

**DEVELOPING AND IMPLEMENTING A TRAINING PROGRAM ON  
“GLOBAL ISSUES” AMONG TEACHER TRAINIIEES AT  
NAVARACHANA UNIVERSITY  
OF VADODARA CITY**

*A Dissertation Submitted in partial fulfillment of  
Requirement for the degree  
Of Master in Education*

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## DECLARATION

I, the undersigned, hereby declare that this dissertation entitled “**Developing and implementing a training program on global issues among teacher trainees of Navrachana University of Vadodara City**” is my own work, and that all the sources that I have used or quoted have been indicated or acknowledged by means of complete references.

Date:

Neeti Saxena

Place: Vadodara

## **CERTIFICATE**

This is to certify that **Ms. Neeti Saxena** has been working for her M.Ed dissertation under my guidance and supervision on **“Developing and implementing a training program on “global issues” among teacher trainees of Navrachana University of Vadodara City”**. This dissertation is submitted in partial fulfillment of the requirement for the degree of Master in Education from Navrachana University. This is her original work to the best of my knowledge.

Vadodara  
April, 2015

GUIDE  
Dr. P. V. Xavier

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*April , 2015*

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# **CHAPTER 1**

## **CONCEPTUAL FRAMEWORK**

# **CHAPTER I**

## **CONCEPTUAL FRAMEWORK**

### **1.0 INTRODUCTION**

Education is the key for having civilized, cultured and refined individuals for a dynamic society. Objectives of Vedic education was religious and spiritual attainment. In Vedic times there used to be lots of critical thinking by scholars during discussions. Education developed self control, co-operation, sympathy, love and self respect. It was teacher centered and emphasized on memorization. Old curriculum was theoretical but ultimately lead to self realization. Indian history is based on culture, tuned into our genetic configuration. We just have to find inlets back in to our roots, waking generation from deep sleep.

Educational process gives experience, knowledge and skills to a child to grow. Education relates to the act of learning. It brings adjustment in behavior of an individual to adjust with surroundings. It's difficult to define all aspects of education under one umbrella. It's definitions stems from the philosophies describing aims of life. Idealists find education as spiritual development, whereas pragmatic philosophers think it's a social process. All these philosophies fall apart. It's a vast affair that carpets Individuals, society, cultures, spirituality, environment traditions all woven in to one covering scientific, sociological, philosophical, psychological process that brings development in individual and society. Education progresses according to demands and needs of society and its components.

### **1.1 NEED AND IMPORTANCE OF EDUCATION**

Individuals are part of social structure. Education is for individuals, contributing in their self empowerment and strengthen them to prevail over condition. With the Insight of rights and wrongs, rules and limitations, we are able to question. When we are conversant with our rights then only we can protect them. Education lends hand to be cognizant of

our potentials and talents. Society has a set of traditions, philosophy, literature & cultural values that need to be transferred to approaching generations. Social organizations (schools) undertake the task to transmit information. It produces individual that could fit and survive in society.

Literacy is a creation of education. Literacy impacts economic, financial, political and democratic practices prevalent in nation. Informed citizens endorse the economic and political framework. Purpose of education is to encourage growth, acquaint with surrounding, unravel the past, master the present and construct future.

Indian society has large number of illiterates. Masses are deprived from formal education. People lack in moral values. There is no scientific touch. Unemployment & poverty had lead to rich and poor groups. Fragmentation of society on basis of caste, religion, language and gender are some problems and panacea to this problem lies in our education system. Education enlightens us and shapes our thought process. Education is not about written exams but it is to initiate the curiosity to know.

Importance of education is seen in reformation of old and wrong belief systems formed at child hood like jealousy, hatred, distrust etc. It interrogates the beliefs and gives a sensible understanding. Subject taught in school clarifies doubt and bestow clear thinking to individuals. Urban and rural India needs education to have a scientific and logical approach. Awareness brings sensitivity towards society, environment in which they live. Understanding of homologous society and education justifying need of society clears the block headedness.

## **1.2 PRESENT SCENARIO OF EDUCATION**

The world with its ever increasing competition offers a path for all to grow. A vast number of men and women with skills and talents have come up. Policy makers and government face challenges in giving new paradigm to 21<sup>st</sup> century education. To bring



any change we have to first accept there is need for the change. We live in a globalized and technically revolutionalized world which requires 21<sup>st</sup> century education.

### **1.2.1 What is 21<sup>st</sup> century Education?**

When we aim for preparing our children for the world, it breaks apart from conventional and traditional methods and shifts to flexible, creative, experimental way of learning. Here students are taught to voice and make changes on national and global parameters. It's because students are exposed to awareness of emerging crucial issues. Global competency helps them to engage them as global citizen and they learn to cope up at local and national level issues. 21<sup>st</sup> century curriculum is based on critical thinking, logical reasoning, analyzing, collaboration, research based, evaluative etc. Policy makers of educational industry will have to ensure that education system gifts skills to students so that they can make use of resources available to drive change, be a world citizen. Present scenario builds up a challenge for schools to divert students towards concrete learning and be an active member of society. For this, Schools will no longer have to be social arenas. Rather, schools have to play role of activity centers, which bring students closer and connected to society and giving a real life experience to students.

### **1.3 WHAT IS GLOBAL EDUCATION OR EDUCATION ON GLOBAL ISSUES?**

Education is complete when it educates heart and mind. Global education educates about values and responsibility. There are certain domains in which global education is different from education. Unlike history geography & science, Global education does not have a typical subject matter. Global education is not content bounded. It is study of environment, geography, cultures, world problems etc that keeps on changing with time. There are two side of a coin. One side shows the vary issues in world and on other hand other side put light on what is to be done to eradicate them.

### **1.3.1 The Maastricht Global Education Declaration (2002) states:**

“Global education is education that opens people’s eyes and minds to the realities of the globalised world and awakens them to bring about a world of greater justice, equality and human rights for all.”

“Global education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimension of Education for Citizenship”.

### **1.4 HISTORICAL BACKGROUND OF GLOBAL EDUCATION**

(1972) Stockholm conference attracted attention of human towards environmental issues followed by Inter-governmental conferences on environmental education held in USSR. Jolted by the two reports exhorting dangers to biosphere and ecology, sensitized to upgrade education system to find solution. Report by the Finnish National Commission UNESCO (1974) suggested studying of environmental education as a separate branch. Ecology and Environment soon gained status of full subject at University which was earlier confined to some chapters in Botany and Zoology.

Revolution in technology brought far away nations together. As the world became connected, inevitable demands to know the world in which we live had sprung up.

Many new topics were included in the curriculum.

#### **Global issue prospective is about**

- Study of national and international problems, their cause and effect.
- Cross cultural thinking and concern. Understanding of various existing cultures and being a part of them.
- It gives knowledge of social economic and political connection and their repercussions on each other.

- Standing up for inequality and discrimination .Focuses on critical thinking and shared responsibility.

“A systematic process of interaction, by which children acquire global awareness through a systematic movement from their parental cultural influences into a reality more closely defined by their peers on outside influences (Grant, 2006, p. 104).

### **1.5 NEED AND KNOWLEDGE OF GLOBAL ISSUES FOR TEACHER TRAINEE**

- To empower new patterns of behavior in teacher trainee towards global issues.
- To start training them at graduate level irrespective of their subject streams.
- Help teacher trainee to understand cause of any global issue.
- Development of critical thinking and problem solving skills in teacher trainee with respect to global issues (inequality and discrimination etc) and take a stand on the same.

Earlier times school were simply educating individuals and preparing them for vocation. In 20<sup>th</sup> century education brought social reforms, removing taboos and superstition. Whenever need for transformation is felt, modifications brought in prevailing system of education. People who are part of educational industry should make first move, to know global changes and spread awareness. On field duty of teacher to administer, impart knowledge on various subjects. Teachers have an influence on personality of students and they are the one who can bring change. Present education system should educated students for 21st century by imparting inter disciplinary knowledge about economic, financial, cultural, environmental and cyber literacy.

### **1.6 WHAT IS THE ROLE OF EDUCATION IN GLOBAL ISSUES?**

Best way to push students to contribute to world community is through education on global issues. Informed citizens can participate in mending the social disorders. Education being critical to issues like environmental and developmental issues is

confined only to formal education but it should cover the training of formal education as well as public awareness.

Exposure of youth of to the evils of war and the making them experience peaceful co-existence. If we tell them about Kargil war that is outcome of a hate story between Indians and Pakistani. Focus should be on the disasters caused by wars. World history speaks that war always ends in cries and pains. Love and tolerance are antidote to hatred. We have to match our patters with others for peaceful co- existence.

Constitutions of several countries across the globe have framed human rights for their citizens but now it's a global concern. Humans are slave to government. In course of journey, our legal rights of equality, liberty and fraternity are lost. Organizations like World health organization, Human right organization, fights against any kind of injustice done. As a global citizen, child should be given knowledge of his rights. Inequality, environmental pollution & conservation of natural resources can be taught through text books and practically.

Tragic event of Sept 2011 and attack on Taj Hotal Mumbai in Nov 2008 was not because of religious teachings but a result of misguided education. ISIS attacks on Iraq 2014 are caused due to the global religious, political and economic problems. Root meaning of jihad is "maximum effort for survival for betterment" and jihad nowhere speaks of terrorism. Many domestic problems, feeling of being deprived give birth to these anti social activities. Over three billion pounds of pesticides is used within a year's span globally which causes human poisonings, harm to fish and wildlife, livestock losses, groundwater contamination, destruction of natural vegetation, and more pests resistant to pesticides" (Jacobson, 1991, p. 45).Ozone depletion is not a national problem and we should collectively address it as we are not soloists nor we can be the master of everything.

Educational as a tool is the best to enrich us with the happenings. Multicultural knowledge develops tolerance. We learn to appreciate diversity. Complexities of the

world can be brought to end by acknowledging and globally working on them. New world can be achieved through awakening. Passage to new consciousness is by going beyond and thinking unconventionally. For this we need to have a system that educates us to think collectively. Education educates about existing issues in the system and enables people to participate in the movement of solving it. Present generation can actively participate along with the government and policy makers. It gives power to the people to make world a better place owing to it being their shared responsibility.

Education builds in the values and capacity to face challenges, resolving issues and difficulties in being a responsible citizen. To bring a positive transformation in a society, education system should be such that each and every individual is benefitted from and in return, the society gains global citizens. Role of education is to give openness to the world.

### **1.7 NEED TO RESPONSE TO THE CONSTANTLY EVOLVING GLOBAL PARADIGM**

Our today is a consequence of what we have done in the past and more importantly what we haven't done in our past. A new born is not born with any values. It is what that child sees, hears around himself makes him become how responsible a world citizen that child is going to be in future. We impart education to our children but most of it is intended to be bookish knowledge and with the intention that the child tops the class and is ultimately able to earn a good living in a longer run.

