

**INTEGRATION OF EDUCATION FOR  
SUSTAINABLE DEVELOPMENT (ESD) IN  
TEACHER EDUCATION PROGRAMS:  
TOWARDS DEVELOPING A MODEL**



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This thesis is submitted for the partial fulfillment  
of the requirements for degree of  
PhD Education

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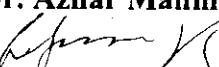
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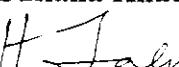
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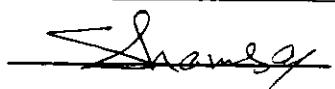
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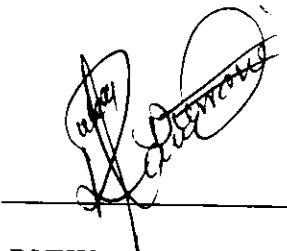
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## AUTHOR'S DECLARATION

I hereby declare that "Integration of Education for Sustainable Development (ESD) in Teacher Education Programs: Towards Developing a Model" is my own research work. The sources consulted or referenced are acknowledged properly in-text. The research is entirely my personal effort done under the sincere guidance of the respected supervisors. No portion of the work presented herein has been submitted against a publication in any degree or qualification of the same or any other university or institute of learning.



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## **SUPERVISORS' CERTIFICATE**

It is certified that Ms. Rukhsana Durrani Reg. No. 88-FSS/PHDEDU/F11 has completed her thesis titled "Integration of Education for Sustainable Development (ESD) in Teacher Education Programs: Towards Developing a Model" under our supervision. We are satisfied with the quality of student's research work and allow her to submit her thesis for further process as per IIUI rules and regulations.



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## **DEDICATION**

*This research work is dedicated to  
My Parents whose prayers never let me down  
My little kids  
(M. Suleman, M. Aayan & Eshaal Fatima)  
who 's smile push me for more struggle in life.*

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**(RUKHSANA DURRANI)**

## **Abstract**

Education for Sustainable Development is the process which enables people and society to live according to the principles and values of sustainability. It is a holistic and systemic approach which has accessibility to all sectors of societies. This study is designed to investigate the integration of Education for Sustainable Development (ESD) in teacher training programs and develop a model at the end of the study based on ESD. The research was based on the objectives: 1) To identify the level to which the concept of Education for Sustainable Development is addressed in teacher education curriculum. 2) to investigate the areas for integrating Education for Sustainable Development in teacher education curriculum. 3) To assess the awareness of teacher educators about Education for Sustainable Development for teacher education. 4) To evaluate the awareness of prospective teachers about Education for Sustainable Development. 5) To propose a model of integration of education for sustainable development in teachers training curriculum. This study was delimited to prospective teachers of semester 6-8 of B. Ed 4-year elementary program from public universities of Pakistan who are offering B.Ed. 4-year elementary program. The population of the research included 15 public universities of Pakistan and 160 teacher educators along with 500 prospective teachers from public universities. 22 subject experts and 27 National Curriculum Review Committee (NCRC) members were also the part of the population. Random sampling techniques were used for selection of sample, therefore 40% prospective teachers of total population from semester 6-8, 63% teacher educators and 7 members of NCRC were selected randomly from population. Similarly, Director of Institute of Education for Sustainable Development and 9 subject experts were also selected randomly. 31 courses of B.Ed. 4-year program were also under research for analysis of curriculum. It was mixed method

research with convergent parallel mixed method design. Data were collected through questionnaires, Semi-structured interviews and alignment matrix. Percentages and mean were used for analysis of data. Themes were derived from interviews. The findings of the data reflected that the components of Education for Sustainable Development is not aligned in majority of the courses of B.Ed. 4-year elementary program. And the experts have recommended the areas and subjects from courses of B.Ed. for integration the components of ESD. The teacher educators and prospective teachers also were agreed for integration of the components of Education for Sustainable Development in curriculum of B.Ed. 4-year elementary program. On the basis of both quantitative and qualitative analysis a model based on ESD for B.Ed. 4-year elementary program was proposed. The opinion of the experts was obtained on the proposed model and changes were made in the model in the light of the views of the experts. Integration of the proposed model in curriculum of B.Ed. 4-year program is one of the major recommendations.

***Keywords:*** *Education for Sustainable Development, Teacher Education, B.Ed. 4-Year.*

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## **List of Abbreviations**

B. Ed. 4-year	Bachelor of Education 4-Year Program
C.T	Certificate in Teaching
ESD	Education for Sustainable Development
M.Phil.	Philosophy of Education
NCRC	National Curriculum Review Committee
PhD	Doctor of Philosophy of Education
PTC	Primary Teaching Certificate
SPSS	Statistical Package for Social Sciences

## CHAPTER 1

### INTRODUCTION

Education may a powerful source for eradication of poverty, established realistic democracies, and promote peace and harmony in societies. Education may be empowering the citizens, enable them to express their opinion, polish their potential, make them self-actualized, and broaden perspectives and horizons of their minds to understand the globalized world (Furedi, 2009).

Generally, all societies expect from the education system to train young generation for their professional career and studies. Education may have a socializing role as it contributes in preparing the individuals to take up their responsibilities for making a peaceful society (Willy, 2008). Education might be an indispensable mean for achievement of sustainability. People all over the world realized that the present trends of economic development are not sustainable and that public awareness, training of citizens and education are the keys for moving forward the societies toward sustainability. Sustainable development is that type of human activity which nurture and enable the historical fulfillment of lives of all communities on earth (Rickinson, 2001).

Education, training and awareness of public are those keys processes by which societies might achieve their full potential toward progress. The world summit on sustainable development pinpointed two main aspects of education for sustainable development. One is, education makes the foundation of sustainable development. Therefore, all programs of (ESD) might be linked with EFA Education For All. Secondly, education might serve as the sources of bringing changes in behavior, values, skills and attitudes of individuals. Thus it is a tool which addresses social,

economic and environmental issues. The main purpose of Education for Sustainable Development (ESD) may to train the individuals for positive social and environmental change and to provide skill and knowledge which might be enable them to find out new and applicable solutions for economic, social and environmental issues. It is the basic them of ESD to produce balance human beings and promote their economic wellbeing, respect for cultures and traditions as well as for earth system (Samuelsson & Kaga, 2008).

The relationship between sustainable development and education is a complex phenomenon. Generally, research indicates that improvement in primary education is the key for achievement of sustainability of any nation. While, some researches results that education at any level has good impact on agricultural productivity, declination in population growth, improvement in environmental protection, upraising of women status, and usually move up the life standard of citizens (Rosalyn & Charles, 2002). ESD promote understanding and knowledge of economic, social and environmental aspects of sustainable development. Social aspect of ESD involves the citizenship education as it deals with the understanding of social institutions and its role, the process of development and social change. The social aspect also deals with the participatory and democratic system of society which provides opportunities for expression of opinion, creating consensus, selection of government and resolving the differences and conflicts (Pigozzi, 2005).

Sustainable development has many definitions but Brundtland Commission Report has its one of the original description which states that, "Sustainable development is development that meets the needs of the present without compromising on the ability of future generations to meet their own needs" (WCED, 1987, p.400).

Generally, it is recommended that sustainable development has three components, society, economy and environment. These three components are interconnected. For example, a healthy and prosperous society depends on the safe and clean environment as it provides good food, clean air, pure drinking water and health care resources to the citizens. Paradigm of sustainability rejects the argument of occurring of causalities in environment rather than believes in economic and social development without harming any aspect of society for coming generation. So sustainability paradigm is thinking about a future in which economic, social and environmental aspects are balanced for achieving a quality life. SD has its inbuilt commitment to the local and cultural relevancy and appropriateness of program. It considers the environmental, social and economic conditions in local perspective. Basically ESD enhances the civil capacity of citizens as it promotes tolerance, working condition of workforce, participation of community in decisions making and quality of life. It is based on the principles of sustainability in terms of equity, gender equality, social tolerance, alleviation of poverty, preservation of environment, restoration and conservation of natural resources and social justice (UNESCO, 2005).

Education may play a pivot role in development of human society. Globalization not only creates opportunities but also creates many challenges to societies. Only those nations can gain advantage from these opportunities that has adequate knowledge, skills and training. Education is a type of social instrument which guide the individuals toward their destiny and shaping their future. An illiterate man cannot become an effective part for the process of the development. If the purpose of education become only reading and writing not developing a skill in any country than the dream of a progressive and peaceful society might never be achieved (Syeda, 2005). ESD have two important approaches, i.e., top-down approach in which

the government and its agencies have to perform their responsibilities affectively, other is bottom up approach in which all students, teachers even from childhood education to university level have to be committed to contribute for a sustainable future (UNESCO, 2007). Education for Sustainable Development is an influential tool to move forward the society toward a more sustainable future and especially, higher education plays an important role as it not only educate the professionals of tomorrow but also provides services to the communities and to the nation at large through conduction of researches (Rehmani, 2006).

In the age of globalization, the boundaries of knowledge are extending as well as the method and procedures of delivery of knowledge are also changing. So the awareness of the teachers with both knowledge and skill become essential. No matter what the system of education is, if the teacher is fully trained and having command over the pedagogy, then the desire objectives can be achieved (Louis et al., 2010).

Teachers are the most powerful professional of any society as they make the minds and souls of the citizens. Their role is very important in educating the future generations. Therefore, the training of teachers is indispensable. Teacher education refers to those procedures and policies which are made to train future teachers with skills, knowledge and attitudes to perform their duties and achieve their tasks effectively both in classrooms and community at large. Teacher is the central and the most important element in any educational program. It is the teacher who is basically responsible for successful execution of any educational program. This shows that it is essential to invest on education and training of teachers to equip the nation with knowledge and skills (Letendre & Wiseman, 2015).

Learning and teaching for a sustainable future is a new and emerging trend of education. It is a vision which help the students to understand the world in which

they are living, also have deep knowledge of complexity and interrelationship of different problems such as gender equality, poverty, environmental issues, population explosion, urbanization, tolerance, resources consumption, human rights and its violation health and conflicts which threaten our future (Tilbury, 1995). No matter how much the education system of any country is updated, scientific and based on technology but it might be incomplete if the teachers are not trained properly. Teachers are those who bring the nations from darkness to the light of knowledge. They are the key figures inside the institutions that have this transforming role (UNESCO, 2007).

Pre service Teacher education is the most important feature of teachers training as these prospective professionals' have to deal to the lives of every child enrolled in schools. Revision of teacher education for inclusion of sustainable development might have positively affect the understanding of next generation for knowledge, skills and attitudes toward sustainability, therefore the current study explores the extent to which the concept and components of education for sustainable development are included in curriculum of teacher education at elementary level and proposed a model at the end of the research.

## **1.1 Rationale of the Study**

The history of education for sustainable development traced back to 1987, Brundtland Report which stated that to create awareness for solution of environmental issues and design the policies for ESD on government level. It also states that consume the resources in such a way which not only fulfill the needs of the current generation but also save them for the coming generations to protect the lives on land. Education for sustainable development is a paradigm for thinking about future, based on balanced environmental, social and economic considerations. The three aspects i.e.

environment, society and economy are interlinked with each other, similarly the paradigm of the concept of ESD is different from the paradigm of economics of past with prevention of harming the social and environmental aspects of a society.

Lack of awareness about ESD causes serious problems all over the world such as global warming, population burden, lack of tolerance and peace, social and cultural problems and issues, scarcity of water and economic resources, illiteracy, poor health, especially in the developed countries along with serious environmental problems. Consumption of resources is getting higher day by day as compare to production of resources. To tackle these serious problems, it is necessary to educate the masses about the consequences of this problem. The best way for solution is to familiarize the masses about the concept of education for sustainable development. The concept of ESD got importance all over world and efforts are made for introducing this concept in the curriculum of different level of education to create awareness in people. In this regard the efforts of UNO in form of different projects in different countries are appreciating.

Creating awareness about ESD through teacher education is one of the aspects which got importance all over the world. Because teachers in every society play an important role as they are the builders of the minds of the nations and are the powerful agents of change. They are the only professionals who can mould the minds of the individuals toward a progressive and peaceful society from the very beginning. Therefore, the role of a teacher education become very crucial as a well-equipped and trained teachers have better understanding of knowledge and have a skill for the good training of the students also.

Curriculum is one of the basic and essential parts of teachers training during pre-service education. Need based and demand oriented curriculum can only serve the

purpose of satisfactory training of teachers for future generations of the society. Therefore, it is essential to design the curriculum of teacher education in such manner which not only fulfill the needs of the particular society but also train the prospective teachers for handling the new challenges and problems occur in society. Keeping in view the importance of teacher education with special reference to curriculum the experts all over the world are now focusing on the inclusion of the concept of ESD for teacher training to tackle the problems and issues faced by the people globally.

Pakistan is one of the underdeveloped countries, and is facing many problems, which have directly link with lack of knowledge of ESD. To address these problems there is a need to revise the curriculum of B.Ed. 4-year elementary program as it was developed during 2011-2012. Alignment of curriculum with the current trend and demands of a society is a need of the time. The gape may exist between the theoretical knowledge and current trends and demands in curriculum of teacher education, efforts are being made all over the world to design the curriculum of teacher education based on the parameters of ESD, but in Pakistan the curriculum of teacher education for alignment of the ESD is still awaiting.

The study of Jumani and Abbasi (2015) also shows that the knowledge of education for sustainable development is very essential for training and capacity building of prospective teachers but unfortunately the concept is missing in the objectives of curriculum of teacher education. It further stated that education for sustainability is used as a common term in teacher education but people do not know much about it. So the gap may exist between ESD and curriculum of B.Ed. 4-year program. Therefore, it may be needed to include the components of ESD in teacher education curriculum to make it a proper part of training of prospective teachers at

B.Ed. 4-year elementary level during their pre-service education for inculcating the knowledge of ESD.

## **1.2 Statement of the Problem**

The main purpose of education for sustainable development is to bring sustainability in environmental, social and economic lives of people of any society. Education for sustainable development refers to the characteristics such as tolerance, peace, gender equality, preservation of environment, poverty and illiteracy reduction, population burden, pollution and social justice. These characteristics may need to be included in the contents of teacher education so that the teachers get awareness about the importance of sustainable development. Teachers can contribute to sustainable development and can guide their students in a better way for a sustainable future; therefore, the role of Pre-Service Teacher Education for achieving a sustainable future become very important, because they are the teachers who can guide and make the minds of the students in classrooms for sustainable communities in their local context. So the teachers may need to be equipped with the knowledge of Sustainable development since their pre-service teacher education. Keeping in view the importance of education for sustainable development the researcher intended to investigate the extent of integration of education for sustainable development in teacher education and also to find out the views of the experts for its integration in teacher education curriculum to propose a model of integration based on ESD for teacher education of B.Ed. 4-year elementary program.

## **1.3 Objectives of the Study**

The following were the objectives of the study:

1. To identify the level to which the concept of Education for Sustainable Development is addressed in teacher education curriculum.
2. To investigate the areas for integrating Education for Sustainable Development in teacher education curriculum.
3. To assess the awareness of teacher educators about Education for Sustainable Development for teacher education.
4. To evaluate the awareness of prospective teachers about Education for Sustainable Development.
5. To propose a model of integration of Education for Sustainable Development in teacher education curriculum.

#### **1.4 Research Questions**

1. To what extent the curriculum of teacher education addresses the concept of education for sustainable development?
2. What is the extent of integration of Education for Sustainable Development in teacher education curriculum?
3. What are the contents of education for sustainable development for integration in teachers' education curriculum?
4. What is the opinion of teacher educators to inculcate the components of education for sustainable development in their teaching learning process?
5. What is the level of awareness of teacher educators about ESD?
6. To what extent the teacher educators inculcate the discussion on education for sustainable development in their classrooms?
7. Are prospective teachers aware about the inclusion of ESD in curriculum of teacher education?

8. How can the concept of ESD be integrated into the curriculum of teacher education?

## **1.5 Significance of the Study**

Education for Sustainable Development (ESD) is one of the important concepts of teacher education. Now the trends in teacher education are changing toward ESD globally. Developed countries such as USA, UK and Japan and developing countries like Indonesia, Malaysia, Chilli and India are strongly emphasizing on ESD in all levels of curriculum particularly in teacher education curriculum. Due to its significance importance in new era UNESCO under UNO is already working in many countries on teacher education.

This study might be significant in many areas of education. The results of the study might be helpful to different sections of society. It is premature to claim but the plan and design of the research has shown that different sectors of education may benefit from it. This research might be helpful for the stakeholder of teacher education to know about education for sustainable development and its importance which might guide them to include it in the teacher education curriculum. The study might be helpful for teachers to get awareness about the concept of education for sustainable development and include it in their teaching learning process.

The study might also be serving as a guideline for the prospective teachers to know and adopt the concept of ESD in their daily life to make right decisions on right time about their society and future. It might also be significant for stakeholders to implement and regulate such policies and plans which will help to get maximum positive support from the phenomenon of Education for Sustainable Development.

The study may also be helpful for those who design and plan curriculum for teacher education, especially for higher education commission of Pakistan to re-think

about curriculum of teacher education and make changes according to the concept of ESD. ESD is one of the need and demand of a peaceful society so that the research might have significance for curriculum developers to align the curriculum of teacher education according to the problems and need of society which are occurring due to the absence of the inclusion of ESD in teachers training curriculum.

It has also importance for teacher educators to get awareness about the components of ESD and adopt such teaching methodologies which addresses the concepts of ESD. Identification of gapes between curriculum and ESD might also be helpful for teacher educators to include the concepts of ESD in their classroom teaching, so, that the students become aware and change their attitudes toward future society in the light of ESD.

The proposed model might be helpful for providing guidelines while developing or changing the curriculum of teacher education, especially for the stakeholders who are responsible for designing the curriculum.

The future researchers can also take help from this study to conduct researches on the related issues of education for sustainable development. The proposed model may be put forward for pilot testing and later on it might adopt for teacher education curriculum.

## 1.6 Conceptual Framework of the Study

Integration of Education for Sustainable Development in teacher education program: a proposed model:

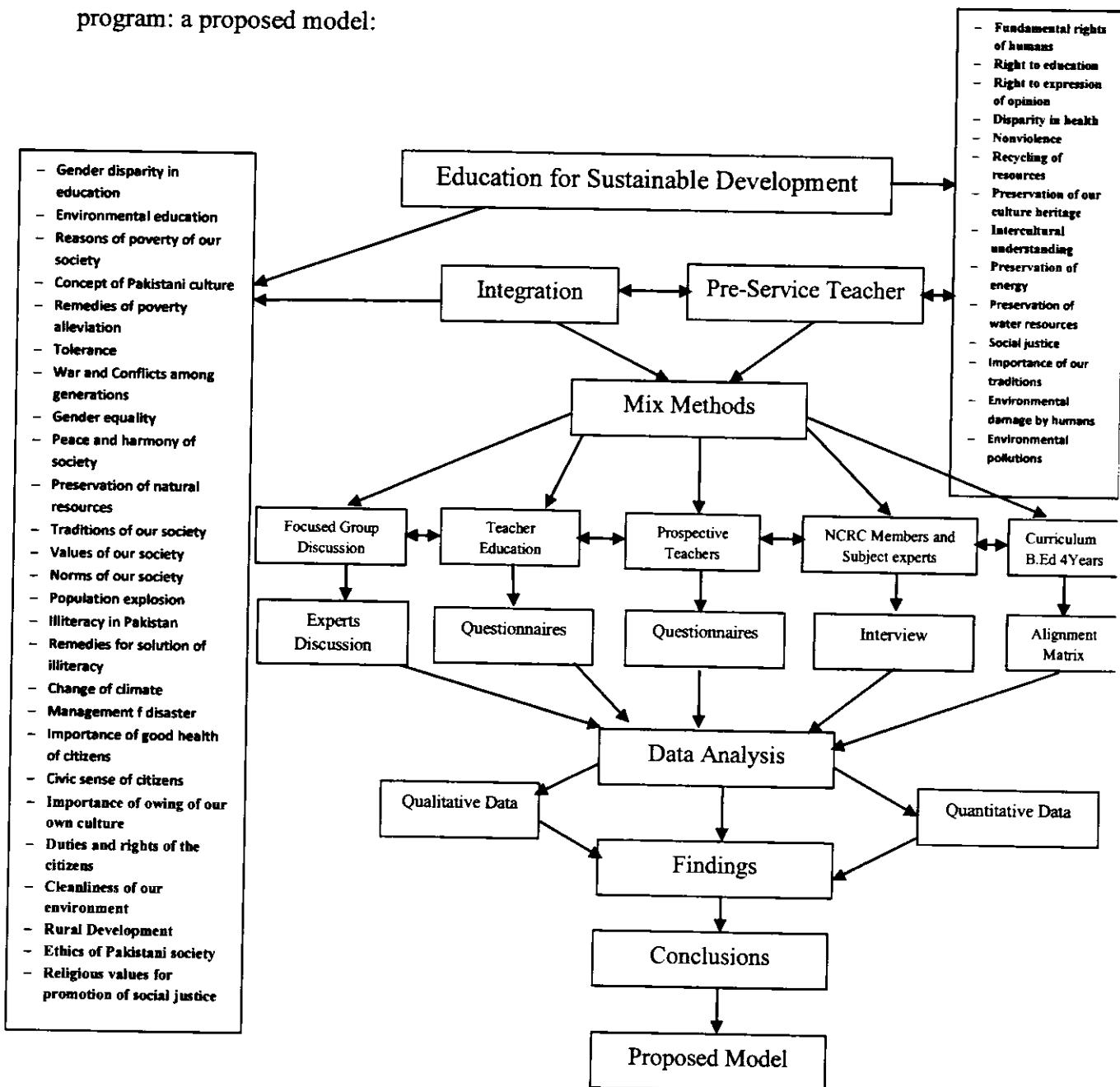


Figure 1.1 Conceptual Framework of the Research Study

## 1.7 Delimitations

1. The research study was delimited to pre-service teacher education.
2. The research study was delimited to B. Ed 4 years' elementary program.
3. The research study was delimited to semester 6 to 8 of B.Ed.4-year elementary program.
4. The research was delimited to the public universities of Pakistan.

## 1.8 Operational Definitions

1. **Gender disparity in education:** discrimination between the women and men in availing the opportunity of education.
2. **Environmental education:** knowledge about the problems and issues in surroundings about Environment
3. **Reasons of poverty of our society:** causes that creates poverty and contribute in the low earning of individuals of society.
4. **Concept of Pakistani culture.** Learning and awareness about the cultures prevails in Pakistan.
5. **Remedies of poverty alleviation:** possible solutions which can eliminate poverty
6. **Tolerance:** to bear each other opinion, like and dislikes or disagreements.
7. **War and conflicts among generations:** those issues and problems which can create war and conflicts or clashes between different age groups of people.
8. **Gender equality:** maintain equal access to all opportunities for both male and female genders.

9. **Peace and harmony of society:** importance of peace and avoidance of hostility.
10. **Preservation of natural resources:** awareness and importance of saving of natural resources
11. **Traditions of our society:** knowledge about the customs and tradition of Pakistani society.
12. **Values of our society:** knowledge about the social pattern and interaction of our society.
13. **Norms of our society:** knowledge about the acceptable behaviors of our society.
14. **Population explosion:** the concept of continuous growth in population and its effects.
15. **Illiteracy in Pakistan:** increasing rate of illiteracy in Pakistan and its effects on country.
16. **remedies for solution of illiteracy problems:** information about the low literacy and its possible solutions
17. **Change of climate:** knowledge about the evolving changes in the climate and its effects on globe.
18. **Management of Disaster risks:** pragmatic knowledge of managing the threats of disasters.
19. **Importance of good health of citizens:** knowledge about the importance of healthier and diseases free life.
20. **Civic sense of citizens:** creating sense in individuals for caring of people and social environment of society.

21. **Importance of owing of our own culture:** developing an attitude for valuing and adopting own culture.
22. **Duties and rights of the citizens:** awareness about own rights others rights as our duty.
23. **Cleanliness of our environment:** importance of keeping the environmental cleanliness.
24. **Rural development:** knowledge about the importance of the activities which can help to improve the rural areas.
25. **Ethics of Pakistani society:** awareness and importance of moral principles of Pakistani society.
26. **Religious values for promotion of social justice:** importance of adopting religious principles for strengthening the social equality in society.
27. **Fundamental rights of humans:** awareness about the basic rights of individuals living in a society.
28. **Right to education:** education as a fundamental right of the citizens.
29. **Right to expression of opinion:** giving an opportunity to the individuals to express their views in right way.
30. **Disparity in health:** discrimination between male and female in health opportunities.
31. **Nonviolence:** the importance of absence of hostility and violence
32. **Recycling of resources:** re-use of resources.
33. **Preservation of our culture heritage:** the importance of preserving our cultural legacy.
34. **Intercultural understanding:** understanding and respect for the culture of others living in a society.

35. **Preservation of energy:** saving energy and its resources.
36. **Preservation of water resources:** importance of saving water and its resources for coming generation.
37. **Social justice:** knowledge about the equal access to social rights without any discrimination.
38. **Importance of our traditions:** valuing our traditions.
39. **Environmental damage by humans:** knowledge about the harms caused by human actions for environment.
40. **Environmental pollution:** awareness about all types of pollution which harm the environment.

## **1.9 Limitation of the Study**

Due to time and resources constraints the study was limited to the B.Ed.4-year elementary program. It was difficult for the researcher to take students of all semesters of B.Ed.4-year program as the students of B.Ed.4-year have entry qualification of intermediate therefore the students of last semester from 6-8 were preferably included in the population with the intention that passing through some semesters the students develop knowledge about the system as well as about the concepts of teacher education. As the sample universities were located in different parts of the country so the resources were also involved in data collection, therefore, the sample of students were limited to 6-8 semesters, on the other hand time was one of the constraint as the researcher was supposed to complete her degree within due time.

## **1.10 Assumption of the Study**

There is a low level of integration of the concept of Education for Sustainable Development in teacher education curriculum of B.Ed. 4-years elementary program. Teacher educators and prospective teachers have less awareness about the concept of Education for Sustainable Development.

## **1.11 Research Design and Methodology**

### **1.11.1 Type of Research**

This research was both qualitative and quantitative in nature. The mixed methods research under convergent parallel mixed method design has covered curriculum analysis of B.Ed.4-year elementary program, survey, interviews of the subject experts and focused group discussion of experts from the field of education.

### **1.11.2 Population**

All (160) teacher educators and (500) prospective teachers of B.Ed.4-year program from semester 6-8 from the faculty/ Department of Education from (15) public universities of Pakistan offering B.Ed. 4-year were the population of the study (as Annexure- F). All 27 members of NCRC were also included in the population of the study. All (22) experts from the field of education, sociology, environmental sciences, economics and institute of sustainable development were also the part of population.

### **1.11.3 Sampling Techniques and Justification of Sample Size**

10 universities (those who are offering B.Ed.4-year elementary) were selected randomly as a sample of the research study for collection of data. 40% prospective teachers of B.Ed.4-year program of semester 6-8 were randomly selected from each university. As the Students of B.Ed.4-year program have the required qualification of

intermediate or 12 years of education, therefore the students of semester 6-8 were selected for the research with the logical reason that reaching till semester 6-8, students have spent about 2.5 years and achieved an enough level of knowledge about the teaching profession and their degree program. Furthermore, 63% teacher educators from the faculty/department of education of each university were also selected randomly to constitute the sample of the study. Members of NCRC are those members who are directly engaged in development of curriculum process and contents, therefore 7 members from 27 members of NCRC were randomly selected as a sample for the study. The interviews of members of NCRC were stopped on 7 members as the level of saturation was achieved in the light of Creswell (2015) recommendations for interviews as a research tool. Similarly, two professors from each department of education, sociology, environmental sciences, economics and a Director of Institute of Sustainable Development were selected randomly for interview. All general (31) courses from the curriculum of B.Ed.4-year (elementary) were also taken for analyzing the alignment of courses with the components of ESD.

#### **1.11.4 Research Instruments**

The following research instruments were used for collection of data from different sources which were under the sample of the study.

*Table No 1.1 Type of instruments and its sources of data*

Sr. No	Instrument	Source of data
1	Alignment matrix	Curriculum of B.Ed. 4-year program
2	questionnaire	Teachers educators
3	questionnaire	Prospective teachers
4	Semi structured interviews	NCRC members
5	Semi structured interviews	Subject experts/professors
6	Focused group discussion	Experts/educationists discussion

### **1.11.5 Development of Research Instruments**

Document analysis of Curriculum of B.Ed.4-year elementary program was made by using Alignment Matrix. The alignment matrix for all subjects of B.Ed.4-year elementary program was prepared in the light of ESD, which identified the extent of integration of ESD in teacher education curriculum. Questionnaires for prospective teachers and teacher educators was designed with 5-point scale, which helped to find out the awareness and integration of ESD and need of ESD in classroom teaching learning process. Likewise, Semi structured interviews were designed for NCRC members, professors of education, sociology, economics environmental sciences, and for a Director of Institute of Sustainable Development. The main purpose of the interviews was to assess the opinion of the experts about the different components of ESD for integration in teacher education contents. For authentication of model and identifying the views of the experts in the field of education a focused grouped discussion was arranged with pre-planned questions based on ESD.

### **1.11.6 Validity and Reliability**

Validity and reliability of all instruments used for data collection were ensured through the following steps:

- Experts opinion for ensuring validity
- Making changes according to the experts' opinion
- Pilot testing of the tools
- Ensuring high inter-rate correlations.

Detail of the validity and reliability is given in chapter 3.

### **1.11.7 Data Collection**

Data were collected through alignment matrix, questionnaires and interviews with focused group discussion. The curriculum of B.Ed.4-year elementary program

was collected from Higher Education Commission Pakistan through personal visit. All general courses from the curriculum were selected for analysis in the light of ESD. Semi structured interviews were conducted according to the schedule from all NCRC members and experts of education, sociology, environmental sciences, economics along with the director of Institute of Sustainable Development. At the end of all data collection procedures a focus group discussion was arranged which included the experts of education to give their opinion on the already designed model of ESD for integration in curriculum of B.Ed.4-year elementary program. In the light of the opinion of the experts' phase II of the model was developed for further explanation of the integration of the components of ESD of the proposed model.

#### **1.11.8 Data Analysis**

The data collected from teacher educators and prospective teachers was tabulated and was analyzed through percentages and mean score. All general courses of B.Ed. 4-year elementary program were analyzed through alignment matrix and percentages were calculated. Interviews of the experts were transcribed. Themes were derived from the transcribed interviews of all NCRC members and experts after careful reading. All themes were matched with the components of ESD which were included in the questionnaires. A proper model was designed through Coral Draw software. The opinion of the experts of education was obtained on the designed model in focused group discussion. Phase II of the model was developed through analysis by ranking of the opinion of the experts on the components of the model for integration in the courses of B.Ed. 4-year elementary curriculum.

#### **1.12 Chapter Overview**

This chapter deals to the introduction of the topic of research study. It discussed the topic of research in detail and shed light on the research problem.

Logical dimensions of the problem are discussed in this chapter and justify the statement of the problem with arguments. Objectives of the research along with its significance are included in this chapter. A self-explanatory conceptual framework is also the part of the chapter. Research methodology which was adopted for the achievement of the objectives is given in detail. To present the theoretical background and detail knowledge of the research topic review of literature is in next chapter.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 The Concept of Development

Earlier to nineteenth century the concept of development was not very common globally. Both the colonial and imperial powers have made little provisions for the upraising of developing countries. The colonial powers mainly provided raw materials and labors to imperial powers and generally there was a modest concern toward the issues of equity and social justice. But after the 2<sup>nd</sup> world war the policies had been changed drastically. Economic and social improvement occupied the central role in theory and policies of governments (Harris, 2000).

The economist, social scientists and policy makers have made different policies and theories with the main focus on raising the living standards throughout the world. International organizations like International Monetary Fund, World Bank, and the United Nations also came into being with this aim. As the policies of development have been evolved so, different approaches were used to emphasize on different dimensions in different times such as Education, nutrition, health, sanitation, and employment etc. remained the main focus of policies. However, the concept of development faced criticism all over the world with the unequal distribution of the benefits of development and the negative impact of development on the environment and existing social structure. Many societies are suffering from disparities in different aspects of lives, education, extreme pollution, inadequate water resources and transportation and environmental damages, etc. If these problems remained unchecked, they might overcome the achievements of development and can lead to the collapse of essential eco-system (Harris, 2000).

The growing awareness about these challenges lead to the new concept of “sustainable development” which can save both environment and societies. But what sustainable development is? This will be discussed in the upcoming paragraphs below:

## **2.2 Sustainable Development**

It is hard to define the concept of sustainable development as it is one of the evolving concepts so, it makes it more difficult to confine its definition exactly. According to Brundtland Commission: "Sustainable development is development that meets the needs of the present without compromising on the ability of future generations to meet their own needs" (world commission on environment and development, 1987).

Generally sustainable development has three major components, i.e. economy society and environment. These three components are intertwined rather than separated. Because a healthier environment, which provides quality food and resources, safe and clean drinking water, unpolluted air, directly leads to a prosperous society. So, sustainability is a concept of thinking for future in which economic, environmental and social considerations are balanced for improvement of the quality of life (McKeown, 2006).

## **2.3 Sustainability**

The three components of sustainable development such as economy, environment and society are directly linked with the human well-being for example, if these three components are positively increasing, the human wellbeing will be automatically improved. Sustainable development also refers to new technologies and methods of doing businesses, which allow us to enjoy the quality of life in all aspects

of economic, social and environment. But availing the quality of life should not be harmful to the upcoming generations rather than we should consume the resources in such a manner that the future generations can also spend their lives happily. The experts of human rights have the views that sustainability can only be achieved by supporting justice, peace and democracy in the societies (McKeown, 2006).

## **2.4 Relationship between Education and Sustainable Development**

Education and sustainable development has a very close relationship. A low literacy rate hinders economic development. In many countries the level of basic education is very low which adversely affect the plans and development options of moving toward a sustainable future. Similarly, a higher rate of education level leads to create more jobs and industries which are essential for a sustainable society. Generally, the researches reflect that basic education is the main key for achievement of the targets of sustainability of any nation according to their national priorities. Furthermore, the basic education enhances agriculture productivity, upraise the status of a woman in a society, control rate of population growth and ensure the safety of environment. Education has a deep impact on sustainable development. For example, even four or six years' education can contribute to agriculture productivity. Because a literate farmer knows how to use modern methods of agriculture, how to handle risks and he also knows the market tactics for marketing his of goods. An educated farmer can also apply the pesticides to his crops according to the manufacturer's instructions which decrease the risks to the health of masses. Likewise, educated women also have positive effect on the components of sustainable development and educated women have a strong social status and can contribute in decisions making of a community. She is more aware about the health and career of her children. She has fewer children and do not believe on gender discrimination (McKeown, 2006).

#### **2.4.1 What Do We Gain and What Do We Lose Through Education**

Education and sustainable development has a close and positive relationship. The higher level of education in any society leads to the economic and social development. As educated citizens can opt for better jobs in market and can contribute to high rate of GDP for their country. Educated people may also contribute for safe environment. But as different societies have different cultures and values so it might be the prime concern while implementing the plans of ESD or SD. For example, in many societies women have the main responsibility for looking after their children as compare to males. If the plans regarding gender equality are implemented and the woman have to go for earning, it should not affect her family system; therefore, the plans of ESD should comply with the social system of any society because if the social system of any society remain unstable the development would not be call a sustainable development (Bjorneloo & Nyberg, 2007).

#### **2.4.2 Reorienting Education**

ESD is not only the knowledge of economics, society and environment. But it also deals to learning skills, values and perspectives which help the people in guidance and motivation for attainment of sustainable lives, contribution for democratic society and living in a sustainable way. The concept of ESD also studies the local issues as well as necessary global issues. Therefore, values, skills, perspectives and knowledge are essential to incorporate in the curriculum for attainment of the goals of ESD. Addition of more knowledge of the components is not enough rather it needs to be decide that what knowledge to be integrated for the achievement of sustainability of any society. The curriculum of schools has already overburdened for students so it is essential that the selective knowledge related to ESD should be incorporate in the syllabus. As ESD cover the areas of economics,

environment and society, therefore the people need basic knowledge from the field of natural sciences, social sciences and humanities in order to understand the concept of ESD and follow this concept practically in their lives. For this purpose, it is necessary that every community set their goals for achievement of ESD. This may help them to avoid integration of unnecessary knowledge in curriculum which can overload the curriculum and is not beneficial for their society (McKeown, 2006).

