern era to the whole world community. It is the only major element that brings Improving knowledge, skills, values and attitudes that enable students to continue to contribute to successful content and performance development in pedagogy and the environment of learning (UNESCO, 2014). Many research studies pointed out various reasons for studying education for sustainable development at various levels. Teachers in all subjects and heads in their respective educational institutions were made responsible in accordance with the ESD approach stressed in U.N. policy documents for teaching and promoting education for sustainable development (UNESCO 2005; 2017). Students should learn how to take responsibility for both themselves and their society for today and in the future, based on the concept of sustainable development (de

Haan, 2006; Mogensen & Schnack, 2010).

Material and Methods

Research Design

The design of the study was descriptive, and survey method was followed, as it helps researchers for the description of samples as per the requirements of the study (Gay, Mills & Airasian, 2009). Similarly, many research studies conducted earlier related to this research work were carried out on the basis of this method, as it is the most suitable method used to conduct research studies in the social sciences (Leob et al., 2017).

Population

Population in research studies is considered the largest group of respondents selected for the ollection of required information for achieving required objectives in due course of time (Asiamah., Mensah. & Oteng, 2017. It is a complete set of cases, helps researchers to draw the sample for collection of requisite information for further investigating research process (Alvi, 2016; Mills & Gay, 2018). As the study was delimited to two districts, so the population of this research study was comprised on 380 (215+165) male and female head teachers serving in these boys' and girls' public sector secondary schools of Okara and Sahiwal districts of Sahiwal Division, (Punjab province) Pakistan.

Sample

In research studies, sampling is considered a subset of the total population representing the whole group. It is used to make inferences regarding showing population characteristics. It is a small number of people taken out from a population for research investigation (Gay, 2012). In this study, simple random sampling technique was used to select a sample from a population, as it is a type of sample selection where each and every member of the population has equal chances to be selected for a sample of the study. Similarly, it is also used to avoid unwanted effects and bias affecting the successful conduct of research studies (Alvi, 2016; Mills & Gay, 2018). In the current study, 240 (120 male and 120 female) head teachers serving in public sector boys' and girls' secondary schools of Okara and Sahiwal districts were selected from the population through simple random sampling technique as a sample of the study.

Tool for Collection of Data

Keeping in view for achieving objectives of the research study, a self-developed questionnaire, based on five points Likert scale, validated through pilot testing, was personally administered to respective respondents for collection of the required information. At present, generally, a questionnaire is used to collect information from respondents, due to this reason, it is considered one the most suitable tool widely used in social sciences survey research studies. Furthermore, it is a set of questions applied for receiving requisite information from respondents according to their perceptions meeting the demands of the research study (Mills & Gay, 2018). Questionnaire of this research study was comprised of three parts, showing 40 items included relevant to the research study. Part 1 of the questionnaire was used to gather information on informants on sustainable development education, whereas, part-11 was used to explore head teachers' perception regarding the role of head teachers for achieving education for sustainable development goals and part -111 was used to find out problems faced to head teachers for achieving education for sustainable development goals.

Data Analysis and Interpretation

The collected data were analyzed through SPSS -21 and presented in tabular form by application of descriptive statistics such as frequency score, percentages, mean score, standard deviation, percentage and t-value for data analysis. It also presents the demographic characteristics of the respondents who were head teachers of secondary schools of the public sector have been made responsible for participating in their respective educational institutions to achieve educational targets for sustainable growth. Detailed descriptions of the results were presented in the following tables;

Table 1. School Head Teachers have an Idea about Sustainable Development for Education

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	11	26	15	63	5	3.21	1.14	-1.1
	Per%	9.2%	21.7%	12.5%	52.5%	4.2%			
Female	Frequency	7	21	17	72	3	3.36	.994	
	Per%	5.8%	17.5%	14.2%	60.0%	2.5%			

df = 238 Sig. at 0.05 = 0.272

Above table shows that majority (56.7%) male and (62.5%) female head teachers were agreed and only (30.9%) male and 23.3%) female (5.8%+17.5%=23.3%) have disagreed to the statement regarding school head teachers have an idea about sustainable development for education. Mean score increases from (3.21 to 3.36) while the standard deviation rises from (.994 to 1.14). The t-value (-1.10) is lesser than the tabulated value (0.272). It has shown that the views of male and female respondents do not vary significantly. It was concluded that the majority (62.5%) female head teachers were agreed that school head teachers have idea about sustainable development for education