The thought process is fine till the time we think on an individual basis. We also have to understand that the world has to be better place to live in every day every moment. And who can do this? Who will bring this every minute change for betterment? It is we, our society that will bring about this change. To have a better tomorrow, we have to educate tomorrow's citizens on the issues which matter to the world. They will have to be sensitized on all the issues so that they are able to contribute to the world in a better way, with an understanding and a sense of responsibility.

## **1.8 WHAT AS A MINIMUM GLOBAL EDUCATION IMPARTS TO THE STUDENTS**

Molding of students to be the critic of their own problems. For this, the perception power and sound reasoning has to be reinforced in them engaging them in participatory learning. According to National curriculum framework. (NCF ,2005). “Critical pedagogy facilitates collective decision making through open discussion and by encouraging and recognizing multiple views”. “Students are no longer passive recipients of knowledge; they are decision makers” (Barrell, 2010).

Job in present times requires expert thinking heading to solutions. Experts and professional use information and find solution to issue to overcome hurdles. Following a logical procedure in which problem is identified, defined & information is collected to strategically solve the problem. Problem solving leads to decision making abilities. It encourages reasoning, thinking and creativity. Problem solving skill makes individuals take initiative.

In this context, Albert Einstein said – “We cannot solve problems by the same kind of thinking we used when we created them”

**1.8.1 Decision making and critical thinking** – logical & independent thinking focus on every hidden aspect, it makes one think out of box and state arguments against beliefs. Through critical thinking students learn to calculate accuracy, authenticity, analyzing, identification the root cause of problem, find solution to it. Critical thinking includes the use of cognitive skills to interpret compare, find cause and effects, analyze in inductive or deductive way. Critical thinking skills can be developed at a very early age. Open ended tasks, authentic real problems’ having more than one solution enforces reasoning, to support their answer with evidences and go beyond their previously learned information. “The mental processes, strategies, and representations people use to solve problems, make decisions, and learn new concepts” (Sternberg, 1986).

**1.8.2 Cognitive skills-** The global-knowledge economy is transforming the demands of the labor market throughout the world. It is also placing new demands on citizens, who need more skills and knowledge to be able to function in their day-to-day lives.

“Equipping people to deal with these demands requires a new model of education and training” (*World Bank, 2003*). Cognitive skills in builds power to concentrate, pay attention, enhance memory, thinking, judgment, evaluation reasoning and computation. They are skills that help to learn remember and think. It is the ability to grasp and capture information and use it further by recalling information .This ability is used to recall spellings, solve mathematical problems based on concepts. It includes reading of word and comprehending them whereas visual processing is ability to create picture of words.

**1.8.3 Creativity:** Creativity is finding new ideas and implementing them. Creativity is thinking and producing. Creativity leads to different and multiple ways of doing same task. Students should be encouraged to come up with new ideas. Unconventional thinking, reasoning and imagination are fostered by global competencies. It is how we perceive things differently, find connection between hidden patterns. Creativity can be learned. It can be taught through experimenting, exploring, questioning and observing.

"Not imposing too many assignments and rules on students, giving students choices, providing students opportunities to become aware of their creativity, and accepting students as they are." Denise de Souza Fleith (2000). In the study by Flavell (1979), “critical appraisal of message source, quality of appeal, and probable consequences needed to cope with these inputs sensibly” can lead to “wise and thoughtful life decisions”. (Gelder, 2005; Willingham, 2007).

**1.8.4 Information literacy:** Quest for knowledge leads to literacy. Knowledge confined to subject field is not worth satisfying as everything cannot be taught within few years of education. Information literacy gives them freedom to learn ‘what they want to learn’, ‘how much they want to learn’ in their area of interest. Strong base of information and knowledge gives quick decision making power. Internet and libraries are sources of information that can be synthesized, analyzed and used. It improves our life as we make decision supported by sound information. Literacy is not a regular part of curriculum but is woven into curriculum framework in form through problem based learning, evidence-

based learning, and inquiry learning. Just like Researchers make use of parallel resources to update their knowledge.

**1.8.5 Flexibilities and adaptations**-World of students is limited to class room teaching. Taking them on a tour round the world wide happenings and gives understanding what is happening on a global platform. They become inquisitive and they want an answer to many doubts. Interaction with outside world bridges the gap between them and various cultures, religions, scientific, economic, social geographical phenomenon. They accept many unrevealed realities. Shift towards change is brought by adaptation. Adaptation and flexibility are pillars to decision making and leads to change. Many Studies reveal that Learning adaptation and flexibilities is crucial task for students. More innovative and creative students are, less is the possibilities of let down

All the skills are equally important to be nurtured in a student. Critical thinking skills refine cognition skills. Cognitive skills are genetic where as other two are independent. Critical thinking elevates cognition skills as students go in depth of knowledge to be a critic, more they push themselves, more is the development of cognitive power. Creativity is dependent on cognition. Student's visualization and actualization depends on his or her cognitive development.

Educators of 21<sup>st</sup> century is expected to foster cognitive development, critical thinking decision making and problem solving capacities and attitude in students . Nurturing these skills in class room is an important task .Cognition is the product of complex interaction between the maturation of nervous system and language. The maturation of nervous system depends in children's social and physical interaction with the world around them Teachers can provide students a platform, with a way to capture their ideas on a daily basis and can effectively implement strategies in their daily teaching to help students tap their creativity and problem solving, decision making aptness.



## **1.9 GLOBAL ISSUES**

School curriculum has some chapters on the core global issues, from which environmental issues are restricted to science syllabus where as other issues form part of social studies syllabus. And it becomes sole responsibility of respective subject teachers to teach students about these topics. Social studies teacher or science teacher is more aware of such issues compared to other subject teachers.

If a graduate or a post graduate undergoing teacher training programs irrespective of the stream of study can be made aware of global issues and then they too can participate in sharing of responsibility.

### **(A) Environmental**

**1.9.1 Global warming-** is an issue taken up seriously at a global level. Global warming is caused due to sufficient increase in gases like carbon dioxide, methane, nitrous oxide etc in atmosphere. These gases trap heat of sun which in the following years has increased temperature of the earth. Rapid increase in water level submerged many islands which were home to many animals. Sunder band is likely to be 90 % submerged. Hole in the protective ozone layer is cause of many skin diseases. Atmospheric carbon dioxide is making sea water acidic affecting oceanic ecosystem. Bleached coral reef outcome of global warming. Earth is becoming hotter. Uncertainty of rainfall and famine in parts of world. There is a huge climatic turbulence. Eco system has displaced from its natural form

### **B) Rights**

**1.9.2 Gender In equality-**Equality in gender can never be achieved completely, unless we identify and recognize gender apart from stratified genders i.e. male and female comprising of boy and girl respectively. Formal and non formal education do talk of third gender i.e transgender, which remain enclosed within books and words. In present times they are recognized as 'Alien creatures', 'un identified in to regular class of gender', being different from us and most of us don't even have a humane touch towards them. Sensitization and giving an emotional touch on the third gender becomes our

responsibility. It's a dual process which involves 1) self understanding and acceptance for transgender 2) making present and future generation comfortable and familiar with them.

### **C) Social economic and political**

**1.9.3 Terrorism-**The United States Department of Defense defines terrorism as “the calculated use of unlawful violence or threat of unlawful violence to inculcate fear; intended to coerce or to intimidate governments or societies in the pursuit of goals that are generally political, religious, or ideological.” Within this definition, there are three key elements—violence, fear, and intimidation—and each element produce terror in its victims. The causes of terrorism, or more specifically, why people become terrorists. In order to combat terrorism, to understand the drivers of terrorism. Identifying these drivers allows policy makers to target terrorism at its root causes rather than fight those who have already become radicalized. The causes of terrorism have been under much debate. There is evidence for and against every reason on this list however, more often than not, it is a combination of several that lead to terrorism

## **1.10 GLOBAL ISSUES IN EXISTING CURRICULLUM**

There is a relationship between community and curriculum Student to be successful in the world must have courage confidence and knowledge. It should be taught as a regular part of curriculum, not once or twice a year in form of an activity. Education must reflect on life need and problems in a society. School curriculum and teachers have ratio to contribute to it.

Studies done by (Tanner, D; Tanner, L, 1980) suggested that Curriculum is that construction of knowledge and experienced systematically developed under the auspicious of school) or university enable learner to increase his or her control of knowledge and experience. Present education is compact. We cease it to our national boundary. Let's take a tour round the world with education. We need to develop an international outlook and make child feel world as his own. To actualize this, curriculum

framers should go beyond boundaries on nation weave curriculum in a global view. It is not the sole responsibility of UNESCO or any other international organization to spread global understanding.

#### **1.10.1 NCF (2005) STATES:**

Curriculum acquires creativity when children are show their relatedness to world and develop their capabilities to heal the world. From "known to the unknown", from "concrete to abstract", and from "local to global.

**Social science:** Study on subject to focus on conceptual understanding, evaluation of issues, Interdisciplinary approaches towards human rights and poverty. In Peace education light to be thrown on non acceptance to violence and accelerating peace.

**Critical pedagogy:** To reflect critically on issues in terms of their political, social, economic and moral aspects. Through Critical analysis children will know their connection to multiple issues and understand them .A critical framework helps children to see social issues from different perspectives

**Human rights-** water crises, human dignity human rights caste gender to be critically reflected.

#### **CURRICULUM FOR CLASSES III to V- ENVIRONMENTAL EDUCATION**

Environmental educations will emphasis on environmental degradation and its preservation Sensitizing children in social issues.

#### **1.10.2 NCTE (2010) STATES:**

**A)** Need to educate teacher to connect school knowledge with community knowledge and life outside the school.

**B) Need to re-conceptualize citizenship education in teacher education program.**

**C) Existing curricula should focus in cosmopolitan issues to broaden up the thought patterns of upcoming generation and making them aware of their action in future.**

Entire teacher education program is based on its design .It is to be related to need of the field teacher has to be equipped and known to her role as a society educator. Dividing subject matter on global education. Making a detailed study in each segment followed by sharing of the information with entire group. Testing them finally on basis of knowledge achieved. Jigsaw Lie(1992).In the study by Deller(1990),In case teacher lacks in material, students can them self gather material, teacher is aware of needs and interests of students. Such an activity is motivation for students. It gives complete information of background.

Expectations of our national curricula for teacher and students can be fulfilled, together with inclusion of global issues to present curriculum which the makes thought process a) reflective / critical b) connect to the community c) citizenship oriented education d) Interdisciplinary approach.