## **2.5 Key Areas of Sustainable Development**

Society, environment and economics are the three areas which have been identified on many international forums as the key areas of ESD, where political aspect is recommended under the concept of society for ESD. The role of education for sustainable development is very important and to understand the role of education under ESD (UNESCO, 2009). It is important to understand the concept of the main three key areas of ESD which are as follow:

### **2.5.1 Society**

Society under ESD refers to the understanding of social institutions and the role of these institutions in the process of change, development and progress of communities. It also serves as a platform for strengthening of a democratic system in which every citizen has the right of expression of his opinion, right to select the government and develop a consensus on social issues along with the settlement of conflicts and differences among the different groups of society (Car & West, 2014).

### **2.5.2 Environment**

It is the knowledge of resources exists in environment and the importance of the physical environment which affect the human lives. It also includes that how human decisions influence the environmental resources. It is very important to

encounter the environmental concerns during the development of social and economic policy process (Nasibulina, 2015).

### **2.5.3 Economy**

Economy is the understanding of boundaries and strength of the economic growth and its impact on the environment and society. It is also to evaluate the rate of consumption of resources on individual and societal level. Sustainable development is a vibrant concept. It is not about the maintenance of the specific classes in the society rather it provides direction to progressive change in the society. Therefore, linking of poverty with the sustainable development is the main concern of international community along with the environmental protection of the world. Culture serves as the basic foundation for interlinking of the three areas of sustainable development. Culture is a way of behaving, believing and acting of different aspects in different context. It covers the history of traditions of human beings in which they lived throughout the years (Khatayabeh, Subbarinis & Shurman, 2010).

In the context of sustainable development and education, emphasize is on culture is on the following features:

- To take care of the culture diversity
- Tolerance to differences and acceptance of others rights.
- Appreciate and admit values openly.
- Promote the values of respect and dignity which is essential for sustainable development on personal and institutional life.
- Support for native traditional knowledge and rural development.
- Support for the specific views of different societies for nature instead of ignoring or destroy them.

The three areas of sustainable development which are, society, economy and environment are connected with the rope of culture. Every aspect of life is striving for sustainable development and it has a deep impact on all aspects of the society. The eventual goal of sustainable development is achieving a peaceful relationship among the people with less torment, hunger and poverty where the people practice their fundamental rights in a respectable way. At the same time there is also a need to avoid the loss of biodiversity of natural environment. It is the crucial time for realizing the need a holistic approach for the balance between natural environment and human learning systems (Arima et al., 2006).

The above discussion shows that sustainable development is not basically advocate the class differences in society rather it supports the poverty alleviation and the concept of equity for all people. Sustainable development is giving more emphasize on the respect of culture and adoptability of local culture. It is one of the appreciating aspect of ESD that it suggests the preservation of all resources not only for this generation but also for the future generations. keeping in view the importance of the concepts which fall under ESD, such as consumption of resources, poverty, understanding of different cultures, traditions, tolerance, human rights, respect of values and rural development were selected for thesis research study as some of the main variables.

## **2.6 Education and Sustainability**

Consumption of resources and increasing population are the two major issues for international concern which hinder the sustainable future of any country. On the other hand, education also consider as a factor which affect the fertility rate and resources. Educated women reduce population growth as they prefer to a small family size. So the threats to population of any country reduce through provision of

education to female sector of population. But education on the other hand also leads to more consumption of resources. Generally, highly educated people who have high income consume more resources in form of luxury life as compare to less educated people who have less income. So in this case more education enhances the threat to sustainability or sustainable development. Unfortunately, the more educated nations have highest per capita rate of consumption of resources. For example, the report of UNESCO (*Statistical Yearbook and World Education Report*,) shows that about 80% of population in USA have post-secondary education while only 25% population having four years' degree from university and per capita consumption rate of energy and generation of wastage is the highest of the world in USA. Therefore, in this case more education does not lead to sustainability. It is clear that providing more education to the citizen is not sufficient for creating sustainable societies. But the challenge is that, to lift the rate of education without creating demand for more consumption of resources and goods. To meet this challenge, it is necessary to reorient the curriculum which not only address the sustainable consumption of resources but also enable a nation to set the balance between production and consumption. So it is the need of the time that all nations should re-examine their curriculum from pre literacy to professional education and address the issues of sustainability. It is also one of the challenges that teaching of economic, civic and environmental literacy is difficult without basic literacy. But on the other hand only basic literacy which is practice in many countries of the world does not have positive effect on the basic components of sustainable development. Therefore, it is essential to revise the curriculum of all levels and address the issues of sustainable development (Cough & Scott, 2007).

## **2.7 Meaning and Concept of ESD**

ESD was first illustrated in chapter 36 of Agenda 21 of UNESCO which pointed out the four major areas to work on for ESD. They are: bringing improvement in basic education, reorienting existing curriculum to address sustainable development, improvement in public awareness and understanding and training for adopting the concept of sustainable development in its true spirit. Education occupies a central role in sustainable development. Education and sustainable development has close relationship therefore, they affect each other. It is the main concern of ESD that any program whether that is local or international should consider the suitability of local needs of societies. So it is obvious that ESD based on the local needs and availability of resources of the societies (McKeown, 2006).

Culture remains very important for sustainable development because it is considered as a backbone of any society. SD has its inherent idea that all programs related to sustainability must be relevant to the local traditions and culture. ESD also enhances the capacity of the society in form of improving workforce, community based decisions and quality of life. Education for sustainable development is based on the ideals of gender equity, social tolerance, preservation of environment, poverty reduction, and conservation of natural resources and peace of a society. It is the main purpose of ESD to link the community goals and values, knowledge and skills for reorienting education in order to address sustainability (Niclo, 2012).

## **2.8 Education for Sustainable Development and International Concerns for Curriculum**

Although there are different approaches towards ESD on global level but the main focus of all concerns is reorienting of education for sustainable development.

The concept of ESD needs to be incorporate in formal, non-formal and lifelong learning along with the training. Generally, the most concern of ESD is the basic education. Many countries and organizations such as such as UN, UK, European countries and Scotland have introduced many programs for promoting ESD in basic education. They addressed different aspects of the three components of ESD in these programs. Integration of this concept is very limited to the curriculum however preference is given to grade 5-14 as compare to higher sector of education (Sisitka et al., 2017).

## **2.9 Education for Sustainable Development**

The concept of ESD enables everyone to humanize living conditions. This is basically driven from the concept of education which emphasize on the concept of self-driven and self-determination. To meet the challenges of ESD both locally and internationally need to focus on learning from real life situation and experiences for improvement of the skills. It is generally expected from education system to prepare the humans for professional life. It is the duty of education to make the mind of young to take their responsibilities of life. Education has focused on different dimensions in different decades such as environmental education, citizenship education and peace education etc. But it is the need of today world to address the concept of sustainable development in education. Implication of the concept of ESD requires a holistic approach rather than a reductionist approach which remains common in traditional system of education (Willy, 2008).

ESD is a new concept which empowers the people for committing themselves for achievement of sustainability. It is also called as education for democracy as it believes on the respect to the rights of current generation as well as of future generation, cultural diversity and obligation to peace (Samuelsson & Kaga, 2008).

### **2.9.1 Two Different Understandings of the Concept of ESD**

There are two different understanding of ESD. One school of thought have the view that provision of basic education to all is the main purpose of education for sustainable development, while the other school have the view that teachers are responsible to sustain education in societies as education is the main key to sustainable development. But these two aspects depend upon the culture and economic conditions of any society. The Provision of basic education is depending upon the provisions and sustainability of funds, especially in developing countries. But it is not the case in most of the developed countries where education till higher level is free for all citizens. The two concepts are necessary to be transformed to the approach of lifelong learning education because it is the essential element of any society to achieve sustainable development (Bjorneloo & Nyberg, 2007).

### **2.9.2 Various Definitions of Sustainable Development**

#### **Definition 1**

Sustainable development is development that fulfills the needs of the present without compromising the ability of future generations to attain their own needs (WCED, 1987).

#### **Definition 2**

Sustainable development is a dynamic process, which enables all people to realize their potential and improve their quality of life in ways that also protect and enhance the Earth's life support system (Nevin, 2008).

#### **Definition 3**

Sustainable development is a broad concept that means meeting the economic, environmental, social and political needs of the present generation without endangering future generations (Hartmut, 1999).

#### **Definition 4**

Sustainable development is a method of harvesting or using a resource so that the resource is not depleted or permanently damaged (Norizan, 2010).

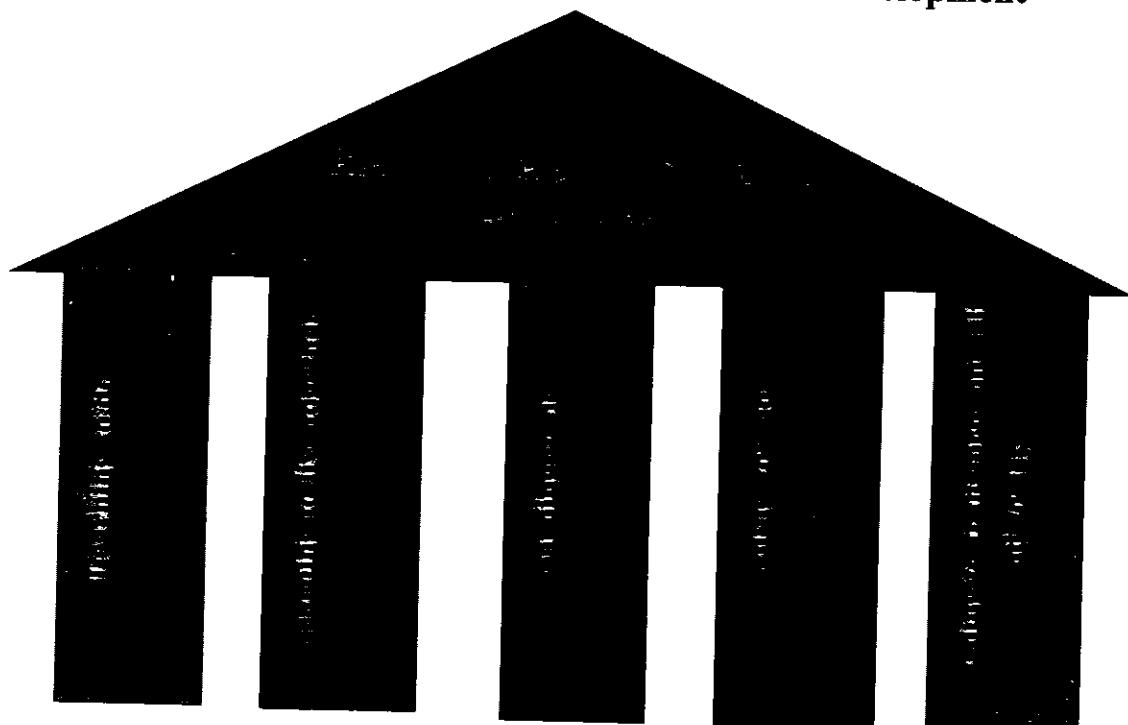
#### **Definition 5**

The goal of sustainable development is to allow growth to benefit humanity while encouraging a balanced approach that creates a minimal amount of harm. By carefully balancing future and current demands, most environmentalists hope that natural resources will always be available to meet essential needs (Castro, et al, 2016).

#### **Definition 6**

Sustainable development is development capable of being maintained at a steady level without exhausting natural resources or causing ecological definitions? (Black & Henderson, 1999).

### **2.10 The Pillars of Education for Sustainable Development**



*Figure 2.1 Pillars of Education for Sustainable Development (it is the synthesis of the above definitions)*

- Learning to do: be able to react creatively and responsibly in all environments.
- Learning to live together: participate and co-operate with other people in all human activity.
- Learning to be: seeing oneself the main actor in defining positive outcomes for the future.
- Learning to know: acquiring instruments of understanding.
- Learning to transform oneself and society: develop respect for the environment, social solidarity and non-discrimination. (Samuelsson & Kaga, 2008).

## **2.11 The Importance of Education for Sustainable Development**

The apparent problem of today's world is that the resources on earth are decreasing day by day while, its consumption is increasing. This imbalance results the changes of climate of the world. Sustainable development becomes a challenge in this perspective. So, it is the need of the time to pay special attention to the problems like, population growth, changes of climate, disaster risks, economic development, chemical imbalances in environment and ocean abnormalities. The negative impacts of globalization are also adversely affecting the developing regions. In this respect sustainable development become also a challenge. But education may be the better way to eliminate poverty from society and bridge up the gaps of development. It is not only the matter of sustainability but also it is indispensable to inculcate creative skills in young generation who fulfill their social duties and give respect to individual differences and cultural diversity. They should know the appropriate use of their knowledge and skill to solve the problems of sustainability (Samuelsson & Kaga, 2008).

## 2.12 History of Education for Sustainable Development

The concept of ESD was first endorsed by UN in 1987. This term matured and discussed in committees of UN from 1987-1992. The beginning thoughts related to ESD were written in chapter 36 of Agenda 21. These thoughts were based on the promotion of education and training with public awareness about ESD. Unlike majority of educational movements the concept of ESD was started by the non-educational organizations. With the passage of time, when ESD discussed and got matured, it is realized that education is a key to sustainable development (McKeown, 2006).

Another historical development regarding ESD was the Club of Rome report in 1972. This report named as “the limits to growth”. According to the report the resources which we are using currently will be completely declined till 2072. Although this report faced many critiques but it is considered as one of the historical developments of ESD (Meadows et al, 1972). Brundtland Report is one of the important reports in the history of ESD. In 1987 the World Commission on Environment and Development (WCED) submitted the report on “our common future” in the UN general assembly which is called Brundtland Report (WCED, 1987). The main aim of the commission was to find out the ways for environmental and developmental problems. It has three objectives:

1. To re-examine the issues and find out the practical solution of environmental and developmental problems.
2. To suggest new international organization who will address these issues and will influence the policies.
3. To create public awareness for the above issues.

This report defines the term sustainable development as, "*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*".

This definition stressed on the need and limits of resources. Its goal can only be achieved if the pattern of consumption of resources in richer countries adjusted. On other hand there is also a need to moderate our demands for preservation of natural environment and resources (Willy, 2008).

## **2.13 Direct Effects of Education on Sustainability Plans**

According to McKeown (2006) sustainability plans are directly affected by education on the following three areas:

### **2.13.1 Implementation**

Education has a major role in implementation of sustainability plans. Educated citizen can enhance or decreased the effectiveness of implementation plans. For example, the nations with low literacy rate and unskilled population have less developmental options. These nations usually buy goods from international market with high prices. They also face exploitation of their natural resources in international trade. So, education is a key for moving up sustainability and developmental plans and economy of a country.

### **2.13.2 Decision Making**

Decision making has a key role in sustainability or development while education is a key to sound decisions on the other hand. So, educated citizens take sound decisions about their own lives as well as about their communities. Educated population also help the communities in conveying the reports of their surroundings to concern authorities if there is any wastage of natural resources in surrounding

communities for example wastage of water. Educated and skilled people always prefer to avail modern technology for maximum output in their workplaces.

### **2.13.3 Quality of Life**

Education has a very close relationship with the quality life of any nation. Educations upgrade the economic condition of families, control the child death rate and save life facilities to next generation. In this way education improve the lives and economic conditions of next generations.

## **2.14 The ways to be Successful with Education for Sustainable Development**

Education and learning provide skill which enables the individuals for an advantageous life. The UNO recognized 2004 to 2015 as a decade of sustainable development and consider education as a key for a sustainable development to ensure a quality life for all, not only to a current but also for future generations (Arima, et al., 2006).

Schools are considered as the place for solution of societal problems. Although it is the fact that schools are the reflection of the culture and traditions of any society but the change in political power usually affects the schools and curriculum. The success of sustainable development depends upon its easier and facilitating approach both for teachers and schools. Usually the societies expect from schools to enhance critical abilities of learners to solve social and environmental problems. The change in behavior of the learners is also one of the expectations from teachers (Bjorneloo & Nyberg, 2007).

In the light of the discussion of review literature the researcher come to the conclusion that integration of the concepts of ESD in curriculum is a very complex

task and need a through and careful attention, therefore the following points may be followed while making alignment of the concept of ESD in curriculum:

- Integrating the concept/idea of ESD making the existing curriculum burdened or not?
- Including the knowledge of ESD makes the curriculum a challenging task for teachers rather make it a burden for them.
- ESD should be a facilitating tool for teachers to help them to fight against societal issues and problems.
- ESD can be made a tool for teachers which will help them to fight with social problems, in this way they will feel satisfying rather than disappointed.
- ESD should not overcrowd the existing curriculum otherwise it will create a time and resources constraints for teachers.

## **2.15 Comparison between Traditional Education and ESD**

The following points make clear the comparison between traditional education and ESD:

1. Traditional education basically deals to practical and theoretical learning to attain the basic needs of survival with combination of the aspect of development while the main focus of ESD is the inclusion of knowledge, values and skills which enable the people to live a sustainable life.
2. Learning in traditional education is based on values which emphasize on the principles of sustainability by community leaders for harmonious life while ESD is based on those values and principles which are related to social, economic and environment for lifelong learning.

3. Transformation of knowledge of cultural heritage, through folks and role plays etc. while, ESD believe in informed and knowledgeable citizens.
4. Focus on training to enhance knowledge in traditional professions but ESD prefers to the training of workforce to provide them skills and knowledge to perform their tasks in a sustainable manner.
5. Strong roots in traditional knowledge which is tested over the time and dynamic to handle the emerging issues. ESD addresses the issues of environment, society and economics in a diversified manner which is more suitable both socially and culturally (Samuelsson & Kaga, 2008).

## **2.16 ESD is an Evolving Concept**

ESD is a dynamic concept and based on local issues and problems. By nature, it is the evolving concept. In the process of reorienting of curriculum to address sustainability, it is important for educators not to give preference to scope or content of the concept of sustainability within specific time frame rather they focus on the issues and problems in local or regional context. SD has emerged on global level with more importance after the Earth Summit in 1992. It is the evolving concept because the societies change with the passage of time as the demands and priorities of the human changed. On the other hand, human awareness and interaction with environment also change with time. But this change is different in all societies and cultures. The shift in change reflects the focus and emphasize on local ecosystem of each region. Therefore, it is essential for educators to address the regional and local issues related to sustainability while reorienting the content and its methodology as the change in one region of the world might not be effective for other region (McKeown, 2006).

## **2.17 Key Characteristics of Education for Sustainable Development**

Following are the characteristics of ESD:

1. ESD is about the three realms of sustainable development, i.e., environment, society and economics.
2. ESD is local and culturally relevant and appropriate.
3. ESD use three types of education, i.e. non formal, formal and informal.
4. Education for sustainable development should not be compare with environmental education as it was combined used during 1980s and 1990 by UNESCO. Because environmental education is a separate subject which deals with human beings and its relationship with their environment and resources.
5. ESD absorbed the evolving nature of sustainable development.
6. ESD include environmental education within socio-cultural, socio-economic and socio political realm.
7. ESD should be integrated with other subjects rather teaching as a direct subject because of its scope and nature.
8. Interdisciplinary and holistic approach should be used for teaching of ESD.
9. It deals with the critical thinking and problem based learning methodologies to address the challenges of sustainable development.
10. ESD needs to be address in local language to focus on local as well as global issues.
11. ESD deals with improving life style and effective use of technology and science with understanding the values and traditions of any society.
12. ESD basically revolves around respect and values of both existing and future generation.
13. ESD is for every citizen of any age.

14. ESD deals with lifelong learning.
15. ESD suggests the reorientation of the curriculum which enable the students to think critically that how a quality life can be achieved.
16. ESD is the concept which based on the advantageous life for all.
17. ESD is interdisciplinary (Arima et al., 2006).

## **2.18 Principles of ESD of Sustainable Development**

According to Tilbury and Mula (2009) the following are some of the key recognized principals of ESD:

### **2.18.1 Futures Thinking**

Future thinking describes the ability of people to imagine preferred vision for future. It enables the individuals to understand and interpret the future vision of sustainable development and exploration of assumption about ESD. Imagining the future vision create a sense of responsibility in people for sustainable future.

### **2.18.2 Critical and Creative Thinking**

It provides the ability to think in a creative manner and make knowledgeable decisions about future. It enables the people to make a choice of alternatives for a good life, understand different cultures and live together.

### **2.18.3 Engaging and Participatory Learning**

A close harmony and bonding of people, stakeholders and communities is essential for building up a sustainable future. Connection between these three generates sharing of ideas and responsibilities which accelerate a sustainable development.

#### **2.18.4 Partnerships**

Partnership is basically a drive for motivation to participate in community decisions for bringing a positive change in society. It also empowers people to take action and built a capacity for sustainable future.

#### **2.18.5 Systemic Thinking**

It is a systematic thinking approach for solution of problems. SD states that solving a problem at the cost of creating other problem is not a logical approach; therefore, ESD demands such solution which reduces the chances of creating more problems.

Some other principles of ESD are as:

- Every citizen has the right to a productive and healthy life in harmony with nature.
- Development does not mean to destroy the environment needs of both present and future generations.
- The nations who are sovereign have the right to exploit their own resources but it should not damage other resources across the borders.
- There should be international laws for environmental damages for nations across the borders.
- Environmental precautionary measures are essential where there is a threat of irreversible environmental damages.
- To meet the sustainable development there is a need of eliminating the poverty and gender disparities.
- ESD deals with reduction of unsustainable patterns of production and consumption of resources.

- It is based on the environmental awareness of all citizens.
- It suggests such economic laws which are beneficial to all people from all over the world.
- ESD reflects the cooperation and sharing of scientific knowledge and information for disaster risks.
- ESD is based on the scientific approach for the solution of problems.
- ESD encourage the full participation of women in all fields of life for social and economic upraising.
- Promotion of peace and prevention of war is one of the essential of sustainable development because it is harmful to generations (Corcoran & Osano, 2009).

## 2.19 Key Learning Themes of ESD

According to Global Monitoring and Evaluation Framework ESD is based on certain learning themes as following:

- Human security, peace and conflict resolution
- Human rights
- Democracy, governance and citizenship
- Participatory decision-making
- Gender equity
- Cultural diversity
- Biological diversity
- Intercultural understanding
- Ecosystems and Ecological principles
- Natural resources management
- Climate change

- Disaster prevention
- Energy
- Recycling of Wastages
- Health and human well-being
- Ethics of trade
- Water preservation
- Rural and urban development
- Corporate social responsibility
- Globalization
- Millennium Development Goals (Tilbury & Mula, 2009).

## **2.20 Sustainable Development and its Paradigms**

### **2.20.1 Economic Paradigm**

According to neoclassical economic theory sustainability may be defined as a maximization of human welfare over a time period. Some of the economists defined it as a maximization of human welfare as well as the maximization of utility consume by human beings. But this concept of sustainable development has been criticized by standard economic theory as it states that efficient allocation of resources should have maximum rate of utility than consumption. There is a huge gap between resources and its allocation to population. On the other side, allocation of resources or economic sustainability also affects the ecosystem and environment. So sustainability in this sense has a damaging impact on generations. If we look through a lens of development, green houses and soil erosions have negatively affects the generations over decades. Therefore, it creates a strong biased against sustainability. But again these elements are related to atmospheric functions of sustainability. It is one of the

thought of sustainability that a stable level of human population is required for a constant per capita stock of natural capital. This recommendation of a specific sustainability decision is different from the standard neo-classical approach. There is no reason to conserve natural capital in this approach. According to this approach sustainability has two types of capital. For example, if we built industrial plants on the sake of cutting down the forests. It means we are providing new economic value on the loss of forest's value. Daly's views are opposite to it as he says that natural capital has marginally substitutes. Michael Toman has suggested that some issues may be resolved with the market efficiency of the neo-classical approach while others may need the protection of necessary resources of environment. He said that suitable framework should be used for ecological damages. Safe minimum standards approach believes on societal values and public made decisions. This approach shows a fundamental shift in economic paradigm of sustainable development. Thus Toman recommended that there is great scope for interdisciplinary work to address the key issues of sustainability. Economists can make efficient use of ecological information, social scientists can add in understanding of natural environment values for future generations and ecologists can share information which can be used for economic valuation. (Haris, 2000).

### **2.20.2 The Ecological Paradigm**

The ecological perspective deals with putting up the limitation on population and consumption of resources. This limitation is applicable to all biological systems. Ecologists defined sustainability in terms of maintenance of flexibility of ecosystem. This definition differs it from the illustration forwarded by World Commission on Environment and Development which is based on human centered approach and also from economists' theorists of resources consumption based principles. The

importance of ecological perspective is getting root as many critical problems are facing by humans due to lack of flexibility in ecological systems. There is a need of economic ecological approach under which the resources can be allocated in such manner which disturbs neither the system nor its components. For survival of the system, it is essential that objectives of consumption and production must be sustainable. There is a need of integration of economics and ecology for sustainability (Bandari & Abe, 2003).

#### **2.20.3 The Social Paradigm**

Supporter of sustainable development considers the social component as an essential part of new paradigm. This support reflects the importance of much older perspective of society which is indeed the “human development”. This approach stressed on the basic needs and equity of human beings. Similarly, the calculation of human development index also offers different measures of social and economic developments each year. Such as poverty, gender equality, democratic governance, adult literacy, school enrollment ratio and life expectancy with GDP and GNP. From these perspectives HDI results shows that development is a multidimensional process and higher GNP rate does not mean higher level of overall development. Social perspective emphasizes on the importance of social values while designing market policies (Merrill et al, 2018).

#### **2.20.4 A Synthesis Paradigm**

The original idea of development was based on the concept of consumption of goods by society which generates the tension between equitable distribution of resources and economic consumption. A sustainable development must mean a remedy for social inequalities and environmental damages with sound economic balances. The integrity of ecosystems must be maintained according to ecological

paradigm. To look all the above paradigms of sustainable development, it is summing up that a viable utilization and management of technology is essential in globalized world. Recycling of resources is the need of the time without damaging the ecosystem. To enhance the yield of agriculture without managing the environment and health issues has no viability. To save the ecosystem, it is necessary for all countries and governments to cooperate with each other and stop the production of such material which are harmful to the environment across the borders (Harris, 2000).

## **2.21 Challenges to Education for Sustainable Development**

ESD is emerging concept and very dynamic in its nature. Therefore, it is facing challenges in its implementation. Samuelsson and Kaga, (2008) and Anastasia (2010) have suggested the following challenges to ESD in the period of globalization.

- ESD refers to social, economic, political, environmental and cultural aspects of human lives. The nature and scope of all these aspects are very dynamic. So, there is a need to achieve consensus of societies to build a set standard definition of sustainable development.
- It is also one of the big challenges for advocates of ESD to take care and respect for ethical contents of biological and cultural diversity.
- Sustaining such development which improves the standards of lives of marginalized group without harming the ecosystem as well as the future generation is a challenging task for developers.
- The concept of “learning own self and mutual respect and cooperation in socio-cultural differences” is challenging job for those who are working on reforms of schools for ESD.

- Finding effective methods of teaching for ESD is not only costly but also challenging as it needs proper training of teachers at each level of education.
- Some of the concept of ESD is confusing and abstract, so there is a need of experts to make them illustrative not only for teachers but also for students.
- Some of the old teachers are very rigid to change and they are very sensitive to old traditional methods of teaching so, it is challenge for schools to train them for ESD.
- Majority of the teachers are overloaded not only with curriculum but also with number of students in classrooms, especially in developing countries so, it is a challenge for them to teach and manage the activities related to the concept of ESD.

## 2.22 Issues of ESD

Many nations including world organizations are emphasizing on education for achieving sustainable development, however the progress on ESD is slow because of some issues. Here are some of the issues highlighted by McKeown (2006) as follow:

- Increasing awareness is essential for achieving sustainable development both for educational communities as well as for common public. Lack of awareness hinders the reorientation of education, especially changes in curriculum.
- Placing and structuring ESD in curriculum is a challenging issue for countries. It is the need of the time to decide, whether ESD will be placed in the existing curriculum or will be teach as “an add” subject.
- Proper training and methodologies for teaching of the concept of ESD is still under debate. It is essential for nations to clarify that what to teach and how to teach for achieving sustainability.

- There is a controversy regarding sustainable development among some of the experts have the view that economic will bring sustainability, while the other have believe on education. There is a need of linking economic viability with educational reforms.
- Sustainable development is a complex term. Experts have spent decades to define its standard definition. It is an evolving concept and difficult to define as well as difficult to teach and reorient the education for placing this concept.
- There is issue of setting and clarifying the goals while launching any ESD program on global level.
- It is difficult to create international or even national curriculum which is relevant to all people belong to different cultures in a same society.
- People usually not participating in programs which are developing for ESD.
- It needs skilled and trained teachers a crossed the disciplines.
- It is difficult to teach ESD in such system where the disciplines are completely separated rather than integrated. ESD is a holistic and transdisciplinary in nature therefore, it needs full trained teachers for teaching.
- Creating consensus of different sectors of ministries such as from environment and economics is an issue. As it is a myth that informed society is the job of state but in reality it is essential that all sector of population work together for achieving a sustainable society and successful ESD, as the concept of ESD was first arise by the experts of environment in UN commission meeting.
- Implementation of ESD needs a loyal and capable leadership who knows the concept in depth but unfortunately there is a scarcity of experts' leaders especially in developing countries.

- ESD needs both pre-service and in-service training of teachers and professionals. But there is the issue of capital and commitment as far as teachers are concerned.
- Provision of basic education to children is the millennium development goal but unfortunately countries are not spending more budgets on education. Therefore, the goals of ESD are not being achieved. There is also less allocation of funds to spend on ESD by many countries.
- Spending funds on educational technology is a controversy in many countries, especially in those countries where the people are living under poverty index. They have no access even to formal schools because of no funds. So, bearing funds for technology which is necessary for ESD is difficult to provide.
- Developing a policy for execution of ESD concept is a major issue as it needs commitment both on state level as well as on local level for its relevancy to regional culture and environment.

It is the fact that the concept of ESD emphasizes on the relativity of programs with local culture and environment, therefore issues arises with this concept. These issues are described by Shaw and Oikawa (2014) in the following points:

- Placing the social and economic dimensions in ESD is another issue for experts as the weightage of these both is important but how much? It is a debate.
- Management of natural as well as chemical wastages is a big issue for scholars of ESD as the environment is getting polluted day by day because of modern technology and factories wastages.

- Strengthening the role of different groups of society such as women, farmers and children etc. is a difficult task but very important for having a sustainable society.
- Combating poverty and illiteracy is a challenging job for the whole world and it is indispensable for ESD also.
- The job of teachers is to create analytical thinking among the students for those issues which are related to ESD. It needs skills to proposed solutions for issue and problems and resolves the conflicts. So, the role of the teachers is very tough in this regard.
- Students need to provide skills to identify the major threats to human system as well as to natural environment.
- ESD must provide skills to all people to enable them to live a sustainable life and play their role practically for a sustainable society.
- Maintaining equity among generations and accesses to resources or distribution of resources among generations.
- Culturally appropriateness and locally acceptance of ESD is one of the big issues.

## **2.23 Priority of ESD**

According to McKeown (2006) the UN agenda 32 has set some of the priorities of ESD. Few of them are as following:

### **2.23.1 Bringing Improvement in Basic Education**

Improving basic education is the main priority of ESD. Because education is a main source of bringing awareness in individuals. Provision of basic education to those who are deprived of it and reorienting the existing education is the target of

ESD programs. But every country has its own pattern of basic education. Some have 5 years of basic education, while some have compulsory education till elementary level. For other countries basic reading writing or literacy is consider as a basic education. Providing skills for identifying issues and problems which are dangerous to environment and nature as well as for societies and confront to societies is the main concern of ESD.

#### **2.23.2 Bringing Reforms in Existing Education**

It is difficult and costly to introduce a new system of education which is based on the concept and main themes of ESD. Therefore, there is the main concern of bring changes in the existing system of education regarding ESD to save time, money and resources. Reorienting to address ESD is essential to be integrated in all levels of formal education.

#### **2.23.3 Understanding and Awareness of Public**

Sustainable development needs that public must be aware about goals of a sustainable society and their contribution toward these goals. There is a need of inculcation of skills and values in citizens to understand the importance of a sustainable society, and it is one of the main concerns of ESD. For example, if the public is aware about the management of resources; they can cope with risks and can also use these resources effectively. Than chances of wastage of resources become minor.

#### **2.23.4 Training of Stakeholders**

Training is one of the important parts of implementing ESD programs. It includes training of teachers, communities, citizens, leaders, and managers etc. It provides better understanding of ESD as an evolving concept. For this purpose,

formal and non-formal institutions are needed to cooperate with each other and identify the experts in all areas of ESD for training purpose.

## **2.24 Perspectives of Education for Sustainable Development**

### **2.24.1 Socio-Cultural Perspective**

Socio-cultural perspective refers to those aspects of society which deals with all habitats living in particular region of a globe. It also includes their fundamental rights and security. Sustainable development not only ensures the rights of all human beings but also enables them to take care of others rights whether they are human beings or other habitats. For example, construction of roads should not destroy the forests as it harms the lives of its habitats. Human security and peace is essential to be considered while planning and implementing Education for sustainable development. Sometimes development and sustainability leads to displace the people and destructions of homes and schools etc. Therefore, it is necessary to build values and skills in the minds of human beings to ensure each other security and avoid and resolve conflicts. Gender equality is one of the basic elements of socio-cultural perspectives. Gender disparity is not only the problem of developing countries but industrialized countries are also suffering from the same problem. Generally, women have the main responsibility of food production and child caring and are excluded from the decision making process of families and of communities at large. They have also fewer excesses to income generation resources. This disparity is obvious in education also. Majority of the families provide education to boys but deprived their girls from the right to education. But ESD address the gender disparity on all levels of life and especially in education and health. The role of women in sustainable development is crucial. Therefore, planning and implementing any program of ESD, it

is necessary to consider the importance of gender equality in the process of development (Shaw & Oikawa, 2014).

Majority of the opportunities of sustainability of human development and education are usually destabilized due to lack of tolerance and lack of acceptance each other culture and customs. Therefore, inter-cultural respect and understanding is necessary for sustainable development. It is the basic role of education not only to make the children to understand their own culture, but also have respect and appreciation for cultural diversity. For this purpose, teaching in local language become important as a child can better understand in their own language rather than a second language. Health of the human beings is the most important element of sustainable development while environment is essential for a good health of citizens. Healthy population can play better role in achieving ESD goals. Diseases in the environment hamper the process of sustainable development. Therefore, schools should have not only academic learning but also provide health education and awareness for a sustainable society. State and government are the integral parts of promotion of ESD, if state or government is willing to promote ESD, citizens and community can actively participate in developing the goals of sustainable development of their region (Shaw & Oikawa, 2014).

## **2.24.2 Environmental Perspective**

Protection and dignity of ecosystem is one of the big challenges of ESD. Environmental perspective deals with the establishment of links between society and economic consideration which enable the individuals to modify their attitude towards protection of environment and preservation of natural resources as it is essential for human survival. Changes in climate such as global warming, deserters and pollution are some of the dangerous problems which need to be considered by ESD. In

environmental perspective rural development have significant role. About 60% of the population is living in rural areas in developing countries. They are facing severe problems such as illiteracy, lack of schools, poverty, lack of income sources and disparity in education investments. These are the serious issues which need to be addressed by ESD on priority basis. For this purpose, development of the rural areas becomes important. Therefore, educational activities should be linked up with the essential needs of the communities and provide them skills for their economic up-gradation (Slingsby & Barker,2003).

Urbanization is affecting sustainability and on the other hand, for example people are depending on cities for their income sources and population in the cities is increasing day by day which causes many problems of health and environment. So ESD need to create a balance between urban and rural facilities and resources. Managing and protecting the lives of citizens in the time of disasters is also essential part of ESD. Education for disaster risk has positive effects on the lifesaving of societies. Awareness and knowledge of environmental risks leads to managing the hard situations effectively by communities (Shaw & Oikawa, 2014).

### **2.24.3 Economic Perspectives**

Elimination of poverty from societies is the basic theme of economic perspective of sustainable development. Nations and organizations are struggling for poverty reduction all over the world. Poverty is a serious threat to sustainable development. SD advocates the reduction of poverty in linking with social and economic dimensions not in isolation. Economic and political powers affect sustainable development because of their potential. These two powers harm the resources of other countries as well. Therefore, multicultural trade becomes important for sustainability. ESD need to build a balance between financial resources and enable

the learners to take part on commercial practices. Cooperation and accountability become essential in economic perspective as it maintains a balance which is necessary for the process of development. The current market economy is not supporting the environment and hardly benefits the population of the world. The biggest challenge for ESD is to regulate the market economy in such a way which ensures the benefits of all with the aim of equity. It is also necessary to bring changes in modern technology or use the technology for renewal and recycling of resources. The technology change should provide maximum energy efficiency. The role of ESD become crucial as education has deep impacts on the economy of any country (Arima et al., 2006).