Table 2. Sustainable Development Helps to Improve Technological Innovation

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	7	11	13	69	20	3.70	1.042	1.373
	Per%	5.8%	9.2%	10.8%	57.5%	16.7%			
Female	Frequency	10	20	12	56	22	3.50	1.209	
	Per%	8.3%	16.7%	10.0%	46.7%	18.3%			

df = 238 Sig. at 0.05 = 0.272

This table indicates that majority (74.3%) male and (65% female head teachers were agreed and only (15%) male and (25%) female were disagreed to the statement that sustainable development helps to improve technological innovation. Mean score increases from (3.50 to 3.70) while standard deviation rises from (1.042 to 1.209). The t-value (1.373) is greater than the tabulated value (0.272) at 0.05 level. It shows that there is a significant difference in the perceptions of male and female respondents. It was concluded from the above table that majority (74.3%) of the male head teachers were agreed that sustainable development helps to improve technological innovation.

Table 3. Sustainable Development Helps to Maintain Institutional Peace

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	6	13	9	68	24	3.76	1.053	.964
	Per%	5.0%	10.8%	7.5%	56.7%	20.0%			
Female	Frequency	9	18	12	52	29	3.62	1.217	
	Per%	7.5%	15.0%	10.0%	43.3%	24.2%			

df = 238 Sig. at 0.05 = 0.272

Table 3 illustrates that majority (76.7%) male and (67.5%) female head teachers were agreed and only (15.8%) male and (22.5%) female head teachers have disagreed to the statement that sustainable development helps to maintain institutional peace. Mean score increases from (3.62 to 3.76) while the standard deviation rises from (1.053 to 1.217). The value of t (.964) is above the tablet (0.272) at the level of 0.05. It indicates that the views of men and women respondents vary considerably. It was concluded from the above table that the majority (76.7%) of the male headteachers were agreed that sustainable development helps to maintain institutional peace.

Table 4. Sustainable Development Promotes Quality of Education

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	7	14	11	63	25	3.71	1.103	-.586

	Per%	5.8%	11.7%	9.2%	52.5%	20.8%		
Female	Frequency	6	13	12	58	31	3.79	1.099
	Per%	5.0%	10.8%	10.0%	48.3%	25.8%		

df = 238 Sig. at 0.05 = 0.272

The above table describes that majority (73.3%) male and (74.1%) female head teachers were agreed and only male (17.5%) and female (15.8%) head teachers have disagreed to the statement that sustainable development promotes quality of education. Mean score increases from (3.71 to 3.79) while the standard deviation rises from (1.099 to 1.103). The value of t measured (-.586) is lower than the value of 0.05 (0.272). It indicates that the views of men and women respondents are not significantly different. It was concluded from the above table that the majority (74.1%) of the female head teachers were agreed that sustainable development promotes quality of education.

Table 5. Sustainable Development Helps to Secure Wellbeing of the Future Generation

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	7	13	9	61	30	3.78	1.117	-1.577
	Per%	5.8%	10.8%	7.5%	50.8%	25.0%			
Female	Frequency	3	8	9	67	33	3.99	.921	
	Per%	2.5%	6.7%	7.5%	55.8%	27.5%			

df = 238 Sig. at 0.05 = 0.272

Table 5 shows that majority (75.8%) male and (83.3%) female head teachers were agreed and only male (16.6%) and female (9.2%) head teachers have disagreed to the statement that sustainable development helps to secure the well-being of the future generation. Mean score increases from (3.78 to 3.99), while the standard deviation rises from .921 to 1.117. The t-value calculated (-1.577) is smaller than the value (0.272) calculated on the basis of 0.05. It indicates that the views of men and women respondents vary considerably. It was further concluded that the majority (83.3%) female head teachers were agreed that sustainable development helps to secure the well-being of future generation.

Table 6. Sustainable Development Creates Critical Thinking in Students

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	8	14	19	61	18	3.56	1.091	-.350
	Per%	6.7%	11.7%	15.8%	50.8%	15.0%			
Female	Frequency	6	18	18	53	25	3.61	1.125	
	Per%	5.0%	15.0%	15.0%	44.2%	20.8%			

df = 238 Sig. at 0.05 = 0.272

Table 6 describes that majority (75.8%) male and (83.3%) female head teachers were agreed and only male (16.6%) and female (9.2%) head teachers have disagreed to the statement that sustainable development helps to secure the well-being of the future generation. Mean score increases from (3.78 to 3.99), while the standard deviation rises from .921 to 1.117. The calculated t-value (-1.577) is lesser than tabulated value (0.272) at 0.05 level. It shows that there is no significant difference in the perceptions of male and female respondents. It was further concluded that the majority (83.3%) female head teachers were agreed that sustainable development helps to secure the well-being of future generation.