### **1.11 INTERNATIONAL OUTLOOK ON GLOBAL ISSUES AS A PART OF CURRICULUM**

Foreign policy association in their document on global education highlighted the acts framed by the policy makers in favor of mutual education and cultural exchange and international education.

Jerome burner in 1965 designed curriculum (MACOS) for social studies identifying cross cultural behavior and place of human being in the world. James Becker (1979) in his book discussed how human rights ties to individual responsibility. He placed human rights first in his list descending on global responsibilities

A plan for New York state 1982-2000(1981) k-16 curriculum to be infused with some elements on global education. In this module students will learn about the lives of people different from them gaining multi cultural competence by understanding the world. In later stage, students will be taught to respect cultures, human rights and to stand against power. In nineties educators moved a step ahead proceeding towards detailed knowledge of our interdependence and seeking involvement in world affair. In the study by Merrifield (1993), Identify and reflect upon what value and belief, experiences and knowledge have shaped their multicultural global perspectives. She explained how values and belief shaped the people and way people share culture by dint of “tree of life”.

Gradual development of awareness of diversity places, language religion is a gift of technology. Through this they have explored to take care of their rights and rights of others .They are environment sensitive this be though active participation in class room activities and community projects held at schools .as they grow up they understand difference better existing for people languages spoken, religion etc. tragic events could be better explained to them, impact of decisions and their influence across the globe and their country. To actualize this Countries like Australia Canada UK, USA have proposed separate curriculum for students at various levels. New Zealand has proposed for a separate inter disciplinary elective or compulsory course to be introduced on global education for Bachelors and masters program in education

Education becomes eternal when it bridges the gap of diversity through uniqueness, purposely call for mutual understanding and cooperation.

### **1.12 TEACHER TRAINEE AND THEIR ROLE**

Education system cannot work without teacher. Every teacher is a philosopher and architect. New challenging role for teachers have transferred more objectives to their job. Catering to specific need of growing education system specialized training is must. Globally literates have insight of international experiences such teachers can bridge gap

by offering students opportunities to find their interests. Teacher's positive outlook towards global curriculum paves way for its success (cited by Easterly, 1994).

In the study by Gibson (2008), Teachers must be globally educated to be affective. And in the study by Grant (2006), Theory global awareness increases interactions and students experience a social comfort. Teacher trainee is the one who under takes teacher training course to learn ways of teaching to make subject matter interesting for learners. Teaching methods vary for age groups. Program gives mastery over teaching pedagogy and teaching skills. Learner's achievement spell out teacher competence .It gives power to meet out professional challenges

Traditional curriculum does not prepare students to deal with International issues nor the teachers adequately prepared to teach them from global perspectives. Growing stress in relations and intolerance is because of natural and psycho-social environment put to question mark on teacher's role.

New social order desires for changes in educational outlook towards formal and in formal education. Role of educational intuitions is broadening and call for improvement in teacher education program to prepare quality teachers with global competency. Commissions have put forward need for quality teachers to plinth the social status, financial security and well being of individual.

Only Environmental education has found place in diverse discipline but on teacher education program there is much to be achieved, a better compressive information system to be developed in cooperation with University grants commission, and technical educational bodies. Some countries organize special lectures on global issues for students and teachers.

Demovsky & Niemuth (1999) stated that Grasp on Latest technological development and advancements round the world in grains teacher to expertise. Discussion on world issue in classroom generates critical thinking and problem solving attitude in them. Use of

computer and media had given Closeness in communities' .Students make optimum use of internet to access information which can be alternative way for students to learn (Global Awareness Society, 1993).The report conducted by Asia Society in 2001 and by the National Geographic Society in 2002 also revealed that “85 percent of young Americans (between the ages of 18 to 24) could not locate Iraq or Iran on the middle East/Asia map”

Raento and Hottolla (2005) Founded that teachers should “find ways to deliver the message in clear, thought-provoking, and engaging ways to which the children of the era of global consumer culture and entertainment can relate and which they find meaningful In study by Ford (2010) Class room atmosphere created by proactive teachers make them reach their potentials. Brown, Gibson, Landwehr & Remington (2008) stated that a global-learning experience is more effective for learners when a high degree of cultural contrast is achieved. Therefore the greater the cultural difference, the greater is the participant’s frequency and intensity of “culture shock” and consequently the learning experience is more vivid and memorable.

Solution for economic backwardness lie eradication poverty and unemployment. Society needs input from teacher to emphasize on scientific temper, vocational education and real life experiences. Teacher training program to include aspects peace development and integration at global plane. Understanding of problem at global level as their own and working collectively for it. Teachers role to sensitize and inform the present generation to work for up gradation of environment, biological balance, abolition of un touch ability, racial discrimination healthy and prosperous society. Moral education\_is necessary for character development. Ethics and values excepted worldwide have eroded. Value education is inculcated in teacher training program make teachers realize the importance and commitment towards of moral development of students

Teachers are the pillars on which educational industry rests. They are nation builder. Therefore it becomes a necessity to churn new roles of teachers .Education of future citizens is teacher’s contribution. Teacher, fountain head of knowledge should update

knowledge pertaining to subject and direction of trends of developments in which society is heading. Teachers are curriculum translators. They have to influence generation. Child in turn can go and educate family. So class room teaching reaches society. Modern teachers can be the instruments to bring change in society.



# **CHAPTER 2**

## **REVIEW OF RELATED LITERATURE**

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### **REVIEW OF RELATED LITERATURE**

#### **2.0 INTRODUCTION**

Global education comprised in education on prevailing global issues is a sub - emerging trend. No dearth studies pivoting around more than one core issue have been found. A common and most focused global issue found is 'environment'. Now many countries have started taking other issues seriously. Reports and articles were found endorsing and stressing on the need of global issues to be the part of the core curriculum.

The review of literature is divided into five parts. The first part covers the international studies on global education, challenge faced by the teachers and barriers in making global issues as a part of curriculum. Second part holds international studies done on the environmental awareness where as third part encompasses Indian studies on environmental awareness and fourth part embraces articles and few studies on global issues other than environmental issues. Fifth the articles written internationally as to how existing cosmopolitan issues can be woven in the curricular frame work to achieve true learning. Attitude and non seriousness of the schools policy maker's, educators, school administrators and teachers and importance of global learning of issues affecting the world.

Studies in the second and third part of review focus on the studies done on environmental awareness to determine knowledge level regarding the environmental issues and how far its objectives are achieved and the problem faced in the achievement of the objectives. Achievements in the field of environment awareness can direct ways for making other global issues part of curriculum.

## 2.1 INTERNATIONAL STUDIES ON GLOBAL EDUCATION

**Kenneth A. Tye . (1999) . A study on Global Education: A Worldwide Movement. A preview of a study of global education practices in 52 countries.**

**Objective:** The main purpose of the study was to explore, in a very preliminary manner, the status of global education in the primary and secondary schools of 52 countries in various regions of the world. In addition, it was hoped that the report of the data could serve to promote dialog among the various global education participants and programs throughout the world

**Methodology:** In the questionnaire that was developed for the study. Questions had to do with philosophy and definition of global education, curriculum content, methods of teaching, teacher training, implementation and monitoring responsibility, problems and barriers, and new initiatives

**Findings:** 1) The barrier identified by the largest number of respondents, eighteen, was “lack of teacher skills, training, interest.” Most responses simply said that there was a lack of adequate teacher training. A few said that teachers did not know how to use teaching strategies that were most appropriate to global education. One respondent said, “Too many teachers simply don’t care enough about global issues to be bothered.” 2) The greatest barrier to global education in their countries was the fact that it was not an acknowledged curriculum area. A few indicated that any global perspectives which are included in the curriculum must fit into existing courses such as history, geography, social studies, literature, foreign language, the arts, and so forth. Some others felt that because their educational systems were examination driven, it was difficult for teachers to alter the day-to-day curriculum to include global perspectives because that took time away from teaching topics and skills that would be tested. A couple of the answers pointed out that schools were reluctant to add a new curriculum area because community members were used to what was currently there and might be uncomfortable with something new. 3) Lack of resources was identified by thirteen people as a major barrier

to global education in their countries. Most, but not all, were lesser developed countries (LDCs). Most respondents spoke of the lack of money. A few talked about teaching materials. None mentioned a lack of technology. 4) Twelve individuals cited national politics in some way or another as a problem or barrier to the implementation of global education. Individuals and groups mistakenly fear that global education promotes some kind of “one world” philosophy in opposition to more nationalistic dogma, or some kind of humanism that was in opposition to religious values.5) Ten responses pointed to nationalism, religion, or cultural isolation as a major barrier to the development of global education. A somewhat different and interesting set of responses came from three countries where various forms of cultural isolation were seen as problems. Large immigrant population, prejudice and the lack of a desire to celebrate diversity as barriers to global education.6) Some countries global education was not really understood well enough to be promoted as part of the curriculum or that its definition was not clear. Interestingly, in three of these countries there were reported to be programs of intercultural education, peace studies, environmental studies, international education, and/or development education. We shall return to this issue shortly.

**Karen, Mundy, K., Manion, C. (2007). A Study to reflect the challenges faced by Canadian teachers and schools in implementation of global education. (Commissioned by UNICEF Canada)**

**Objectives:** 1) What is the current state of global education in Canadian organizations an elementary school, and how it is been supported by school, district and provincial ministries as well a non government .2) How can Canadian organizations (including UNICEF) better encourage and support global education in Canadian schools

**Methodology:** Qualitative research. Research was done in 14 providences and territories on students of grade 4-6

**Findings:** 1) There has never been a more opportune moment for paying attention to global education in Canadian schools.2) At the federal, provincial, district and school

levels, there is wide recognition of the subject's importance. 3) There are many barriers to the effective implementation of global education. Tackling these challenges will require more than an improvement in the initiatives of individual organizations; 4) It needs the coordinated attention of a range of actors, both from within and outside ministries of education. 5) Several teachers noted that the provincial curriculum did not provide adequate support for introducing 6) Most teachers and administrators defined global education as to global interdependence, helping others, and using multiple perspectives. However, they rarely directly addressed the spectrum of specific issues associated with global education in the research literature, such as human rights, global citizenship, problems of war and conflict, or environmental sustainability 7) Few teachers or school-level administrators could identify professional development Opportunities or curricular support for global education from district or ministry staff. Teachers told that most global education resources and in-service training focus on secondary-level education. 8) the other significant way that schools link to external partners is through the receipt of curricular materials. Many schools (and districts) told us that they routinely receive global education materials from a variety of governmental and non-governmental organizations. 9) Individual teachers often told that they try to infuse global issues across the curriculum or that they used classroom time to introduce global issues school-level research suggests that the problem with implementing global education in. 10) Canadian elementary schools are not interest, energy, lack of curricular materials, or innovative practices. 11) There is a considerable ambivalence towards global education among district and provincial level staff. Although attention to global issues is formally mandated in the elementary. 12) Curriculum of most provinces, there is little link between formal curricular expectations and extra-curricular activities; limited pedagogical support; and a strongly held view that coverage of global education themes rests with individual teachers. 13) Additional ambivalence emerged regarding the issue of whether global education themes are simply too complex for elementary age students. Although formal curricula across Canada seem to support the idea that children can and must be exposed to the challenges of complex interdependence.