#### **2.24.4 Lifelong Learning Perspective**

ESD is for every segment of population, it is based on the concept of lifelong learning. It engages all type of institutions of the society for a sustainable development with the basic purpose to enable the learners to adopt such practices which ensure the wellbeing of all. It is based on the philosophy of collectivism. ESD suggests re-examining the educational policies, assessments, and curricula and schools' systems to focus on the knowledge, values and skills link to sustainability. It requires reviewing the existing education in terms of objectives and content. Transdisciplinary approached to be adopted for teaching of ESD. Creative and analytical skills are needed to be incorporated in the contents for achieving the goals of ESD. Public and private both systems of education have needed of re-examine its systems. Teaching methodologies focus on the issues of communities with its reasonable solutions. Lifelong learning perspective condemned the concept of traditional style of learning where schools are considered as a place where child learn and after school education ceased. It advocates the concept of learning for all formal,

informal or non-formal which never end. SD needs to be link with all educational movements for achieving its goals. Non formal education is a wide range facility of education and offers education to rural women till adults and workers even living in deprived areas of a society. SD can be best fit in the non-formal education, especially in adult literacy where main focus is on the economic wellbeing of people. Non formal education has deep roots in communities so; it tackles the problems and advantages of communities in a better way. Educational institutions are not in isolation from communities but are the reflection of the communities. Community organizations with cooperation of schools effectively work for sustainable development as they can identify the weaknesses and strength of a particular group in a better way. They can design the goals of ESD which are more relevant locally (UNESCO,2006).

Workplace is another component of lifelong leaning perspective. Workplace can be utilized effectively for sustainable development. It needs to think critically and realized the importance of gender equality for achieving the goals of ESD. Formal schools are also having important role in ESD. Education of formal system should not be considered as a separate part from ESD rather it should be considered as a source of delivering a concept of ESD. It delivers in isolation it might look like a competitive subject with formal subjects. ESD is holistic in nature so, it should be webbed in all schools' subjects. Training institutions are the best sources of achieving goals of sustainability. They are dealing with technical and vocational trainings so, there is a need to establish a framework for sustainable development. But it should not be a burden for the teachers as they are already overloaded with work. ESD needs to be integrated. Teacher should provide with necessary resources for implementation of activities of ESD. Higher education has important role in ESD. Universities are

considered as some research hubs. They can contribute a lot in ESD as their basic job is to conduct researches. So it is necessary to conduct researches on all aspects of ESD whether they are environment, social, cultural or political and also find out the ways and methods for implementing ESD programs. Higher education can contribute in making ethical systems for ESD (Arima et al., 2006).

## **2.25 The Ethical Dimension of ESD**

Ethical dimensions have very crucial and important role in ESD. It also refers to the concept of equity not only among generations but also between different creatures of the nature. The most essential is the equity and respect for biological diversity. Discussion on ESD and ethical dimensions give birth to many questions such as:

- For whom we are striving for sustainable development and to what extent?
- Whether we should deal with only our region for sustainable development or we should take into account the whole world?
- Whether all citizens have the same rights to the same welfare and similar rights for future generations will have or not?
- For how many generations we should be concerned as far as ESD is concerned?
- Whether all species have the same right of security?

All these questions lead to formulation of some rules and regulations for ethical dimensions of ESD. Ethics of ESD will solve the problems of security, distribution of resources, recycling of resources and right of the species on earth planet. Ethical dimensions will confine the states to work for ESD within some specific guidelines (Bjorneloo & Nyberg, 2007).

## 2.26 Models of ESD

### 2.26.1 Strengths Model

Strength model refers to the understanding of the concept of ESD by all those who are dealing with the education. They are educational administrators, policy makers, teachers and curriculum developers. This model emphasized on the understanding of the concept of ESD and its principles by all educational administrators. It is difficult to re-create new curriculum for ESD rather the teachers of every discipline understand this concept and try to contribute in ESD in area of their subjects. Majority of the topics related to ESD are already existed in the formal schools' curriculum but it is needed to identify these concepts and address from the context of ESD. So realizing and identifying the key components of ESD is the main function of strength model. This model also emphasizes that the educators can identify the space within the existing curriculum where the concept of ESD can be addressed and additional knowledge, perspectives, skills and values and be embedded related to ESD. When these areas identify by educators, it can be implemented on large scale in the form of project for further strengthen of ESD. For example, ESD can be addressed in different subject as:

- Mathematics deals to number, so students can be given task of finding the data of local population and other parameters of ESD. This will create the analytical skill in students which is essential for ESD.
- Languages and media literacy can check the advertisement for promotion the environmental preservations efforts.
- Through History students can see the global changes through the years.

- Reading habits can develop the critical thinking in students to see and find the fact and opinions.
- Social study can help to address gender equity and racism and the way these concepts are prevailing in surrounding communities.

Similarly, environmental education and other subjects can help to achieve sustainability goals if the educators understand these concepts (McKeown, 2006).

## **2.26.2 Model In-Service Program: Learning for Sustainable Environment in Teacher Education**

As ESD is an evolving concept, therefore experts are working all over the world on ESD. The main focus is on teachers and curriculum as one is the source of transmission of ESD, while other is the support of this source. In-service model is basically dealing with training of professionals in the field of education for ESD. It provides skills, knowledge and values for ESD to teacher educators to help them while addressing the concept of ESD in classrooms. It also deals to integration of activities related to ESD in curriculum by teacher during teaching learning process (McKeown, 2006).

## **2.27 Early Childhood Education and Sustainable Development**

According to Samuelsson & Kaga (2008) ECE and sustainable development consists the following two aspects;

1. Early childhood education for young's sustainable development
2. Children learning for sustainable development

### **2.27.1 Early Childhood Education for Young's Sustainable Development**

ECE is basically a lifelong learning of a child. What a child learn in early age have a deep impact on his whole life. Therefore, the role of ESD becomes very

important in ECE. A sustainable society needs to provide people a capacity for sustainable development and it can be achieved through ECE easily. ECE is a beneficial source of inculcating the ability to take a responsibility and act for a sustainable future. Therefore, ECE needs to adopt the methodologies based on exploration, active learning and cooperative skills that children develop the ability of analytical skills for a sustainable society. When a child grows in a sustainable manner their thinking reflects the same patterns of development and they react towards situations in a more logical way.

#### **2.27.2 Children Learning for Sustainable Development**

This concept emphasized on the development of skills, attitude and perspectives of children related to sustainable development. It refers to the pragmatic approach that children should bring into practice their learning. The concepts of ESD should be integrated into young children curriculum more closely from their daily life. These concepts need to be taught in a playful way.

#### **2.28 Concept of Education for Sustainable Development in Curriculum**

The literature about ESD shows that the concept of ESD should be integrated in the existing curriculum rather than being a separate subject. Understanding of social issue, economic issue and ecological issues are very important for placing the concept of ESD in curriculum. The other important aspect in this regard is the training of the teachers. Some of the rigid teachers don't want to accept changes in curriculum so, the role of appropriate training becomes essential. For example, in schools of Denmark the teachers are not using the term ESD but in fact they are teaching its concepts. At the same time Danish curriculum clearly describe the concept of ESD

and is formally implemented. Therefore, it is necessary to understand the situation and formulate the curriculum accordingly.

#### **2.28.1 Specific Curriculum of ESD**

Most of the experts of curriculum have the opinion that ESD should be addition in already existing curriculum but it can be designed as a separate subject also (Petra et al, 2009). A curriculum of ESD may also be design on the following points:

#### **2.28.2 Sustainable Use of Natural Resources**

A sustainable use of natural resources is the important part of ESD. It refers to the investigation of the consumption of natural resources of the current generation and also looks for future on the basis of current use. It also includes the impact of current resources on the potential of other resources.

#### **2.28.3 Equity of Access to Natural Resources**

The main issue regarding ESD is the usage of natural resources. Equity has important role not only for the present situation but also for future. So equity of resources should be place in such manner that it creates the ability of tolerance and acceptance of others right for access to resources.

#### **2.28.4 Resolution of Conflict in Use of Resources**

Usually the conflicts arise from consumption of resources. It is basically deal by environmental education but has equal importance in ESD also. Therefore, focusing on resolving the conflicts of public interests is essential for curriculum makers.

#### **2.28.5 Equity of Health Facilities**

Health has very important role in sustainable development because healthy society can actively participate in achievement of goals of sustainability. So, the

provision of equal health facilities to all public whether urban or rural is very essential.

#### **2.28.6 Difference between Reversible and Irreversible Changes**

The students should know about the effects of changes. They should develop the skills and values of knowing and understanding for permanent damages of some changes.

#### **2.28.7 Develop Ownership Toward ESD**

One of the important concepts is to develop the ability in children to own the concepts of sustainable development. This ownership will enable them to realize their responsibilities and adopt real actions for ESD. The learners' skills for valuing and solving the problems and conflicts are very essential which can only be inculcated through the ownership of the concept of ESD (Bjorneloo & Nyberg, 2007).

### **2.29 Need of ESD in Curriculum**

The main focus and goal of ESD is to develop the holistic outlook in the minds of the learners. All organizations of the world are working on ESD for the purpose of this outlook. Holistic approach means the "whole", which refers to the understanding of the concept of making connection between different concepts or elements of the society such as connection between environment, health and economy etc. It is understood that the students of today will be economists, businessmen or some other professionals or will be working in some other departments of community. For example, a student's become farmer or government officer has understanding that his decisions can affect the other parts of community such as environment, health and how his/her wrong decisions can create unsustainability in the surrounding environment in the form of pollution, destruction of forests etc.

The concept of ESD enables the learners for sound future decisions. For example, if a land owner making profit with selling timber. It will give him short-term benefit. But doing so might create water and soil erosion, health and environmental problems which will affect his family in the long term. It might create the long term poverty problems for community. Therefore, integration of ESD in curriculum is necessary for realizing the importance of collective thinking. It is essential to help the student in understanding the connections between the systems around them.

Unfortunately, the education system in most of the country is emphasizing on the teaching of different subject such as English, Social Studies and Math etc. but it doesn't teach the interconnections between systems of society. This is the big challenge to ESD to make connections between disciplines as subjects are taught by subject experts and most of the cases teachers do not share a staffroom which also hinder the process of sharing of students and curriculum problems and concepts. So it is a challenge for curriculum that how to create connection between resources and environment and between the systems of environment. It is easier for the primary teacher to make links between different subjects as most of the same teachers taught two or three subjects to the same class. But it is not same for the secondary school teachers.

Teaching and integration of ESD in curriculum is supporting the understanding of students' ability of making the social connections in economics and environment and in all subjects regardless of the nature of the subject. For this purpose, the teachers' role becomes very important; they need full training and creativity for looking the opportunities using available resources. It essential for teacher to focus on learning outcomes, it will make easy teacher's job for integration the concepts of ESD (Henderson, 2009).

## **2.30 Education for Sustainable Development Promoting Values**

The role of education and values are very important in sustainable development. The society and people have great value in sustainable development. It describes basically the relationship between people and environment. The mutual interest of the people leads to greater chances of equity and harmony. Education for sustainable development support and inculcate the following values:

- Respect for human rights of all people around the world.
- Obligation to social justice.
- Safety of natural ecosystem.
- Care of cultural diversity.
- Respect for global tolerance, justice and non-violence.
- Education is the best sources of bringing changes in the behaviors of individuals for promoting the social, economic and cultural values.

Education and sustainability are going side by side. We cannot isolate these two concepts because they support each other. It provides the opportunity for re-thinking to learners and planners for prevention of social and environmental values. Education is the agent of transformation of sustainable development as it enhances the people capacity for changing their vision into reality for a sustainable society. Education promotes the thinking of valuing the concept of equity, elimination of poverty and quality life of all communities. It promotes the ability of future thinking.

Promoting values is not only the job of education but also other social parameters such as governance, gender relations and economic organizations are contributing in sustainable development. In other words, all above are not only restricted to education but indeed they have relation to learning and education.

Development of social values, ability to be useful citizen and love for others is the fundamental duty of education. Inculcating values and development of sound personality is the basic purpose of education and sustainable development is only being achieved when the citizens have this quality (Arima, et al., 2006).

## **2.31 Teacher Education**

Teachers' education and teachers both are the most important part of any social change in society. Efforts are made through world to bring improvement in teachers training programs as it become indispensable to train the prospective teachers properly for meeting the global challenges.

According to report of the international commission on education for the twenty-first century, the role of a teachers as an agent of change in society and promoting tolerance and understanding of intercultural relationship, was never that much important as in today world, as teachers are mainly responsible for molding the character and behavior of the new generations (Rehmani, 2006).

### **2.31.1 Meaning of Teacher Education**

The worth and level of achievement of the learners are basically determined by the ability and motivation of the teachers. Teacher education may be defined as that kind of educational and research program for a person which enables her/him to teach from primary till higher level of education. It is related to the development of expertise and abilities of a teacher to meet the challenges and problems of teaching profession. Teacher education serves as a lab which produces technicians for reforming the individuals of societies.

### **2.31.2 Nature of Teacher Education**

Pre-service and in-service teacher educations both are interlinked and are part of continuous process. It can be divided into three phases, pre-service, induction and in-service teacher education.

Teaching is not only an art but also a science so Teacher education is responsible to inculcate the skills and knowledge in teachers which are essential for teaching process in these dimensions.

Teacher education is a broader term and not only restricted to pre and in service programs but also to the community education at large.

It is evolving and dynamic and has to absorb the current trends and challenges of society. Teacher education is rooted into the process of teaching including content, methodologies and its appropriateness.

Teacher education is a like a specified system in which input, process and output depends on each other (Loughlin, 1995).

### **2.31.3 Perspectives of Teacher Education for Sustainable Development**

It is essential that the prospective teachers are provided with education of gender equality, respect for all, fundamental rights and perspectives which develop values and respect for peace, because they will influence the citizens of society who are the future agent of sustainable development. Currently commercialized an industrialized life style have created crisis for ecological system and the citizens have to be trained for consumption of natural resources within current patterns. The conflicts among children within multicultural classrooms are increasing day by day which promote stress in society. Teacher education plays an important role to address peace and respect for others (Martin, 1994).

## **2.32 Teacher Education in Pakistan**

### **2.32.1 Programs of Teacher Education in Pakistan**

#### **2.32.1.1 In-Service Teacher Education**

There are almost 550,000 teachers in public sector and 100,000 teachers in the private sector in Pakistan. Teachers training institutions are mainly responsible for the pre-service and in-service training of teachers. Pre-service teachers training is provided in the form of diploma, degree or certificate, while in-service teachers training are mainly conducted by specific units of provincial governments. Curriculum of these trainings is limited to the training of curriculum teaching in schools or administrative and management skills etc. In-service teachers training institutions are known as Provincial Institutions of Teacher Education (PITE) where as in Punjab it is known as a Directorate of staff development. National Institute of Science and Technology Education (NISTE) is responsible for in-service teachers training at federal level.

#### **2.32.1.2 Pre-Service Teacher Education Programs in Pakistan**

There are various types of pre-service teacher education programs in Pakistan. These programs are designed to prepare teachers for different level of teaching.

#### **2.32.1.3 PTC Program**

Primary Teacher Certificate program is designed to train or educate the teachers for primary level of teaching in schools.

#### **2.32.1.4 CT**

Certificate in teaching is that program which prepares a teacher for teaching at middle or elementary level schools in Pakistan.

### **2.32.1.5 B. ED Programs**

B.ES, BS. ED and BS (Edu) are those programs which provide pre-service training to the teachers for teaching at secondary level of education in Pakistan.

### **2.32.1.6 Master in Education (M. A, M. ED)**

Master in education is a type of pre-service teachers training program offered by higher education institutions for training to equip a teacher to teach at higher secondary level of education. MA and M. Ed are equivalent degrees to each other. The pre-requisites of both degrees are slightly different such as B. Ed one-year qualification is required for M. Ed degree, while Bachelor degree in Education is required for M.A.

### **2.32.1.7 M.Phil. and PhD in Education**

These both degrees are research oriented degrees and offered by higher education institutions. Master in education is required for M.Phil. While, M.Phil. in education is required for PhD programs (Muhammad & Hafiz,2010).

## **2.33 Key Issues and Problems in Teacher Education**

### **2.33.1 Lack of Policy and Standards**

There is not a unified policy or standards for teaching education on national level which results that each institution is working according to their own contents. There is a need that all teacher education institutions work together under one umbrella together for some common standards on each level. Lack of standards for teacher education hinders to harmonize the school education with teacher education.

### **2.33.2 Linkage between the Institutions**

There is lack of cooperation and coordination between the training institutions at provincial level. They work in isolation rather than sharing research and good practices with each other. Likewise lack of coordination between the provincial and

district institutions create complexities in contents and conduct of teacher education curriculum (UNESCO, 2006).

### **2.33.3 Core Abilities or Competencies**

Basic competencies which are needed for the teaching professions are not fully developed in teachers which results slow professional development of teachers because those competencies need for progress of knowledge and skill development for teaching profession.

### **2.33.4 Recruitment or Selection**

Selection procedure of teachers is facing the problems of merit and qualification of teachers. Favoritism in the process of recruitment is adversely affecting the performance of students in schools. Research have results that the students' performance was better than those teachers who were having 12 years of formal school education rather than those teachers whose qualification was Metric (Malik & Urooj, 2012).

### **2.33.5 Curriculum**

Although changes have been made in teacher's education curriculum but still emphasize on practical work rather than theory and skills development is needed. Teachers' education curriculum more is focusing on theory and rote learning. There is a need to embed the use of modern technologies and communication skills.

### **2.33.6 Teacher Educators**

Teachers in teacher education institutions are not using modern learning and teaching styles in their classrooms. They use old lecture or discussion methods for delivery of knowledge which hinders the grooming, creative and critical skills of prospective teachers'. These prospective teachers use the same methods in their schools with students which negatively affect the performance of students in Pakistan.

Group work and interactive learning is missing in teacher education institutions (Rehmani, 2006).

#### **2.33.7 In-Service Programs**

Contents and courses of in-service teachers training are not designed with harmony of real classroom problems and development of skills for those problems. The syllabus is not up to the requirement of the trainees. On the other hand, the master trainers themselves are not fully equipped with skills and knowledge to train the teachers effectively. There is also lack of linking the subject knowledge and skills required for its delivery.

#### **2.33.8 Support of School Management**

Professional development and initiative for applying new techniques in teaching need a support from administration in schools. But unfortunately the politics and behavior of school administration with teachers hinders their job. There is lack of healthier and facilitative environment in schools which leads to demonization and dissatisfaction of teachers.

#### **2.33.9 Career Development Process**

There is a lack of well-defined and proper career path or structure for teachers in Pakistan. Moreover, the procedure of promotion also needs to be reconsidering and teachers' performance should be recognized for promotion rather than seniority. There is also lack of subject specialist in schools and the secondary school subject specialist provides training to the teachers.

#### **2.33.10 Monitoring and Evaluation**

The process of monitoring and evaluation of teachers is not affective as it needs to be. The proper feedback and provision of insight of teacher's performance is missing which leads to inferior performance of teachers in schools or in classrooms.

The Annual Confidential Report which is a kind of evaluation of teachers on annual basis is mere a formality. There is a need of proper and useful feedback to teachers for their performance if we want to improve students' performance.

#### **2.33.11 Donors Driven Programs/Projects**

There is always a focus on introducing new programs in teachers training in Pakistan as the donors provide funds and the agencies have to put them in practice without knowing and identifying the needs of teachers. There is a need of focusing on already existing policies to make them error free and make them more effective rather than launching new programs. Donor driven demands and programs or initiatives do not meet the needs of the teachers training.

#### **2.33.12 High Per Capita Expenses and Low Income**

High rate of expenditure and low income of teachers is one of the major problems of teachers in Pakistan. There is a need that the teacher should be mentally sound and not worried for their finance if we want good performance from them (UNESCO, 2006).

### **2.34 Teacher Competencies Related to ESD**

Teachers are the agent of social change. They are responsible for making minds and characters of nations, therefore their responsibility become very important as the fate of nation is in the hands of teachers. Similarly, the role of teachers is also significant in defusing the concept of ESD in the minds of the students. The following are some of the competencies which are very necessary for a teacher. A good teacher should have the following competencies for command of ESD:

- Awareness about challenges and issues of ESD and ability of teacher to acquire knowledge related to ESD.

- A teacher has proficiency in concepts of ESD and ESD. She/he should also know about the policies of ESD whether national or international.
- Ability of teacher to know and value the knowledge of cultural heritage and also critically reflect on it.
- The ability to understand the students to differentiate between the factual knowledge and opinions.
- Ability of teacher is to select the goals of ESD according to the physical and mental level of learners.
- Competency of teacher to identify global issues and connect them to local aspects with its solution.
- Ability of teachers to integrate ESD into existing curriculum in schools.
- Competency of teacher to identify organizations for cooperation to promote sustainable development.
- A teacher should know the needs and requirements of current moment as well as of future generation, quality life for all and rights of citizens of community.
- Ability to create the critical and analytical skills in students that they value the cultural, environmental and social changes.
- Competency of teacher to respect for biodiversity and culture diversity.
- A teacher as an individual should know and relate her/his beliefs, assumptions and values of ESD to learning.
- Encourage the learners for questioning related to their beliefs and ESD to make the clarity in their minds.
- A teacher has the ability to identify the conflicts, interests and positive trends of society so that she/he can guide the students for action accordingly.

- The understanding to not impose her or his values on students rather than encourages them for their own thinking.
- The teachers should model the values of respect and dignity of ESD in their personal and institutional life so those learners copy them (Willy, 2008).

## 2.35 Review of Related Researches

**2.35.1** The articles on “The integration of biodiversity education in the initial education of primary school teachers: four comparative case studies from Europe” Matthies et al. (2009) were basically carried out in four countries Germany, Cyprus, Switzerland and England. One teacher’s education institution was selected from each country. Interviews of teacher educators, prospective teachers and document analysis were the main tools of this research. The study has the objective to find out the integration of biodiversity education in pre-service teachers training program and the satisfaction of prospective teachers with respect to their education. The study proves that it is essential to train the primary school teachers how to address the concept of biodiversity and also how best to deliver it through proper methodologies. The study also proved that the countries included in study i.e. Germany, Cyprus and England were having more content oriented in teaching perspectives, while in Switzerland the situation method oriented approach was more common in teaching.

**2.35.2** This article, “Starting the pluralistic tradition of teaching? Effects of education for sustainable development (ESD) on pre-service teachers’ views on teaching about sustainable development “has been written by Andersson (2017). The main purpose of this research study is to find out the perception of pre-service teachers about teaching the concept of ESD to students. The article also reflects to investigate that inclusion of the concept of ESD in pre-service teacher education has influenced

pre-service teachers' perception about ESD or not? This is a mixed methods research which includes experimental research also. According to author the course of ESD was designed for treatment group which was taught for weeks to pre-service teachers. This course was taught to teachers in university of Gothenburg. The opinion of pre-service teachers about their approach toward teaching of SD was collected through questionnaire. The results of the study show short term effects on teaching of pre service teachers or discussing the concept of SD with pupils. Although these teachers could not influence pupils' opinion about the concept of SD. Further researches related to contents of ESD and inclusion of ESD in pre-service teacher's program is needed as recommended by this article.

**2.35.3** The authors Cebrian and Junyent (2015) has written the article "Competencies in Education for Sustainable Development: Exploring the Student Teachers' Views" basically conducted this research on perceptions of prospective teachers for competencies in sustainable development. Sample size of student's teachers (32) selected from higher education institutions. The students' teachers were asked to select and work on a project related to ESD. They were working of finding out knowledge, skills and competencies related to ESD. The teacher students also highlighted in their research results aspects of environment such as interaction of human being with environment, its impact, environmental awareness, and responsibilities of individuals, respects and care for environment by human beings. The study identified a gap between the existing framework of ESD and curriculum of teacher education. Therefore, it is suggested in this research that there is a need of bringing harmony and integration in the existing curriculum of teacher education and framework of ESD. The research article emphasized that the current societies are facing different challenges regarding ESD so it is necessary to provide skills,

knowledge and competencies about ESD to future teachers for dealing with the challenges of ESD.

**2.35.4** Numbers of researches have been conducted on ESD and teacher education.

The research study of Michail, Stamou and Stamou (2007), conducted on primary school teachers in Greece which revealed that the primary school teachers have not adequate knowledge of environment and its related issues which negatively affects the students' awareness about the environmental problems.

**2.35.5** The research of the Evans et al. (2012) recommended that the course on ESD need to be included in pre-service teachers' education as it will build the concept of ESD in the minds of the preparatory teachers which will further help to trained and aware the students about ESD. The study of Jumani and Abbasi (2015) revealed that the issues such as poverty, hunger, lack of tolerance, peace, extremism and environmental issues are need to be addressed in curriculum of teacher education as these problems threaten the lives of individuals. But unfortunately to some extent these concepts are ignored in teachers training programs. The study of Atmaca (2017) reported that the practical activities related to ESD need to be included during teaching practice of teachers so that they will get awareness about the concept of ESD. Tomas, Girgenti and Jackson (2017) conducted a research in which they offered a course on ESD to teachers in schools. After the completion of the course the findings revealed that the teachers have changed their attitude and thinking in a positive way for solution of the social and environmental problems. They also developed skill and knowledge for teaching the concept of ESD to students. The study of Esa (2010) reflected that teachers are more influential agents to train the students for tomorrow, therefore the concept of ESD and environmental knowledge need to be included in pre-service teacher education. He conducted a research on attitude of pre-

service teachers enrolled in undergraduate biology teaching method course. After studying the course, the teachers' attitude positively changed toward the environmental issues such as recycling the wastages, water pollution, climate change, preservation of energy and intercultural understanding, for transmitting the knowledge of ESD to students. According to Kalsoom, Qureshi and Khanam, (2019) Education for Sustainable development is not a serious or mainstream theme of educational sector in Pakistan. According to their research during November 2019 an international conference was organized on "Building Knowledge Competencies for Sustainable Development (SD) in Asia: Achieving the Goals of Life-Long Learning" in Institute of Education, Lahore College for Women University, Pakistan. About 92 research papers were presented in the conference in which very few were related to the issues related to ESD in Pakistan. The research study furthermore reflected that the research scholars were not aware about the importance and concept of ESD, therefore their research recommended that there is a need on integration of ESD on all levels of education in Pakistan.

### **2.36 Chapter Overview**

To sum up the conclusion of literature review, the researcher identified that the current trends in education has changed and the concept of ESD is getting more importance all over the world. The concept of ESD is integrating in different levels and areas of education in different countries. It might because of the emerging environmental, societal and economic problems facing by the people in all countries. The literature review conveyed that the better solution to overcome the problems like shortage of natural resources, peace and tolerance and changing climate may be resolved in the light of the awareness and knowledge of ESD. Therefore, the concept of "learning and teaching for sustainable future" has become an emerging trend in

education. The review of researches reflected that the components of ESD were incorporated in education and provided better results in changing attitudes and behavior of individuals towards environmental and societal problems. It is also perceived from literature that the inclusion of the concept of ESD in curriculum leads to awareness of both students and teachers.

It is observed from the literature that education brings changes in the behavior of individuals and make them productive citizens of the society. If the positive change is not reflected from the actions and behavior of the individuals, it means that education is not provided to the individuals in its true spirit. In this regard the responsibility of the teachers and institutions that are providing education become crucial. Teachers can bring good change in society through educational institutions and curriculum. Curriculum is a pathway both for teachers and students. If the curriculum is aligned with the modern challenges and trends, most of the problems of society can be solved easily. Keeping in view the importance of education for sustainable development for curriculum of teachers training, different aspects of ESD such as definitions, paradigms, importance, history, ESD and teacher education, curriculum and ESD along with its characteristics etc., were studied in detail while reviewing the related literature. Related researches were also studied for the clarity of the concept of the research study. These researches also advocate the importance of ESD for teachers training. These research studies provided guidelines to the researcher for carrying out the research procedure and finalization of frame work of the study. Keeping in view the importance of ESD the researcher opts the problem to investigate the extent and areas for inclusion of ESD in teacher training curriculum.

## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

The basic purpose of study was to conduct a research to analyze the extent of integration of Education for Sustainable Development (ESD) in pre-service teacher training program and finally develop a model for teachers training program of B.Ed. 4years based on the concept of ESD. This chapter deals with the research methodology which was carried out for the achievement of the objectives of the study. The chapter discussed a research design applied to conduct this research. It also discussed in detail population, sampling and its technique used for research. It also shed light on how development of instruments for collection of data and a brief description of data analyzed through different quantitative and qualitative procedures.

#### **3.1 Research Design**

Research design basically provides a defined direction for quantitative, qualitative and mixed method researches. It also refers to combine of different components of research in a logical way to address the research problem (Creswell, 2014). The current research study is a mixed method research as it is based on both quantitative and qualitative approaches of research. Mixed method research design is the combination of both quantitative and qualitative researches with in pragmatic world view.

It has different research designs but the current research falls under the convergent parallel mixed method design. This design provides findings or results of the research problem which drawn from both quantitative and qualitative sources of data for interpretation of the results. Convergent mixed method design merge or converge both types of the data according to the nature of the research and then

provides in-depth information in form of qualitative as well as quantitative for findings of the research.

### **3.2 Population**

Population can be defined as a number of objects, persons, items, organizations and events etc. (Gay, Mills & Airasian, 2009). An explanatory and precise population is needed for research in education. The basic aim of this research was to find out the extent of integration of Education for Sustainable Development in curriculum of B.Ed.4-year (elementary) program and developed a model of integration, based on ESD for B.Ed.4-year elementary program. To obtained the below mentioned population the websites of the universities included in population were visited by the researcher and contact number of the concern department were obtained from there. They were approached telephonically and the staff members were recommended for information by the heads of the concerned department. The staffs were briefed about the nature of the data which was required for the research by the researcher. The number of prospective teachers was obtained from the concern departments of the universities included in population. Similarly, the number of teachers' educators was obtained from the websites of the universities. The list of members of National Curriculum Review Committee (NCRC) and document of curriculum of B.Ed.4-year program were obtained through personal visit to Higher Education Commission of Pakistan.

Population of the research study is as:

- All (160) teacher educators who are teaching to B.Ed.4-year elementary program.
- All (500) prospective teachers of B.Ed.4-year elementary program from semester 6-8.

- All 22 subject experts/professors from the field of education, social and culture environment, economics and Institute of Sustainable Development.
- All (27) members of National Curriculum Review Committee (NCRC).

Analysis of curriculum of B.Ed.4-year elementary program was also done as a document analysis.

The detail of the population is given in table as following:

Table No 3.1

*Detail Description of Population*

Description of population unit	Number of courses of B.Ed. 4-year program	Number of teacher educators	Number of prospective teachers.(semester 6-8)	Number of NCRC members	Number of subject experts
<b>Total</b>					
population.	31	160	500	27	22

### 3.3 Sample of the Study

Gay (2003) has stated that sampling is the process of selection of individuals for a study which represent its larger group of its origin. The main theme of the sampling is to provide information about the larger group. Keeping in view the rational and importance of selection of sample, all subjects were selected randomly for sampling of the study. List of the members of National Curriculum Review Committee (NCRC) was obtained and the researcher has found 15 members for interviews. Creswell (2014) has stated that level of saturation has a very important role in qualitative research. For qualitative methods if the level of saturation is achieved, aim of the research is fulfilled. Therefore 7 members of NCRC were interviewed randomly as the level of saturation was achieved from the interviews of

the members. Similarly, 9 experts from all discipline of economics, sociology, environmental sciences, and education were also selected randomly and were interviewed. Director of Institute of Sustainable Development was also included in sample of the study for interview. Furthermore, 200 prospective teachers were selected randomly from B.Ed. 4-year elementary program from semester 6th -8th from 10 public universities of Pakistan which constitute 40% of the population. Likewise, 63% of total teacher educators who comprised 100 teachers' educators (teaching to students of B.Ed. 4-year elementary program) were also randomly selected from the sample universities. (31) courses were also included in the study for analysis of curriculum of B.Ed. 4-year elementary program. (9) Experts from the education sector were also selected randomly for focused group discussion from public universities of Islamabad.

Table No 3.2

*Detail Description of the Sample with its Units*

Description of sample	courses of B.Ed. 4 year program	63% teacher educators	40% prospective teachers.(semester 6-8)	NCRC members	Number of subject experts
Total					
proportion of the sample	31	100	200	7	9

### 3.4 Sampling Technique

The primary role of the sampling is the representation of the larger group of population. A precise sampling not only avoids sampling error and biased but also supports the valid findings. Random sampling is one of the probability sampling

techniques. It is the kind of sampling in which all persons or objects of the accessible population have equal chances of selection. All sampling techniques have its merits and demerits (Teddlie & Yu, 2007). According to the nature of the research study and objectives, simple random sampling techniques were used under probability sampling. All categories of population were selected randomly in the light of Gay (2003) suggested sampling ratio.

### **3.5 Research Instruments**

Data were collected through different research instruments. Alignment matrix was used for analysis of curriculum. For obtaining opinion of teacher educators and prospective teachers questionnaires were designed. Similarly, semi structured interviews were planned for experts. Questions for focused group discussion were also developed to take the opinion of educationists on the developed model. These questions were also related to take the opinion of experts for areas/subjects where the components of ESD can be integrated.

### **3.6 Development of Research Instruments**

Related literature on Education for sustainable development was studied in depth and a foundation of knowledge was built on the basis of literature for development of instruments for this research study. Detail of each instrument is following:

#### **3.6.1 Questionnaire for Teacher Educators**

It was derived from the literature that ESD was basically divided in to main four categories. These main components of ESD were education, economics, social and culture and environment. The Questionnaires for teacher educator (as Appendix - A) were developed basically on the components of ESD which were derived from

literature. First of all, the four categories of ESD education, economics, sociology and environmental sciences were enlisted and then developed statements related to each category. These statements were developed on the basis of knowledge derived from literature. later on the main headings of the categories were removed and almost (40) questions were developed for teacher educators.

### **3.6.2 Questionnaire for Prospective Teachers**

The basic themes and knowledge for the questionnaire of prospective teacher (as Appendix- B) was same as for prospective teachers. Same methods were used for development of questionnaire for prospective teachers also. This questionnaire was different in addressing the way the prospective teachers were asked about different components of ESD on which the statements were developed. Both questionnaires of teacher educators and prospective teachers were developed on 5 point Likert scale i.e. were Strongly Agree. Agree, Undecided, Disagree and Strongly Disagree. Each category of Likert scale was also coded as Strongly Agree as SA and codified as 5, Agree as A and codified as 4, Undecided as UN and codified as 3, Disagree as DA and codified as 2 while Strongly Disagree as SDA and codified as 1.

### **3.6.3 Alignment Matrix**

For analyzing the alignment of the courses of B.Ed. 4-year program with the components of ESD, alignment matrix was developed (as Appendix -C). Alignment matrix was basically developed on the foundations of major components of ESD i.e. economic, social & culture, environment and education. These components and their subcomponents were derived from literature and related researches. These components were put on excel sheet with all general course of B.Ed. 4-year program of each semester separately in a form of grid/table. Three types of categories were developed i.e., aligned, partially aligned and not aligned. These three categories were

assigned codes such as 1 for aligned, 2 for partially aligned and 3 for not aligned. The components of ESD which were simply defined with little explanation in the courses were considered as partially aligned while the detailed discussion on the components of ESD in the courses was considered as fully aligned under alignment matrix. But the components not discussed at all were considered as not aligned during analysis of courses of B.Ed. 4-year elementary program through alignment matrix.

#### **3.6.4 Plan of Interviews for Experts**

Semi structured interviews were also constructed for finding out the views of the experts. Questions of the interviews were developed on the basis of knowledge derived from literature review (as Appendix - D). These questions of interview were semi structured in nature with the reason to fulfill the aim of investigating the in depth views of subject experts about integration of the components of ESD in curriculum.

#### **3.6.5 Plan of Interviews for NCRC Members**

Interviews of NCRC members were important with the reason that they were the actual members who were directly participating in development of curriculum process of B.Ed. 4-year elementary program. Semi structured interviews of NCRC members were also conducted. The statements of the interviews were developed in the light of the knowledge of curriculum and researches on ESD (as Appendix - E).