Table 7. Sustainable Development Helps for the Distribution of Basic Facilities

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	3	9	11	67	30	3.93	.932	1.324
	Per%	2.5%	7.5%	9.2%	55.8%	25.0%			

Female	Frequency	9	13	11	53	34	3.75	1.197
	Per%	7.5%	10.8%	9.2%	44.2%	28.3%		

df = 238 Sig. at 0.05 = 0.272

This table describes that majority (80.8%) male and (72.5%) female head teachers were agreed and only male (10%) and female (18.3%) head teachers have disagreed to the statement that sustainable development helps for distribution of basic facilities. Mean score increases from 3.75 to 3.93, while the standard deviation rises from .932 to 1.197. The calculated t-value (1.324) is greater than (0.272) at the 0.05 level. It shows that there is a significant difference in the perceptions of male and female respondents. It was concluded that the majority (80.8%) of the male respondents were agreed that sustainable development helps for the distribution of basic facilities.

Table 8. Head Teachers Faced Many Problems in Achieving Sustainable Development Goals

Gender	Frequency	SDA	DA	UD	A	SA	Mean	SD	T-Value
Male	Frequency	9	36	9	59	7	3.16	1.145	-2.936
	Per%	7.5%	30.0%	7.5%	49.2%	5.8%			
Female	Frequency	6	21	8	67	18	3.58	1.097	
	Per%	5.0%	17.5%	6.7%	55.8%	15.0%			

df = 238 Sig. at 0.05 = 0.272

The above table describes that majority (55%) male and (70.8%) female head teachers were agreed, and only male (37.5%) and female (22.5%) head teachers have disagreed to the statement that head teachers faced many problems in achieving sustainable development goals. Mean score in the above table increases from 3.16 to 3.58 while standard deviation rises from 1.097 to 1.145. The calculated t-value (-2.936) is lesser than the tabulated value (0.272) at the 0.05 level. It shows that there is no significant difference in the perceptions of male and female respondents. It was concluded from the above table the hat majority (70.8%) female head teachers were agreed that head teachers faced many problems in achieving education for sustainable development goals.

Discussion

Education plays a significant role in interpreting learning for the advancement of information, skills and values substantial Growth; education brings change in attitudes of the learners to enable them a socialized member of socialized society with more sustainable manners. Its main aim is to allow current and future generations to meet their needs Proper use of balanced and integrated resources available for sustainable economic and environmental dimensions (UNESCO 2018). It is also considered renewing education, teaching and learning, allowing schools, universities, vocational and training institutes, businesses communities to face challenges for bringing change in their lifestyle across the world. The aim is to achieve the long-term and short-term objectives of the ESDs (UNESCO 2012) through thinking, value-based learning, problem-based learning, thought-critical education, and social learning approaches. The results of the present study indicated that that majority (62.5%) female head teachers were agreed that school head teachers were having awareness regarding Education for Sustainable Development (ESD). Education quality promotes the fostering of innovation and improves the awareness, gaining know-how in literacy, scientific, problem-solving, and other cognitive, interpersonal and social skills at high levels such as equity between men, health, education, and environmental sustainability (UNESCO 2014b). It was also found from results of the present study that majority (74.1%) of the female head teachers were agreed that sustainable development promotes quality of education. Burmeister & Eilks (2013) were of the opinion that many teachers were aware of the idea of sustainable development for education, similar results were also shown in the present study that majority (62.5%) female head teachers were agreed that school head teachers have an idea about sustainable development for education.

Conclusion

Education for Sustainable Development (ESD) is specifically designed to prepare young people for socialization by addressing present needs of society, without sacrificing the future generations' output in order to meet their own needs. Results of this study showed that most senior teachers supported sustainable development education (ESD). The Priority for sustainability Sustainable development in particular education understanding of sustainable development, improving technological innovation, maintaining institutional peace, promoting quality of education, securing the well-being of future generation, developing critical thinking, distribution of basic facilities, and solution of problems creating hindrances in achieving sustainable development goals.

Recommendations

To control problems creating hindrances for achieving education for sustainable development goals at the school level, it was recommended that Head teachers may be provided ESD related trainings for proper utilization of available resources to achieve education for sustainable developmental goals in their respective schools.

Infrastructure of the schools be improved as per demands of present era so that qualitative education be provided to students.

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