**Placide, K. L. (2011) . A study to see impact of Implementing Global Awareness Curriculum In High School: The Use Of Global Awareness Instruction To Improve Academic Achievement Among High School Students.**

**Objectives:** 1) To know the effect the introduction of global awareness curriculum in social studies (world history) increase 9<sup>th</sup> on grades of test scores.2) To Study students' attitudes towards the introduction of global issues to social studies and constructive teaching strategies used to improve their global knowledge.3) To find evidence from teachers and administrators that supports the implementation of global awareness strategies into social studies

**Methodology:** The research was both qualitative and quantitative. A student survey and a teacher questionnaire used to collect data reflecting their attitudes and concerns about global education. The samples used in this research are three ninth grade world history classes. The three ninth grade world classes are called Class one, Class two and Class three respectively. The sample size of all three classes is 57 students. Class one had 20 students. Class one consists of 10 males, eleven females and three gifted student. The racial makeup of Class one is 11 Blacks and 10 Whites. Class two consisted of 20 students. The male to female student ratio in this class are 11 to 14. There are 11 Blacks, 13 White and one Latino student that comprise of Class two. There are two gifted students in this class. Class three consists of seventeen students. The males to female student ratio in this class are 10 to 12. There are 12 white, 10 black, and ten gifted students in class three. Students are not placed in subgroups. All three classes were selected from this researchers ninth grade world history classes. The sample size of all three classes combined is sixty-eight students

**Findings:** 1) The results of the global awareness instruction did show that the ninth grade students' scores improved when global awareness curriculum was implemented. 2) The post scores show that there was no significant difference in the level of achievement among boys and girls in all three classes when global awareness instruction was implemented. 3) The data collected showed that there were significant gains with the

implementation of the global awareness curriculum 4)The study looked at how the Global awareness curriculum would increase students' academic achievement among ninth graders in social studies .5)One of the major themes discovered in the study was there is a need for a global curriculum by both national and international community. 6) Global awareness helps student's helps students create their own realities more closely defined by their peers. 7) Global awareness instruction uses peer interaction to increase educational attainment. 8) The student survey revealed the use computers, internet, multimedia and digital technology really interested and engaged them. 9) Teaching with a global perspective is interesting, rewarding and meaning.10) Teachers who participated in the study felt that the global instruction was effective and improved the students' mastery of social studies content which substantiates11) Overall findings of the teachers' questionnaire revealed that the teachers believed the global awareness instruction was a success 12) The principal's response that there was a need for a global awareness curriculum. 13) A recurring theme found in the interview was technology and world issues have change the way we educate students. 14) The interview discovered that the teachers were positively changed by the global awareness research the staff at this school are receptive to curriculum that is viable to the education of students was that the global awareness instruction had students were fully engaged and interested with their classroom activities

## **2.2 INTERNATIONAL STUDIES ON ENVIRONMENTAL AWARENESS**

**Hoody, L.L. (1996) . A study report on the Educational efficacy of Environmental education.**

**Objective:**1 )The purpose of this study was to locate researches that assesses the educational efficacy of environmental education specially the study that analyze the influence of Environmental Education methods and content on student ability to learn the subject areas through the curriculum.2)The study was designed to find the researches

that evaluated research programs in Environmental Education that use decision making and problem solving process to develop high level thinking skills

**Methodology:** Literature search through database, Telephonic interview, professional journals. The survey was distributed to 200 NAAEE members and all members of board of directors

**Findings:** 1) Inter disciplinary based research in Environmental Education is poorly represented in literature 2) Scarcity of such studies 3) Lack of researches that reinforces pedagogical strength of Environmental Education 4) Difficulty incorporating assessment of problem solving and critical thinking in to traditional school structure 5) Lack of relevant case examples of inter disciplinary model program

**K, Tahsin. (2000) A study of “Pre-service Teachers-Misconceptions Regarding Three Environmental Issues.**

**Objective:** To determine pre-service elementary teachers’ knowledge level regarding the three environmental issues: the greenhouse effect, ozone depletion, and acid rain. I also wanted to determine their misconceptions regarding the nature, causes and effects of the three issues, and if they had a tendency to interrelate the two or more separate issue

**Methodology:** The sample for this study was one of convenience. The subjects were 113 students, 91 female and 22 male, majoring in elementary education at a large Mid-western university in USA. They were either juniors or seniors (third or fourth year of their undergraduate degree) and were taking a science teaching methods course. There were two reasons for choosing this population for data collection. First, by the time these students enroll in the science teaching methods course, they have taken all the required science courses for a bachelor’s degree. Second, they will begin their professional career as elementary teachers in one to one and a half years. The instrument was adapted from a survey questionnaire



**Findings:** The major misconceptions found in this study are summarized below.

1)The greenhouse effect and ozone depletion are related.2) Pollutants such as car and factory exhausts can destroy the stratospheric ozone. 3) CO<sub>2</sub> is one of the causes of ozone depletion. 4)Ozone depletion may result in an increase in temperature on the Earth. 5) Pollutants and chemicals evaporate with water and mix with clouds and come down as acid rain.6) Acids have a higher pH level than bases.

The presence of these misconceptions among the pre-service teachers in the present study, and their lack of knowledge of these fairly common environmental issues. One major reason for the presence of misconceptions is the abstract nature of the concepts, such as the greenhouse effect and ozone depletion. Students generally receive verbal information regarding the nature and functions of these phenomena. Students claimed that they did not receive complete information either from their classes or from the media. Because of ineffective classroom instruction and incomplete information from the media, the students failed to realize that greenhouse gases do not absorb solar radiation including UV rays. The presence of one incorrect conception resulted in the development of several incorrect mental models and many misconceptions among the students. The role of the media can be considered an important factor in creating confusions and misconceptions among these students. The presence of misconceptions can also be attributed to ineffective classroom science instruction. Some students, during the conversation, complained that their science classes did not have any real impact on their knowledge. That is why, as they claimed, they did not remember the information. Instead, they remembered the information from the media. Some students complained that the environmental topics were not discussed in detail in their classrooms.

### **2.3 INDIAN STUDIES ON ENVIRONMENTAL AWARENESS**

**Shahnawaj . (1990) . A study on Environmental Awareness and Environmental attitude of secondary and higher secondary school teachers and students.**

**Objective:** 1) to determine the extent of awareness about the environment among student and teachers.2) to find out the attitude to teachers and student towards the environment

3) Find out the difference between teacher and student and male and female group concerning the environment

**Methodology:** The study was conducted mainly through survey and application of the tool by the investigator to test attitude and awareness

**Findings:** 1) It was found that 95% of teachers and 94% students possessed positive environmental attitude .2) The environmental trained teachers and untrained teachers did not differ in their attitudes.3) The teachers had more awareness of the environment than the students.4) The trained and untrained teachers did not differ on environmental awareness.5) The girls possessed significantly more awareness of environment than boys

**Chaudhari, P. (2004) . A study on Environmental knowledge and environment attitude of students of secondary school of Vadodara city.**

**Objective:** 1) to study the environmental knowledge of the students .2) To study the environmental attitude of students .3) To find out the relationship between environmental knowledge and environmental attitude

**Methodology:** Survey. Cluster sampling method is used. Out of 131 Gujarati medium schools, four were randomly selected using random lottery method. All students of class IX were selected.

**Findings:** 94% of students possessed positive environmental attitude. Secondary school students have poor command over factual environmental knowledge. The result received nine numbers of areas of knowledge inadequacy among students but had positive response towards environment

**Rathode, P. (2011) . A study of Environmental awareness and its impact on behavior of students of upper primary schools of Vadodara city.**

**Objectives:**1)To study the environmental awareness among the upper primary school of Vadodara city with relation to gender.2)To study the impact of a awareness on behavior of students of upper primary school of Vadodara city with relation to gender.3)To study the transaction of environmental education in upper primary schools of Vadodara

**Methodology:** Student belonging to primary stage was studied the average age of this phase of education is 12-14 English medium & CBSE board was taken. Questionnaire for students, Interview with teachers, Observation of school.

**Findings:** 1) Major number of students under study responded that environmental education helps in understanding of environmental issues.2) Majority of responses of students under study revealed that teacher help him in being aware of environmental issue.3) The study revealed the majority (78%) of students at upper primary level concerned about the issue of air pollution and its cause and prevention.4) The study revealed that majority of (76%) students of upper primary were not aware of water purification from pollutants.5) The students revealed that school helps in organization of various programs related to environmental issues.6) A major portion of students reported that they are interested in conservation of resource of the earth .7) Study revealed that girls have more motivation suggestions for environmental awareness than boys.8) Study revealed that students have responded positively to conservation of trees and plants .9) Male students have high level of environmental awareness than females.10) Suggestion for some innovative ways of enhancing environmental awareness were like solar cookers , alternative source of energy like wind mill etc they also suggested for need of awareness program at school level while 78 .54 % of students at upper primary shower interest in innovation measure to enhance experimental studies.11) Majority teachers responded that the school library has sufficient books on environmental awareness

**Pandey, K. & Kulshreshtha, A.K. (2012). A Study of environmental value and attitude towards sustainable development among pupil.**

**Objective:** 1) To compare the environmental value of male and female pupil teachers .2) To compare the environmental value of pupil teachers belonging to arts and science streams .3) To compare the attitude towards sustainable, development of male and female pupil teachers .4) To compare the attitude towards sustainable development of pupil teachers belonging to arts and Science stream.5) To find out relationship between environmental values and attitude towards sustainable development

**Methodology:** 150 Pupil Teachers were selected randomly from Ewing Christian College and S.H. Deemed University, Allahabad, in which 96 were male and 54 female pupil teachers. Environmental Value scale and Attitude Scale used for data collection

**Findings:** From the studies on Environmental Value and attitude towards sustainable development, , and on the basis of preset study, it was found that both male and female pupil teachers, as well as pupil teachers associated with arts and science streams have equal environmental values and attitude towards sustainable Development. On the basis of findings regarding relationship between environmental Value and attitude towards sustainable development it could be said that pupil teachers who have positive Environmental Values possesses positive Attitude towards Sustainable Development, To conclude, it may be suggested that environmental values can be nourished favorable attitude towards sustainable development. Therefore this is the best time to generate environmental values for the positive attitude towards sustainable development among them and motivate them to establish a congenial and harmonious coexistence with nature. Environmental Education and Education for Sustainable Development may be also help to generate environmental values and positive attitude towards sustainable development. Some environmental and Sustainable Development components in respect of teacher education could be enumerated as follows: (a) Making pupil teachers as well as teacher educators understand the aims, objectives methods, scope and importance of environmental values. (b) Development environmental values among teachers, pupil

teachers at levels and stages. (c) Developing among pupil teachers the general awareness of environmental degradation and problems at local, national and international level. (d) Bringing attitudinal change among the teacher educators and pupil teachers about the environment and development. (e) Making a positive human philosophy towards environment and development. (f) Sensitizing them to Work without self interest in this field. (g) Convincing them that it is an integral part of their duty to organize environment related effective curricular and co curricular activities (h) Education for sustainable development should be an integral part of curriculum both theoretical and practical inputs. (i) Exposing pupil teachers to different kinds of community projects related to environment and sustainable development already in operation in the locality. (j) Using co-scholastic activities in other subjects as a medium of teaching ESD.