### **3.7 Validity and Reliability**

Validity and reliability of the instruments are those characteristics of the research tools which ensure the preciseness of the finding of any research study. Keeping in view the importance of validity and reliability for research tools all instruments were validated and were tested. The steps followed for validity and reliability were:

- i. Experts Opinion
- ii. Pilot Testing

iii. Application of Formula for Alpha value of Reliability

The detail of validity and reliability of instruments is as follow:

### **3.7.1 Experts Opinion**

#### **3.7.1.1 Questionnaire for Teacher Educators**

A questionnaire which was designed for teacher educators was put forwarded to 10 experts for obtaining their opinion. These experts were having experience of teaching, curriculum development and research at higher level of education. The initial draft of the questionnaire was changed in the light of the opinion of the experts. Some of the sub components of ESD were excluded from the questionnaires by the experts. They also suggested changing the pattern of the statements. Order of the statements was also adjusted according to their opinion. The experts suggested that the number of statements should be reduced to 40 so the changes were made according to the opinion of the experts after discussion with the supervisor.

#### **3.7.1.2 Questionnaire for Prospective Teachers**

Experts' opinion was also obtained on the questionnaire of prospective teachers. Likewise, the questionnaire of teacher educators, experts suggested changes in the pattern of the statements. They also suggested that the sub components of ESD should be same for both questionnaires of teacher educators and prospective teachers. The pattern of asking about the opinion of the prospective teacher should be different from teacher educators. Therefore, the questionnaire of prospective teacher was changed according to the opinion of the experts with the consultation of supervisor.

#### **3.7.1.3 Alignment Matrix**

Alignment matrix for analysis of curriculum was also put forward for the opinion of the experts. They suggested changes in the tool and were followed such as

making the matrix semester wise instead of a grid sheet of whole program which was made year wise and adopting a 3 point Likert scale instead of Yes or No.

#### **3.7.1.4 Plan of Interview for Experts**

Some minor changes were also made in the plan of interviews of experts and NCRC members in the light of the experts' opinion. Some of the questions were deleted and some statements were changed to make them more expressive for interviewees.

### **3.7.2 Pilot –Testing**

#### **3.7.2.1 Pilot –Testing of Tool for Teacher Educators**

Pilot study of questionnaire developed for teacher educators was conducted on the sample similar to the actual sample but not included in sample of the study. In this regard three universities were selected from capital city of Islamabad randomly. 21 teacher educators from department of education of 3 universities were also selected randomly. The questionnaires were distributed among them for response. The questionnaires were collected from the teacher educators and data was coded to put into SPSS for finding out the reliability. According to analysis of reliability the alpha value for tool of teacher educators was ( $\alpha=0.94$ ).

*Reliability of Tool for Teacher Educators ( $\alpha=0.94$ ).*

#### **3.7.2.2 Pilot –Testing of Tool for Prospective Teachers**

Pilot testing on 30 prospective teachers were also conducted on random selection procedure within 3 universities of Islamabad. 30 prospective teachers from B.Ed. 4-year elementary program of semester 6-8 were selected randomly. The questionnaires were distributed among them and were received back. The data of pilot testing of prospective teachers was coded for feeding in SPSS. After running the reliability analysis, the alpha value for prospective teachers was ( $\alpha=.84$ ).

*Reliability of Tool for Prospective Teachers ( $\alpha=.84$ ).*

### **3.8 Data Collection**

A proper channel for approval and permission for data collection were used before approaching to teacher educators and prospective teachers from the universities who were included in sampling. All the procedures for data collection were followed which were proposed by the concern universities officially. For this purpose, first of all an authority letter was obtained from the supervisor in order to make the access to the concern sample easily. A set of the authority letter with the questionnaires copy were made for the required sample of both teachers' educators and prospective teachers. As the sample of the study was located all over Pakistan and it was difficult and time consuming for a researcher to approach them personally, therefore the social contacts of colleagues were used to access to the desired sample for data collection. The hard copies of questionnaires were sent via post mail to the contacted person in each university. They distributed the questionnaires to the concern persons. Likewise, the experts for interviews were contacted telephonically and scheduled for interviews was decided with them. Experts of the capital city Islamabad and Rawalpindi were accessed personally by the researcher for face to face interviews while the experts located outside the two cities were interviewed through Skype with their permission. Interviews of the experts were recorded for information results. Curriculum of B.Ed. 4-year elementary program was analyzed by the researcher through alignment matrix. In this regard a document of general courses of curriculum was collected from Higher Education Commission of Pakistan. The last stage of data collection was the views of the educationists on the designed model. The group of the experts was approached through proper channel and according to the officially prescribed procedures of the universities. The focus group discussion of the expert was conducted to obtain their

opinion on the proposed model the opinion of the experts was also obtained on the areas/ components to be integrated in the courses of B.Ed. 4-year curriculum. The discussion of the experts was recorded both in visual and texture form.

### **3.9 Data Analysis**

The research study was consisted of mixed method research. Therefore, both qualitative and quantitative analysis of data was carried out through proper procedures. Quantitative data which was obtained from the questionnaires of both teacher educators and prospective teachers was arranged and was tabulated. Percentages and mean scores were calculated for obtaining the results and findings from quantitative data of above two groups. Similarly, the quantitative data which was obtained through alignment matrix after analysis of curriculum of teacher education of B.Ed. 4-year was also analyzed, percentages and mean score of data were obtained.

Interviews of the experts were analyzed and themes were derived from the views of the experts. For this purpose, all interviews were transcribed and after listening and reading carefully by the researcher themes were derived from them. The themes of the interviews were matched with the components of ESD which were obtained from both teachers' educators and prospective teachers. The themes and components of ESD were grouped on the basis of similar characteristics of themes and ESD components. The model was designed on the basis of quantitative and qualitative data. This model was presented to the experts for their opinion in a focused group discussion. Changes were made in the model in the light of the experts' opinion in the model. Some of the components of the model were interchanged and grouped in other components of the model. The experts also identified the relevant areas/courses for integration the different components of ESD.

### **3.10 Chapter Overview**

This chapter shed light on the methodology carried out for the research study. It covers the sample and its techniques along with the development of research instrument. There were different kind of research instruments, i.e. are questionnaires, interviews, alignment matrix and opinion of experts in focused group discussion. Details of the validity of the instruments and its pilot study with data collection are also given in detail in this chapter. A further explanation of the data analysis and its discussion is in the next chapter.

## **CHAPTER 4**

### **DATA ANALYSIS AND INTREPRETATION**

This research was conducted with the main purpose to investigate the integration of Education for Sustainable Development (ESD) in teachers' education and propose a model based on the components of ESD. To achieve the objectives of this research mixed method of research was used and the following tools were used for collection of data:

- Questionnaires both for teacher educators and prospective teachers.
- Alignment matrix for analysis of curriculum.
- Interviews of the experts.
- Focused group discussion for validation of model.

Data from the selected sample were collected through above tools and each set of data was analyzed and presented in the form of tables. All tables with its discussion are given as.

## 4.1 Analysis of Data Collected from Teacher Educators Through Questionnaires

Table 4.1.1

### *Gender Disparity*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Gender Disparity in Teacher Education	SDA	08	9.0	
	DA	03	3.4	
	UNC	05	5.6	3.84
	A	52	58.4	
	SA	21	23.6	
		89	100.0	

Table No 4.1.1 reflects that the teacher educators were asked about the integration of the concept of gender disparity in curriculum of B.Ed. 4-year elementary program, 58% teachers responded to agree, 23% to strongly agree, while 5.6% was neutral. 3.4% teachers were disagreed and 9.0% teachers were strongly disagreed. likewise, the mean score of the above statement is 3.84. So, it is concluded from the above table that 58.4% teacher educators were agreed as the highest percentage and mean score 3.84 for inclusion of the concept of gender disparity in curriculum of B.Ed. 4-year elementary program.

Table 4.1.2

*Environmental Education*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Environmental Education	SDA	04	4.5	
	DA	06	6.7	
	UNC	05	5.6	3.89
	A	55	61.8	
	SA	19	21.3	
		89	100.0	

Table No 4.1.2 reveal that teacher educators were asked about the inclusion of concept of environmental education in curriculum of B.Ed. 4-year elementary program, 61.8% teachers were agreed to the statement, 21.3% was strongly agreed while 5.6% was remain neutral for the above statement. 6.7% teachers responded as disagree and 4.5% teachers were strongly disagreed. Similarly, the mean score for the inclusion of the concept of environmental education was 3.89. So, it is concluded from the above table that 61.8% teacher educators were agreed for integration of the concept of environmental education with a highest percentage and with mean score of 3.89 in the contents of curriculum of B. Ed. 4-year elementary program.

Table 4.1.3

*Reasons of Poverty of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Reasons of Poverty of our Society	SDA	03	3.4	
	DA	10	11.2	
	UNC	11	12.4	3.73
	A	49	55.1	
	SA	16	18.0	
		89	100.0	

Table No 4.1.3 shows that 55.1% teachers were agreed that different reasons of poverty of our society need to be addressed in curriculum of B.Ed. 4-year program. Amongst them 18% was strongly agreed and 12.4% has responded to undecided for the above statement. 11.2% teachers were disagreed and 3.4% teachers were strongly disagreed with the notion. The calculated mean value was 3.73. So, it is concluded from the above table that 55.1% teachers were agree with the mean score 3.73 for integrating the concept of reasons of poverty of our society in B.Ed. 4-year curriculum.

Table 4.1.4

*Pakistani Culture*

Statement	Level	Frequency	Percentage	Mean
				Score
	SDA	0	0	
	DA	03	3.4	
Concept of Pakistani Culture.	UNC	06	6.7	4.16
	A	54	60.7	
	SA	26	29.2	
		89	100.0	

Table No 4.1.4 speaks that 60.7% teachers were agree for including concept of Pakistani culture in teacher education curriculum 29.2% teachers were strongly agree while 6.7% was undecided for the statement. 3.4% teachers responded to disagree while none of the teachers responded as strongly disagree for this statement and the mean score of the table was calculated as 4.16. So, it is concluded from the above table that 60.7% teachers were agree for inclusion of the concept of culture of Pakistan in curriculum as a highest percentage value and mean score is 4.16.

Table 4.1.5

*Remedies of Poverty Alleviation*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Remedies of Poverty Alleviation	SDA	08	9.0	
	DA	10	11.2	
	UNC	21	23.6	3.47
	A	32	36.0	
	SA	18	20.2	
		89	100.0	

Table No 4.1.5 shows that 36.0% teachers were responded to agree that for including the concept of remedies of poverty alleviation in curriculum, 20.2% was strongly agreed and 23.6% was undecided about the statement. Similarly, 11.2% teachers were disagreed with the statement and 9.0% was strongly disagreed. The mean value for the notion is calculated as 3.47. So, it is concluded from the above table that 36.0% teachers were agreed, a highest percentage score, that the concept of remedies of poverty alleviation may be integrate in curriculum while a notable number of teachers 23.6% were undecided about the concept. The mean value was 3.47.

Table 4.1.6

*Tolerance*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Tolerance	SDA	04	4.5	
	DA	10	11.2	
	UNC	20	22.5	3.67
	A	32	36.0	
	SA	23	25.8	
			89	100.0

Table No 4.1.6 revealed that when the teachers were asked about the inclusion of the concept of tolerance in teacher education contents, 36.0% teachers were agreed, 25.8% was strongly agreed while 22.5% teachers were undecided for the above statement. likewise, 11.2% teachers were disagreed for inclusion of the concept of tolerance while 4.5% was strongly disagreed with the statement. The mean score for this table was 3.67. So, it is concluded from the above table that the highest percentage i.e., 36.0% teachers were agreed for including the concept of tolerance in teacher education curriculum while a sufficient number of teachers 22.5% was still undecided about the inclusion of the concept. The mean score was 3.67.

Table 4.1.7

*War and Conflicts Among Generations*

Statement	Level	Frequency	Percentage	Mean Score
Concept of War and Conflicts Among Generations	SDA	01	1.1	
	DA	13	14.6	
	UNC	28	31.5	3.53
	A	32	36.0	
	SA	15	16.9	
		89	100.0	

Table No 4.1.7 shows that 36.0% teachers were agree that the concept of war and conflicts among generations may be addressed in curriculum, 16.9% was strongly agreed and 31.5% was undecided to the statement. 14.6% teachers were disagreed and 1.1% teachers were strongly disagreed for the above statement. The mean score for the table was 3.53. So, it is concluded from the above table that majority of the teachers 36.0% was agreed that the concept of war and conflicts among generation need to be integrate in curriculum of B. Ed. 4-year program, and enough number of teachers 31.5% teachers were still undecided about the inclusion of the concept. The mean value was 3.53.

Table 4.1.8

*Gender Equality*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Gender Equality	SDA	01	1.1	
	DA	11	12.4	
	UNC	29	32.5	4.28
	A	31	34.8	
	SA	17	19.1	
		89	100.0	

Table No 4.1.8 reflects that 34.8% teachers were agreed that the concept of gender equality needs to be addressed in curriculum, 19.1% was strongly agreed while 32. % was undecided about the concept. Similarly, 12.4% teachers were disagreed and 1.1% was strongly disagreed to the statement. The mean score for the above table was 4.28. So, it is concluded from the above table that most of the teachers 34.8% were agreed that the concept of gender equality may be included in curriculum of B. Ed 4-year program, hence notable number of teachers 32.5% was undecided about the concept and a mean score of the statement was calculated 4.28.

Table 4.1.9

*Peace and Harmony of Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Peace and Harmony of Society	SDA	02	2.2	
	DA	11	12.4	
	UNC	14	15.7	3.83
	A	35	39.3	
	SA	27	30.3	
		89	100.0	

Table No 4.1.9 revealed that 39.3% teachers were agreed for integrating the concept of peace and harmony of society, 30.3% was strongly agreed and 15.7% was undecided for this statement. Similarly, 12.4% teachers were disagreed and 2.2% teachers were strongly disagreed to the statement. Mean value was 3.83. Thus it is concluded from the above table that majority of the teachers as 39.3% was agreed for integrating the concept of peace and harmony of society in curriculum of teacher education. The mean score was calculated as 3.83.

Table 4.1.10

*Preservation of Natural Resources*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Preservation of Natural Resources	SDA	02	2.2	
	DA	18	20.2	
	UNC	16	18.0	3.57
	A	33	37.1	
	SA	20	22.5	
		89	100.0	

Table No 4.1.10 reflects that 37.1% teachers were agreed for integration of the concept of preservation of natural resources in the contents of teacher education, 22.5% was strongly agreed and 18.0% was undecided to the notion. Similarly, 20.2% was disagreed and 2.2% was strongly disagreed to the statement. The mean score of the table was 3.57. So, it is concluded from the table that most of the 37.1% teachers were agreed as a highest percentage for inclusion of the concept of preservation of natural resources in curriculum of B. Ed. 4-year program. The mean score of the table was 3.57.

Table 4.1.11

*Traditions of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Traditions of our Society	SDA	02	2.2	
	DA	07	7.9	
	UNC	20	22.5	3.81
	A	37	41.6	
	SA	23	25.8	
		89	100.0	

Table No 4.1.11 shows that 41.6% teachers were agreed that the concept of traditions of our society need to be addressed in curriculum of teacher education 25.8% was strongly agreed and 22.5% was undecided about the statement. Likewise, 7.9% teachers were disagreed and 2.2% was strongly disagreed to the statement. The mean score for the above data was calculated 3.81. So, it is concluded from the above table that majority 41.6% of the teachers were agreed for inclusion of the concept of traditions of our society in curriculum of B.Ed. 4-year program. But a sufficient number of teachers 22.5% was undecided as compare to 7.9% disagreed teachers. The mean score of the table was 3.81%.

Table 4.1.12

*Values of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Values of our Society	SDA	0	0	
	DA	03	3.4	
	UNC	25	28.1	3.91
	A	38	42.7	
	SA	23	25.8	
		89	100.0	

Table No 4.1.12 revealed that 42.7% teachers responded to agree that the concept of values of our society may be include in the contents of B. Ed. 4-year curriculum, 25% was strongly agreed and 28.1% was undecided about the concept. Similarly, 3.4% teachers were disagreed to the notion and none of the teachers responded to disagree for this statement. The mean value for this table was 3.91. So, it is concluded from the above table that majority 42.7% teachers were agreed for integrating the concept of values of our society in teacher education curriculum while, a good number of teachers 28.1% as compare to 3.4% disagreed, were still undecided about the inclusion of the above concept. The mean for this table was 3.91.

Table 4.1.13

*Norms of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Norms of our Society	SDA	0	0	
	DA	04	4.5	
	UNC	29	32.6	3.80
	A	37	41.6	
	SA	19	21.3	
		89	100.0	

Table No 4.1.13 reflects that 41.6% teachers were agreed that the concept of norms of our society need to be include in the contents of B. Ed. 4-year program, 21.3% was strongly agreed while 32.6% teachers were undecided about the concept. 4.5% teachers were disagreed for the integration of the statement. None of the teachers responded to strongly disagreed for the notion. The mean score of the table was 3.80. So, it is concluded from the table that most of the teachers 41.6% were agreed for integrating the concept of the norms of our society in curriculum of B. Ed. 4-year program while a sufficient number of teachers 32.6% were still undecided about the inclusion of the above concept. The mean value of the table was calculated 3.80.

Table 4.1.14

*Population Explosion*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Population Explosion	SDA	03	3.4	
	DA	06	6.7	
	UNC	18	20.2	3.84
	A	37	41.6	
	SA	25	28.1	
		89	100.0	

Table No 4.1.14 Illustrates that 41.6% teachers were agreed that the concept of population explosion may be included in curriculum of B. Ed. 4-year program, 28.1% was strongly agreed while 20.2% teachers were undecided about the notion. Similarly, 6.7% teachers were disagreed and 3.4% was strongly disagreed for the integration of the concept in curriculum. The mean value of the above data was 3.84. So, it is concluded from the above table that large number of teachers 41.6% was agreed that they are including the concept of population explosion in their teaching and a satisfactory number of teachers 20.2% was undecided about the concept as compare to 6.7% disagree option. The mean value as calculated for the table was 3.84.

Table 4.1.15

*Illiteracy in Pakistan*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Illiteracy in Pakistan	SDA	0	0	
	DA	04	4.5	
	UNC	22	24.7	3.92
	A	40	44.9	
	SA	23	25.8	
		89	100.0	

Table No 4.1.15 describes that 44.9% teachers were agreed for inclusion of the concept of illiteracy in Pakistan in curriculum of teacher education, 25.8% was disagreed and 24.7% was undecided about the inclusion the concept. Likewise, 4.5% teachers were disagreed and no teacher responded to strongly disagree for the mentioned statement. The mean value for the table was 3.92. So, it is concluded from the table that most of the teachers 44.9% was agreed that the concept of population explosion need to be integrate in curriculum while enough number of teachers 24.7% as compare to disagree option 4.5% was still undecided about the concept. The mean value for the above table was 3.92.

Table 4.1.16

*Remedies for Solution of Illiteracy Problems*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Remedies for Solution of Illiteracy Problems	SDA	06	6.7	
	DA	05	5.6	
	UNC	24	27.0	3.60
	A	38	42.7	
	SA	16	18.0	
		89	100.0	

Table No 4.1.16 reflects that 42.7% teachers were agreed that the concept of remedies for solution of illiteracy problems of Pakistan need to be incorporate in the curriculum of B. Ed. 4-year program, 18.0% was strongly agreed while 27.0% was undecided about the concept. The table also displays that 5.6% teachers were disagreed and 6.7% teachers were strongly disagreed for the statement. The mean value for the table was 3.60. So, it is concluded from the table that majority of the teachers 42.7% were agreed for the inclusion of the concept of remedies for solution of illiteracy problems while a large number of teachers 27.0% teachers as compare to 5.6% disagree option were undecided. The calculated mean value for the table was 3.60.

Table 4.1.17

*Change of Climate*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Change of Climate	SDA	02	2.2	
	DA	6	6.7	
	UNC	27	30.3	3.67
	A	38	42.7	
	SA	16	18.0	
		89	100.0	

Table No 4.1.17 displays that 42.7% teachers were agreed that the concept of change of climate may be integrate in teacher education curriculum, 18.0% was strongly agreed and 30.3% was undecided. Likewise, 6.7% teachers were disagreed and 2.2% was strongly disagreed to the notion. The mean score for the above data was 3.67. So, it is concluded from the above table that majority of the teachers 42.7% was agreed for the inclusion of the concept of change of climate while a notable number of teachers 30.3% was still undecided as compare to 6.7% teachers who were disagreed about the inclusion of the concept. The men score was calculated as 3.67.

Table 4.1.18

*Management of Disaster Risks*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Management of Disaster Risks	SDA	02	4.5	
	DA	16	18.0	
	UNC	23	25.8	3.34
	A	38	42.7	
	SA	08	9.0	
		89	100.0	

Table No 4.1.18 illustrates that 42.7% teachers were agreed for integrating the concept of management of disaster risks in curriculum of B. Ed. 4-year program, 25.8% was strongly agreed and 25.8% was undecided. Similarly, 18.0% teachers were disagreed and 4.5% teachers were strongly disagreed to the statement. The mean value of the table was 3.34. So, it is concluded from the table that most of the teachers 42.7% was agreed that the concept of management of disaster risks need to be addressed in teacher education curriculum while a sufficient number of teachers 25.8% was still undecided about the inclusion of the concept as compare to 18.0% disagreed teachers. The mean value of the table was 3.34.

Table 4.1.19

*Importance of Good Health of Citizens*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Importance of Good Health of Citizens	SDA	07	7.9	
	DA	10	11.2	
	UNC	21	23.6	3.53
	A	31	34.8	
	SA	20	22.5	
		89	100.0	

Table No 4.1.19 describes that 34. % teachers were agreed that the concept of importance of good health of citizens is essential to be integrating in curriculum, 22.5% was strongly disagreed and 23.6% was undecided about the inclusion of the concept. Similarly, 11.2% teaches were disagreed and 7.9% was strongly disagreed to the statement. The mean values of the table were 3.53. So it is concluded from the table that most of the teachers 34.8% was agreed that the concept of importance of good health of citizens may be integrate in contents of B.Ed. 4-year curriculum. According to the data of the table enough number 23.6% of teachers as compare to 11.2% disagreed teachers were still undecided about the concept. The mean value of the table was 3.53.

Table 4.1.20

*Civic Sense of Citizens*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Civic Sense of Citizens	SDA	02	2.2	
	DA	08	9.0	
	UNC	17	19.1	3.75
	A	45	50.6	
	SA	17	19.1	
			89	100.0

Table No 4.1.20 displays that 50.6% teachers were agreed for the inclusion of the concept of civic sense of citizens in curriculum, 19.1% was strongly agreed and 19.1% was undecided. Similarly, 9.0% teachers were disagreed and 2.2% was strongly disagreed. The mean score of the table was 3.75. So, it is concluded from the table that majority 50.6% teachers were agreed that the concept of civic sense is necessary to be addressed in the curriculum of B. Ed. 4-year program, while an ample number 19.1% teachers were undecided about the concept. The mean value of the data was 3.75.

Table 4.1.21

*Importance of Owing of our Own Culture*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Importance of Owing of our Own Culture	SDA	01	1.1	
	DA	06	6.7	
	UNC	13	14.6	4.07
	A	35	39.3	
	SA	34	38.2	
		89	100.0	

Table No 4.1.21 illustrates that 39.3% teachers were agreed that the concept of importance of adopting own culture need to be integrate in curriculum of B. Ed 4-year 38.2% was strongly agreed and 14.6% was undecided about the notion. According to the table data 6.7% teachers were disagreed and 1.1% was strongly disagreed with the statement. The mean value of the table was 4.07. So, it is concluded from the table that most of the teachers 39.3% was agreed for integration of the concept of importance of adopting our own culture for contents of B. Ed curriculum. The mean score as calculated was 4.07.

Table 4.1.22

*Duties and Rights of the Citizens*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Duties and Rights of the Citizens	SDA	0	0	
	DA	12	13.5	
	UNC	09	10.1	4.00
	A	35	39.3	
	SA	33	37.1	
		89	100.0	

Table No 4.1.22 reflects that 39.3% teachers were agreed that they are integrating the concept of duties and rights of citizens in their teaching, 37.1% was strongly agreed and 10.1% was undecided. Likewise, 13.5% teachers were disagreed and none of the teachers were strongly disagreed with the notion. The mean value of the table was 4.00. So, it is concluded from the table that most of the teachers 39.3% was agreed that the concept of duties and rights of citizens is essential for integration in B. Ed curriculum. The means score of the data was 4.00.

Table 4.1.23

*Cleanliness of our Environment*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Cleanliness of our Environment	SDA	02	2.2	
	DA	09	10.1	
	UNC	11	12.4	3.91
	A	40	44.9	
	SA	27	30.3	
		89	100.0	

Table No 4.1.23 shows that 44.9% teachers were agreed for inclusion of the concept of cleanliness of our environment in curriculum, 30.3% was strongly agreed and 12.4% was undecided about the inclusion of the concept. Similarly, 10.1% teachers were disagreed and 2.2% teachers were strongly disagreed. The mean value of the table was 3.91. So, it is concluded from the table that large number of the teachers 44.9% was agreed that the concept of cleanliness of our environment need to be addressed in curriculum of B. Ed.4-year program. The mean score of the data was 3.91.

Table 4.1.24

*Rural Development*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Rural Development	SDA	02	2.2	
	DA	06	6.7	
	UNC	13	14.6	3.79
	A	56	62.9	
	SA	12	13.5	
		89	100.0	

Table No 4.1.24 describes that 62.9% teachers were agreed that the concept of rural development may be incorporate in teacher education curriculum, 13.5% was strongly agreed and 14.6% was undecided about the statement. Likewise, 6.7% teachers were disagreed and 2.2% was strongly disagreed about the concept. The mean value of the table was 3.79. Therefore, it is concluded from the table that adequate number of teachers 62.9% was agreed for integrating the concept of rural development in curriculum of B. Ed. 4-year. The mean score of the table was 3.79.

Table 4.1.25

*Ethics of Pakistani Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Ethics of Pakistani Society	SDA	01	1.1	
	DA	09	10.1	
	UNC	13	14.6	3.85
	A	45	50.6	
	SA	21	23.6	
		89	100.0	

Table No 4.1.25 reflects that 50.6% teachers were agreed for including the concept of ethics of society of Pakistan in contents of B. Ed. 4-year program, 23.6% was strongly agreed while 14.6% teachers were undecided about the statement. Similarly, 10.1% teachers were disagreed and 1.1% was strongly disagreed to the concept. The mean value as calculated was 3.85. Hence, it is concluded from the table that most of the teachers 50.6% was agreed that the concept of ethics of Pakistani society may be addressed in the curriculum of B. Ed. 4-year program. The mean score was 3.85.

Table 4.1.26

*Religious Values for Promotion of Social Justice*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Religious Values for Promotion of Social Justice	SDA	04	4.5	
	DA	08	9.0	
	UNC	10	11.2	3.84
	A	43	48.3	
	SA	24	27.0	
		89	100.0	

Table No 4.1.26 displays that 48.3% teachers were agreed that the concept of religious values for promotion of social justice need to be integrate in curriculum of B.Ed. 27.0% was strongly agreed and 11.2% was undecided about the concept. Likewise, 9.0% teachers were disagreed and 4.5% was strongly disagreed to the statement. The mean score of the table was 3.84. Therefore, it is concluded from the data that majority of the teachers 48.3% was agreed for integrating the concept of religious values for promotion of social justice in B.Ed. 4-year curriculum. The mean value was 3.84.

Table 4.1.27

*Fundamental Rights of Humans*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Fundamental Rights of Humans	SDA	05	5.6	
	DA	08	9.0	
	UNC	13	14.6	3.81
	A	36	40.4	
	SA	27	30.3	
		89	100.0	

Table No 4.1.27 illustrates that 40.4% teachers were agreed for addressing the concept of fundamental rights of humans in curriculum, 30.3% was strongly agreed and 14.6% teachers were undecided. Similarly, 9.0% teachers were disagreed and 5.6% was strongly disagreed about the concept. The mean value of the table was 3.81. Hence, it is derived from the table that sufficient numbers of teachers 40.4% was agreed for integrating the concept of fundamental rights in curriculum while a good number of teachers 14.6% was still undecided about the concept. The mean score of the above data was 3.81.

Table 4.1.28

*Right to Education*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Right to Education	SDA	04	4.5	
	DA	05	5.6	
	UNC	09	10.1	3.98
	A	42	47.2	
	SA	29	32.6	
		89	100.0	

Table No 4.1.28 displays that 47.2% teachers were agreed that the concept of right to education need to be incorporate in curriculum of B. Ed. 4-year program, 32.6% was strongly agreed and 10.1 % was undecided about the concept. Similarly, 5.6% teachers were disagreed and 4.5% was strongly disagreed to the concept. The mean score of the table was calculated as 3.98. So, it is concluded from the above data that most of the teachers 47.2% was agreed for inclusion of the concept of right to education in curriculum. The mean value according to calculation was 3.98.

Table 4.1.29

*Right to Expression of Opinion*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Right to Expression of Opinion	SDA	04	4.5	
	DA	07	7.9	
	UNC	15	16.9	3.87
	A	34	38.2	
	SA	29	32.6	
		89	100.0	

Table No 4.1.29 reveals that 38.2% teachers were agreed that the concept of right to expression of opinion may be included in curriculum of B.Ed. 4-year program, 32.6% was strongly agreed while 16.9% was undecided about the concept. Likewise, 7.9% teachers were disagreed and 4.5% was strongly disagreed to the statement. The mean score was 3.87. Therefore, it is concluded from the table that large number of teachers 38.2% was agreed that the concept of right to expression of opinion is essential for integrating in curriculum of B.Ed. 4-year program while, a satisfactory number of teachers 16.9% was undecided yet. The mean value as calculated was 3.87.

Table 4.1.30

*Disparity in Health*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Disparity in Health	SDA	04	4.5	
	DA	19	21.3	
	UNC	17	19.1	3.42
	A	34	38.2	
	SA	15	16.9	
		89	100.0	

Table No 4.1.30 describes that 38.2% teachers were agreed for addressing the concept of disparity in health in curriculum, 16.9% was strongly agreed while 19.1% teachers were undecided about the notion. Similarly, 21.3% of the teachers were disagreed and 9.4.5% was strongly disagreed. The mean score was 3.42. Thus, it is derived from the table that adequate number of teachers 38.2% was agreed for inclusion of the concept of disparity in health in B. Ed. 4-year curriculum and a satisfactory number of teachers 19.1% was still undecided about the inclusion of the concept. The mean score was 3.42.

Table 4.1.31

*Nonviolence*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Nonviolence	SDA	04	4.5	
	DA	06	6.7	
	UNC	18	20.2	3.74
	A	42	47.2	
	SA	19	21.3	
		89	100.0	

Table no 4.1.31 revealed that 47.2% teachers were agreed that the concept of nonviolence is important to be included in contents of curriculum of B. Ed. 4-year program, 21.3% teachers were strongly agreed and 20.2% was undecided to the concept. Likewise, 6.7% teachers were disagreed and 4.5% teachers were strongly disagreed. The mean score was calculated as 3.74. Therefore, it is concluded that most of the teachers 47.2% was agreed that the concept of nonviolence may be included in curriculum while 20.2% teachers were still undecided about the notion. The mean score was 3.74.

**Table 4.1.32***Recycling of Resources*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Recycling of Resources	SDA	01	1.1	
	DA	14	15.7	
	UNC	17	19.1	3.66
	A	39	43.8	
	SA	18	20.2	
		89	100.0	

Table No 4.1.32 shows that 43.8% teachers were agreed for including the concept of recycling of resources in curriculum of B.Ed. 4-year, 20.2% was strongly agreed and 19.1% teachers were undecided about the concept. Similarly, 15.7% teachers were disagreed and 1.1% was strongly disagreed. The mean score of the table was 3.66. So, it is concluded from the table that most of the teachers 43.8% was agreed that the concept of recycling of resources is necessary to be integrated in curriculum while there were adequate number of teachers 19.1% who were still undecided about the inclusion of the concept. The mean score of the table was calculated as 3.66.

Table 4.1.33

*Preservation of our Culture Heritage*

Statement	Level	Frequency	Percentage	Mean Score
	SDA	03	3.4	
Concept of Preservation of our Culture	DA	07	7.9	
Heritage	UNC	24	27.0	3.66
	A	38	42.7	
	SA	17	19.1	
		89	100.0	

Table No 4.1.33 reflects that 42.7% teachers were agreed that the concept of preservation of our culture heritage need to be addressed in curriculum of B. Ed. 4-year program, 19.1% was strongly agreed and 27.0% teachers were undecided about the notion. Likewise, 7.9% teachers were disagreed and 3.4% was strongly disagreed. The mean score of the above data was 3.66. Hence, it is concluded from the data of the table that majority of the teachers 42.7% was agreed for integrating the concept of preservation of our culture heritage in teacher education curriculum while, enough number of teachers 27.0% was undecided about the inclusion of the concept. The mean score was 3.66.

Table 4.1.34

*Intercultural Understanding*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Intercultural Understanding	SDA	01	1.1	
	DA	08	9.0	
	UNC	22	24.7	3.80
	A	35	39.3	
	SA	23	25.8	
		89	100.0	

Table No 4.1.34 indicates that 39.3% teachers were agreed that the concept of intercultural understanding is essential for integrating in B. Ed curriculum, 25.8% was strongly agreed and 24.7% was undecided about the statement. Similarly, 9.0% teachers were disagreed and 1.1% was strongly disagreed the notion. The mean score was 3.80, therefore it is concluded from the data of the table that most of teachers 39.3% was agreed that the concept of intercultural understanding need to be incorporate in curriculum of B. Ed. 4-year on the other hand large number of teachers 24.7% was still undecided about the integration of the above mentioned concept. The mean value of the table was calculated as 3.80.

Table 4.1.35

*Preservation of Energy*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Preservation of Energy	SDA	05	5.6	
	DA	11	12.4	
	UNC	21	23.6	3.49
	A	39	43.8	
	SA	13	14.6	
		89	100.0	

Table No 4.1.35 revealed that 43.8% teachers were agreed for addressing the concept of preservation of energy in teacher education curriculum, 14.6% was strongly agreed while 23.6% teachers were undecided about the notion. Similarly, 12.4% teachers were disagreed and 5.6% was strongly disagreed to the statement. The mean score was 3.49. So, it is concluded from the table that majority of the teachers 43.8% was agreed that the concept of preservation of energy is essential to be include in curriculum of B. Ed. 4-year program but a large number of teachers 23.6% was undecided about the concept yet. The mean score of the table was 3.49.

Table 4.1.37

*Social Justice*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Social Justice	SDA	07	7.9	
	DA	06	6.7	
	UNC	16	18.0	3.69
	A	39	43.8	
	SA	21	23.6	
		89	100.0	

Table No 4.1.37 describes that 43.8% teachers were agreed that the concept of social justice need to be integrate in curriculum of B. Ed. 4-year, 23.6% teachers were strongly agreed and 18.0% was undecided about the statement. Similarly, 6.7% teachers were disagreed to the notion and 7.9% of the teachers were strongly disagreed for the statement. The mean score was 3.69. Therefore, it is concluded from the above data that most of the teachers 43.8% was agreed for inclusion of the concept of social justice in curriculum of B. Ed. 4-year program while, an ample number of teachers were undecided about the inclusion of the statement. the mean value of the table was 3.69.

Table 4.1.38

*Importance of our Traditions*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Importance of our Traditions	SDA	04	4.5	
	DA	06	6.7	
	UNC	15	16.9	3.74
	A	48	53.9	
	SA	16	18.0	
		89	100.0	

Table No 4.1.38 reveals that 53.9% teachers were agreed for integrating the concept of importance of our tradition in curriculum of teacher education, 18.0% was strongly agreed and 16.9% teachers were undecided about the concept. Likewise, 6.7% teachers were disagreed and 4.5% teachers were strongly disagreed for the inclusion of the concept. The mean score was 3.74. So, it is concluded from the data of the table that majority of the teachers 53.9% was agreed that the concept of importance of our traditions is important to be integrated in curriculum of B. Ed. 4-year program. But still sufficient number 16.9% teachers were undecided about the notion. The mean score of the table was 3.74.