**R. Ali, B. Sinha. (2013). A study of environmental awareness and ecological behavior among female B.Ed students.**

**Objectives:** 1) To study the relationship between environmental awareness and the medium of instructions among female B.Ed students.2) To study the relationship between environmental awareness and the place of residence among female B.Ed. students.3) To study the relationship between environmental awareness and the status (i.e., deputed or fresher) among female B.Ed. students.4) To study the relationship between environmental awareness and ecological behavior among female B.Ed students

**Methodology:** Sample consists of 200 female B.Ed students (both fresher and deputed) having English and Bengali as their medium of instruction. The B.Ed. students were taken from urban and semi urbanized rural areas of Kolkata.

**Findings:** Results reveal that environment awareness of the student-teacher shows discrepancies with result to medium of instruction and place of residence. Probably the students of English medium background are more exposed to environmental degradation and have heard more about environmental problems. Results of the study reveal that B.Ed

students residing in urban places are more conscious about environmental issues due to media access and internet access

**Rajendran, M. (2014). A study on constructivist approach to environmental education among primary pre service student teachers education**

**Objectives:** 1) To study student teachers changing perspectives (conception) about environmental concepts in the constructivist classroom. 2) To study the application of constructivist teaching methods and strategies by student teachers while teaching environmental concepts in their classroom during internship program. 3) To study students changing perspectives (conception) about environmental concepts in the constructivist classroom. 4) To study the student teachers perception about constructivist approach to Environmental Education. 5) To study the school learners perception about constructivist approach to Environmental Education.

**Methodology:** This research study is framed as a qualitative case study.

All the 49 (19 male and 30 female) student teachers of first year and 50 (20 male and 30 female) student teachers of second year were purposively selected. For objective two, 11 student teachers of first year and 6 student teachers of second year were selected based on their willingness from the selected schools. The main data collecting strategies employed in this study were Focus Group Discussion, Participant observation, Semi and Unstructured interviews and Document analysis

**Findings:** 1) Study suggest that constructivist classroom experiences facilitated student teachers and learners to develop better understanding on environmental concepts .2) Study shows student teachers and learners showed willingness to change ideas in the light of evidence brought out through interaction among peers and learner and teacher in school and student teacher and researcher in the teacher education classroom.3) Another finding of this study indicates that student teachers belief on constructivist approach – a key factor to become a constructivist teacher. Smith (2000) study also indicates that

the.4) the present study is that organization of learning resources is important for successful constructivist classrooms.

## **2.4 LITERATURE ON OTHER GLOBAL ISSUES (GENDER INEQUALITY, AND TERRORISM)**

**Antoszewski, Kasielska, Jędrzejczak and Kruk-Jeromin (2007). A study on knowledge of and attitude towards trans-sexualism among college students**

**Objective:** To find out what rights students would grant to transsexual persons.

**Methodology:** The questionnaire studies were carried out in a group of 300 students. About 53.6% of the students gave correct answer to the definition of transsexualism.

**Findings: Most** of the students thought that transsexuals should have the possibility of legal change of name (67%) or undergoing hormonal therapy (70%) and surgical treatment (63.5%). Student's attitude toward legal and surgical sex change in transsexuals was positive. Female students showed greater understanding of transsexual needs than male students.

**Spinthourakis, J.A., Lempesi, G.E., Papadimitriou, I. (2009). A thematic report on Educational Policies that Address Social Inequality**

Education is a human right; an essential tool for achieving equality. Equality between men and women has been a key issue of social and political debate in the European Union (EU) for several decades and of educational policy. The Educational Policy Addressing Social Inclusion (EPASI) project is an effort to identify and analyze a sample of existing policies and implemented projects addressing educational inequality in 14 of the 27 member states. This report begins with a brief outlining of gender and sexuality definitions and concepts, moves onto present findings of the projects that deal with gender and sexuality, the educational policies followed, descriptions of projects that

represent these policies in practice and concludes with a summary, conclusions and recommendations.

The gender gap in public education has become an international issue .1)stresses that gender equality in the school matters because a Gender equality is central to achieving rights of not only access but participation, recognition and valuing of all children; b) Gender equality is an integral part of improving the quality of basic education; c) Democracy in the classroom and democratic learning is based in gender equality and quality education; and d) Inequalities exist – race, class, gender - and we need to work with them, not try to ignore them. Males have been found to be more involved in physical bullying, while females use more covert forms. Young LGBT1 people face homophobic bullying and harassment in educational settings and in particular the discrimination affects their school performance. Very often students drop out as a result of bullying. The school environment of LGBT youth is often described as a “strictly heteronormative space” that can force them to hide their feelings and sexuality. International Lesbian and Gay Association (ILGA) European wide research with regard to LGTB youth concluded that 53 percent of the respondents reported being bullied, while 43 percent found prejudice or discriminative elements in the school curriculum. Even when women follow such courses of study that lead to male dominated occupations, research has indicated that women tend to resist positioning themselves as women and different, fearing the loss of professional identity in so doing . Nonetheless, women appear to lose this advantage when they enter the labor market. Even when women do attain the same educational and employment position as men, they often find themselves having to deal with gender-specific forms of discrimination, including among other things barriers to promotion, pay differences and allocation of activities that do not match up to their educational background and training. The gender issue needs to include references to sexuality and not merely the differences between men and women. LGBT youth encounter structural levels of discrimination related to the lack of representation of homosexuality and gender identity issues in the education curriculum. These experiences have a negative impact on the capacity of young LGBT people to manage the transition from school to work and to become confident and independent adults who can contribute to society. Parallel to these issues is that of the



role played by socioeconomic factors in conjunction with teacher gender and both the direct and indirect influence that this has on In some countries, the number of women in tertiary education exceeds the number of men ,yet other gender inequalities still The concept of gender mainstreaming is usually conceived in relation or in contradiction to previous approaches concerning gender equality policy, such as “equal treatment” and “positive action”. Review underscored the need to understand the context within which the educational policies are made and implemented. All the projects mentioned a commitment to principles of gender equality and non-discrimination. This can be seen as a positive starting point for the promotion of individuals’ education and training regardless of gender and sexuality. The major issues repeatedly encountered when analyzing the gender focused projects, regardless of each country’s policy approach, are career and subject’s choices girls and boys make and fighting against stereotypes in education. Boys and girls should not be treated as homogenous groups but as individuals with initiatives focusing on the individual needs of the participants. Issues of sexuality issues need to be given equal treatment and exposure. Gender equality training initiatives should not end with training but should be followed through to appropriate placement, implementation and assessment of the trainees’ effectiveness. The state should work towards the inclusion of gender equality related courses in teacher training programs and teacher accreditation Public school curriculum reform to eradicate gender stereotyping in school textbooks and other teaching materials. The collection and dissemination of best practice in the effective implementation of sexuality and gender equality policies and strategies. Local Work with disadvantaged gender group stakeholders whether they are women, men, or LGBTs in planning, implementing, and monitoring projects identified as priorities by their communities. Link NGOs with individual groups to provide awareness raising of gender equality issues. Employ career counselors trained in issues of gender equality, gender stereotyping and antidiscrimination practices since gender differences can partially be attributed to stereotypical subject choice of women. To participate in the development and monitoring of policies and curriculum development that promotes good practice in sexual equality. Schools should develop a policy that makes specific reference to gender as a factor in inequality in the school environment. Schools should develop a policy that makes specific reference to issues of sexuality .Practitioners should

accommodate gender differences through gender-sensitive teaching by including tasks and activities that address the needs of different learning styles and preferences as well as avoiding stereotypes. Schools should develop anti-bullying initiatives involving the curriculum, targeted group and intensive individual intervention.

**Al-Ameri, M. S. (2013) Media and USF Students' Perception of Terrorism**

**Objective :** (1) Examine the influence of media on youths' (2) Explore the extent to which the different types of media are active and influential on youths' perception about terrorism. For communication professionals whose job is to communicate to the larger publics about the U.S. position on terrorism, it is essential to understand the critical role of media influence on youths' perceptions of terrorism as it evolves and adapts to meet their needs. This influence also affects society's knowledge of and cooperation with policies and strategies for facing the problem of terrorism

**Methodology :** An e-mail survey was chosen for this study because of its many advantages and the availability of a list of addresses that existed to help reach the target audience .An e-mail survey was chosen for this study because of its many advantages and the availability of a list of addresses that existed to help reach the target audience. There are many advantages to the e-mail survey, primarily because: (a) Web surveys are much cheaper to conduct; (b) Web surveys are faster; and, (c) combined with other survey modes, Web surveys yield a higher response rate than the other survey modes by themselves. The population of the study consisted of all students at USF Tampa campus. The Sample for the study is USF Tampa campus registered students

**Findings:** For communication professionals whose job is to communicate to the larger publics about the U.S. position on terrorism, it is essential to understand the critical role of media in shaping the youths' perceptions of terrorism as it evolves and adapts to meet their needs. This influence also affects society's knowledge of and cooperation with policies and strategies for facing the problem of terrorism. The SPSS statistics 21 were used to analyze data. The sample consisted of 464 students; the majority of which were

Caucasian (57.2%). The sample had slightly more females (53.8%) than males. Students in this sample tended to be single (72.7%). The students were asked about how they do consider themselves; 85 answered that they consider themselves as conservatives (19.1%), 94 conservative/Independents (21.2%), 145 students were independents (32.7%), 76 were independent/liberal (17.1%), and 44 .Students considered themselves as liberals (9.9%).

### **Zelman, A. Causes of Terrorism : Guide to Studies on Psychological Causes of Terrorism**

The results of this handful of studies are inconclusive. It only takes a little poking to see that researchers in different periods are working with different definitions of terrorism

**Findings:** The psychological causes of terrorism have been a topic of interest to researchers since the 1970s, when they began trying to create psychological profiles of terrorists. People who found, lead, or drive a group forward intellectually or strategically are likely to be different sorts than those that follow. A violent, often alcoholic father, a deeply religious mother, sexually shy, timid and passive, younger sisters toward whom the terrorist acted protectively, poor social achievement, ambivalence toward authority, defective insight, Adherence to convention, Emotional detachment from the consequences of their actions, sexual role uncertainties, magical thinking, destructiveness, low education, adherence to violent subculture norms and weapons fetishes, twenty-five percent of leftist terrorists had lost one or both parents by age fourteen, thirty-three percent reported severe conflict with parents, thirty-three percent had a history of juvenile court conviction, Suicide ranged from 18 to 28 years old, two were sons of millionaires, none were depressed, only four had histories suggestive of conduct disorder, only 1 case was suggestive of a childhood trauma, one-quarter of the group had histories of petty crime, no evidence of pathological and 'no pattern of paranoid personality disorder

## 2.5 ARTICLES ON GLOBAL EDUCATION

**Julie Andrzejewski & John Alessio. (1999) Article on Education for Global Citizenship and Social Responsibility.** speaks of reasons for neglect of global issues and importance of global issues . Teachers and educational institutions, already under pressure from multiple studies. Today world has little room for workers who cannot read, write, and compute proficiently; find and use resources; frame and solve problems with other people; and continually learn new technologies and occupations "Supporting a just and civil society" and maintaining democracy are of less than secondary importance since they are never mentioned again in the report. Global issues other than work are not addressed at all. Smith contends that the focus of school reforms on producing workers is not accidental

As the millennium nears, people all over the world are struggling with problems of a magnitude no other generation has faced. Even in the most affluent nations, millions of people suffer from hunger, homelessness, and unattended health problems. Wars, civil conflicts and invasions take the lives of millions more. Global changes in the climate are creating severe local weather conditions, destroying lives and property. Human projects continue to despoil the land, water and air Deforestation, soil erosion, destruction of habitat, extinction of species, depletion of aquifers are but a few of the many attacks on our planet. While natural resources are stripped from the earth, new "species" are genetically engineered by corporations for profitability and monopolized through complex international patent laws with few constraints for releasing them into the environment. Ancient knowledge of plants and animals, and even human genetic material, are stolen from indigenous peoples and used to generate wealth for a few while the cultures which generated the knowledge are decimated.

Enormous resources are wasted on the production of guns and weapons of destruction as social programs and education funds are drastically reduced. Projects to solve one problem have created other problems. Dams, viewed for decades as creating "clean" energy and providing irrigation, are responsible for destroying the means of subsistence

for millions of people who are forced to relocate their homes. Altering the natural flow of rivers, these dams flood millions of hectares of arable land, create conditions for water born diseases and prevent fish from spawning. Aquaculture, heralded as the answer to declining fish and shrimp populations, is despoiling the habitat of other species. Global problems necessitate going beyond national borders to embracing the concept of global citizenship. By learning how global issues affect individual and community lives, how and why decisions are made which affect the planet and life on it and, most importantly, means by which the future can be influenced, education can prepare students to become socially responsible global citizens.

Issues of global justice, environment, survival, human rights and citizenship are, for the most part, not major components of the curriculum in K-12 schools and are still given short shrift in higher education institutions. They are rarely addressed by administrators, school boards or trustees, teacher or faculty unions, state legislators, proposals for educational reform, nor even the Congress of the United States, at least in relation to education. Where global issues are addressed, they are often approached through the biased perspectives of ethnocentrism, national chauvinism, and global economic dominance. There are several possible reasons for the absence of global citizenship in the curricula of our schools. First, because many educators and policymakers in the United States don't experience or see the immediate consequences of these problems, it is possible to distance ourselves from them. They are someone else's problems. In addition, many of these issues, like global warming or aquifer depletion, are trends, not catastrophic events. They don't appear to require immediate action. Second, global issues seem immensely depressing and insurmountable, leading people to believe we can have little or no influence on them. Third, teachers have been taught to avoid "political" issues that differ from the conventionally accepted beliefs embedded in the traditional curriculum. Teachers often learn how to teach defensively to reduce controversy, student resistance, parental objections and administrative sanctions. "School knowledge," like fast food, has been overcooked and pre-packaged for immediate consumption. Divorced from "real world" knowledge relevant to broad community life experiences

Educators have not usually been taught about issues of social and global responsibility in our own school experiences, Furthermore, teachers will not learn to value and include issues of socially responsible global citizenship if teacher educators, administrators and policymakers do not. If teachers/faculty is not aware of global issues if we are not active citizens ourselves, if we do not question, investigate and critically analyze the social and economic institutions in our lives, it will be difficult for us to foster these behaviors in others. Therefore, as we continue to re-educate ourselves about issues of race, class, gender and disability, we must face the challenge of global issues on the horizon.

Defining global citizenship as knowledge and skills for social and environmental justice. About the world today, students identify almost every significant issue. They are worried about the ozone layer, global warming, AIDS, racism, sexism, the rainforests, the treatment of animals, the extinction of species, violence in homes and communities, terrorism, genocide, the proliferation of nuclear weapons, poisons in the air, food and water and more. Even though they know very little about the global economy, they have heard of it and know that it means increased competition for fewer and fewer livable wage jobs. The information they do receive, from a sound bite on television or abbreviated article in the mainstream media, is fragmented, incomplete and de-emphasized.

Students should have the right to investigate study and explore these issues as a normal part of their education. They should be able to investigate issues raised by contemporary social movements: simple living, vegetarianism, organic and natural foods, sustainable communities, livable wages, social justice and equality movements, democratizing science and technology, sustainable jobs, labor initiatives, curriculum transformation, service learning, socially responsible businesses and investments, challenges to global sweatshops, etc

**Jacobs , G. M ., Cates, K . (1999) .Article on “Global education in second language teaching.”** Where Author had proposed how global issues can be part of curriculum through second language. It points out the importance of global education. Suggests ways how can second language teacher participate in throwing light on global issues and make

them find answers to 'why' 'what' & 'how'. Innovative ways by which students can self-participate through quiz activities dramatization essay writing and self-learn. In the article they have given ideas how second language teacher can help in the awareness and holistic development.

**Hicks, D. (2009) Article on a rationale for global education.** highlighted global education as a link our life locally with the world. Curriculum and content of such an education have advantages of development of an individual and gaining an equitable society. Education in the past focused on presence of the problem not on solution to them. There is integration in food, clothes, music round the world. Youth express their concerns in crucial issues via media. To make sense to present day living it is to be merged with global living

**James M. Dennis. (2011) in his Article on Global Education Challenges and Opportunities Students are not isolated from world events.** stresses on Students need to learn that they are interconnected globally. There are, of course, many interpretations and definitions of what constitutes a "global education." Some would have us believe that by hosting students from other countries on our home campuses we are providing a global education. Others believe that sending students abroad achieves the goal. Several institutions operate campuses abroad to enhance their global objectives. Although all of these are valid strategies, global education requires more. It requires that we develop a global mindset and understand that what happens in other parts of the world affects all of us. Our students need to learn that they are interconnected and cannot isolate themselves from world events. Global education has been a focus in American higher education for several years. Students today need to have the opportunity to develop competencies that will prepare them to live in a complex world that's socially, politically, and economically interdependent. They need to understand the challenges they will face as they move into positions of leadership and acquire skills that will allow them to navigate a highly networked world. Employers tell us that today's graduates lack the knowledge and skills needed to achieve success. True global learning cannot be isolated in our curricula. Our challenge is to incorporate our local institutional values within a broader framework to

prepare students for the global challenges and opportunities ahead. Not only should we provide study abroad opportunities, but we should also promote the development of international global content in ALL classes and research. True global learning must be integrated throughout the curricula. To partially address the demands of global education, the faculties of Mc-Kendree University (Ill.) are launching a new interdisciplinary major in Global Studies. Students will study "the world as an interacting human community, including the movements of goods, the migration of people, the spread of technologies, and the unifying of cultures," explains faculty member Brian Frederking. "The faculty agree that "the greatest issues faced by humanity - climate change, economic stability, disease, terrorism, hunger, poverty, war and conflict, etc. - require a global solution.

## **2.6 IMPLICATIONS FOR PRESENT STUDY**

- i. Researcher had tried to look at literature that stressed on awareness of global issue at school and college level and found that internationally lots of efforts had been made.
- ii. Karen, Mundy, K., Manion, C. (2007).study on global education revealed that there are barriers in implementation and rarely addressed to the spectrum of specific issues such as human rights, global citizenship, problems of war and conflict, or environmental. It needs the coordinated attention, both from within and outside ministries of education. Kenneth A. Tye. (1999) found that the barrier was "lack of teacher skills, training, interest, lack of adequate teacher training lack of teacher skills, training, interest, attitude of teachers simply don't care enough about global issues. The greatest barrier was non acknowledged curriculum area, lack of resources and schools were reluctant to add a new curriculum. Placide, K. L. (2011). Found that there were significant gains with the implementation of the global awareness curriculum. Teachers who participated in the study felt that the global instruction was effective and improved the students' mastery of social studies content.
- iii. Hoody, L.L. (1996) in his study on International studies on environmental awareness revealed scarcity of environmental education studies and is poor represented in



studies . K, Tahsin. (2000) found the presence of these misconceptions among the pre-service teachers and their lack of knowledge of these common environmental issues. The presence of misconceptions can also be attributed to ineffective classroom science instruction and incomplete information from the media. The presence of one incorrect conception resulted in the development of several misconceptions among the students.

iv Most of Indian studies focused on environmental issues at school and college level. School helps in organization of various programs related to environmental issues environmental education helps in understanding of environmental issues.

v. R.Ali, B. Sinha. (2013) found that environment awareness of the student-teacher shows discrepancies with result to medium of instruction and place of residence Media and internet access generated awareness about environmental issues. K. Pandey, A.K. Kulshreshtha (2012) and (Chaudhari, P. (2004). Studied the attitude towards the environmental values and environmental values and found that secondary school students and Male and female pupil teachers of arts and science streams have equal environmental values and attitude towards sustainable Development. Pupil teachers who have positive Environmental Values possesses positive Attitude towards Sustainable Development which suggested that environmental values can nourish attitude towards sustainable development.

vi. Report by Julie Andrzejewski & John Alessio (1999) focused on social Inequalities existing in gender .Young LGBT1 people face homophobic bullying and harassment in educational settings that force them to hide their feelings and sexuality.LGBT people to manage the transition from school to work and to become confident and independent adults who can contribute to society. Practitioners should accommodate gender differences through gender-sensitive teaching. A. Spinthourakis, J.A., Lempesi, G.E., Papadimitriou, I. (2009) studied Student's attitude toward legal and surgical sex change in transsexuals was positive. Female students of college showed greater understanding of transsexual needs than male students.