Table 4.1.39

*Environmental Damage by Humans*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Environmental Damage by Humans	SDA	08	9.0	
	DA	12	13.5	
	UNC	11	12.4	3.58
	A	36	40.4	
	SA	22	24.7	
		89	100.0	

Table No 4.1.39 reflects that 40.4% teachers were agreed for including the concept of environmental damages by human beings in teacher education contents 24.7% was strongly agreed and 12.4% teachers were undecided about the statement. Likewise, 13.5% teachers were disagreed and 9.0% teachers were strongly disagreed to the concept. The mean score of the table was 3.58. Therefore, it is concluded from the table that most of the teachers 40.4% was agreed that the concept of environmental damages by human beings is necessary for integration in curriculum. The mean score was 3.58.

Table 4.1.40

*Environmental Pollution*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Environmental Pollution	SDA	06	6.7	
	DA	05	5.6	
	UNC	17	19.1	3.66
	A	46	51.7	
	SA	15	16.9	
		89	100.0	

Table No 4.1.40 describes that 51.7% teachers were agreed that the concept of environmental pollution need to be included in curriculum of B. Ed. 4-year program, 16.9% was strongly agreed and 19.1% teachers were undecided about the inclusion of the statement. Likewise, 5.6% teachers were disagreed and 6.7% was strongly disagreed. The mean score was 3.66. Hence, it is concluded from the above data that majority of the teachers 51.7% was agreed that the concept of environmental pollution may be included in curriculum of B. Ed. 4-year program but still there were also a large number of teachers 19.1% who were still undecided about the statement. The mean score was 3.66.

## 4.2 Analysis of Data of Prospective Teachers

Table 4.2.1

### *Gender Disparity*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Gender Disparity in Education	SDA	15	7.7	
	DA	43	22.1	
	UNC	27	13.8	3.33
	A	83	42.6	
	SA	27	13.8	
		195	100.0	

Table No 4.2.1 shows that 42% students were agreed that their teachers are discussing the concept of gender disparity in education during their teaching to class, 13.8% was strongly agreed and 13.8% was undecided. Similarly, 22.1% students were disagreed and 7.7% was strongly agreed about the concept. The mean score of the table was calculated as 3.33. Therefore, it is summarized from the table that most of the students 42.6% was agreed that their teachers are including the concept of gender disparity in education in class while a sufficient number of students 22.1% was disagreed to the notion. The mean score was 3.33.

Table 4.2.2

*Environmental Education*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Environmental Education	SDA	02	1.0	
	DA	16	8.2	
	UNC	23	11.8	3.91
	A	111	56.9	
	SA	43	22.1	
		195	100.0	

Table No 4.2.2 reflects that 56.9% students were agreed that the concept of environmental education is discussing in their class by their teachers, 22.1% students were strongly agreed and 11.8% was undecided about the statement. Likewise, 8.2% students were disagreed and 1.0% was strongly disagreed to the concept. The mean value was 3. 91%. So, it is concluded from the above table that majority of the students 56.9% was agreed that the teachers are discussing the concept of environmental education in their class. The mean score was calculated as 3.91.

Table 4.2.3

*Reasons of Poverty of our Society*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Reasons of Poverty of our Society	SDA	01	0.5	
	DA	07	3.6	
	UNC	31	15.9	4.06
	A	96	49.2	
	SA	60	30.8	
		195	100.0	

Table No 4.2.3 revealed that 49.2% students were agreed that their teachers are integrating the concept of reasons of poverty of our society during their teaching. 30.8% was strongly agreed while 15.9% was undecided about the concept. Likewise, 3.6% students were disagreed and 0.5% was strongly disagreed to the notion. The mean score was recorded as 4.06%. Therefore, it is concluded from the table that majority of the students 49.2% was agreed that their teachers are including the concept of reasons of poverty of our society in their teaching. The mean score was 4.06.

Table 4.2.4

*Pakistani Culture*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Pakistani Culture.	SDA	0	0	
	DA	03	1.5	
	UNC	08	4.1	4.32
	A	108	55.4	
	SA	76	39.0	
		195	100.0	

Table No 4.2.4 reflects that 55.4% students were agreed that their teachers are discussing the concept of Pakistani culture in their teaching, 39.0% was strongly agreed and 4.1% was undecided about the concept. Similarly, 1.5% was disagreed and none of the students were strongly disagreed to the concept. The mean score was 4.32. Hence, it is concluded from the above data that most of the students 55.4% was agreed that their teachers are addressing the concept of Pakistani culture in their teaching. The mean score was 4.32.

Table 4.2.5

*Remedies of Poverty Alleviation*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Remedies of Poverty Alleviation	SDA	19	9.7	
	DA	13	6.7	
	UNC	65	33.3	3.39
	A	68	34.9	
	SA	30	15.4	
		195	100.0	

Table No 4.2.5 shows that 34.9% students were agreed that their teachers are including the concept of remedies of poverty alleviation in their teaching in class, 15.4% was strongly agreed and 33.3% students were undecided that their teachers are including the above concept during teaching to B. Ed. 4-year elementary class. The mean score for the statement was calculated 3.39. Therefore, it is concluded from the above table that most of the students 34.9% was agreed that their teachers are addressing the concept of remedies of poverty alleviation during their teaching to students of B. Ed. 4-year elementary program while a notable number of students 33.3% was undecided yet about the integration of the concept by their teachers. The mean value for the above table was 3.39.

Table 4.2.6

*Tolerance*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Tolerance	SDA	4	2.1	
	DA	15	7.7	
	UNC	13	6.7	4.01
	A	106	54.4	
	SA	57	29.2	
		195	100.0	

Table No 4.2.6 describes that 54.4% students were agreed that their teachers are discussing the concept of tolerance during their teaching in class, 29.2% students were strongly agreed and 6.7% was undecided about the inclusion of the above concept. Similarly, 7.7% students were disagreed and 2.1% was strongly disagreed for integration of the above notion by their teachers. The mean value for the statement was 4.01. So, it is concluded from the above data of the table that majority of the students 54.4% was agreed that their teachers are including the concept of tolerance in their teaching to students of B. Ed. 4-year elementary program. The man score for above statement was calculated as 4.01.

Table 4.2.7

*War and Conflicts Among Generations*

Statement	Level	Frequency	Percentage	Mean Score
Concept of War and Conflicts Among Generations	SDA	13	6.7	
	DA	21	10.8	
	UNC	41	21.0	3.55
	A	86	44.1	
	SA	34	17.4	
		195	100.0	

Table No 4.2.7 shows that 44.1% students were agreed that their teachers are integrating the concept of war and conflicts among generation in their teaching, 17.4% was strongly agreed and 21.0% was undecided about the statement. The mean score was 3.55. Therefore, it is concluded from the table that most of the students 44.1% was agreed that their teachers are discussing the concept of war and conflicts among generations during their teaching process while enough number of students 21.4% was still undecided about the integration of the notion by their teachers. The mean value was calculated as 3.55.

Table 4.2.8

*Gender Equality*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Gender Equality	SDA	11	5.6	
	DA	31	15.9	
	UNC	29	14.9	3.70
	A	59	30.3	
	SA	65	33.3	
		195	100.0	

Table No 4.2.8 reflects that 33.3% students were strongly agreed that their teachers are integrating the concept of gender equality in their teaching, 30.3% was agreed while 14.9% students were undecided about the notion. Likewise, 15.9% students were disagreed and 5.6% was strongly disagreed to the statement. The mean score was 3.70. Hence, it is concluded from the above table that most of the students 33.3% was strongly agreed that their teachers are including the concept of gender equality in their teaching to them. The mean score was 3.70.

Table 4.2.9

*Peace and Harmony of Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Peace and Harmony of Society	SDA	5	2.6	
	DA	19	9.7	
	UNC	20	10.3	3.89
	A	99	50.8	
	SA	52	26.7	
		195	100.0	

Table No 4.2.9 describes that 50.8% students were agreed that their teachers are discussing the concept of peace and harmony of society during their teaching, 26.7% was strongly agreed while 10.3% was undecided about the notion. Similarly, 9.7% students were disagreed and 2.6% was strongly disagreed to the statement. The mean score was 3.89. So, it is derived from the table that majority of the students 50.8% was agreed that their teachers are integrating the concept of peace and harmony in their teaching. The mean value was 3.89.

Table 4.2.10

*Preservation of Natural Resources*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Preservation of Natural Resources	SDA	5	2.6	
	DA	26	13.3	
	UNC	29	14.9	3.78
	A	82	42.1	
	SA	53	27.2	
		195	100.0	

Table No 4.2.10 reflects that 42.1% students were agreed that their teachers are including the concept of preservation of natural resources in their teaching, 27.2% was strongly agreed and 14.9% students were undecided about the concept. Similarly, 13.3% students were disagreed while 2.6% was strongly disagreed to the notion. The mean score was 3.78. Hence, it is concluded from the above data of the table that most of the students 42.1% was agreed that their teachers are including the concept of preservation of natural resources in their teaching. The mean value was calculated of the table as 3.78.

Table 4.2.11

*Traditions of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Traditions of our Society	SDA	01	0.5	
	DA	6	3.1	
	UNC	33	16.9	4.01
	A	105	53.8	
	SA	50	25.6	
		195	100.0	

Table No 4.2.11 describes that 53.8% students were agreed that their teachers are addressing the concept of traditions of our society during their teaching, 25.6% was strongly agreed and 16.9% was undecided about the concept. Likewise, 3.1% students were disagreed and 0.5% was strongly disagreed to the statement. The mean value was recorded as 4.01. Therefore, it is concluded from the table that most of the students 53.8% was agreed that their teachers are integrating the concept of traditions of our society in their teaching. The mean score was 4.01.

Table 4.2.12

*Values of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Values of our Society	SDA	0	0	
	DA	7	3.6	
	UNC	23	11.8	4.16
	A	97	49.7	
	SA	68	34.9	
		195	100.0	

Table No 4.2.12 revealed that 49.7% students were agreed that their teachers are integrating the concept of values of our society in their teaching to students in class, 34.9% was strongly agreed and 11.8% was undecided about the concept. Similarly, 3.6% students were disagreed and none of the students were strongly agreed with the notion. The mean score was 4.16. Hence, majority of the students 49.7% was agreed that their teachers are integrating the concept of values of our society in their teaching. The mean score was calculated as 4.16.

Table 4.2.13

*Norms of our Society*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Norms of our Society	SDA	0	0	
	DA	05	2.6	
	UNC	29	14.9	4.15
	A	92	47.2	
	SA	69	35.4	
		195	100.0	

Table No 4.2.13 shows that 47.2% students were agreed that their teachers are discussing the concept of norms of our society in their teaching, 35.4% was strongly agreed and 14.9% students were undecided about the concept. Similarly, 2.6% students were disagreed and none of the students were strongly disagreed to the notion. The mean score was 4.15. So, it is derived from the table that most of the students 47.2% was agreed that their teachers are discussing the concept of norms of our society in their teaching. The mean value for the data was 4.15.

Table 4.2.14

*Population Explosion*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Population Explosion	SDA	15	7.7	
	DA	12	6.2	
	UNC	40	20.5	3.77
	A	64	32.8	
	SA	64	32.8	
		195	100.0	

Table No 4.2.14 reflects that 32.8% students were strongly agreed and same 32.8% was agreed that their teachers are integrating the concept of population explosion during their teaching in class and 20.5% students were undecided about the notion. Likewise, 6.2% students were disagreed and 7.7% was strongly disagreed to the statement. The mean score was 3.77. Therefore, it is concluded from the table that the percentage value both for agreed and strongly agree were same as 32.8%. So 32.8% students were agreed and also same percentage of students was strongly agreed that their teachers are explaining the concept of population explosion in their teaching to class. The mean score was calculated as 3.77.

Table 4.2.15

*Illiteracy in Pakistan*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Illiteracy in Pakistan	SDA	16	8.2	
	DA	10	5.1	
	UNC	28	14.4	3.84
	A	77	39.5	
	SA	64	32.8	
		195	100.0	

Table No 4.2.15 shows that 39.5% students were agreed that their teachers are including the concept of illiteracy in Pakistan in their teaching, 32.8% was strongly agreed while 14.4% was undecided about the statement. Similarly, 5.1% students were disagreed and 8.2% was strongly disagreed to the concept. The mean score was calculated as 3.84. So, it is concluded from the above data that most of the students 39.5% was agreed that their teachers are integrating the concept of illiteracy in Pakistan in their teaching. The mean score was 3.84.

Table 4.2.16

*Remedies for Solution of Illiteracy Problems*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Remedies for Solution of Illiteracy Problems	SDA	12	6.2	
	DA	23	11.8	
	UNC	28	14.4	3.69
	A	83	42.6	
	SA	49	25.1	
		195	100.0	

Table No 4.2.16 revealed that 42.6% students were agreed that their teachers are discussing the concept of remedies for solution of illiteracy problems during their teaching in class, 25.1% was strongly agreed and 14.4% was undecided about the notion. Likewise, 11.8% students were disagreed and 6.2% was strongly disagreed to the concept. The mean score was 3.69. Therefore, it is concluded from the above table that majority of the students 14.6% was agreed that their teachers are including the concept of remedies for solution of illiteracy problem during their teaching. The mean score for the data was 3.69.

Table 4.2.17

*Change of Climate*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Change of Climate	SDA	03	1.5	
	DA	29	14.9	
	UNC	36	18.5	3.69
	A	85	43.6	
	SA	42	21.5	
		195	100.0	

Table No 4.2.17 describes that 43.6% students were agreed that their teachers are integrating the concept of change of climate in their teaching, 21.5% was strongly agreed while 18.5% was undecided about the statement. Similarly, 14.9% students were disagreed and 1.5% was strongly disagreed to the statement. The mean score was 3.69. Hence, it is concluded from the data that most of the students 43.6% was agreed that their teachers are including the concept of change of climate in their teaching in class. The mean score was calculated as 3.69.

Table 4.2.18

*Management of Disaster Risks*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Management of Disaster Risks	SDA	15	7.7	
	DA	31	15.9	
	UNC	58	29.7	3.33
	A	56	28.7	
	SA	35	17.9	
		195	100.0	

Table No 4.2.18 shows that 29.7% students were undecided about the inclusion of the concept of management of disaster risks by their teachers in class, 28.7% was agreed and 17.9% was strongly agreed with the statement. Likewise, 15.9% students were disagreed with the notion and 7.7% was strongly agreed. The mean score was 3.33. Therefore, it is concluded from the above data that majority of the students 29.7% was undecided about the inclusion of the concept of management of disaster risks in teaching by their teachers in class. The mean score was 3.33.

Table 4.2.19

*Importance of Good Health of Citizens*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Importance of Good Health of Citizens	SDA	13	6.7	
	DA	21	10.8	
	UNC	15	7.7	3.79
	A	90	46.2	
	SA	56	28.7	
			195	100.0

Table No 4.2.19 reflects that 46.2% students were agreed that their teachers are including the concept of importance of good health in class, 28.7% was strongly agreed and 7.7% was undecided. Similarly, 10.8% students were disagreed and 6.7% was strongly disagreed to the notion. The mean score was 3.79. So, it is concluded from the above table that most of the students 46.2% was agreed that their teachers are integrating the concept of importance of good health by their teachers in class and the mean score was 3.79.

Table 4.2.20

*Civic sense of Citizens*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Civic Sense of Citizens	SDA	09	4.6	
	DA	25	12.8	
	UNC	28	14.4	3.66
	A	95	48.7	
	SA	38	19.5	
		195	100.0	

Table No 4.2.20 revealed that 48.7% students were agreed that their teachers are including the concept of civic sense of citizens in their teaching to students, 19.5% was strongly agreed and 14.4% was undecided about the concept. Likewise, 12.8% students were disagreed and 4.6% was strongly disagreed. The mean score was 3.66. Hence, it is derived from the table that majority of the students 48.7% was agreed that their teachers are discussing the concept of civic sense of citizens in their teaching. The mean score for the data was 3.66.

Table 4.2.21

*Importance of Owing of our Own Culture*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Importance of Owing of our Own Culture	SDA	02	1.0	
	DA	10	5.1	
	UNC	18	9.2	3.98
	A	124	63.6	
	SA	41	21.0	
		195	100.0	

Table No 4.2.21 describes that 63.6% students were agreed that their teachers are addressing the concept of importance of owing our own culture during their teaching, 21.0% was strongly agreed while 9.2% was undecided about the concept. Similarly, 5.1% students were disagreed to the notion and 1.0% was strongly disagreed. The mean score of the data was 3.98. So, it is concluded from the table that most of the students 63.6% was agreed that their teachers are integrating the concept of importance of owing our own culture in their teaching. The mean score was calculated as 3.98.

Table 4.2.22

*Duties and Rights of the Citizens*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Duties and Rights of the Citizens	SDA	02	1.0	
	DA	27	13.8	
	UNC	23	11.8	3.86
	A	88	45.1	
	SA	55	28.2	
		195	100.0	

Table No 4.2.22 revealed that 45.1% students were agreed that their teachers are including the concept of duties and rights of citizens in their teaching and 28.2% was strongly agreed while 11.8% students were undecided about the inclusion of the concept by their teachers. Likewise, 13.8% students were disagreed and 1.0% was strongly disagreed to the notion. The mean value was calculated as 3.86. Therefore, it is concluded from the above table that majority of the students 45.1% was agreed that their teachers are addressing the concept of duties and rights of the citizens. The mean value was 3.86.

Table 4.2.23

*Cleanliness of our Environment*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Cleanliness of our Environment	SDA	08	4.1	
	DA	17	8.7	
	UNC	15	7.7	3.96
	A	89	45.6	
	SA	66	33.8	
		195	100.0	

Table No 4.2.2 shows that 45.6% students were agreed that their teachers are including the concept of cleanliness of our environment in their teaching, 33.8% was strongly agreed and 7.7% was undecided about the concept. Similarly, 8.7% students were disagreed while 4.1% students were strongly disagreed to the notion. The mean value of the data was 3.96. Hence, it is concluded from the above data that majority of the students 45.6% was agreed that their teachers are integrating the concept of cleanliness of our environment in their teaching hence the mean value of the data was 3.96.

Table 4.2.24

*Rural Development*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Rural Development	SDA	06	3.1	
	DA	19	9.7	
	UNC	54	27.7	3.67
	A	71	36.4	
	SA	45	23.1	
		195	100.0	

Table No 4.2.24 describes that 36.4% students were agreed that their teachers are integrating the concept of rural development in their teaching, 23.1% was strongly agreed and 27.7% was undecided about the notion. Likewise, 9.7% students were disagreed and 3.1% was strongly disagreed. The mean value of the data was 3.67. Thus, it is concluded from the above data of the table that most of the students 36.4% was agreed that their teachers are addressing the concept of rural development in their teaching to the students in class while a sufficient number of students 27.7% was still undecided about the inclusion of the concept. The mean value was calculated as 3.67.

Table 4.2.25

*Ethics of Pakistani Society*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Ethics of Pakistani Society	SDA	08	4.1	
	DA	10	5.1	
	UNC	26	13.3	3.90
	A	100	51.3	
	SA	51	26.2	
		195	100.0	

Table No 4.2.25 reflects that 51.3% students were agreed that their teachers are including the concept of ethics of Pakistani society in their teaching to class, 26.2% was strongly agreed and 13.3% was undecided about the concept. Similarly, 5.1% students were disagreed and 4.1% was strongly disagreed about the notion. The mean value was 3.90. So, it is concluded from the above data that most of the students 51.3% was agreed that their teachers are addressing the concept of ethics of Pakistani society in their teaching. The mean value was calculated as 3.90.

Table 4.2.26

*Religious Values for Promotion of Social Justice*

Statement	Level	Frequency	Percentage	Mean Score
	SDA	13	6.7	
Concept of Religious Values for	DA	16	8.2	
Promotion of Social Justice	UNC	35	17.9	3.75
	A	74	37.9	
	SA	57	29.2	
		195	100.0	

Table No 4.2.26 describes that 37.9% students were agreed that their teachers are including the concept of religious values for promotion of social justice in their teaching, 29.2% was strongly agreed and 17.9% was undecided about the statement. Likewise, 8.2% students were disagreed and 6.7% students were strongly disagreed to the notion. Thus, it is derived from the table that majority of the students 37.9% was agreed that their teachers are discussing the concept of religious values for promotion of social justice in their teaching. The mean value was 3.75%.

Table 4.2.27

*Fundamental Rights of Humans*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Fundamental Rights of Humans	SDA	10	5.1	
	DA	19	9.7	
	UNC	19	9.7	3.85
	A	90	46.2	
	SA	57	29.2	
		195	100.0	

Table No 4.2.27 describes that 46.2% students were agreed that their teachers are explaining the concept of fundamental rights of humans in their teaching in class, 29.2% was strongly agreed while 9.7% was undecided about the concept. Similarly, 9.7% students were disagreed with the notion and 5.1% students were strongly disagreed to the statement. The mean score was calculated as 3.85. So, it is concluded from the table data that most of the students 46.2% was agreed that their teachers are integrating the concept of fundamental right of humans in their teaching to students of B. Ed. 4-year program. The mean value was 3.85.

Table 4.2.28

*Right to Education*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Right to Education	SDA	05	2.6	
	DA	21	10.8	
	UNC	18	9.2	4.06
	A	64	32.8	
	SA	87	44.6	
		195	100.0	

Table No 4.2.28 reflects that 44.6% students were strongly agreed that their teachers are addressing the concept of right to education in their teaching in class, 32.8% was agreed and 9.2% was undecided about the inclusion of the concept. Similarly, 10.8% students were disagreed and 2.6% was strongly disagreed to the notion. The mean value was recorded as 4.06. Therefore, it is concluded from the above table the majority of the students 44.6% was strongly agreed that their teachers are discussing the concept of right to education in their teaching. The mean score was calculated as 4.06.

Table 4.2.29

*Right to Expression of Opinion*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Right to Expression of Opinion	SDA	03	1.5	
	DA	24	12.3	
	UNC	20	10.3	3.98
	A	75	38.5	
	SA	73	37.4	
		195	100.0	

Table No 4.2.29 shows that 38.5% students were agreed that their teachers are addressing the concept of right to expression of opinion in their teaching to class, 37.4% was strongly agreed and 10.3% was undecided about the statement. Likewise, 12.3% students were disagreed and 1.5% was strongly disagreed to the notion. The mean value was 3.98. So, it is derived from the above table that most of the students 38.5% was agreed that their teachers are including the concept of right to expression of opinion in their teaching. The mean value was 3.98.

Table 4.2.30

*Disparity in Health*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Disparity in Health	SDA	11	5.6	
	DA	35	17.9	
	UNC	57	29.2	3.30
	A	68	34.9	
	SA	24	12.3	
		195	100.0	

Table No 4.2.30 reflects that 34.9% students were agreed that their teachers are integrating the concept of disparity in education in their teaching in class, 12.3% students were strongly agreed while 29.2% students were still undecided about the concept. Likewise, 17.9% students were disagreed and 5.6% was strongly disagreed about the concept. The mean value was 3.30. Therefore, it is concluded from the above data that most of the students 34.9% was agreed that their teachers were integrating the concept of disparity in education in their teaching while there is a sufficient number of students 29.2% was still undecided about the inclusion of the concept. The mean score was calculated as 3.30.

Table 4.2.31

*Nonviolence*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Nonviolence	SDA	07	3.6	
	DA	24	12.3	
	UNC	63	32.3	3.46
	A	74	37.9	
	SA	27	13.8	
		195	100.0	

Table No 4.2.31 describes that 37.9% students were agreed that their teachers were addressing the concept of nonviolence in their teaching in class, 13.8% students were strongly agreed and 32.3% was undecided about the concept. Similarly, 12.3% students were disagreed and 3.6% students were strongly disagreed about the concept. The mean value was 3.46. Thus, it is concluded from the data of the table that majority of the students 37.9% was agreed that their teachers were including the concept of nonviolence in their teaching but still there is a sufficient number of students 32.3% was undecided about the inclusion of the concept in their teaching. The mean value was calculated as 3.46.

Table 4.2.32

*Recycling of Resources*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Recycling of Resources	SDA	11	5.6	
	DA	29	14.9	
	UNC	45	23.1	3.51
	A	70	35.9	
	SA	40	20.5	
		195	100.0	

Table No 4.2.32 revealed that 35.9% students were agreed that their teachers are including the concept of recycling of resources in their teaching in class, 20.5% was strongly agreed and 23.1% was undecided about the notion. Likewise, 14.9% students were disagreed and 5.6% was strongly disagreed about the notion. The mean value was 3.51. Thus, it is concluded from the above data that most of the students 35.9% was agreed that their teachers are including the concept of recycling of resources in their teaching while a good number of students 23.1% was still undecided about the inclusion of the concept. The mean value was calculated as 3.51.

Table 4.2.33

*Preservation of our Culture Heritage*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Preservation of our Culture Heritage	SDA	06	3.1	
	DA	31	15.9	
	UNC	29	14.9	3.64
	A	90	46.2	
	SA	39	20.0	
		195	100.0	

Table No 4.2.33 describes that 46.2% students were agreed that their teachers are discussing the concept of preservation of our culture heritage during their teaching in class, 20.0% was strongly agreed and 14.9% was undecided about the inclusion of the concept. Similarly, 15.9% students were disagreed and 3.1% was strongly disagreed to the statement. The mean score was calculated as 3.64%. Thus, it is concluded from the above table that majority of the students 46.2% was agreed that their teachers are integrating the concept of preservation of our culture in their teaching. The mean value was 3.64 for the above data.

Table 4.2.34

*Intercultural Understanding*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Intercultural Understanding	SDA	02	1.0	
	DA	17	8.7	
	UNC	45	23.1	3.80
	A	85	43.6	
	SA	46	23.6	
		195	100.0	

Table No 4.2.34 shows that 43.6% students were agreed that their teachers are including the concept of intercultural understanding in their teaching, 23.6% was strongly agreed and 23.1% was undecided about the concept. Similarly, 8.7% students were disagreed and 1.0% was strongly disagreed to the statement. The mean score was calculated as 3.80. So, it is concluded from the above table that most of students 43.6% was agreed that their teachers are integrating the concept of intercultural understanding in their teaching however there are still a notable number of students 23.1% who were undecided yet. The mean score of the table was 3.80.

Table 4.2.35

*Preservation of Energy*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Preservation of Energy	SDA	09	4.6	
	DA	25	12.8	
	UNC	34	17.4	3.65
	A	84	43.1	
	SA	43	22.1	
		195	100.0	

Table No 4.2.35 reflects that 43.1% students were agreed that their teachers are addressing the concept of preservation of energy in their teaching, 22.1% was strongly agreed and 17.4% was undecided about the integration of the concept. Likewise, 12.8% students were disagreed and 4.6% was strongly disagreed to the concept. The mean score of the table was 3.65. Therefore, it is concluded from the above data that most of the students 43.1% was agreed that their teachers are including the concept of preservation of energy in their teaching. The mean score of the table was 3.65.

Table 4.2.36

*Preservation of Water Resources*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Preservation of Water Resources	SDA	09	4.6	
	DA	26	13.3	
	UNC	35	17.9	3.71
	A	67	34.4	
	SA	58	29.7	
		195	100.0	

Table No 4.2.36 describes that 34.4% students were agreed that their teachers are including the concept of preservation of water resources in their teaching, 29.7% was strongly agreed and 17.9% was undecided about the inclusion of the concept. Similarly, 13.3% students were disagreed and 4.6% was strongly disagreed to the statement. The mean score was 3.71. Thus, it is concluded from the above data that majority of the students 34.4% was agreed that their teachers are addressing the concept of preservation of water resources in their teaching while the mean value of the table was 3.71.

Table 4.2.37

*Social Justice*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Social Justice	SDA	10	5.1	
	DA	18	9.2	
	UNC	27	13.8	3.82
	A	83	42.6	
	SA	57	29.2	
		195	100.0	

Table No 4.2.37 shows that 42.6% students were agreed that their teachers are discussing the concept of social justice in their teaching in class, 29.2% was strongly agreed and 13.8% students were undecided about the concept. Likewise, 9.2% students were disagreed and 5.1% was strongly disagreed to the concept. The mean value was calculated as 3.82. Therefore, it is derived from the above data that most of the students 42.6% was agreed that their teachers are addressing the concept of social justice in their teaching to the students. The mean value of the table was 3.82.

Table 4.2.38

*Importance of our Traditions*

Statement	Level	Frequency	Percentage	Mean
				Score
Concept of Importance of our Traditions	SDA	--	--	
	DA	20	10.3	
	UNC	19	9.7	4.04
	A	89	45.6	
	SA	67	34.4	
		195	100.0	

Table No 4.2.38 reflects that 45.6% students were agreed that their teachers are including the concept of importance of our traditions in their teaching to them, 34.4% was strongly agreed and 9.7% was undecided about the concept. Likewise, 10.3% students were disagreed and none of the student was strongly disagreed to the concept. The mean value was 4.04. Thus, it is summaries from the table that most of the students 45.6% was agreed that their teachers are discussing the concept of importance of our tradition in their teaching in class and the mean score of the table was calculated as 4.04.

Table 4.2.39

*Environmental Damage by Humans*

Statement	Level	Frequency	Percentage	Mean Score
Concept of environmental damage by humans	SDA	05	2.6	
	DA	31	15.9	
	UNC	21	10.8	3.84
	A	72	36.9	
	SA	66	33.8	
		195	100.0	

Table No 4.2.39 revealed that 36.9% students were agreed that their teachers are including the concept of environmental damages by humans in their teaching to class, 33.8% was strongly greed and 10.8% was undecided about the inclusion of the concept. Similarly, 15.9% of the students were disagreed and 2.6% was strongly disagreed to the notion. The mean score was 3.84. Therefore, it is concluded from the table data that most of the students 3.84 was agreed that their teachers are integrating the concept of environmental damages by humans in their teaching while the mean value of the table was 3.84.

Table 4.2.40

*Environmental Pollution*

Statement	Level	Frequency	Percentage	Mean Score
Concept of Environmental Pollution	SDA	11	5.6	
	DA	22	11.3	
	UNC	23	11.8	3.85
	A	68	34.9	
	SA	71	36.4	
		195	100.0	

Table No 4.2.40 shows that 34.9% students were agreed that their teachers are discussing the concept of environmental pollution in their teaching, 36.4% was strongly agreed and 11.8% was undecided about the concept. Likewise, 11.3% students were disagreed and 5.6% was strongly disagreed to the inclusion of the concept. The mean value was 3.85. So, it is concluded from the above data of the table that majority of the students 36.4% was strongly agreed that their teachers are discussing and including the concept of environmental pollution in their teaching in class and the mean score of the data was calculated as 3.85.

### 4.3 Analysis of Curriculum of B. Ed. 4-Year Program

Table 4.3.1

#### *Gender Disparity*

Statement	Aligned	Partially	Not	Total
	Aligned	Aligned	Aligned	courses
Concept of Gender	1	1	29	
Disparity				31
Percentage	3.2%	3.2%	92.6%	

The analysis of Table No 4.3.1 shows that the concept of gender disparity in education was aligned in one course which comprised 3.2%, partially aligned in one course which constitutes 3.2% and was not aligned in 29 courses which result 92.6%. So, it is concluded from the above table that the concept of gender disparity was not aligned in majority of courses (29 courses) and there is the gap between the concept and curriculum of B. Ed. 4-year program.

Table 4.3.2

*Environmental Education*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Environmental Education	1	3	27	31
Percentage	3.2	9.6	87.09	

Table No 4.3.2 shows that the concept of environmental education was aligned in one course 1 which shows 3.2%, partially aligned in 3 courses which comprised 9.6% and was not aligned in 27 courses which constitute 87.09%. Thus, it is concluded from the above data that the concept of environmental education was not aligned in most of the courses 27 and the gap was found between the concept and curriculum of B. Ed. 4-year program.

Table 4.3.3

*Reasons of Poverty of our Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Reason of Poverty in our Society.	0	1	30	31
Percentage	0	3.2	96.7	

Table No 4.3.3 reflects that the concept of reasons of poverty of our society was aligned on none of the courses, partially aligned in 1 course with 3.2% and was not aligned in 30 courses which comprised 96.7%. Therefore, it is concluded from the above data that the concept of reasons of poverty of our society was not aligned in majority of courses (30 courses) and there is a lack of alignment of the concept and curriculum.

Table 4.3.4

*Pakistani Culture*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Pakistani Culture	1	8	22	
Percentage	3.2	25.08	70.9	

Table No 4.3.4 revealed that the concept of Pakistani culture was aligned in 1 course with 3.2%, partially aligned in 8 courses with 25.08% and was not aligned in 22 courses with the 70.9%. So, it is derived from the above table that the concept of Pakistani culture was not aligned in most of the courses (22 courses) of B.Ed. 4-year program and the alignment level was not up to satisfactory level.

Table 4.3.5

*Remedies of Poverty Alleviation*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Remedies of Poverty Alleviation	0	1	30	
Percentage	0	3.2	96.7	

Table No 4.3.5 describes that the concept of remedies of poverty alleviation was aligned in none of the courses, partially aligned in 1 course with 3.2% and was not aligned in 30 courses with 96.7%. Hence, it is derived from the above data that the concept of remedied of poverty alleviation was not aligned in most of the courses of B. Ed. 4-year curriculum and the misalignment was found between the courses and the concept.

Table 4.3.6

*Tolerance*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Tolerance	1	1	29	31
Percentage	3.2	3.2	93.5	

Table No 4.3.6 reflects that the concept of tolerance was aligned in 1 course with 3.2%, partially aligned in 1 course with 3.2% and was not aligned in 29 courses with 93.5%. So, it is concluded from the table data that the concept of tolerance was not aligned in most of the course 29 and there is a gap between the concept and curriculum.

Table 4.3.7

*War and Conflicts Among Generations*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of War and	1	1	29	31
Conflict Among				
Generation				
Percentage	3.2	3.2	93.5	

Table No 4.3.7 describes that the concept of war and conflicts among generations was aligned in 1 course with 3.2%, partially aligned in 1 course with 3.2% and was not aligned in 29 courses with 93.5%. Thus, it is concluded from the above data that the concept of war and conflicts among generations was not aligned in most of the courses 29 and the gap was found between the concept and curriculum.

Table 4.3.8

*Gender Equality*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Gender	0	1	30	
Equality				31
Percentage	0	3.2	96.7	

Table No 4.3.8 reflects that the concept of gender equality was aligned in none of the courses, partially aligned in 1 course with 3.2% and was not aligned in 30 courses with 96.7%. Therefore, it is concluded from the above table that the concept of gender equity was not aligned on majority of courses 30 and there is a lack of alignment between the concept and curriculum.

Table 4.3.9

*Peace and Harmony of Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Peace and	2	3	26	
Harmony of Society				31
Percentage	6.4	9.6	83.8	

Table No 4.3.9 describes that the concept of peace and harmony of society was aligned in 2 courses with 6.4%, partially aligned in 3 courses with 9.6% and was not aligned in 26 courses with 83.8%. Thus, it is concluded from the above table that the concept of peace and harmony of society was not included in most of the courses 26 and the concept was founded missing in most of the courses of B. Ed. 4-year program.

Table 4.3.10

*Preservation of Natural Resources*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of	0	4	27	
Preservation of Natural Resources				31
Percentage	0	12.9	87.09	

Table No 4.3.10 shows that the concept of preservation of natural resources was aligned in none of the courses, partially aligned in 4 courses with 12.9% and was not aligned in 27 courses with 87.09%. Therefore, it is derived from the above data that the concept of preservation of natural resources was not aligned in most of the courses 27 and the lack of inclusion was found between the concept and courses of B. Ed. 4-year curriculum.

Table 4.3.11

*Traditions of our Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Traditions of our Society	1	13	17	
Percentage	3.2	41.9	54.8	

Table No 4.3.11 shows that the concept of traditions of our society was aligned in 1 course with 3.2%, partially aligned in 13 courses with 41.9% and was not aligned in 17 courses with 54. 8%. Thus, it is concluded from the above table that the concept of traditions of our society was not aligned in majority of the courses 17 and the gap between the concept and curriculum was founded.

Table 4.3.12

*Values of our Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Values of our Society	1	10	20	31
Percentage	3.2	32.2	64.5	

Table No 4.3.12 reflects that the concept of values of our society is aligned in 1 course with 3.2%, partially aligned in 10 courses with 32.2% and not aligned in 20 with 64.5%. Thus, it is concluded from the above data that the concept of values of our society was not aligned in most of the courses 20 and there is a gap between the concept and the courses of B. Ed. 4-year program.

Table 4.3.13

*Norms of our Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Norms of our Society	1	7	23	31
Percentage	3.2	22.5	74.1	

Table No 4.3.13 revealed that the concept of norms of our society was aligned in 1 course with 3.2%, partially aligned in 7 courses with 22.5% and was not aligned in 23 courses with 74.1% courses. Thus, it is concluded from the above data that the concept of norms of our society was not aligned in most of the courses as the value of not aligned courses shows 74.1% percentage and there is a gap between the concept and courses of B.Ed. 4-year program.