**vii.** **Al-Ameri, M. S. (2013)** studied the critical role of media in shaping the youths' perceptions of terrorism as it evolves and adapts to meet their needs .

Zelman, A. studied the psychological causes of terrorism. A violent, often alcoholic father, a deeply religious mother, sexually shy, timid and passive, younger sisters toward whom the terrorist acted protectively, poor social achievement, ambivalence toward authority, defective insight, Adherence to convention, Emotional detachment from the consequences of their actions, sexual role uncertainties, magical thinking, destructiveness, low education, adherence to violent subculture norms and weapons fetishes etc .

**viii.** Articles proposed global issues can be part of curriculum, the importance of global education. Curriculum and content of such an education have advantages of development of an individual and gaining an equitable society .Second language teacher can help in the awareness and holistic development. Teacher participate in throwing light on global issues and make them find answers to 'why' 'what' & 'how' but we should also promote the development of international global content in ALL classes and research Issues of global justice, environment, survival, human rights and citizenship are, for the most part, not major components of the curriculum in K-12 schools and are still given short shrift in higher education institutions. Educators have not usually been taught about issues of social and global responsibility in our own school experiences, Furthermore, teachers will not learn to value and include issues of socially responsible global citizenship if teacher educators, administrators and policymakers do not. If teachers/faculty is not aware of global issues if we are not active citizens ourselves, if we do not question, investigate and critically analyze the social and economic institutions in our lives, it will be difficult for us to foster these behaviors in others.

From the review of literature, investigator found that work has been done internationally ,in favour of global education comprising of study on global issues. The studies were conducted at school level and proposals were found for curriculum encompassing global issues. From the study done by Kenneth A. Tye. (1999) found that the lack of teacher skills, training, interest, lack of adequate teacher training lack of teacher skills, training, interest, attitude

of teachers simply don't care enough about global issues. The greatest barrier was non acknowledged curriculum area, lack of resources and schools were reluctant to add a new curriculum, indicated that there is a need to pay attention to all the above aspects .From the review, investigator got ideas on different global issues, for the present study.

The researcher could not identify study having focus on more than one global issue Subject of the study in research reviews was mostly on environmental education awareness among pupil teachers, pre service teachers and students. Therefore investigator thought of doing research related to developing and implementing a training program on “global issues” among teacher trainees.

## **2.7 RATIONALE**

It is what that child sees, hears around himself makes him become how responsible a world citizen that child is going to be in future. Individuals are part of social structure. With the Insight of rights and wrong, rules and limitations, we are able to question. When we aim for preparing our children for the world Global competency helps them to engage them as global citizen and the even learn to cope up at local and national level issues.

Global issue prospective is about study of national and international problems and their cause and effects globally. Cross cultural thinking and concern, understanding of various existing cultures and being a part of them. It gives knowledge of social economic and political connection and their repercussions on each other .Standing up for inequality and discrimination.

There is a relationship between community and curriculum Student to be successful in the world must have courage confidence and knowledge. It should taught as a regular part of curriculum, not once or twice a year in form of an activity School curriculum and teachers have ratio to contribute in it. We need to develop an international outlook and make child feel world as his own. To actualize this, curriculum framers should go beyond boundaries of nation and weave curriculum in a global view.

Education system cannot work without teacher. Every teacher is a philosopher and architect. New challenging role for teachers have transferred more objectives to their job. Catering to specific need of growing education system specialized training .To actualize this Countries kike Australia Canada UK, USA have proposed separate curriculum for students at various levels. New Zealand has proposed for a separate inter disciplinary elective or compulsory course to be introduced on global education for Bachelors and masters program in education

It was found that there were significant gains with the implementation of the global awareness curriculum. Teachers who participated in the study felt that the global instruction was effective and improved the students' mastery of social studies content. (Placide, K. L. (2011). According to Karen, Mundy, K., Manion, C. (2007) strongly held view that coverage of global education themes rests with individual teachers. Hoody, L.L. (1996) in his study founded that International studies on environmental awareness revealed scarcity of Environmental education studies and is poor represented in studies. The barrier identified was lack of teacher skills, training, interest, attitude of teachers simply don't care enough about global issues (Kenneth A. Tye. (1999). Study done by K, Tahsin in (2000) revealed the presence of misconceptions among the pre-service teachers and their lack of knowledge of these common environmental issues and many misconceptions among the students. Finding of K. Pandey, A.K. Kulshreshtha (2012) said, developing awareness and bringing attitudinal change of environmental degradation among pupil teachers, the general and problems at local, national and international level Sensitizing and Convincing pupil teacher that it is an integral part of their duty to organize environment related effective curricular and co curricular.

Practitioners should accommodate gender differences through gender-sensitive teaching A Spinthourakis, J.A., Lempesi, G.E., Papadimitriou, I. (2009) . Media influence also affects society's knowledge of and cooperation with policies and strategies for facing the problem of terrorism. Al-Ameri, M. S. (2013). With reference to article written by Julie Andrzejewski & John Alessio.(1999) Educators have not usually been taught about issues of social and global responsibility in our own school experiences If teachers/faculty is not

aware of global issues if we are not active citizens ourselves. Therefore, as we continue to re-educate ourselves about issues of race, class, gender and disability, we must face the challenge of global issues on the horizon.

As a student teacher, investigator noticed that students were interested in learning about worldwide happening .As a science teacher when researcher used to relate many concerning issues to students. They willingly participated in discussion and came up with solutions. Some of them implemented the solutions at their homes and even made their parents aware of their cause and effects.

In the present study investigator had made an attempt to capture other issues along with environmental concerning issue. Awareness on other issues prevalent in society is made part of the study. Investigator did not come across any study during the review of literature which involved awareness on terrorism, gender in equality and global warming together .Study also focuses on view of teacher educator views on making global issues part of teacher education program, which has not been identified by the researcher.

Academicians irrespective of our academic discipline will be able to relate topics on global issues and will be able to sensitize students, if provided with understanding on issues with matter to our lives in parts and world as whole and developing as sense of duty to educate students on global concerns apart course content.

Present study will help Colleges running teacher training programs in making a fair decision for making global issues part of their curriculum. In near future if global issues are made part of teacher education programs almost all the students- teachers will have to study the core issues, and will level up their knowledge without reference to their subject streams. Teacher trainees of Navrachana University academic year 2014-15 are chosen as sample as present curriculum of Navrachana University do not hold topics on global issues. It has more accommodation for changes and modifications in curriculum.

## 2.8 CONCLUSION

The review of literature reveals that many studies have been conducted on environmental awareness in India and abroad. From major reviews investigator found that internationally there has been researches are done to make global issues a part of curriculum at school and college level. Investigator also founded that one of the barrier in global education is lack of teacher's awareness on global issues.

So, the investigator found that awareness of teachers on global issues is very important to educate students on the same.

# **CHAPTER 3**

## **METHODOLOGY**

## **CHAPTER 3**

### **METHODOLOGY**

#### **3.0 INTRODUCTION**

Research methodology is a way to systematically solve the research problem. It may be understood as science of studying how research is done scientifically. In this chapter the researcher is trying to list the steps adopted to carry out the research.

#### **3.1 RESEARCH QUESTIONS**

- Is knowledge on global issues a matter of concern to present educators?
- Do the teachers understand what global issues are?
- If global issues are the part of curriculum, what impact will it have on the awareness levels?
- What is the opinion of the educators on making global education a part of curriculum?

#### **3.2 TITLE OF THE STUDY**

Developing and implementing a training program on “Global Issues” among teacher trainees at Navrachana University of Vadodara city

#### **3.3 OBJECTIVES OF THE STUDY**

- 1 To study the awareness of teacher trainees on global issues
- 2 To develop and implement a training program on global issues to the teacher trainees
- 3 To study the impact of training program on global education on teacher trainees
- 4 To study the opinion of teacher educators on making global education a part of B.E d curriculum.



### 3.4 HYPOTHESIS

There will be no significant difference in the mean achievement score of pre test and post test of teacher trainees. The following hypothesis is formed which will be tested at 0.05 level of significance.

### 3.5 DESIGN OF STUDY

The study was a single group pre - test and post - test experimental design. The design of the study is shown graphically as follow.

$$O1 \quad X \quad O2$$

Where,  $O1$  = Pre test,  $O2$  = Post test and  $X$  = Treatment

As per design of the study , 97 teacher trainees were selected to be tested with the prepared achievement test on global issues before experimentation. A training program was developed as a part of study and sample were taught through a training program. They were tested again through similar achievement test.

### 3.6 DELIMITATIONS

- Study is delimited to topics related to environmental issue, socio- economic-cultural- political issue and human right issue.
- The training program was implemented at Navrachana University of Vadodara city on teacher trainees of B.Ed program of academic year 2014-15 only.
- Survey of the opinion of teacher educators is limited to the colleges in the city area.

### 3.7 OPERATIONAL DEFINITION OF TERMS

**Awareness:** Understanding of the cause and effect.

**Global issues:** Global issues are those problems that affect the whole of the planet, and potentially of all the people who live on it. Global issues are trans-national, or trans-boundary.

**Global Education:** Global education involves learning about global issues, the awareness on the cause and effects of global issues and their preventions

**Teacher trainee:** A qualified student who aspires to become a teacher and under goes a teacher training program.

**Impact:** Impact refers to the difference, which training program has made to the initial awareness level of the teacher trainees. Increase in the score from pre test to post test is termed as impact for the present study.

**Training program:** Training program refers to the teaching learning material developed by the researcher for teaching on the aspects of global issues.

### **3.8 POPULATION OF THE STUDY**

A research population is generally a large collection of individuals for whom the study can be made applicable or generalized in specific areas and it is for the benefit of the population that any study is carried out in general

For objective 1, 2 and 3 Population group includes all the teachers' trainee undergoing B.E d program in year 2014-15 in Gujarat.

For objective 4 Population group includes all the teacher educators of the Gujarat.

### **3.9 SAMPLE**

For objective 1, 2 & 3 sample comprises of 97 Teacher trainees of Navrachana University (2014-15) and for objective 4 samples comprises of 40 Teacher educators from Maharaja

Sayaji Rao University, Navrachana University, S.D. Patel College and Akshar Mahila College.