Table 4.3.14

*Population Explosion*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Population	2	0	29	
Explosion				31
Percentage	6.4	0	93.5	

Table No 4.3.14 reflects that the concept of population was aligned in 2 courses with 6.4%, partially aligned in none of the courses and was not aligned in 29 courses with 93.5%. So, it is concluded from the above data that the concept of population explosion was not aligned in majority of courses 93.5% and the gap between the courses and the concept was founded.

Table 4.3.15

*Illiteracy in Pakistan*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Illiteracy in	1	2	28	
Pakistan				31
Percentage	3.2	6.4	90.3	

Table No 4.3.15 revealed that the concept of illiteracy in Pakistan was aligned in 1 courses with 3.2%, was partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90.3%. Therefore, it is concluded from the above data that the concept of illiteracy in Pakistan was not aligned in most of the courses 90.3 and the courses were not aligned to the concept up to satisfactory level.

Table 4.3.16

*Remedies for Solution of Illiteracy Problems*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Remedies for Solution of Illiteracy Problems	0	0	31	31
Percentage	0	0	100	

Table No 4.3.16 describes that the concept of remedied for illiteracy problems was neither aligned nor partially aligned in none of the courses. Similarly, the concept was not aligned in all 31 courses with 100%. So, it is concluded from the above table that the concept of remedies of illiteracy problem was not aligned in all courses of B. Ed. 4-year program and a complete gap was founded between the concept and the curriculum.

Table 4.3.17

*Change of Climate*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Change of Climate	1	3	27	31
Percentage	2.3	9.6	87.09	

Table No 4.3.17 shows that the concept of change of climate was aligned in 1 course with 3.2%, partially aligned in 3 courses with 9.6% and was not aligned in 27 courses with 87.09%. Thus, it is concluded from the table that the concept of change of climate change was not aligned in most of the courses 87.09% and the alignment between the concept and courses was founded missing.

Table 4.3.18

*Management of Disaster Risks*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Disaster Risks	0	4	27	
Management Percentage	0	12.09	87.09	31

Table No 4.3.18 reflects that the concept of management of disaster risks was aligned in none of the courses, partially aligned in 4 courses with 12.09% and was not aligned in 27 courses with 87.09%. Therefore, it is derived from the above data of the table that the concept of management of disaster risks was not aligned in majority of courses 87.09% and the gap was founded between the concept and curriculum.

Table 4.3.19

*Importance of Good Health of Citizens*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Good Health of Citizens	1	2	28	
Percentage	3.2	6.4	90.32	31

Table No 4.3.19 describes that the concept of importance of good health of citizens was aligned in 1 course, partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90.32%. So, it is concluded from the above table that the concept of importance of good health of citizens was not aligned in most of the courses 90.32% and the gap between the concept and courses was existed.

Table 4.3.20

*Civic Sense of Citizens*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Civic Sense of Citizens	0	4	27	
Percentage	0	12.09	87.09	31

Table No4.3.20 revealed that the concept of civic sense of citizens was aligned in none of the courses partially aligned in 4 courses with 12.09% and was not aligned in 27 courses with 87.09%. Therefore, it is concluded from the above data that the concept of civic sense of citizens was not aligned in majority of courses 87.09% and the lack of alignment between the concept and curriculum was founded.

Table 4.3.21

*Importance of Owing of our Own Culture*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Importance of Owing of our Own Culture	0	2	29	
Percentage	0	6.4	93.5	31

Table No 4.3.21 describes that the concept of importance of owing our own culture was aligned in none of the courses, partially aligned in 2 courses and was not aligned in 29 courses with 93.5%. Thus, it is concluded from the above table that the concept of importance of good health of citizens was not aligned in majority of the courses 29 and the aligned between the concept and curriculum was not up to satisfactory level.

Table No.4.3.22

*Duties and Rights of the Citizens*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Duties and Rights of the Citizens	1	0	30	31
Percentage	3.2	0	96.7	

Table No 4.3.22 describes that the concept of duties and rights of the citizens were aligned in 1 course with 3.2%, partially aligned in none of the courses and was not aligned in 30 courses with 96.7%. Therefore, it is derived from the above table that the concept of duties and rights of citizens was not aligned in majority of the courses 30 and the lack of alignment was observed between the concept and curriculum.

Table 4.3.23

*Cleanliness of our Environment*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Cleanliness of our Environment	0	2	29	31
Percentage	0	6.4	93.5	

Table No 4.3.23 reflects that the concept of cleanliness of our environment was aligned in none of the courses, partially aligned in 2 courses with 6.4% and was not aligned in 29 courses with 93.5%. So, it is concluded from the above table that the concept of cleanliness of our environment was not aligned in majority of the courses 29 and the alignment between the concept and curriculum was not up to satisfactory level.

Table 4.3.24

*Rural Development*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Rural Development	1	0	30	31
Percentage	3.2	0	96.7	

Table No 4.3.24 describes that the concept of rural development was aligned in 1 course with 3.2%, partially aligned in none of the course and was not aligned in 30 courses with 96.7%. Therefore, it is derived from the above table that the concept of rural development was not aligned in most of the courses 30 and the gap between the concept and curriculum was observed.

Table 4.3.25

*Ethics of Pakistani Society*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Ethics of Pakistani society	0	8	23	31
Percentage	0	25.8	74.1	

Table No 4.3.25 reflects that the concept of ethics of Pakistani society was aligned in none of the courses, partially aligned in 8 courses with 25.8% and was not aligned in 23 courses with 74.1%. Thus, it is concluded from the above table that the concept of ethics of Pakistani society was not aligned in majority of the courses 23 and the gap between the concept and curriculum was observed.

Table 4.3.26

*Religious Values for Promotion of Social Justice*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Religious Values for Promotion of Social Justice	0	2	29	31
Percentage	0	6.4	93.5	

Table No 4.3.26 describes that the concept of religious values for promotion of social justice was aligned in none of the courses, partially aligned in 2 course with 6.4% and was not aligned in 29 courses with 93.5%. So, it is concluded from the above table that the concept of religious values for promotion of social justice was not aligned in most of the courses 29 and the lack of alignment between the concept and curriculum was observed.

Table 4.3.27

*Fundamental Rights of Humans*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Fundamental Rights	2	1	28	31
Percentage	6.4	3.2	90.3	

Table No 4.3.27 reveals that the concept of fundamental rights of humans was aligned in 2 courses with 6.4%, partially aligned in 1 course with 3.2% and was not aligned in 28 courses with 90.3%. Thus, it is concluded from the above data that the concept of fundamental rights of humans was not aligned in majority of the courses 28 and the concept was missing in most of the courses.

Table 4.3.28

*Right to Education*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Right to Education	1	2	28	31
Percentage	3.2	6.4	90.3	

Table No 4.3.28 shows that the concept of right to education was aligned in 1 course with 3.2%, partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90.3%. Therefore, it is concluded from the above table that the concept of right to education was not aligned in most of the courses 28 and the gap between the alignment of the concept and curriculum observed.

Table 4.3.29

*Right to Expression of Opinion*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Right to Expression of Opinion	0	1	30	31
Percentage	0	3.2	96.7	

Table No 4.3.29 reflects that the concept of right to expression of opinion was aligned in none of the courses, partially aligned in 1 course with 3.2% and was not aligned in 30 course with 96.7%. Therefore, it is concluded from the above data of the table that the concept of right to expression of opinion was not aligned in most of the courses 30 and the concept was not aligned in curriculum up to satisfactory level.

Table 4.3.30

*Disparity in Health*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Disparity in Health	0	0	31	31
Percentage	0	0	100	

Table No 4.3.30 revealed that the concept of disparity in health was aligned in none of the courses was also partially aligned in none of the courses and was not aligned in 31 courses. Thus, it is concluded from the above table that the concept of disparity in health was not aligned in all of the courses 31 and the gap between the concept and curriculum was founded.

Table 4.3.31

*Nonviolence*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Non-Violence	1	0	30	31
Percentage	2.3	0	96.7	

Table No 4.3.31 describes that the concept of nonviolence was aligned in 1 course with 3.2%, partially aligned in none of the courses and was not aligned in 30 courses with 96.7%. Thus, it is concluded from the above data that the concept of nonviolence was not aligned in most of the courses 30 and the lack of alignment was founded between concept and curriculum.

Table 4.3.32

*Recycling of Resources*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Recycling of Resources	1	3	27	31
Percentage	3.2	9.6	87.09	

Table No 4.3.32 reveals that the concept of recycling of resources was aligned in 1 course with 3.2%, partially aligned in 3 courses) with 9.6% and was not aligned in 27 courses with 87.09%. So, it is concluded from the data of the above table that the concept of recycling of resources was not aligned in majority of the courses 27 and the gap between the concept and curriculum existed.

Table 4.3.33

*Preservation of our Culture Heritage*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Preservation of our Culture Heritage	0	2	29	31
Percentage	0	6.4	93.5	

Table No 4.3.33 shows that the concept of preservation of cultural heritage was aligned in none of the courses, partially aligned in 2 courses with 6.4% and was not aligned in 29 courses with 93.5%. Therefore, it is derived from the above table that the concept of preservation of cultural heritage was not aligned in most of the courses 29 and the concept was missing in curriculum.

Table 4.3.34

*Intercultural Understanding*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Intercultural Understanding	0	1	30	31
Percentage	0	3.2	96.7	

Table No 4.3.34 shows that the concept of intercultural understanding was aligned in none of the courses, partially aligned in 1 course with 3.2% and was not aligned in 30 courses with 96.7%. So, it is concluded from the above data that the concept of intercultural understanding was not aligned in most of the courses 30 and the lack of alignment between the concept and curriculum was founded.

Table 4.3.35

*Preservation of Energy*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Preservation of Energy	1	5	25	31
Percentage	3.2	16.1	80.6	

Table No 4.3.35 reflects that the concept of preservation of energy was aligned in 1 course with 3.2%, partially aligned in 5 courses with 16.1% and was not aligned in 25 courses with 80.6%. Thus, it is derived from the above data that the concept of preservation of energy was not aligned in majority of the courses 25 and the gap between the alignment of the concept and curriculum was observed.

Table 4.3.36

*Preservation of Water Resources*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Preservation of Water Resources	1	4	26	31
Percentage	3.2	12.9	83.8	

Table No 4.3.36 describes that the concept of preservation of water resources was aligned in 1 course with 3.2%, partially aligned in 4 courses with 12.9% and was not aligned in 26 courses with 83.8%. Therefore, it is concluded from the above table that the concept of preservation of water resources is not aligned in most of the courses 26 and the lack alignment of the concept was found in the curriculum of B.Ed. 4-year program.

Table 4.3.37

*Social Justice*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Social Justice	1	2	28	31
Percentage	3.2	6.4	90.3	

Table No 4.3.37 shows that the concept of social justice is aligned in 1 course with 3.2%, partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90.3%. Thus, it is derived from the above data that the concept of social justice was not aligned in majority of the courses 28 and the alignment of the concept was not up to satisfactory level.

Table 4.3.38

*Importance of our Traditions*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Importance of our Traditions	0	3	28	31
Percentage	0	9.6	90.3	

Table No 4.3.38 revealed that the concept of importance of our traditions was aligned in none of the courses, partially aligned in 3 courses with 9.6% and was not aligned in 28 courses with 90.3%. Therefore, it is concluded from the above table that the concept of importance of our traditions is not aligned in most of the courses 28 and the alignment of the concept was not founded in the curriculum.

Table 4.3.39

*Environmental Damage by Humans*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of environmental Damage by Humans	1	2	28	31
Percentage	3.2	6.4	90.3	

Table No 4.3.39 shows that the concept of environmental damages by human was aligned in 1 course with 3.2%, partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90. 3%. Thus, it is derived from the table that the concept of environmental damages by human was not aligned in majority of courses 28 and the missing of the concept was founded in curriculum.

Table 4.3.40

*Environmental Pollution*

Statement	Aligned	Partially Aligned	Not Aligned	Total courses
Concept of Environmental Pollution	1	2	28	31
Percentage	3.2	6.4	90.3	

Table No 4.3.40 reflects that the concept of environmental pollution is aligned in 1 course with 3.2%, partially aligned in 2 courses with 6.4% and was not aligned in 28 courses with 90.3%. So, it is concluded from the above table that the concept of environmental pollution was not aligned in most of the courses 28 and the gap between the concept and curriculum was observed.

## **4.4 Interviews of the Experts**

Interviews of the experts were conducted in order to triangulate the data. During the process of interviews, a stage comes when the interviews were quitted, because the saturation was achieved as the repetition occurred between the statements of interviewees. These interviews were transcribed, coded and the themes were derived from the interviews of the experts. Some of the direct quotes of the experts are given below under the extracted themes of interviews.

### **4.4.1 Environmental Concerns**

The interviews of the experts were analyzed by the researcher and the theme of environmental concern was derived from those interviews. As direct quote of the expert A has stated that:

we should include some lessons about environmental education in teachers training courses which enables them to know about their environment and management of environmental resources. The most important is environmental cleanliness which is also one of the basic part of our Islamic teaching.

Similarly, respondent B has spoken that:

capacity building of teachers is the need of the time especially elementary level teachers as they are dealing with that age of the students where personality of the children is in the developmental process, so the study of the elementary teachers become more important, therefore it is essential to incorporate the environmental issues and changes related to different geographical regions in the curriculum of B.Ed. 4-year program.

The experts have expressed their serious concern towards care of environment; it might be due to the reason that environmental issues are getting serious attention all over the world as drastic changes are occurring on global level in different regions. These changes affect the climate and environment for humans as well for all other creatures living on the globe. To tackle emerging issues of environment, teachers can play better role as they can train the students for solution of environmental problems. The experts also argued that inclusion of environmental education can contribute in clean and safe environment.

Environment was also one of the major components of ESD under this research study. Questions related to environment such as pollution and damages of environment by human beings, climate changes, and cleanliness of environment were also asked both from teachers' educators and prospective teachers. Majority of teacher educators and prospective teachers were agreed with the concept related to environment. But on the other hand the analysis of the curriculum of B.Ed. 4-year program shows that the concept of environment was not aligned in majority of the courses while, the interviews of the experts reflect their serious reservations for environment. On the basis of the above discussion and interviews of the experts it is derived that the concept of environmental concerns may be included in the contents of curriculum of B. Ed. 4-year program.

#### **4.4.2: Islamic Values**

The theme of Islamic values was extracted from the interviews of the experts. The direct quote of the expert P has said that:

If we include the Islamic values in our curriculum, it will cover all aspects related to norms and values of Islamic and Pakistani society, such as equality, respect for others, justice, accountability and honesty etc. are those values

which are very important for the social system of any society. So its inclusion will create awareness in teachers and ultimately in students.

Similarly, expert E has said that:

Lack of awareness about our norms and values threaten the sustainability of our society because sustainability of society is possible when the citizens have respect for their social system and its values. We should develop the skills in teachers who further create the sense of acceptability for our norms and values in students.

It is extracted from the opinion of the experts that each society has its own norms and values. Respect for these values and norms is essential for a sound social system. The experts emphasized for the Islamic values, it might be due to the reason that majority of the population in Pakistan are Muslims and they have respect and honor for their Islamic values. These values have strong foundation in the social set up of the country. Therefore, it might be essential to train the individual for adopting and valuing each other's values for creating consensus and sustainability in society. Some of the questions related to norms and values were also asked from teacher educators and prospective teachers. Both of them were agreed that these concepts are essential to be incorporate in the curriculum of B.Ed. 4-year program. But the analysis of the curriculum of B.Ed. 4-year program revealed that these concepts are missing in majority of the courses. Therefore, the interviews of the experts were conducted for obtaining their opinion regarding the concepts of norms and values. The analysis of all data and triangulation reflects that the theme of "Islamic values" may need to be an important part of teachers training curriculum of B.Ed. 4-year program.

#### **4.4.3 National Solidarity**

National Solidarity was derived as a theme from the opinion of the experts which they have expressed during their interviews. This theme was observed as a one of the important theme by the interviewees such as expert D & H has said:

Pakistan is a society where people of different sects are living; we have to deny sectarianism and teach the sense of patriotism to the citizens. It is the job of the people who are in power, to set the national priorities and design its implementation strategies. Sustainable development is not possible without the sense of oneness of people. The good tool which we can use for its infusion is the teacher education.

Likewise, interviewee A has spoken that: “National solidarity creates sense of oneness in individuals which leads to a sustainable society because people know how to respect each other values”.

The interviews of the experts show that sense of patriotism and fixing the national priorities are two components which leads the nations towards sustainability. The main argument behind the opinion of the experts was found that sense of oneness is essential for sustainability of society as it accumulate the people of different cultures and believes on a single point. Therefore, creating patriotism is more important for a multi-cultural society of Pakistan. The theme of national solidarity was not directly included in the questionnaires of both teachers’ educators and prospective teachers. Likewise, it was also not included in the alignment matrix which was designed for analysis of curriculum of B.Ed. 4-year program. But this theme was observed as a one of the important theme for teachers training curriculum by the interviewees.

#### 4.4.4 Harmony of Society

Harmony of society was a theme which was derived from the interviews of the experts after analysis. The expert B has said:

Our youth is not aware about their social issues and problems prevailing in society, they are less concern about the harmony of their society therefore; the society is going to deterioration. To tackle their social needs and to sensitize them about the societal problems teachers must be equipped with the knowledge.

Similarly, expert F has expressed views as:

Until and unless we bring harmony in the minds of the people we cannot bring harmony in society. So bringing harmony in the minds of the people can be easily done by a teacher because teacher's words are more affective for students.

It is derived from the above quotes that harmonious societies are sound and progressive societies. The role of the teacher is just like an agent of social change in any society. The globalization has brought many positive and negative changes with itself, to overcome and understand these changes it might be essential to equip the teachers with the knowledge of societal problems and challenges. This might be the better way to sensitize the individual for societal problems. If the individuals have deep understanding of the problems prevailing in their surroundings they might provide better solutions for them. Awareness about public problems and issues not only bring harmony in the minds of the individuals but might also facilitate the people toward attainment of a sustainable and harmonious society.

The questions were also asked from teacher educators and prospective teachers such as peace and harmony of society and social justice. They both were

agreed for inclusion of these concepts in the contents of teacher education. But the analysis of the curriculum of B.Ed. 4 years' program shows that the concepts were not aligned in majority of the courses. So in the light of the experts' opinion, it is derived from the above discussion that the theme of harmony of society may also be essential along with the concepts of peace and harmony for inclusion in curriculum of B.Ed. 4-year program.

#### **4.4.5 Utilization of The Resources**

The other theme derived from the interviews of the experts was utilization of the resource. According to expert B: "It is necessary to teach to teachers' different utilization patterns of resources that how can we utilize a single resource with different patterns".

Experts C have spoken that:

A teacher should know how to prepare AV aids for supporting their lessons. Teaching should be more practical rather than theoretical. For this purpose, the concepts of utilization resources are very important to be included in teacher education programs. It will enable a teacher to prepare AV aids from low cost resources and recycle resources for maximum output in teaching.

The experts have emphasized on the utilization of resources as it is obvious from the above quote. It might be due to the reason that the shortage of resources is currently a challenging problem for nations all over the world. The scarcity of resources arises basically due to the emerging needs of people of any society as well as the wastage of resources by humans is also one of the big cause for deficiency of resources. All of the experts were of the view that the teachers should know the pattern of utilization of resources that how different resources can be utilized for maximum output. This may not only enable the teachers for better use of resources for

their class teaching as supporting materials but will also train the students for reprocessing of available resources as the student will observe the AV aids present by teacher in class.

In line with the views of the experts the teacher educators and prospective teachers were also agreed that resources and its utilization and recycling is important for the curriculum of teachers' training but on the other hand the analysis of the curriculum reflected that the concepts related to utilization of resources is missing in majority of the courses of B.Ed. 4-year program. Therefore, it is derived from the triangulation of the data that the utilization of resources and pattern of utilization of resources need to be incorporate in curriculum of B.Ed. 4-year program.

#### **4.4.6 Moral Education**

The theme of moral education has been derived from the interviews of the experts. According to the views of the experts and is quoted directly, that: "Moral education is the need of the time to be include in teacher training curriculum as they are responsible for making the minds of the students".

Similarly, interviewee G has spoken that: "There should be a full fledge separate course on moral education not only for the B.Ed. 4-year program teachers but for all teachers who are teaching at each level from primary level to higher level".

Expert K has viewed that:

Character building is the process which takes place in educational institutions. Teachers are responsible for teaching discipline and good manners to students, which are the dominant aspects of personality; if we want to produce literate people with strong character we should include either the concept of moral education or a course on moral education in our teaching training programs.

It is clear from the above views of the experts that there is a need of including moral education in the curriculum of B.Ed. 4-year program. The experts were of the view that the teachers must work on the character building of students for positive change in the society. The basic purpose behind the opinion of the experts about moral education might be due to the importance of the role of teacher for character and personality development of students. The primary level of education is the crucial age of the students regarding their cognitive development. It may be the age where the moral values can be incorporated in the personality of the students by the teacher. So if the teacher his or herself is properly trained, he/she can frame the personality of students for good character. The role of moral education might also be emphasized by the experts due to the reason that usually people think that education is just to know reading or writing, while character as an aspect of personality remain incomplete in the process of education of students. It is therefore derived from the above interviews that the theme “moral education” is one of the essential themes of ESD for integrating in the curriculum of B.Ed. 4-year program.

#### **4.4.7 Tolerance in society**

In the light of the opinion of the experts the theme of tolerance in society was derived after the analysis of interviews. Majority of the experts were expressed their views about the importance of the tolerance for teacher education. For example, as expert D has expressed his opinion in these words:

We are the people living in that society where nobody is ready to accept others opinion. We do not have tolerance for each other. In fact, tolerance is that aspect which taught to a child from the beginning that how to respond to others and how to understand the things with tolerance.

Expert D furthermore said that: "Actually there is not a proper training of teachers which is the main reason of lack of tolerance in individuals. So it is the most important concept to be integrated in curriculum of teacher." While the expert F has said that:

Tolerance is one of the dominant and essential aspects of human life. Tolerance is just like the tool by which we can resolve many social problems. We need to educate our students about acceptance, accommodative behavior and tolerance for other opinion.

It is reflected from the above quotes of the experts that tolerance plays an importance role in human life. It might be due to the fact that peace of the society is related to the level of acceptance of opinion of individuals living in society and tolerance for accepting that opinion. If the students are trained regarding inculcating tolerance in their personalities from the basic level of education. Later on, they might display a patient attitude toward others in their practical life. The prospective teachers and teacher educators were also asked about the concept of tolerance. They both were agreed that there is a need of incorporating the concept of tolerance of society in curriculum of B.Ed. 4 years' program. However, the analysis of the curriculum of B.Ed. 4-year reflected that the concept of tolerance was not incorporated in majority of the courses. So, it is concluded from the above discussion that the theme of tolerance of society may be necessary for integrating in the contents of teacher education.

#### **4.4.8 Agriculture Education**

The theme "agriculture education" was derived from the interviews of the experts. Majority of the experts were expressed their views about introduction of agro-education. One of the interviewee H has said that: "Pakistan is an agricultural

state and most of the population is living in villages whose income source is only agricultural products so, agriculture education is indispensable for Pakistani society”.

Other expert I have expressed her views that: “A course on agriculture education should be provided on each terminal of formal education. For this purpose, a course on agriculture education or integration of agriculture education is necessary to be included in teachers training programs”.

It is identified from the above quotes of the experts that agricultural education is also one of the important aspects of ESD for integration in curriculum of teachers training. It might be because, the ESD also talks about the economic and environmental sustainability. If a country like Pakistan is not creating awareness about agriculture education, it might loss huge resources in form of environmental and economic assets. It might therefore become important to sensitize the teachers about the value of agricultural products which can ultimately positively affect their teaching also. Bringing reforms in agriculture might lead to economic sustainability for country and might also save the environment from human damages.

#### **4.4.9 Community Development**

In the light of the opinion of the experts the theme of community development was derived after analysis of the interviews. The experts were of the view that the concept of community development needs to be integrated in the curriculum of B.Ed. 4-year program. As the expert C has said:

Education for community services is essential to be integrated in teachers training curriculum. Communities make society and societies make country so thinking for whole community instead for ourselves is the need of the time to be inculcate in the minds of the children.

Likewise, the Expert H has said:

Our citizens must be aware about the concept of community development. We have to teach our students that serving the communities is in fact servicing humanity. For this purpose, we should invest on teachers and community development should be incorporate in their curriculum.

It is clear from the above quotes of the experts that knowledge about community development is necessary for teachers. This might be due to the reason that the teachers know the art of making the minds of the students. They might easily inculcate the collective approach rather individualistic approach in the minds of the students for living in a society. The awareness about the importance of community development might enable the teachers to resolve the issues and problems of different communities in which the particular students and teachers are living. The teacher educators and prospective teachers were also agreed for inclusion of the community development in the curriculum of B.Ed. 4-year program.

#### **4.4.10 Gender and Development**

The theme of Gender and Development was derived from the qualitative analysis of the interviews. The experts were agreed that the concept about gender development and discrimination needs to be included in the contents of teacher education. For example, the direct quotes of the expert F said that:

Usually people think that gender education is something which threatens the social system of traditional societies such as male domination in the society, but in fact it is one of the fundamental teachings of Islam to provide rights to both gender of society on equality basis. So, gender education is basically a study about the rights of both man and women. The concept of gender education needs clarity on the part of society and I think teachers are one of the best sources to clear this confusion.

Likewise, others experts also recommended the above theme for inclusion in teachers training such as the direct words of the expert C said that:

Gender discrimination harms the societies. As the population of female is getting increased, therefore it becomes indispensable to provide equal opportunities to females in all spheres of life. It will not only change their livelihood but will also bring positive change in society.

The above quotes reflect that the expert recommended that the knowledge about gender and development is very important for teacher education. It may be the reason that gender discrimination is one of the major problems facing by the developed and developing societies. A large segment of the population is females but they are usually suffering for their rights. The society demand duties from the females but there is little devotion for the provision of their rights. To bring sustainability in a society it might become essential to provide equal rights and opportunities in all aspects of life to females. As the time passed it brought many changes with itself so, there is a need to change the attitudes and thinking of people for accepting the position of a female as a productive individual for the progress of a society.

The concepts such as gender disparity and discrimination were also asked from both teacher educators and prospective teachers. The data received from them shows that both of them were agreed for integration of the mentioned concepts in curriculum of B.Ed. 4-year program but the analysis of the curriculum shows that these concepts were missing in the contents of the courses. Therefore, on the basis of above discussion the concept of gender and development is important for teacher education program.

#### **4.4.11 Culture of Society**

The theme of culture of society was derived from the views of the experts. some of the direct quotes of the experts are selected on the basis of the common words such as expert M has said: "Pakistan is multicultural society. The variation of cultures in our country is the beauty with which we are blessed. Understanding and respect for these cultures through teacher education is a logical approach". And Expert J has spoken that: "knowledge about the culture of society will enable us to adopt our own culture with pride as it is our identity."

It is derived from the opinion of the experts that knowing about one's own culture is one of the fundamental components on which the norms and values of society established. It might be due to the fact that culture is basically a pillar for keeping the people of a particular society united. Similarly, education is the reflection of the culture and norms of any society. If the education of any country does not conveying their culture it might be harmful for the unity and sustainability of that society. Therefore, knowing one's own culture and civilization is very important for identity of generations in the globalized world.

Keeping in view the importance of culture of society the concepts related to culture were also included in the questionnaires of both teacher educators and prospective teachers. The analysis of the data shows that both of them were agreed of integration of the concepts of culture of society in curriculum, but on the other hand the analysis of curriculum of B.Ed. 4-year program shows that the concept of culture and tradition were missing in most of the courses.

#### **4.4.12 Citizenship Education**

The theme of citizenship education has been extracted from the interviews of the experts. The direct words of the interviewee O have said:

If we want to train our children in decision making for the sake of a peaceful society, we have to include the citizenship education in teacher training programs. If the teachers are aware they will be in a better position to train the children through practical methodologies.

Expert M has said:

Trends on global level are getting changed. Subject based knowledge is not sufficient for educating our citizens. We need to educate them for local skills, democratic decisions, and welfare of whole community. So it is essential to introduce the course of citizenship education on each level of education therefore, the training and knowledge of a teacher about the concept become important.

The above quotes of the experts conveyed the importance of citizenship education for teachers. The logical argument can be established on the basis of above statements of experts that the knowledge about civic education is essential for individuals as it guide the students for living in a collaborative way with each other. It may also create a sense in students that how to take care of their surrounding community and environment. The citizenship education might also create tolerance in students as it provides understanding of other's needs.

Therefor it become essential that the teachers should have enough knowledge of citizenship education for the training of students through application of practical methodologies. For triangulation of data the teacher educators and prospective teachers were also asked about the concepts of citizenship education and civic sense, they both recommended the mentioned concepts for incorporating in curriculum of B.Ed. 4-year program.

#### **4.4.13 Rural Development**

The theme of rural development was derived from the analysis of the views of the experts. Some of the direct quotes of the experts has stated that: “To reduce the population burden on cities there is a need for rural development. The concept of rural development will broaden the horizon of the students for their local potentials and they will realize how they improve their economic lives”.

The expert A has said:

Utilization of local resources for the development of rural areas is the need of the time. It will provide opportunities to individuals living in the deprived areas. But for this purpose we need to create awareness in people to identify the local resources and use their skills for its utilization. I think integration of the concept of rural development will enable the teachers to teach their students through different small projects that how they can work for their communities.

The above quotes of the experts reveal that a growing population is a challenge for the countries all over the world. Similarly, the flow of people towards cities from the villages is also a huge problem which is disturbing both the management of resources and environment. To overcome these problem there is a need to revise the contents of teacher education with reference to ESD and knowledge about rural development. It is also essential to give special attention to the awareness of students for the best use of their local resources according to their needs. Although it is the responsibility of the state to provide better opportunities to the rural areas but a fully trained and equipped teacher may also play a better role for changing the minds of the students for the utilization of their local resources. For this purpose, the teacher educators and prospective teachers were also asked some questions related to rural

development, they were also agreed for inclusion of the theme and concepts related to rural development.

#### **4.4.14 Importance of Health**

One of the theme “importance of health” was derived from the interviews of the experts. According to the opinion of expert G:

Being the developing country most of our population is suffering from diseases. Basically people are not aware about the importance of good health and disease. If we train our teachers to teach to the students from beginning that how to prevent themselves from different diseases and to keep their health perfect it will prove fruitful results for their whole life.

Expert C has expressed views that:

Importance of good health can be taught through different activities in schools by a teacher, a teacher can manage different exercises in play time, developing good eating habits during lunch time etc. These activities are basically to develop habits how to stay healthy and selection of good food for their health. Because it is important for the development of a society that its people are need to be healthy to perform their duties.

The importance of a good health can be derived from the above statements of the experts. Good health is the blessing of life. It is also a famous saying that the importance of a health should ask from the person with not a good health. The fact behind the importance of good health might be the reason that an unhealthy person cannot perform their daily duties properly as compare to healthy person. The health of the individuals is very important for the progress and development of societies. Therefore, it may be necessary to provide enough knowledge to teachers during their pre-service education about importance of a good health for the healthy society. The

trained teacher might be able to guide the students from the beginning level of education for adopting healthy habits and maintenance of their health. Keeping in view the importance of the concept of good health, it was also included in both questionnaires of teacher educators and prospective teachers. They both were agreed for inclusion of the concept in teacher education while on the other hand the analysis of the curriculum of B.Ed. 4-year program reflected that the concept was not aligned in majority of the courses.

#### **4.4.15 Illiteracy and Poverty**

The theme of illiteracy and poverty was derived from the interviews of the experts. As quoted directly from the expert K that:

It is famous saying that illiteracy breeds poverty and illiterate are poor. So, knowledge of illiteracy, its reasons, harms and solutions is very important for a teacher. If a teacher is fully trained about these concepts he or she can reduce the dropped out rates and can also teach the students about the disadvantages of illiteracy in more affective way. For this purpose, a teacher can share some local examples of life of literate and illiterate persons.

Similarly, Expert F has said that:

Pakistan is one of those countries whose literacy rate is not satisfactory. Therefore, it needs to sensitize the teachers about this huge problem through their training on initial level. Although illiteracy is due to poverty as people cannot afford the schooling of their children but it is a fact that illiteracy causes poverty.

It is extracted from the views of the experts that education is one of the fundamental components which is indispensable for the progress of any society. Poverty and illiteracy have very close relationship. They both lead to generate each

other. It is the underlined fact of the views of the experts that usually majority of the students dropped out at primary level of education which causes a huge figure of statistics of illiteracy in Pakistan. There may be a large difference between the thinking of literate and illiterate person, way of availing opportunities in life and making rational decisions.

So, this might be a reason that the experts emphasized on the integration of the concepts related to illiteracy, relationship of illiteracy with poverty, its harms and affects in teacher education as a well aware teacher may bring remarkable change in thinking of students. Similarly, according to both teacher educators and prospective teachers the concepts of poverty and illiteracy are essential for integration in curriculum of B.Ed. 4-year program, but the analysis of the curriculum revealed that this concept is not aligned in most of the courses.

#### **4.4.16 Conflict Resolution**

The next theme evolved from the interviews of the experts was conflict resolution. According to the experts it is one of the most important concepts which is needed for a teacher knowledge. For example, expert N has viewed that:

Globalization and emerging trends in the societies has brought too many conflicts for individuals. As Pakistan is a multicultural society so, it has more chances of conflicts among citizens on different issues; therefore, it is necessary to train the children from beginning how to resolve their conflicts with each other.

Similarly, in the opinion of expert L: “Conflict resolution is basically a skill which enables the person to control their emotion with respect for other in controversial situations and a teacher can train the students by practicing in class for resolving different conflicts among them”. Expert C has also said that:

Conflicts are the fact of life and can arise everywhere among people in societies. The most important is how to reach to agreement in a positive way. Finding solution needs knowledge and skill which comes through training. That's why the role of a teacher becomes very crucial for establishing a peaceful society.

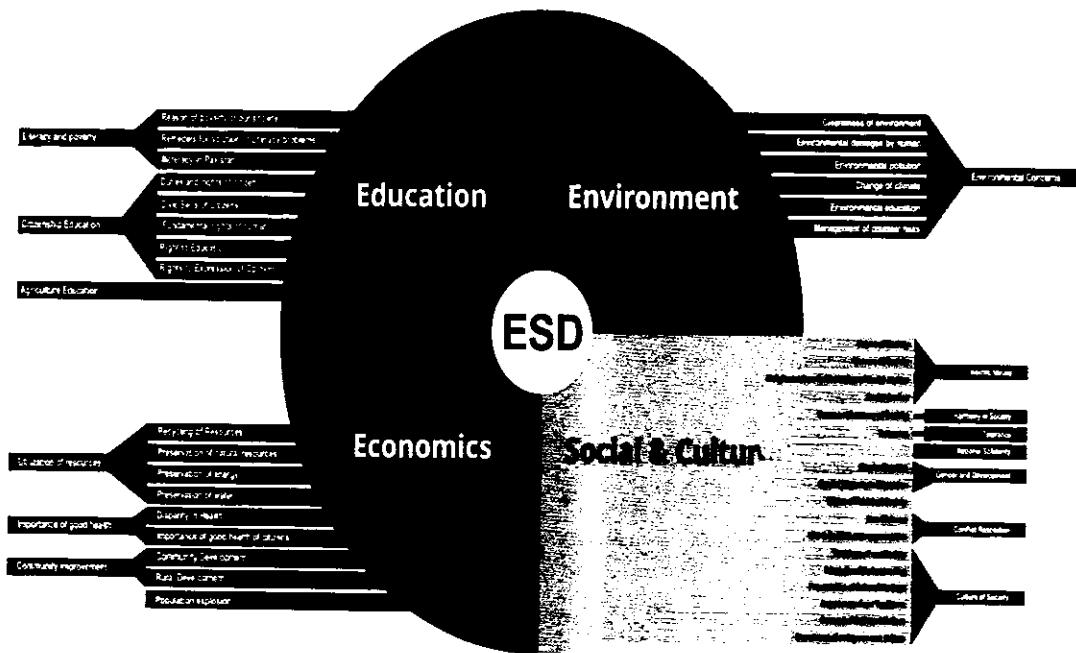
It is clear from the above statements that arising of conflicts between the opinions of individuals is a fact but its resolution needs knowledge. It might be very necessary to train the students from the early ages of life for settlement of conflicts. Teacher might be a better person who can change the habits and thoughts of the students. If the students have practice of resolution of conflicts, they may have better understanding of problem later on during their practical life. The skill of resolution of the conflicts of individual may be important for a sustainable and peaceful society. Any civilized society needs that their citizens have respect for each other opinion and rights.

The concept of resolving the conflict was also recommended by the teacher educators and prospective teachers for integration in the curriculum of B.Ed. 4-year program, however this concept was missing in majority of the courses of the mentioned program.

#### **4.5 Proposed Model of ESD**

The illustrative diagram of the proposed model is given below. Interpretation of Model for Integration of Education for Sustainable Development in Teachers Training Program of B. Ed. 4-year is also under the diagram.

### Model for Integration of Education for Sustainable Development (ESD) in Teachers Education Program (B.Ed 4-year)



*Figure 4.1: Model of Integration of Education for Sustainable Development in Teachers Education Program of B. Ed. 4-year.*

On the basis of data collected from teacher educators and prospective teachers the above model was developed. Data collected through interviews of the experts were also included in developing the model. The above model has main four parts i.e., are education, environment, economics and social and culture. These four were the main focus in this study under Education for Sustainable Development. The components which are emerging from the main four components of the model are recommended by majority of teacher educators for integration in the model. Interviews of the expert were conducted and the themes were derived from those interviews. These themes were grouped with the components on the basis of their similarities in the light of the literature studies by the researcher. The opinion of the

experts was obtained on the developed model and changes were made in the light of their opinion.

The above proposed model for teacher education of B.Ed. 4-year elementary programs which is based on Education for sustainable development (ESD) consisted of four main categories i.e. are economic, society, environment and education. McKeown, (2006) discussed that there is a close relationship between education and sustainable development and education is one of the important indicator of sustainable development as sustainability cannot be achieved without education. The four main categories of the proposed model i.e., are economic, education, environment and social, are also discussed in report of UNESCO (2009) in detail and identified them as the main pillars of ESD. Similarly, the current proposed model also based on the four pillars of ESD, economic, education, environment and social. The literatures review of the related researches supports the components and sub components which are included in the proposed model. The research of Petra et al., (2009) emphasize on the inclusion of environmental component of ESD in curriculum of teacher education. Similarly, the research of (Evans et al, 2012) argued to redesign the training program of teachers and the components of environment, social and local culture need to be emphasized in courses of pre-service teachers' education. The research of Tuncer et al., (2009) highlighted that proper utilization of resources, pollution, natural resources consumption and wastage of resources need to be addressed in curriculum of teacher education.

The proposed model is basically founded on four main categories i.e. education, economics, environment and social & culture. Each category has further grouped with their sub components. The component of Education has its sub-component of literacy and poverty, citizenship education and agriculture education.

These sub-components are further group with their sub-categories as literacy and poverty has further its sub-categories i.e. are reasons of poverty of our society, remedies for solution of illiteracy problems, illiteracy in Pakistan. citizenship education has its sub-categories of duties and rights of citizens, civic sense of citizens, fundamental rights of human, right to education and right to expression of opinion.

Similarly, the component of economic has three sub-components i.e. are utilization of resources, importance of good health and community improvement. The sub-category of utilization of resources is further grouped with recycling of resources, preservation of natural resources, preservation of energy and preservation of water. The sub-component of importance of good health has its sub-categories of disparity in health and importance of good health of citizens. The main component of Environment has its sub-component of concerns of environment. this sub component has further sub-categories i.e. are cleanliness of environment, environmental damages by human, environmental pollution, change of climate, environmental education and management of disaster risk.

The main component of social & culture has its sub-components of Islamic values which has further its sub-categories of values of society, norms of society, religious values for promotion of social justice and social justice. Harmony of society has its sub-category of peace and harmony of society. Tolerance has category of tolerance. The sub-component national solidarity of the social & culture has not further a sub category. Gender & development has its sub-category of gender equality and gender disparity in education. The ethics of Pakistani society is not grouped with any main category. The sub-component of conflict resolution has its sub-category of nonviolence and war and conflicts among generation. The components of culture of

society has its sub categories of tradition of our society, intercultural understanding, preservation of cultural heritage, importance of our tradition, concept of Pakistani culture and importance of owing our own culture.

Phase II of the model was recommended by the experts in order to take the opinion for integration of the components of ESD within the subjects. Therefore, the matrix was developed for Phase II of the model contained the subjects of B.Ed. 4-year program. These matrixes were again put forwarded for the suggestions and opinion of the experts. The views of the experts were acquired that which components of ESD is more suitable for integration in the subjects of B.Ed. 4-year curriculum. They suggested the integration of the component ESD of the model in the following subjects.

## **4.6 Phase II of Proposed Model of ESD of Teacher Training Program**

### **4.6.1 Gender Disparity in Education**

The concept of gender disparity in education was suggested by most of the experts for integration in the subjects of “contemporary issues in education” they also recommended the concept for the subjects “Islamic studies/ethics” and “Pakistan studied”. Some of them advised that “method of teaching Islamic studies” and “teaching of social studies” can also accommodate the concept of gender disparity in education.

### **4.6.2 Environmental Education**

The component of environmental education was suggested for integration in many courses by the experts such as they suggested that the course of “General science”, “Pakistan studies”, “Teaching of general science”, and “contemporary issues

in education" are more suitable courses in which the above concept can be integrated. Some of them also recommended the courses of "child development", "general methods of teaching" and "Islamic studies" for integration of the concept of environmental education.

#### **4.6.3 Reasons of Poverty of Our Society**

The component of reasons of poverty of our society of the model was recommended by the experts for the courses "Pakistan studies", "school community and teacher" and contemporary issues in education". Some of them have also advised the integration of the components for the courses of "teaching of social studies" and "teaching of Urdu/regional languages" of B.Ed. 4-year program.

#### **4.6.4 Concept of Pakistani Culture**

The experts recommended the courses of "school community and teacher" & "Pakistan studies" for the integration of the concept of Pakistani culture. Few of them also enlist the course on "teaching of social studies" and "teaching of Urdu/regional languages" for integration with the concept of Pakistani culture.

#### **4.6.5 Remedies of Poverty Alleviation**

Most of the experts were having the views that the concept of remedies of poverty alleviation can be integrated in the course of "contemporary issues in education" of B.Ed. 4-year program. Some of the experts also mentioned the course of "Pakistan studies", "teaching of Urdu/regional languages" and "teaching of social studies" for integration of the above concept of the model.

#### **4.6.6 Tolerance**

The courses suggested by the experts for integration of the concept of tolerance were "Islamic studies/ethics", "Urdu/regional languages", methods of teaching Islamic studies" and "teaching of social studies". Furthermore, some of the

experts also said that tolerance can be integrated in “teaching of Urdu/regional language”.

#### **4.6.7 War and Conflicts among Generations**

The concept of war and conflicts among generation was suggested by the experts for the course of “Islamic studies”, “introduction to guidance and counseling”. Likewise, few of the experts also recommended the course of “educational psychology” and “contemporary trends and issues in education” for integration of the concept of war and conflicts among generations.

#### **4.6.8 Gender Equality**

According to the views of the experts the concept of gender equality is more suitable for integration in the courses of “Islamic studies”, “Pakistan studies”, “school community and teachers” and “child development”. Few experts also recommended courses of “education psychology” and introduction to guidance and counseling” for integration of the above concept.

#### **4.6.9 Peace and Harmony of Society**

The concept of peace and harmony of society was viewed by the experts for integration in the courses of “school community and teacher”, “Islamic studies”, “classroom management” and “Pakistan studies”. Some of the experts also highlighted the courses of “child development”, “methods of teaching Islamic studies” and “teaching of social studies” for integration of the above concept.

#### **4.6.10 Preservation of Natural Resources**

For the concept of preservation of natural resources, the experts have the views that it can be integrated in the courses of “general science” and “Pakistan studies” of curriculum of B.Ed. 4-year program. They further suggested the course of

“Urdu/regional languages” and “teaching of general science” for integration of the above concept.

#### **4.6.11 Traditions of our Society**

According to the suggestions given by experts the components of traditions of our society is more suitable to be integrated in the course of “Pakistan studies” and “school community and teacher”. Likewise, some of the experts were also have the view that the course of “Art craft and calligraphy”, “teaching of social studies” and “comparative education” can also accommodate the concept of traditions of our society.

#### **4.6.12 Values of our Society**

The experts recommended the components of values of our society for integration in the courses of “Pakistan studies”, “school community and teacher” and “Urdu/regional languages”. Furthermore, some of the experts also suggested for integration of the concept in the courses of “Islamic Studies”, “Curriculum Development” and “Introduction to Guidance and counseling”.

#### **4.6.13 Norms of our Society**

The experts recommended that the integration of the norms of our society can be integrated in the courses of “School Community and Teacher” and “Pakistan studies” of B.Ed. 4-year curriculum. Few of the experts advised that it can also be integrated in the courses of “Islamic studies”, “teaching of social studies” and “curriculum development”.

#### **4.6.14 Population Explosion**

According to the views of the experts the concept of population explosion can be integrated in the course of “general science” and “contemporary issues and trends in education” some of the experts also recommended that the above concept can be

integrated in the course of “teaching of social studies” and “teaching of general science” in curriculum of B.Ed. 4-year program.

#### **4.6.15 Illiteracy in Pakistan**

The experts view reflected that the component of illiteracy in Pakistan can be integrated in “teaching of literacy skills”, “contemporary issues and trends in education” and “Pakistan studies”. Few of the experts also had the views that this concept can also be integrated in the course of “teaching of social studies.”

#### **4.6.16 Remedies for Solution of Illiteracy Problems**

Most of the experts have the opinion that the concept of remedies for solution of illiteracy problems is suitable for integration in the courses “teaching literacy skills”, “comparative education” and “contemporary issues and trends in education”. It can also be integrated in the course of “Pakistan studies”.

#### **4.6.17 Change of Climate**

Experts were the opinion that the change of climate is more suitable to be integrated in the course of “general science”. Some of them were also recommended that this concept can also be integrated in the courses of “Pakistan studies”, “teaching of social studies” and “contemporary issues and trends in education”.

#### **4.6.18 Management of Disaster Risks**

According to the views of the experts the components of management of disaster risks is suitable to be integrated in the courses of “general science” and “contemporary issues and trends in education”. Some of the experts were also have the opinion that the course of educational psychology is also recommendable for integration of the above concept.

#### **4.6.19 Importance of Good Health of Citizens**

Opinion of the experts reflected that the above component is more likely to be integrated in the course of “child development” and “general science” but some of them also suggested that this concept can be integrated in the course of “educational psychology”.

#### **4.6.20 Civic Sense of Citizens**

It is reflected from the opinion of the experts that the components of the model civic sense of citizens can be integrated in the course of “Pakistan studies” and “school community and teacher”. Some of them also suggested the courses of “teaching of social studies” and “educational psychology”.

#### **4.6.21 Importance of Owing of Our Own Culture**

According to the expert opinion on the given matrixes of courses and components of the model the above component is more suitable to be integrated in the course of “Pakistan studies”, “foundations of education” and “curriculum development”. Some of them also recommended the course of “teaching of social studies” for integration.

#### **4.6.22 Duties and Rights of the Citizens**

It derived from the views of the experts that the component of duties and rights of citizens” can be best integrated in the course of “school community and teacher”. Some of the experts said that it is also possible to integrate the above concept in the course of “Islamic studies” and “foundations of education”.

#### **4.6.23 Cleanliness of Our Environment**

According to the opinion of the experts the cleanliness of our environment can be integrated in the courses of “general science”, “Islamic studies” and “contemporary

issues and trends in education". Some of them suggested that the course of "school community and teacher" can also accommodate the above component.

#### **4.6.24 Rural Development**

The component of rural development can be integrated in the course of "Pakistan studies" as the experts suggested. Some of them also suggested for integration in the course of "Urdu/regional languages".

#### **4.6.25 Ethics of Pakistani Society**

According to the views of the experts the component of ethics of Pakistani society can be integrated in the course of "Islamic studies" and "Pakistan studies".

#### **4.6.26 Religious Values for Promotion of Social Justice**

The experts said that the component of religious values for promotion of social justice can be integrated in the course of "Islamic studies". Few of them also recommended the course of "methods of teaching of Islamic studies" "for integration.

#### **4.6.27 Fundamental Rights of Humans**

The experts wee of the view that the component of fundamental rights is suitable for integration in the course of "Islamic studies/ethics" and "school community and teacher". Some of them further suggested the course of "methods of teaching of Islamic studies" and "teaching of social studies".

#### **4.6.28 Right to Education**

The component of right to education is more relevant for integration in the course of "child development", "Islamic studies/ethics" and "school community and teacher". Some of the experts also viewed that the integration of the above component is also suitable for the course of "foundations of education".

#### **4.6.29 Right to Expression of Opinion**

According to the view of the experts the component of right to expression of opinion can be integrated in the course of “Pakistan studies” and “Islamic studies/ethics”. Furthermore, some of the experts also suggested the course of “English II communication skills” for integration.

#### **4.6.30 Disparity in Health**

The experts’ opinion reflected that the component of disparity in health can be integrated in the course of “child development”. Some of them also recommended the course on “general science” for integration.

#### **4.6.31 Nonviolence**

The opinion of the experts said that the course of “Islamic studies/ethics” is suitable for integration of the component of nonviolence. Likewise, they also suggested the course of “contemporary issues and trends in education”.

#### **4.6.32 Recycling of Resources**

According to the opinion of the experts the component of recycling of resources can be best integrated in the course of “general science”. It can also be integrated in the course of “art craft and calligraphy”.

#### **4.6.33 Preservation of Our Culture Heritage**

The component of preservation of our cultural heritage can be integrated in the course of “Pakistan studies” as the experts suggested. This is also possible to integrate the above concept in the course of “Urdu/regional language” an “art craft and calligraphy”.

#### **4.6.34 Intercultural Understanding**

The experts suggested the courses of “Pakistan studies”, “school community and teacher” and “foundations of education” for integration of the concept of

intercultural understanding. Few of them also recommended the course of “curriculum development” for integration.

#### **4.6.35 Preservation of Energy**

The component of preservation of energy might be integrated in the course of “general science” as the experts viewed. Few of them also suggested the course of “Pakistan studies” for integration.

#### **4.6.36 Preservation of Water Resources**

According to the opinion of the experts the component preservation of water resources of the model may be integrated in the course of “general science” and “contemporary issues and trends in education”. Few of the experts also proposed the integration of the concept for the course of “Islamic studies” and “teaching of general science”.

#### **4.6.38 Social Justice**

For the component of social justice few of the experts advised the integration in the course of “Urdu/regional language”, “Islamic studies/ethics” and “introduction to guidance and counseling”.

#### **4.6.39 Importance of Our Traditions**

For integration the component of importance of our own traditions the experts have recommended the course of “Pakistan studies”. Few of them also proposed the course of “Urdu/regional languages”, “art craft and calligraphy” and “school community and teacher”.

#### **4.6.40 Environmental Damage by Humans**

The component of environmental damages by human is recommended by the experts for integration in the course of “general science” and “teaching of general science”.

#### **4.6.41 Environmental Pollution**

According to the views of the experts the component of environmental pollution might be integrated in the course of “Urdu/regional language” and “Islamic studies/ethics”. Few of the experts also advised the courses of “school community and teacher” and “contemporary issues and trends in education”.

# **CHAPTER 5**

## **SUMMARY, FINDINGS, DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS**

The main purpose of this study was to find out the integration of education for sustainable development (ESD) in teacher education program at B.Ed. 4-year elementary level and at the end a model of integration based on ESD was developed. This chapter describes summary, findings, conclusions, discussion and recommendations of the study.

### **5.1 Summary**

The current research study was conducted to investigate the concepts of ESD in teachers training curriculum of B. Ed. 4-year elementary program and present a model at the end of the study. The entire thesis covered introduction, review of related researches, methodology adopted for carrying out the current research study, analysis and drawing findings and conclusions of the study. Introduction is the first part of the research which consisted detail discussion about the topic of research, its objectives, research questions and significance of the research. It also shed light on the methodology of the research.

Furthermore, it also presents a conceptual framework of the study. Review of related research based on the foundation of knowledge about the research topic in depth. It discussed all dimensions of education for sustainable development, its history, teacher education and ESD, curriculum and its need for ESD along with the characteristics of ESD. After the detail knowledge about the research study the methodology and design of the research is discussed extensively in section of research methodology adopted for the present research study. This part provided a detail

description about the development of research tool, its validation and pilot study. It described the data collection and its analysis. The data analysis and its discussion in detail on each category of collected data are discussed in the form of tables in data analysis section of the thesis. In last findings and conclusions were drawn from the research which are discussed in the last part of the thesis.

## **5.2 Findings**

1. It was found that 58.4% teachers were agreed as the highest percentage with the mean score 3.84 for inclusion of the concept of gender disparity in education in curriculum of B. Ed. 4-year elementary program (Table No: 4.1.1), 42.6% students were also agreed as a highest percentage that their teachers are including the concept of gender disparity in education in class while 22.1% was disagreed to the notion. The mean score for the concept of gender disparity in education by students was 3.33 (Table No: 4.2.1). But the analysis of curriculum reflected that the concept of gender disparity in education was not aligned in 29 courses with a 92.6% (Table No: 4.3.1) and the gap was observed between the concept of gender disparity in education and curriculum of B. Ed. 4-year program elementary.
2. It is founded from the analysis of the data that 61.8% teachers were agreed as a highest percentage with mean score of 3.89 for including environmental education in contents of B. Ed. 4-year elementary program (Table No: 4.1.2) similarly 56.9% students were also agreed that the teachers are discussing the concept of environmental education in their class. The mean score of the concept of environmental education for the students was calculated as 3.91 (Table No: 4.2.2). While the analysis of curriculum of B. Ed. 4-year elementary program reflected that the concept of environmental education was

not aligned in 27 of the courses with 87.09% and the gap was found between the concept and curriculum of B. Ed. 4-year elementary program Table No:4.3.2).

3. The finding has shown that 55.1% teachers were agreed as a highest percentage for inclusion of the concept of reasons of poverty of our society in curriculum with the mean score 3.73 (Table No: 4.1.3). likewise, 49.2% students were also agreed that their teachers are including the concept of reasons of poverty of our society in their teaching with the mean score 4.06 (Table No: 4.2.3), while the analysis of the curriculum revealed that the concept of reasons of poverty of our society was not aligned in 30 courses with 96.7% and there is a lack of alignment of the concept and curriculum of B. Ed. 4-year elementary program (Table No: 4.3.3).
4. It is founded that 60.7% teachers were in favor of integration of the concept of culture of Pakistan in curriculum of B.Ed. 4-year elementary program as a highest percentage value with the mean score is 4.16 (Table No: 4.1.4) and most of the students 55.4% were also agreed that their teachers are addressing the concept of Pakistani culture in their teaching. The mean score for the data collected from students was 4.32 (Table No: 4.2.4) but the analysis of the curriculum of B.Ed. 4-year program shows that the concept of Pakistani culture was not aligned in most of the courses (22 courses) with 70.9% and the alignment level was not up to satisfactory level (Table No:4.3.4).
5. According to the data 36.0% teachers were agreed, a highest percentage score, that the concept of remedies of poverty alleviation need to be included in curriculum of teacher education while a notable number of teachers 23.6% were undecided about the concept. The mean value was 3.47 (Table No:

4.1.5). Similarly, 34.9% were also agreed that their teachers are addressing the concept of remedies of poverty alleviation during their teaching while a notable number of students 33.3% were undecided yet about the integration of the concept by their teachers. The mean value was 3.39 for the data received from students (Table No: 4.2.5). Hence, the concept of remedied of poverty alleviation was not aligned in 30 courses with 96.7% of B. Ed. 4-year elementary curriculum and the misalignment was found between the courses and the concept (Table No: 4.3.5).

6. The findings shown that 36.0% teachers were agreed for including the concept of tolerance in the contents of B. Ed 4-year elementary curriculum, while 22.5% teachers were still undecided about the inclusion of the concept in their teaching. the mean score was 3.67 for the data received from teachers Table No:4.1.6), similarly 54.4% students were agreed that their teachers are integrating the concept of tolerance in their teaching. The man score was 4.01 for the data of the students (Table No: 4.2.6). But the analysis of the curriculum revealed that the concept of tolerance was not aligned 29 courses out of 31 course with 93.5% and there is a gap between the concept and curriculum of B.Ed. 4-year elementary program (Table No: 4.3.6).

7. It is founded that 36.0% teachers were agreed that there is a need of including the concept of war and conflicts among generation in curriculum of B. Ed. 4-year elementary program and 31.5% teachers were still undecided about the inclusion of the concept. The mean value was 3.53 for the data collected from teachers (Table No:4.1.7), likewise 44.1% students were also agreed that their teachers are discussing the concept of war and conflicts among generations during their teaching process while a notable number of students 21.4% were

still undecided about the integration of the notion by their teachers. The mean value was calculated as 3.55 for the data received from students (Table No: 4.2.7) while, the data obtained from the analysis of the curriculum reflected that the concept of war and conflicts among generations was not aligned 29 courses with 93.5% and the gap was found between the concept and curriculum of B.Ed. 4-year elementary program (Table No: 4.3.7).

8. The findings of the data revealed that 34.8% teachers were agreed that the concept of gender equality need to be incorporate in curriculum of B. Ed. 4-year elementary program, hence a notable number of teachers 32.5% were still undecided about the concept and a mean score for the statement was calculated 4.28 (Table No: 4.1.8), while 33.3% students were strongly agreed that their teachers are including the concept of gender equality in their teaching to them. The mean score was 3.70 for the data collected from students (Table No: 4.2.8). But analysis of the curriculum reflected that the concept of gender equity was not aligned in 30 courses with 96.7% and the lack of alignment was found between the concept and curriculum of B. Ed. 4-year elementary program (Table No:4.3.8).
9. The findings of the data revealed that 39.3% teachers were agreed that there is a need of integration of the concept of peace and harmony of society in curriculum. The mean score for the data collected from teachers was 3.83 (Table No: 4.1.9). 50.8% students were also agreed that their teachers are integrating the concept of peace and harmony in their teaching. The mean value was 3.89 for the data received from students (Table No: 4.2.9). But the analysis of the curriculum shows that the concept of peace and harmony of society was not included in 26 courses with 83.8% and the concept was

founded missing in most of the courses of B. Ed 4-year elementary program (Table No: 4.3.9).

10. It is founded that 37.1% teachers were agreed as a highest percentage for addressing the concept of preservation of natural resources in contents of curriculum of B. Ed. 4-year elementary program. The mean score for the data was 3.57 (Table No: 4.1.10) and 42.1% students were also agreed that their teachers are including the concept of preservation of natural resources in their teaching. The mean value for the table was calculated as 3.78 (Table No: 4.2.10). While the concept of preservation of natural resources was not aligned in 27 courses with 87.09% and the lack of inclusion was found between the concept and courses of B.Ed. 4-year elementary curriculum (Table No:4.3.20).
11. 41.6% of the teachers were agreed that the concept of traditions of our society may be included in B. Ed 4-year elementary curriculum. But 22.5% teachers were still undecided about the inclusion of the concept. The mean score for the data of teachers was 3.81% (Table No" 4.1.11). 53.8% students were also agreed that their teachers are integrating the concept of traditions of our society in their teaching. The mean value for the table was calculated as 4.01 while, the concept of traditions of our society was not aligned in 17 courses with 54.8% and the gap between the concept and curriculum was founded (Table No: 4.3.11).
12. It was found that 42.7% teachers were agreed that the concept of values of our society need to be integrated in curriculum of B. Ed 4-year elementary program while 28.1% teachers were still undecided about the inclusion of the above concept. The mean of the data received from teachers were 3.91 (Table No: 4.1.12). Similarly, 49.7% students were also agreed that their teachers are

integrating the concept of values of our society in their teaching. While the mean score for students were calculated as 4.16 (Table No: 4.2.12). But on the other hand the concept of values of our society was not aligned in 20 courses with 64.5% and the gap was founded between the concept and the courses of B. Ed. 4-year elementary program (Table No:4.3.12).

13. It was discovered that 41.6% teachers were agreed for including the concept of the norms of our society in curriculum of B. Ed. 4-year elementary program while 32.6% teachers were still undecided about the inclusion of the above concept. The mean value for the data collected from teachers was 3.80 (Table No: 4.1.13). Likewise, majority of the students 47.2% were also agreed that their teachers are discussing the concept of norms of our society in their teaching. The mean score for the data of students was 4.15 (Table No: 4.2.13). Although the analysis of the curriculum has shown that the concept of norms of our society was not aligned in 23 courses as the value of not aligned courses was with 74.1% and there is a gap between the concept and courses of B. Ed. 4-year elementary program (4.3.13).

14. It was reported that 41.6% teachers were agreed that the concept of population explosion may be incorporated in the contents of B.Ed. 4-year elementary curriculum. The mean value for the data of the teachers was 3.84 (Table No: 4.1.14). It was founded that the percentage value both for agree and strongly agree of the students' data were same as 32.8%. So, 32.8% students were agreed and also same percentage of students was strongly agreed that their teachers are explaining the concept of population explosion in their teaching to class. The mean value as calculated for the students 3.77 (Table No: 4.2.14). The analysis of the curriculum reflected that the concept of

population explosion was not aligned in 93.5% of courses and the gap between the courses and the concept was founded (Table No: 4.3.14).

15. It was found from the data that 44.9% teachers were agreed that the concept of illiteracy in Pakistan need to be address in curriculum B.Ed. 4-year elementary program while enough number of teachers 24.7% was still undecided about the concept. The mean value for the teachers table was calculates as 3.92. (Table No: 4.1.15). 39.5% students were also agreed that their teachers are integrating the concept of illiteracy in Pakistan in their teaching. The mean value for the students' data was 3.84 (Table No: 4.2.15). But the results of the analysis of curriculum reflected that the concept of illiteracy in Pakistan was not aligned in 90.3% of the courses so the courses were not aligned to the concept up to satisfactory level (Table No:4.3.15).
16. It was revealed that 42.7% teachers were agreed for the inclusion of the concept of remedies for solution of illiteracy problems in curriculum while 27.0% teachers were undecided about the integration of the concept. The mean value for the data of the teachers was 3.60. Similarly, 42.6% students were also agreed that their teachers are including the concept of remedies for solution of illiteracy problem during their teaching. The mean value of the students' responses was 3.69 (Table No: 4.2.16). While the analysis of the curriculum has shown that the concept of remedies of illiteracy problem was not aligned in all 100% courses of B.Ed. 4 years' elementary program and a complete gap was founded between the concept and the curriculum (Table No:4.3.16).
17. The findings have shown that 42.7% teachers were agreed for integrating the concept of change of climate in curriculum while a notable number of teachers

30.3% were still undecided about the inclusion of the concept. The mean of the table was calculated as 3.67 (Table No:4.1.17). Likewise, 43.6% students were agreed that their teachers are including the concept of change of climate in their teaching in class and the mean score for the student's data was 3.69 (Table No; 4.2.17). Hence, the calculation of the analysis of curriculum reflected that the concept of change of climate change was not aligned in 87.09% of the courses and the alignment between the concept and courses was founded as missing (Table No: 4.3.17).

18. It was reported that 42.7% teachers were agreed for addressing the concept of management of disaster risks in curriculum of teacher education while a sufficient number of teachers 25.8% were still undecided about the inclusion of the concept. The mean value for the responses of teacher was 3.34 (Table No: 4.1.18). Similarly, 29.7% students were undecided about the inclusion of the concept of management of disaster risks by their teachers in class during their teaching. The mean value for the table was of the students was 3.33 (Table No: 4.2.18). But the analysis of the courses of B. ED 4-years elementary program reflected that the concept of management of disaster risks was not aligned in 87.09% of the courses and the gap was founded between the concept and curriculum (Table No:4.3.18).

19. It was discovered that 34.8% teachers were agreed that the concept of importance of good health of citizens need to be incorporate in curriculum of B.Ed. 4-year elementary program while, enough number 23.6% teachers were still undecided about the inclusion of the concept. The mean score calculated as 3.53 for the responses of the teachers (Table No: 4.1.19). Similarly, 46.2% students were agreed that their teachers are integrating the concept of

importance of good health in class. The mean score calculated for the data of students was 3.79 (Table No: 4.2.19). But it was found from the analysis of the curriculum that the concept of importance of good health of citizens was not aligned in 28 courses with 90.32% and the gap between the concept and courses of B.Ed. 4-year elementary program was existed (Table No:4.3.19).

20. It was reported that 50.6% teachers were agreed for inclusion of the concept of civic sense in curriculum of B. Ed 4-year elementary program while an ample number 19.1% teachers were undecided about the concept. The score for the table was 3.75 (Table No: 4.1.20). Hence, it is also derived from the data that 48.7% students were agreed that their teachers are discussing the concept of civic sense of citizens in their teaching. The mean value of the students' responses was 3.66 (Table No: 4.2.20). But the analysis of the B. Ed 4-year elementary program revealed that the concept of civic sense of citizens was not aligned in 27 courses with 87.09% and misalignment between the concept and curriculum was founded (Table No:4.3.20).

21. It is derived from the data that 39.3% teachers were agreed for integrating the concept of importance of adopting our own culture in curriculum of B. Ed 4-year elementary program. The mean score for teachers' responses was calculate as 4.07 (Table No: 4.1.21). Likewise, 63.6% students were also agreed that their teachers are integrating the concept of importance of owing our own culture in their teaching. The mean value for the students table was 3.98 (Table No: 4.2.21) while, the analysis of the courses of B.Ed. 4-year elementary program has shown that the concept of importance of owing our own culture was not aligned in 29 courses with 93.5% and the alignment

between the concept and curriculum was not up to satisfactory level (Table No: 4.3.21).

22. It is discovered from the analysis of the data that 39.3% teachers were agreed that the concept of duties and rights of citizens need to be addressed in curriculum. The means score for the teachers' responses were 4.00. (Table No: 4.1.22). Likewise, 45.1% students were also agreed that their teachers are addressing the concept of duties and rights of the citizens. The mean score for the data of the students was 3.86 (Table No: 4.2.22). However, the analysis of the curriculum reflected that the concept of duties and rights of citizens was not aligned in 30 courses with 96.7% and the lack of alignment was observed between the concept and curriculum (Table No: 4.3.22).

23. It was found that 44.9% teachers were agreed for integrating the concept of cleanliness of our environment in curriculum of B. Ed. 4-year elementary program. The value of mean for the data of teachers was 3.91. Similarly, 45.6% students were also agreed that their teachers are integrating the concept of cleanliness of our environment in their teaching. The mean score of the students' responses was 3.96 (Table No: 4.2.23). On the other hand, the analysis of the courses of B. Ed 4 year's elementary program revealed that the concept of cleanliness of our environment was not aligned in 29 courses with 93.5% and the misalignment between the concept and curriculum was founded (Table No:4.3.23).

24. It was discovered that 62.9% teachers were agreed for incorporating the concept of rural development in B. Ed 4-year elementary curriculum, likewise the mean score for the data was (3.79) (Table No:4.1.24). 36.4% students were also agreed that their teachers are addressing the concept of rural development

in their teaching to the students in class while 27.7% of the students were still undecided about the inclusion of the concept by their teachers. The mean score of the students' responses was 3.67 (Table No: 4.2.24). Though the analysis of the curriculum of B. Ed 4 years' elementary program reflected that the concept of rural development was not aligned in 30 courses with 96.7% and the gap between the concept and curriculum was observed (Table No: 4.3.24).

25. It was found that 50.6% teachers with the mean score of 3.80 were agreed for inclusion of the concept of ethics of Pakistani society in contents of B. Ed. 4-year elementary curriculum (Table No: 4.1.25). Likewise, 51.3% students were also agreed that their teachers are addressing the concept of ethics of Pakistani society in their teaching. The mean score for students' responses was 3.90 (Table No: 4.2.25). However, the analysis of the curriculum of B.Ed. 4-year elementary program has shown that the concept of ethics of Pakistani society was not aligned in 23 courses with 71.1% and the gap between the concept and curriculum was founded (Table No: 4.3.25).

26. It was revealed that 48.3% teachers were agreed that the concept of religious values for promotion of social justice may be integrated in curriculum of B. Ed 4-year elementary program. The mean value for the data of the teachers was 3.84 (Table No: 4.1.26). Similarly, 37.9% students were also agreed that their teachers are discussing the concept of religious values for promotion of social justice in their teaching. The mean value for the responses of the students was 3.75% (Table No: 4.2.26). But the analysis of the curriculum reflected that the concept of religious values for promotion of social justice was not aligned 29 courses with 93.5% and the lack of alignment between the concept and

curriculum of B. Ed. 4-year elementary program was observed (Table No: 4.3.26).

27. It was found that 40.4% teachers were agreed for integrating the concept of fundamental rights in curriculum of B. Ed. elementary. The mean value of the teachers' data was 3.81 (Table No: 4.1.27). Likewise, 46.2% students were also agreed that their teachers are integrating the concept of fundamental right of humans in their teaching to students of B. Ed four years' elementary program. The mean score for the students' responses was 3.85 (Table No: 4.2.27). On the other hand, the analysis of the curriculum of B. Ed 4-year elementary program revealed that the concept of fundamental rights of humans was not aligned in 28 courses with 90.3% and the concept was founded missing in most of the courses of B. Ed 4-year elementary program (Table No:4.3.27).

28. It was discovered that 47.2% teachers were agreed for incorporating the concept of right to education in curriculum of B. Ed elementary. The mean score for the same data was calculated as 3.98 (Table No: 4.1.28). Similarly, 44.6% students were strongly agreed that their teachers are discussing the concept of right to education in their teaching. The mean value according to calculation of responses of students was 4.06 (Table No: 4.2.28). However, the analysis of the curriculum has shown that the concept of right to education was not aligned in 28 courses with 90.3% and the gap between the alignment of the concept and curriculum of B.Ed. 4-year elementary program was observed (Table No: 4.3.28).

29. It was reported that 38.2% teachers were agreed that the concept of right to expression of opinion need to be included in curriculum. The mean value for

the data was 3.87 (Table No: 4.1.29). Similarly, 38.5% students were also agreed that their teachers are including the concept of right to expression of opinion in their teaching. The mean value for the students' responses was 3.98 (Table No: 4.2.29). But the analysis of the curriculum of B.Ed. 4-year elementary program reflected that the concept of right to expression of opinion was not aligned in 30 courses with 96.7% and the concept was not aligned in curriculum up to satisfactory level (Table No:4.3.29).

30. It is derived from the data that 38.2% teachers were agreed that the concept of disparity in health need to be addressed in curriculum of B.Ed. 4-year elementary program. The mean score of the data of the teachers was 3.42 (Table No:4.1.30). Likewise, 34.9% students were agreed that their teachers were integrating the concept of disparity in education in their teaching while a notable number of students 29.2% were still undecided about the inclusion of the concept by their teachers. The mean score for the students' responses were 3.30 (Table No: 4.2.30). Though the analysis of the curriculum revealed that the concept of disparity in health was not aligned in all of the 31 course and the gap between the concept and curriculum was founded (Table No: 4.3.30).
31. It was reported that 47.2% teachers were agreed for including the concept of nonviolence in curriculum while 20.2% teachers were still undecided about the notion. The mean score was calculated as 3.74 (Table No:4.1.31). Likewise, 37.9% students were also agreed that their teachers were including the concept of nonviolence in their teaching but still a sufficient number of students 32.3% were undecided about the inclusion of the concept by their teachers. The mean score for responses of the students was 3.46 (Table No: 4.2.31). But on the other hand the analysis of the curriculum reflected that the

concept of nonviolence was not aligned in 30 courses with 96.7% and the lack of alignment was founded between concept and curriculum of B.Ed. 4-year elementary program (Table No:4.3.31). It was discovered that 43.8% teachers were agreed that the concept of recycling of resources may be integrate in curriculum of B. Ed elementary program. The mean score for the table of the teachers' data was 3.66 (Table No: 4.1.32). 35.9% students were also agreed that their teachers are including the concept of recycling of resources in their teaching while 23.1% students were undecided about the inclusion of the concept by their teachers in class. The mean score for the students' responses was 3.51 (Table No: 4.2.32). However, the analysis of the curriculum revealed that the concept of recycling of resources was not aligned in 87.09% of the courses 27 and the gap between the concept and curriculum of B.Ed. 4-year program found existed (Table No:4.3.32).

32. It was reported that 42.7% teachers were agreed that the concept of preservation of our culture heritage need to be addressed in curriculum of B. Ed while 27.0% teachers were undecided about the inclusion of the concept in their teaching. Mean score for the responses of teachers was 3.66 (Table No: 4.1.33). Likewise, 46.2% students were also agreed that their teachers are integrating the concept of preservation of our culture in their teaching. The mean score calculated for the responses of the students was 3.64 (Table No: 4.2.33). However, the analysis of the curriculum of B.Ed. 4 years' elementary program reflected that the concept of preservation of cultural heritage was not aligned in 29 courses with 93.5% and the concept was missing in majority of the courses of curriculum of B. Ed 4-year elementary (Table No:4.3.33).

33. It was found that most of teachers (39.3%) were agreed for including the concept of intercultural understanding in curriculum on the other hand 24.7% teachers were still undecided about the integration of the above mentioned concept. The mean value for the table was observed as 3.80 (Table No: 4.1.34). Similarly, 43.6% students were agreed that their teachers are integrating the concept of intercultural understanding in their teaching however a notable number of students 23.1% were undecided yet. The mean value for students' responses was calculated as 3.80 (Table No: 4.2.34). But the analysis of the curriculum has shown that the concept of intercultural understanding was not aligned in 30 courses with 96.7% and the misalignment between the concept and curriculum of B.Ed. 4-year elementary program was founded (Table No:4.3.34).

34. It was discovered that 43.8% teachers were agreed that the concept of preservation of energy need to be integrated in contents of B. Ed 4-year curriculum however 23.6% were undecided about the inclusion of the concept yet. The mean value was calculated as 3.49 (Table No: 4.1.35). Similarly, 43.1% students were also agreed that their teachers are including the concept of preservation of energy in their teaching. The mean score for students' responses was 3.65 (Table No: 4.2.35). Though, the analysis of the curriculum of B. Ed 4-year elementary program reflected that the concept of preservation of energy was not aligned in 25 courses with 80.6% and the gap between the alignment of the concept and curriculum was observed (Table No:4.3.35).

35. It was derived from the data that 53.9% teachers were agreed that the concept of preservation of water resources need to be included in curriculum, the mean value for the same data was as 3.47 (Table No:4.1.36). Likewise, 34.4%

students were also agreed that their teachers are addressing the concept of preservation of water resources in their teaching. The mean score for the responses of the students was 3.71 (Table No: 4.2.36). However, the analysis of the curriculum revealed that the concept of preservation of water resources is not aligned in 26 courses with 83.8% and the lack alignment of the concept was found in curriculum of B. Ed 4 years' program (Table No:4.3.36).

36. It was founded that 43.8% teachers were agreed for addressing the concept of social justice in curriculum. The mean value for the data of the teachers was 3.69 (Table No: 4.1.37). Similarly, 42.6% students were also agreed that their teachers are addressing the concept of social justice in their teaching to the students. The mean value of students' responses 3.82 (Table No: 4.2.37). But on the other hand the analysis of the curriculum of B.Ed. 4-year elementary program revealed that the concept of social justice was not aligned in 28 courses with 90.3% and the misalignment of the concept was observed in the curriculum of B. Ed 4-year elementary program (Table No: 4.3.37).

37. It was discovered that 53.9% teachers were agreed that the concept of importance of our traditions may be addressed in curriculum. The mean score of the table data was 3.74 (Table No: 4.1.38). Likewise, 45.6% students were also agreed that their teachers are discussing the concept of importance of our tradition in their teaching in class. The mean score students' responses were as 4.04 (Table No: 4.2.38). However, the analysis of the curriculum reflected that the concept of importance of our traditions is not aligned in 28 courses with 90.3% and the alignment of the concept was not founded in the curriculum of B. Ed. 4-year elementary program (Table No:4.3.38).

38. It was reported that 40.4% teachers with the mean score of 3.58 were agreed for including the concept of environmental damages by human beings in curriculum (Table No:4.1.39). Similarly, 3.84 students were also agreed that their teachers are integrating the concept of environmental damages by humans in their teaching. The mean score for students' responses was 3.84 (Table No: 4.2.39). Though the analysis of the contents of courses revealed that the concept of environmental damages by human was not aligned in 28 courses with 90.3%. So the concept was not aligned up to satisfactory level in curriculum of B. Ed. 4-year elementary program (Table No:4.3.39).

39. It was founded that 51.7% teachers were agreed for integrating the concept of environmental pollution in curriculum of B.Ed. The mean score was calculated for the table was 3.66 (Table No: 4.1.40). Similarly, majority 36.4% students were strongly agreed that their teachers are discussing and including the concept of environmental pollution in their teaching in class. The mean score for the responses student was 3.85 (Table No: 4.2.40). But on the other hand the concept of environmental pollution was not aligned in 28 courses out of 31 courses with 90.3%, so the gap between the concept and curriculum of B. Ed. 4-year elementary program was observed (Table No: 4.3.40).

40. In the light of the experts' opinion the areas for integration of ESD was found within the curriculum of B. Ed. 4-year elementary program. (Chapter #4, Heading: 4.6)

41. On the basis of the quantitative data collected from teacher educators and prospective teachers along with the qualitative data the model of integration based on ESD was proposed (Fig 4.1).

### 5.3 Discussion

Pre-service teacher education has a very important role in promoting the concept of ESD and environmental education. This is one of the basic tool which helps in implementing the concept of ESD in real sense (Powers, 2004). It is argued that the function of teacher education is to educate a large number of candidates who will be the part of future educational communities and will definitely educate the students and will also share their views with their friends and colleagues. So, it is necessary to invest on teacher education and the quality of the system of teacher education programs as it will contribute in making the minds and personality of the future nation (Baker & Elliot, 2000).

The analysis of data and findings of this research shows that there is a strong opinion of the experts for inclusion of ESD in teacher education program. Education for sustainable development is a globally accepted concept not only for teacher education but also for all levels of education. The importance of ESD cannot be ignored in the current situation of the world (Petra et al, 2009). The major components of ESD i.e., Education, environment, social & culture and economics were the main focus of the current study. The objectives of the study which deals to the awareness and inclusion ESD of teacher educators in curriculum were achieved as the findings reflected that majority of the teacher educators and prospective teachers were agreed that the components and concept of ESD need to be integrated in the teacher education curriculum. These finding support the research of Petra et al, (2009) and Baker and Elliot, (2000). These researches were conducted on pre-service teacher education program of primary level teachers and had focused on the environmental aspect of ESD. They found that there is a strong need on inclusion of environment component for ESD to be integrated in the curriculum of teacher education.

Another objective of the current study deal to the level of integration of ESD in teacher education curriculum was achieved through the document analysis of the curriculum of B. Ed. 4-year elementary program. The findings revealed that the major four components of ESD along with its sub components were missing in the curriculum although it is one of the most priorities given subject throughout the world. The research study of Petra et al, (2009) also conducted the document analysis of the curriculum of primary level teachers. The course related to environmental aspect of ESD was analyzed and they also found the lack of proper alignment of the concept of environment in those courses. therefore, this research stated that the lack of proper place of environmental concepts of ESD in teachers' curriculum will left the concepts on teachers will that whether they want to include or not the concept of ESD and this absence of ESD along with environment education will negatively affect the children as the age of primary school level is a crucial age.

As the current study founded that there is a lack of alignment of the components of ESD in curriculum of B. Ed. 4-year program and the inclusion of the components of ESD was recommended by the experts through their interviews, similarly a study conducted by (Evans et al, 2012) also have resemblance with this study which analyzed environmental and social and local cultural aspects of ESD in B. Ed program. This study founded that the students of first years of B.Ed. have less understanding of the ESD as compare to the final year students. The research proposed that there is a need to redesign the courses to meet the required change regarding ESD. The study of Jumani and Abbasi (2015) also stressed on the inclusion of the components of ESD in teacher education curriculum. This study reflected that ESD is the time demand component all over the world but it is lack even in the objectives of the curriculum of B.Ed. 4-year curriculum.

Researches such as conducted by Cebrian and Junyent (2015) and Tomas et al, (2017) have also discussed the integration of the concepts of ESD in pre-service teacher education. While the current research also founded that there is a space for integration of the components of ESD in curriculum of pre-service teacher education (B. Ed 4-year). therefore, on the basis of the findings of the research study and in the light of the opinion of the experts the model of integration of Education for Sustainable development for curriculum of B.Ed. 4-year program was proposed. Furthermore, according to the views of the experts the courses were also suggested for integration of the components of ESD.

The findings of the current research show that the components of ESD were missing in the curriculum of B.Ed. 4-year elementary program. However, the components of ESD are very important to be included in the teachers training curriculum especially in the curriculum of future teachers who are supposed to teach to students on primary level of education where the minds and thought of little ones are in the process of early development. The study of Andersson et al. (2013) resulted that there is a positive effect on prospective teachers due to integration of the components of ESD in teachers training curriculum. This study was conducted on the future teachers believes and attitudes towards ESD after teaching the course on ESD during their training at Swedish university. There was a positive change in the attitude of those who participated in the course of ESD as compare to those who did not participated in the course of ESD. This study supports the findings of the research that the model of ESD may be integrated I curriculum of B.Ed. 4-year program for better results.

## 5.4 Conclusions

On the basis of the findings of the study the following conclusions have been drawn:

1. Education is the main powerful tool which moves the societies towards sustainability. Without sustainability the progress of any society is not possible, therefore the educational experts of today are focusing and emphasizing on the concept of Education for sustainable development. Social and cultural aspects of societies are one of the basic elements of ESD which are addressing globally. The current research also indicated that norms, values, traditions, ethics and culture of our society are essential to be integrated in the curriculum. However, these components of ESD are missing in most of the courses of the existing curriculum of B.Ed. 4-year program. Bridging up of these concepts in the curriculum are strongly emphasized by the experts and curriculum developers.
2. Peace of society is the need of the time. The research has strongly endorsed that the concepts such as nonviolence, war and conflicts, tolerance and social justice are the important components of teachers' education curriculum but these concepts are observed as missing in the existing curriculum of B.Ed. 4-year elementary program.
3. Teachers are responsible for shaping the minds and thoughts of the citizens, therefore their role become very important especially on elementary level of education. Because it is the age where the innovative ideas emerging in the minds of the children. The current research also stressed on filling the gapes in the curriculum of B.Ed. 4-year program regarding learning of the concepts of civic sense, human rights, elimination of poverty and illiteracy along with the

concepts of duties of citizens of student teachers. Because a trained and fully equipped teacher can provide better education to their students.

4. Environment of the world is damaging day by day and the people are facing environmental issues like a global warming throughout the world which threaten our lives. Therefore, the need of addressing the environmental issues in teachers training becomes indispensable. The research has result a gap between the concepts such as cleanliness of environment, pollution and environmental damages by human and the existing curriculum. The experts strongly recommended the integration of this concept in the courses of B.Ed. 4-year program.
5. Changing the climate brought many problems and issues therefore the societies are focusing on the awareness about changes and risks concerns to environment. It is also concluded from the present research that the environmental education is very essential for teachers so that they can educate their students about the changes of environment and its preservation. The gap between the environmental concerns and curriculum of B.Ed. 4-year is need to be filled, according to the experts.
6. Recycling of resources and its utilization along with the proper consumption of resources become very important in the populated societies. Education for Sustainable Development emphasized on the best utilization of resources not only for current generation but also for future generations. keeping in view the importance of the economic resource the current research concluded that all teacher educators as well as the prospective teachers were agreed for integration of the economic component of ESD such as utilization of natural resources, recycling of resources, consumption of resources, preservation of

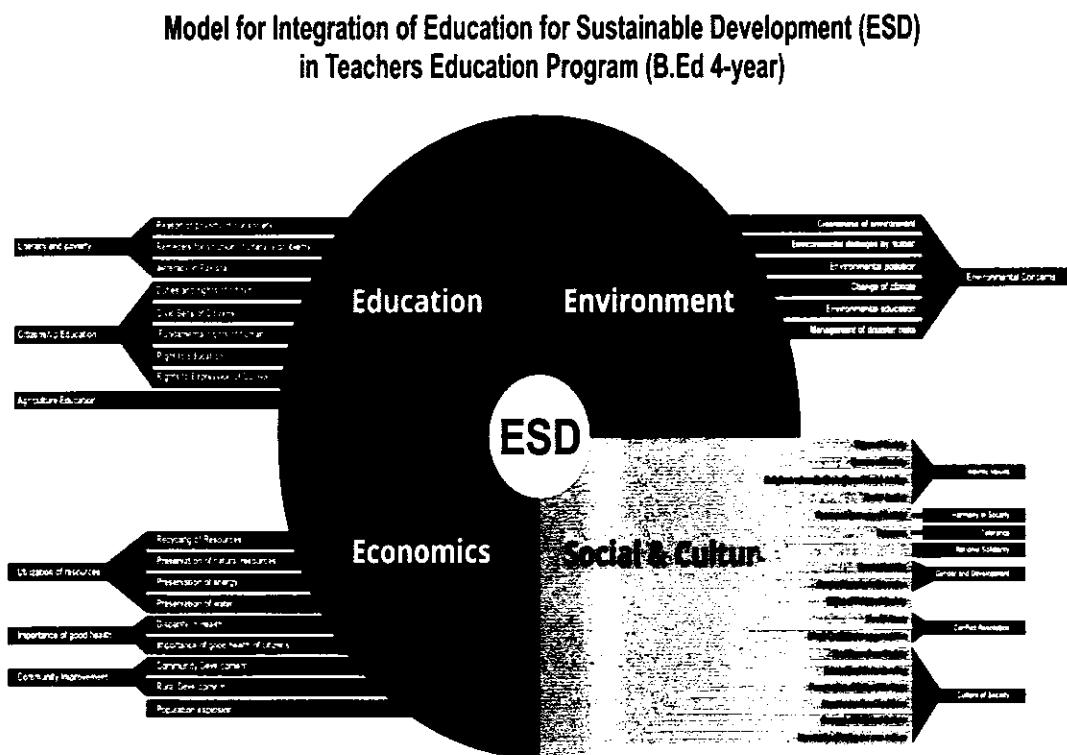
both natural and energy resources in teachers training curriculum as the gap was found between the economic components of ESD and curriculum of B. Ed 4-year elementary program. The integration of these components will enable the teachers to get awareness and knowledge about the concepts of ESD because when the teachers are equipped with the knowledge of particular concepts they can easily and effectively transmit the knowledge of ESD to the students of elementary level of school.

7. Nations can attain the desired level of development and progress when their masses have sound health. In this regard development of rural and urban communities is essential. They need to be provided with the required facilities of health and opportunities for work. Community and rural development side by side with the importance and discrimination issues of health were focused by the current research which resulted that these components of ESD are indispensable to be integrated in the courses of B. Ed 4-year elementary program that the teachers receive training about these elements and create further awareness in their students.
8. It was also concluded from the present research that experts of curriculum and economics, sociology, environment and education were also of the view that agriculture education also important to be included in the curriculum of teachers training as Pakistan is an agriculture country and it will bring good results for future students.
9. This research study developed a proposed model for integration of the components of ESD (Fig 4.1) in B. Ed 4-year elementary curriculum. In the light of the experts views the courses in which the components of the model of integration of ESD can be integrated also enlisted by the research.

## 5.5 Recommendations

On the basis of findings and conclusion the following recommendations were made:

1. The major recommendation of the study is a proposed model based on ESD for curriculum of B.Ed. 4-year program. The components of this model may be integrated in the curriculum of B.Ed. 4-year program by the curriculum developers through their concerned bodies (Fig No:5.1).



*Figure 5.1 Model of Integration of Education for Sustainable Development in Teacher Education Program (B.Ed. 4-Year)*

2. The curriculum of B. Ed 4-year may be revised and the gaps regarding the components of ESD may be filled through incorporation of the components of ESD in the curriculum of teacher education.
3. The experts may decide and identify that how the components of ESD may be integrated in the courses of B.Ed. 4-year program. This may magnify the extent of integration of each component of ESD in the curriculum of teacher education. This may also identify the procedures and methods of integration of the components of ESD in teacher education curriculum.
4. Activities and project based approach may be used for integration of the components of ESD in the curriculum. This method approach may provide an opportunity to prospective teacher for exercising a sustainable approach towards different aspects of life which may further contribute positively in the training of students through their teaching.
5. It may be useful that teacher educators of B. Ed 4-year program be included in the revision process of the curriculum as they are teaching the courses to the students so that they may be in better position to contribute in the revision process in the light of ESD.
6. The views of the prospective teachers of B. Ed 4-year elementary program may also be important to know and identify through proper procedure by the curriculum developer authorities for integration of the concepts of ESD in curriculum as they are the basic clients of the program. In this regard a need analysis survey may be helpful from the prospective teachers to identify their priority needs regarding integration of ESD in curriculum of teacher education.

7. While revising the curriculum of B.Ed. 4-year program it is suggested that subject experts of the main four areas of ESD such as Economics, Sociology, Environment and Education may be included in the revision process as they may provide better suggestion regarding the concepts of ESD from their areas of expertise for integration of ESD in curriculum. For this purpose, the experts may share the list of more relevant and possible topics from their relevant area of subjects for inclusion in teacher education curriculum to achieve the goals of sustainable development. The committee of relevant area experts may also be made for giving suggestions to NCRC members regarding inclusion of ESD.
8. The curriculum of elementary school may be approach during revision process of the curriculum of B.Ed. 4-year program and may be aligned with the elementary school curriculum as the teachers get training for elementary school students. For this purpose, the level and extent of alignment of both curriculums may be identify in the form of similarities and differences. The relevancy in teacher education curriculum may be made further in the light of alignment.

## **5.6 Recommendations for Future Researches**

The current research created new questions which need further research in the area such as:

1. The concept of ESD is an important element of modern education for teachers training. Therefore, it is suggested that the study may be conducted on the level of alignment of the components of ESD in B.Ed. 4-year curriculum in the light of the proposed model of ESD. It is an extensive research as the curriculum has many parts including objective, methodologies, learning

outcomes and assessments etc., so the researcher could not cover all areas due to time and resources constraints, therefore it is recommended that a research may be conducted that how much and which components of ESD need to be integrated in which areas of curriculum of teachers training.

2. Further research may be conducted on investigation of the level of alignment of B.Ed. 4-year curriculum and curriculum of elementary level of education in the light of ESD.
3. Research on the teaching styles and methodologies adopted for teaching of ESD curriculum may also be conducted.
4. Competencies, skills and attitudes related to teaching of ESD may be undertaken for further research.
5. In the light of the proposed model further research may be conducted on the level of integration of the components of ESD of the designed model among the different courses of B.Ed. 4-year curriculum, that how much components of the model of ESD may be include in the courses which ensure the integration and avoid the un-necessary repetition of the concepts inside the courses.
6. It recommended for future research that an experimental study may be conducted on the proposed model to test its level of integration in the curriculum of B.Ed. 4-year program.

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**Appendix-A**

**QUESTIONNAIRE FOR FACULTY MEMBERS**

**(INTEGRATION OF EDUCATION FOR SUSTAINABLE DEVELOPMENT (ESD) IN TEACHER EDUCATION PROGRAMS: TOWARDS DEVELOPING A MODEL)**

Dear Sir/Madam

*Kindly fill the below questionnaire. This data will only be used for the purpose of academic research of PhD. Your awareness will reflect your opinion on the below items.*

**The teacher educators indorsed the following components of ESD for integration in curriculum of B. ED 4 years' program:**

S. No	Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	Gender disparity in education					
2	Environmental education					
3	Reasons of poverty of our society					
4	Concept of Pakistani culture.					
5	remedies of poverty alleviation					
6	Tolerance					
7	War and conflicts among generations					
8	Gender equality					
9	Peace and harmony of society					
10	Preservation of natural resources					
11	Traditions of our society					
12	Values of our					

	society					
13	Norms of our society					
14	Population explosion					
15	Illiteracy in Pakistan					
16	remedies for solution of illiteracy problems					
17	Change of climate					
18	Management of Disaster risks					
19	Importance of good health of citizens					
20	Civic sense of citizens					
21	Importance of owing of our own culture					
22	Duties and rights of the citizens					
23	Cleanliness of our environment					
24	Rural development					
25	Ethics of Pakistani society					
26	Religious values for promotion of social justice					
27	Fundamental rights of humans					

28	right to education					
29	right to expression of opinion					
30	Disparity in health					
31	Nonviolence					
32	Recycling of resources					
33	Preservation of our culture heritage					
34	Intercultural understanding					
35	Preservation of energy					
36	Preservation of water resources					
37	Social justice					
38	Importance of our traditions					
39	environmental damage by humans					
40	Environmental pollution					

## Appendix -B

### QUESTIONNAIRE FOR STUDENTS

Dear Sir/Madam

*Kindly fill the below questionnaire. This data will only be used for the purpose of academic research of PhD. Your awareness will reflect your opinion on the below items.*

**The following concepts are essential for including in curriculum of B.Ed. 4years program**

S. No	Items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree
1	Gender disparity in education					
2	Environmental education					
3	Reasons of poverty of our society					
4	Concept of Pakistani culture.					
5	remedies of poverty alleviation					
6	Tolerance					
7	War and conflicts among generations					
8	Gender equality					
9	Peace and harmony of society					
10	Preservation of natural resources					
11	Traditions of our society					
12	Values of our society					
13	Norms of our society					

14	Population explosion					
15	Illiteracy in Pakistan					
16	remedies for solution of illiteracy problems					
17	Change of climate					
18	Management of Disaster risks					
19	Importance of good health of citizens					
20	Civic sense of citizens					
21	Importance of owing of our own culture					
22	Duties and rights of the citizens					
23	Cleanliness of our environment					
24	Rural development					
25	Ethics of Pakistani society					
26	Religious values for promotion of social justice					
27	Fundamental rights of humans					
28	right to education					
29	right to expression of opinion					

30	Disparity in health					
31	Nonviolence					
32	Recycling of resources					
33	Preservation of our culture heritage					
34	Intercultural understanding					
35	Preservation of energy					
36	Preservation of water resources					
37	Social justice					
38	Importance of our traditions					
39	environmental damage by humans					
40	Environmental pollution					

Appendix -C

**ALIGNMENT MATRIX FOR CURRICULUM ANALYSIS**

**Semester:1**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	Name of Courses															
		Functional English-I (Compulsory)			Islamic Studies/ Ethics (Compulsory)			Child Development (Foundation)			Urdu/Regional Language (Content)			General Science (Content)			General Method of Teaching (Foundation)
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																
2	Environmental education																
3	Reasons of poverty of our society																
4	Concept of Pakistani culture																
5	Remedies of poverty alleviation																
6	Tolerance																
7	War and conflicts among generations																
8	Gender equality																
9	Peace and harmony of																

	society														
10	Preservation of natural resources														
11	Traditions of our society														
12	Values of our society														
13	Norms of our society														
14	Population explosion														
15	Illiteracy in Pakistan														
16	Remedies for solution of illiteracy problems														
17	Change of climate														
18	Management of disaster risks														
19	Importance of good health of citizens														
20	Civic sense of citizens														
21	Importance of owing of our own culture														
22	Duties and rights of the														

	citizens														
23	Cleanliness of our environment														
24	Rural development														
25	Ethics of Pakistani society														
26	Religious values for promotion of social justice														
27	Fundamental rights of humans														
28	Right to education														
29	Right to expression of opinion														
30	Disparity in health														
31	Nonviolence														
32	Recycling of resources														
33	Preservation of our culture heritage														
34	Intercultural understanding														
35	Preservation of energy														

36	Preservation of water resources																								
37	Social justice																								
38	Importance of our traditions																								
39	Environmental damage by humans																								
40	Environmental pollution																								

**Semester:2**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	Name of Courses																								
		Functional English-II (Communication Skills Compulsory)			Computer Literacy (Compulsory)			Classroom Management (Foundation)			General Mathematics (Compulsory)			Pakistani Studies (Compulsory)			Method of Teaching Islamic Studies (Professional)									
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																									
2	Environmental education																									
3	Reasons of poverty of our society																									
4	Concept of Pakistani																									

	<b>culture</b>														
5	Remedies of poverty alleviation														
6	Tolerance														
7	War and conflicts among generations														
8	Gender equality														
9	Peace and harmony of society														
10	Preservation of natural resources														
11	Traditions of our society														
12	Values of our society														
13	Norms of our society														
14	Population explosion														
15	Illiteracy in Pakistan														
16	Remedies for solution of illiteracy problems														
17	Change of climate														

18	Management of Disaster risks																	
19	Importance of good health of citizens																	
20	Civic sense of citizens																	
21	Importance of owing of our own culture																	
22	Duties and rights of the citizens																	
23	Cleanliness of our environment																	
24	Rural development																	
25	Ethics of Pakistani society																	
26	Religious values for promotion of social justice																	
27	Fundamental rights of humans																	
28	Right to education																	
29	Right to expression of opinion																	

30	Disparity in health													
31	Nonviolence													
32	Recycling of resources													
33	Preservation of our culture heritage													
34	Intercultural understanding													
35	Preservation of energy													
36	Preservation of water resources													
37	Social justice													
38	Importance of our traditions													
39	Environmental damage by humans													
40	Environmental Pollution													

**Semester:3**

**Key1= Fully Align,2 Partially Align,3=Not Align**

Name of Courses							
S. No	Variables	Teaching Literacy Skills (Professional)	Art, Craft and Calligraphy (Content )	Teaching Urdu/ Regional Languages (Professional)	Teaching of General Science (Professional)	(I C T )in Education (Professional)	Teaching Practice (Foundation)

		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																		
2	Environmental education																		
3	Reasons of poverty of our society																		
4	Concept of Pakistani culture																		
5	Remedies of poverty alleviation																		
6	Tolerance																		
7	War and conflicts among generations																		
8	Gender equality																		
9	Peace and harmony of society																		
10	Preservation of natural resources																		
11	Traditions of our society																		
12	Values of our society																		
13	Norms of our																		

	society														
14	Population explosion														
15	Illiteracy in Pakistan														
16	Remedies for solution of illiteracy problems														
17	Change of climate														
18	Management of Disaster risks														
19	Importance of good health of citizens														
20	Civic sense of citizens														
21	Importance of owing of our own culture														
22	Duties and rights of the citizens														
23	Cleanliness of our environment														
24	Rural development														
25	Ethics of Pakistani society														

26	Religious values for promotion of social justice																	
27	Fundamental rights of humans																	
28	Right to education																	
29	Right to expression of opinion																	
30	Disparity in health																	
31	Nonviolence																	
32	Recycling of resources																	
33	Preservation of our culture heritage																	
34	Intercultural understanding																	
35	Preservation of energy																	
36	Preservation of water resources																	
37	Social justice																	
38	Importance of our traditions																	
39	Environmental damage by humans																	

40	Environmental pollution																				
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**Semester:4**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	Name of Courses																		
		Classroom Assessment (Foundation)			Teaching of English (Professional)			Teaching of Mathematics (Professional)			School, community and Teacher (Foundation)			Teaching of Social Studies (Professional)			Teaching Practice			
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																			
2	Environmental education																			
3	Reasons of poverty of our society																			
4	Concept of Pakistani culture																			
5	Remedies of poverty alleviation																			
6	Tolerance																			
7	War and conflicts among generations																			
8	Gender equality																			

9	Peace and harmony of society																		
10	Preservation of natural resources																		
11	Traditions of our society																		
12	Values of our society																		
13	Norms of our society																		
14	Population explosion																		
15	Illiteracy in Pakistan																		
16	Remedies for solution of illiteracy problems																		
17	Change of climate																		
18	Management of Disaster risks																		
19	Importance of good health of citizens																		
20	Civic sense of citizens																		
21	Importance of owing of our own culture																		

22	Duties and rights of the citizens																	
23	Cleanliness of our environment																	
24	Rural development																	
25	Ethics of Pakistani society																	
26	Religious values for promotion of social justice																	
27	Fundamental rights of humans																	
28	Right to education																	
29	Right to expression of opinion																	
30	Disparity in health																	
31	Nonviolence																	
32	Recycling of resources																	
33	Preservation of our culture heritage																	
34	Intercultural understanding																	

35	Preservation of energy																							
36	Preservation of water resources																							
37	Social justice																							
38	Importance of our traditions																							
39	Environmental damage by humans																							
40	Environmental pollution																							

**Semester:5**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	Name of Courses																								
		English-III( Technical writing & Practical Skills (Comp)			Foundation Of Education (Foundation)			Content Course-I from selected discipline-I			Content Course-I from selected discipline-II			Curriculum Development (Foundation)			Educational Psychology (Foundation)									
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																									
2	Environmental education																									
3	Reasons of poverty of our																									

	society													
4	Concept of Pakistani culture													
5	Remedies of poverty alleviation													
6	Tolerance													
7	War and conflicts among generations													
8	Gender equality													
9	Peace and harmony of society													
10	Preservation of natural resources													
11	Traditions of our society													
12	Values of our society													
13	Norms of our society													
14	Population explosion													
15	Illiteracy in Pakistan													
16	Remedies for solution of illiteracy													

	problems																	
17	Change of climate																	
18	Management of Disaster risks																	
19	Importance of good health of citizens																	
20	Civic sense of citizens																	
21	Importance of owing of our own culture																	
22	Duties and rights of the citizens																	
23	Cleanliness of our environment																	
24	Rural development																	
25	Ethics of Pakistani society																	
26	Religious values for promotion of social justice																	
27	Fundamental rights of humans																	
28	Right to education																	

### Semester:6

**Key1= Fully Align,2 Partially Align,3=Not Align**

Name of Courses						
S. No	Variables	Contemporary Issues & Trends	Content Course-II from selected	Content Course-II from selected	Comparative Education (	Introduction to guidance & Counseling

		in Education			discipline- I			discipline- II			Professional			(Professional)			
		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1
1	Gender disparity in education																
2	Environmental education																
3	Reasons of poverty of our society																
4	Concept of Pakistani culture																
5	Remedies of poverty alleviation																
6	Tolerance																
7	War and conflicts among generations																
8	Gender equality																
9	Peace and harmony of society																
10	Preservation of natural resources																
11	Traditions of our society																

12	Values of our society												
13	Norms of our society												
14	Population explosion												
15	Illiteracy in Pakistan												
16	Remedies for solution of illiteracy problems												
17	Change of climate												
18	Management of Disaster risks												
19	Importance of good health of citizens												
20	Civic sense of citizens												
21	Importance of owing of our own culture												
22	Duties and rights of the citizens												
23	Cleanliness of our environment												
24	Rural development												

25	Ethics of Pakistani society													
26	Religious values for promotion of social justice													
27	Fundamental rights of humans													
28	Right to education													
29	Right to expression of opinion													
30	Disparity in health													
31	Nonviolence													
32	Recycling of resources													
33	Preservation of our culture heritage													
34	Intercultural understanding													
35	Preservation of energy													
36	Preservation of water resources													
37	Social justice													
38	Importance of our traditions													

39	Environmental damage by humans														
40	Environmental pollution														

**Semester:7**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	Name of Courses																		
		Content Course- III from selected discipline- I			Content Course- III from selected discipline- II			Pedagog y -I( Methods of Teaching relate to Spe.- I)			Pedagog y - II(Methods of Teaching related to Special.. -II)			Researc h Methods in Education ( Professional)			Teachin g Practice ( Short Term)			
1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education																			
2	Environmental education																			
3	Reasons of poverty of our society																			
4	Concept of Pakistani culture																			
5	Remedies of poverty alleviation																			
6	Tolerance																			
7	War and conflicts																			

	among generations																	
8	Gender equality																	
9	Peace and harmony of society																	
10	Preservation of natural resources																	
11	Traditions of our society																	
12	Values of our society																	
13	Norms of our society																	
14	Population explosion																	
15	Illiteracy in Pakistan																	
16	Remedies for solution of illiteracy problems																	
17	Change of climate																	
18	Management of Disaster risks																	
19	Importance of good health of citizens																	
20	Civic sense of																	

	<b>citizens</b>																			
21	Importance of owing of our own culture																			
22	Duties and rights of the citizens																			
23	Cleanliness of our environment																			
24	Rural development																			
25	Ethics of Pakistani society																			
26	Religious values for promotion of social justice																			
27	Fundamental rights of humans																			
28	Right to education																			
29	Right to expression of opinion																			
30	Disparity in health																			
31	Nonviolence																			
32	Recycling of resources																			
33	Preservation of our culture																			

	heritage																			
34	Intercultural understanding																			
35	Preservation of energy																			
36	Preservation of water resources																			
37	Social justice																			
38	Importance of our traditions																			
39	Environmental damage by humans																			
40	Environmental pollution																			

**Semester:8**

**Key1= Fully Align,2 Partially Align,3=Not Align**

S. No	Variables	School Management ( Professional)			Test Development & Evaluation ( Professional)			Teaching Practice ( Long Time)			Research Project (Professional)		
		1	2	3	1	2	3	1	2	3	1	2	3
1	Gender disparity in education												
2	Environmental education												
3	Reasons of poverty of our society												
4	Concept of Pakistani												

	culture												
5	Remedies of poverty alleviation												
6	Tolerance												
7	War and conflicts among generations												
8	Gender equality												
9	Peace and harmony of society												
10	Preservation of natural resources												
11	Traditions of our society												
12	Values of our society												
13	Norms of our society												
14	Population explosion												
15	Illiteracy in Pakistan												
16	Remedies for solution of illiteracy problems												
17	Change of climate												

18	Management of Disaster risks											
19	Importance of good health of citizens											
20	Civic sense of citizens											
21	Importance of owing of our own culture											
22	Duties and rights of the citizens											
23	Cleanliness of our environment											
24	Rural development											
25	Ethics of Pakistani society											
26	Religious values for promotion of social justice											
27	Fundamental rights of humans											
28	Right to education											
29	Right to expression of opinion											

30	Disparity in health											
31	Nonviolence											
32	Recycling of resources											
33	Preservation of our culture heritage											
34	Intercultural understanding											
35	Preservation of energy											
36	Preservation of water resources											
37	Social justice											
38	Importance of our traditions											
39	Environmental damage by humans											
40	Environmental pollution											

## **Appendix -D**

### **Plan of Interview for Subject Experts**

**Following are the questions to be answered**

1. Education for sustainable development (ESD) basically deals with economic, social, Education and environmental aspects of society. You agree with the statement? Or you suggest some other factors also?
2. How can you define the concept of Education for sustainable development? Your opinion please!
3. How education can affect the sustainability of society?
4. Which elements/concepts you suggest to be included under economic aspect of sustainable development?
5. Do you think elementary school level teachers should be aware about the concept of ESD? if agrees reason please!
6. Should we include the concept of ESD in pre-service teachers training? If agree than which aspects of social & culture component of ESD should be added?
7. In your opinion the concept of ESD should be taught as a separate subject or should be integrated in existing curriculum of pre-service teachers training? Your opinion please
8. Do you think environmental education should be included in Teachers training curriculum? If yes than which aspects of environment can be address?
9. How can we provide training on ESD to prospective teachers?
10. How ESD can bring positive change in learning of prospective teachers for sustainability of society?

## Appendix -E

### **PLAN OF INTERVIEW FOR NCRC MEMBERS**

- Briefing about the concept of ESD by the scholar
- Briefing about already analyzed data by the scholar.

#### **Questions for interview**

##### **The following are the questions to be answered.**

1. The process of curriculum development or review of B.Ed. 4 years' program.  
How it was done?
2. Any Criteria for development or review of curriculum B.Ed. 4 years' program for NCRC members?
3. Any element or aspect of ESD was considered by NCRC members during developing B.Ed. 4 years' curriculum?
4. Is it essential to integrate the concept of ESD in curriculum? or the curriculum is already fulfilling the purpose of ESD?
5. What is your opinion for inclusion of ESD in teachers training curriculum of B.Ed. 4 years' program?
6. How the social, economic, environmental and education components of ESD can be integrated in curriculum of B. ED 4 years' program? what you suggest.
7. Should there be a separate guide based on ESD for teachers training? If not than why?
8. What is your opinion about the integration of ESD in the existing subjects of B.Ed. 4 years' program?
9. If ESD integrate in existing subjects? Than in which possible subjects?
10. How ESD can affects the sustainability of society?

## **Appendix -F**

### **List of Universities offer B.Ed.4-Year Degree Program**

1. University of the Punjab
2. University of Education, Lahore
3. Fatima Jinnah Women University
4. Bahauddin Zakariya University
5. University of Gujrat
6. University of Sindh, Jamshoro
7. University of Karachi
8. Institute of Business Administration (IBA), Sukkur
9. Sardar Bahadur Khan Women's University
10. University of Baluchistan
11. Lasbela University of Agriculture, Water & Marine Sciences
12. University of Hazara
13. University of Peshawar
14. Gomal University
15. Haripur University