### **3.10 SAMPLING TECHNIQUE**

In present study the purposive sampling technique was used by the researcher for objective one and three and four

The criterion for the selection of the sample

- a) The willingness of the college administration to make teacher trainee available for the study
- b) The vision of the college emphasized on the development of the teacher trainee
- c) Autonomy of the teaching staff to make innovative curriculum a frequency at which had done it.
- d) All the teacher training institutions were part of the present study.

### **3.11 TOOLS AND TECHNIQUE**

**Achievement test:** An Achievement test in form of questionnaire was prepared to know the initial awareness levels of the sample. A questionnaire was prepared based on the training program. Three separate questionnaires prepared on three different issues. Maximum marks for each questionnaire was 20 marks. Questions were in form of multiple choice questions and short answers. Total time given for each questionnaire was 30 minutes. Same achievement test was used as post test

**Opinionnaire:** Opinionnaire was made to get the view of sample for the fulfillment of the objective four. Prepared Opinionnaire consisted of nine closed ended questions.

### **3.12 DEVELOPMENT OF THE TRAINING PROGRAM**

Development of a training program required systematic process to be followed .In the present study, certain steps were followed to develop the training program .These steps are elaborated in next section.

#### **3.12.1 STEPS INVOLVED IN THE DEVELOPMENT OF TRAINING PROGRAM**

The first step of the process is to select the content, to analyze the content and arrange it in a logical sequence. To develop intervention package a good amount of reading was done on global issues including case studies. This was followed by the formation of the objectives to be achieved through the training package. Then finally three issues were short listed which were to be the part of the training program. Pre test was administered before the on the training program. A post test was administered to study the impact of training program.

#### **3.12.2 SELECTION OF THE CONTENT**

The content was selected and analyzed in the following way. The content selection was done for the issues like terrorism and gender inequality (for transgender) which are not discussed in the course content at school level. One environmental issue was taken to know the awareness level on environmental education.

#### **3.12.3 FORMULATION OF THE INSTRUCTIONAL OBJECTIVES**

After the content was identified and arranged in sequential order, instructional objectives were fixed.

- 1) The teacher trainee will be able to understand cause of global issues.
- 2) The teacher trainee will be able to understand the effects of global issues.

- 3) The teacher trainee will be able to understand psychological perspective behind global issues.
- 4) The teacher trainee will be sensitized on the global issues and will be able to make others aware of global issues.

#### **3.12.4 VALIDATION OF THE EXPERTS**

The entire training package was shown to three experts in field of education for suggestions on the contents validity and appropriateness of the sequence. The necessary suggestions given by experts were incooperated in the training program.

#### **3.13 THE PROCESS OF DATA COLLECTION**

The required data is collected in the following manner the process includes different stages. The nature of data is quantitative. It is analyzed using the co related t-test, figures tables to explain the change in awareness levels of students on the global issues from pre test and post test.

The present study has two major aspects, one was development of training program and the other was to study the effectiveness of the developed training program. Development of the training program has already been discussed .For objective 1 and 3, to study the awareness of teacher trainee on global issues the impact of teaching program on global education on teacher trainees achievement test was administered twice as pre test and post test on the selected sample. Both pre test and post test were similar in pattern and weightage of marks.

Before implementing the training program, the investigator administered pre test. The investigator distributed the questions papers to the teacher trainees .The investigator then gave detailed instruction regarding how to answer the questions. The teacher trainees took the test and also got their doubt clarified. The investigator collector the answer papers back when the teacher trainees had completed the test. Average time taken by the

teacher trainees to answer the test was 20 minutes. The collected answer papers were evaluated to obtain pre test scores.

The investigator implemented the developed training program one week after the pre test was conducted. The sessions of implementation has been described below

The implementation was done for a weeks. Total numbers of session were 3. Duration of each session was one and a half hour. List of sessions is given as in table number one.

**Table1:** List of the sessions conducted

SESSIONS	DATE OF SESSIONS CONDUCTED	THEME OF SESSION	TIME REQUIRED
Session1	09/02/2015	Terrorism	90 minutes
Session 2	12/2/2015	Gender inequality	90 minutes
Session 3	19/2/2015	Global warming	90 minutes

The administration of post test using same questionnaire, after all the sessions were over. Time gap is one week was maintained between intervention and post test.

For the objective 4 - To study the opinion of teacher educators on making global education a part of B.E d curriculum, investigator had constructed opinionnaire for teacher educators.

### **3.14 CHALLENGES FACED BY THE RESEARCHER**

- It was evident to the researcher that the teacher trainees at Navracahna University were loaded with assignments.
- The session was based on group discussion where participation was needed.
- Students were requested to give their 100% participation which they did to large extent.
- One of the major problem which researcher faced was of attendance.

- The entire 97 teacher trainee did not attend all the intervention session due to the different outdoor assignments.
- Making the session interesting and participatory was another challenge for the researcher.
- Mutual agreeable time slot for the intervention session.

### **3.15 DATA ANALYSIS**

Collected data were analyzed through appropriate statistical techniques. To determine the effectiveness of developed instructional package Mean, Standard Deviation and Co-related t-test were computed .to study the opinion of the teacher educators, frequency and percentage were computed for closed ended items.

### **3.16 CONCLUSION**

The chapter three explains the methodology that was adopted by the researcher, the details of the prepared training program is given in chapter number four, the next chapter.

# **CHAPTER 4**

## **TRAINING PROGRAM**



## **CHAPTER 4**

### **TRAINING PROGRAM**

#### **4.0 INTRODUCTION**

This chapter is about the educational intervention package. Intervention package is on three different topics of one and a half hour each, with their own objectives.

#### **4.1 THE TRAINING PROGRAM**

##### **SESSION 1**

##### **TERRORISM**

**Time required: 90 minutes**

##### **Objective of the training program**

1. To develop a understanding towards terrorism.
2. To provide knowledge about various terrorist groups their functioning and aims.
3. To provide understanding on psychological perspective of terrorists.
4. To develop insight for self and competence to make others aware of terrorism and Psychological perspective of terrorists.

##### **Development of training program**

Researcher took support of the media to prepare training program. Sub topics for discussion along with the content were listed and power point presentation was made on the same.

##### **Procedure**

Session was conducted involving a group discussion supported by a power point presentation connected to the topic and followed by a lecture.

**Topics of discussion were:**

1. What all counts under terrorism and history of terrorism
2. Causes of terrorism
3. Various terrorism groups of the world and their aim and source of finances
4. What turns people in to terrorists (on basis of studied conducted).
5. Relation between poverty and terrorism & education and terrorism

## **SESSION 2**

### **GENDER INEQUALITY**

**Time required: 90 minutes**

#### **Objective of the training program**

1. To develop new understanding towards gender equality focusing mainly on transgender
2. To provide a understanding about transgender and inequality faced by them.
3. To provide a understanding of causes and inequality faced by man and women in society
4. To develop insight for self and competence to sensitize others on gender inequality

#### **Development of training program**

Researcher took support of the media to prepare training program. Sub topics for discussion along with the content were listed and power point presentation was made on the same

#### **Procedure**

Session was conducted involving a group discussion supported by a power point presentation connected to the topic and followed by a lecture.

#### **Topics of discussion were:**

1. What is gender in equality?
2. Who are transgender people and variety if issues faced by them.
3. What can be done to bring equality to them?
4. In equality issues faced by men

5. Inequality issues face by women
6. Possible solutions to the problem of inequality
7. Relation between population growth and inequality

## **SESSION 3**

### **GLOBAL WARMING**

**Time required: 90 minutes**

#### **Objective of the training program**

1. To develop new understanding towards global warming.
2. To develop understanding and identify the causes of global warming.
3. To develop insight and competence to make other aware of causes of global warming.

#### **Development of training program**

Researcher took support of the media to prepare training program. Sub topics for discussion along with the content were listed and power point presentation was made on the same.

#### **Procedure**

Session was conducted involving a group discussion supported by a power point presentation in connection with the topic and followed by a lecture. Videos on global warming were shown. Lastly, a quiz was conducted to revise the main points of the session.

#### **Topics of discussion were:**

1. What is global warming?
2. Green house gasses and their sources and effect.
3. Ozone layer depletion and its causes (chemical reactions in stratosphere)

4. Negative effects of global warming (increase in temperature, change in weather, disruptions in rainfall pattern, melting of glaciers, ozone layer depletion, effects on human and agriculture).
5. Ways to overcome global warming.
6. As a student teacher how will they relate global warming to day to day experiences of the students.

## **4.2 Conclusion**

In three different sessions the investigator attempted to impart the knowledge on the causes and effects of global issues and tried to sensitize the teacher trainee on the seriousness of the global issues. The next chapter explains the process of data analysis and the interpretation of data that was collected before and after the training program was implemented on the sample.

# **CHAPTER 5**

**DATA ANALYSIS**

**AND**

**INTERPERATION**

## **CHAPTER 5**

### **DATA ANALYSIS OF INTERPRETATION**

#### **5.0 INTRODUCTION**

In the data analysis phase researcher has attempted to transform the data collected in to credible evidence. The present study was under taken with the objective of developing and implementing a training program on global issues, hence froth studying the advancement in the knowledge of the sample and collecting views of teacher educator for making global issues part of B.Ed curriculum. Training program has been described in chapter four and the process of its implementation and collection of data is explained in chapter three

#### **5.1 THE OBJECTIVES OF THE STUDY**

1. To study the awareness of teacher trainee on global issues
2. To develop and implement a training program on global issues to the teacher trainee
3. To study the impact of training program on global education on teacher trainee
4. To study the opinion of teacher educators on making global education a part of B.E d Curriculum

#### **5.2 ANALYSAIS AND INTREPRETATION OF THE COLLECTED DATA WITH RESPECT TO EFFECTIVNESS OF THE TRAINING PROGRAM BASED ON PRE TEST AND POST TEST RESULTS**

This part deals with the analysis and interpretation of data collected with reference to the objective 3, to study the impact of teaching program on global education on teacher trainees.



In order to study the effectiveness of the developed training program, the investigator had formulated a null hypothesis that "There will be no significant difference in the mean achievement score of pre test and post test of teacher trainee at 0.05 level of significant".

The scores obtained on the achievement test were considered for testing the null hypothesis formulated by the investigator. The data were analysis using inferential statistics for all the three pre tests and post tests. A graphic and tabular presentation of pre test and post test scores of Terrorism, Gender Inequality and Global Warming are presented.

**Table 2: Achievement scores of pre test and post test of teacher trainees for Terrorism**

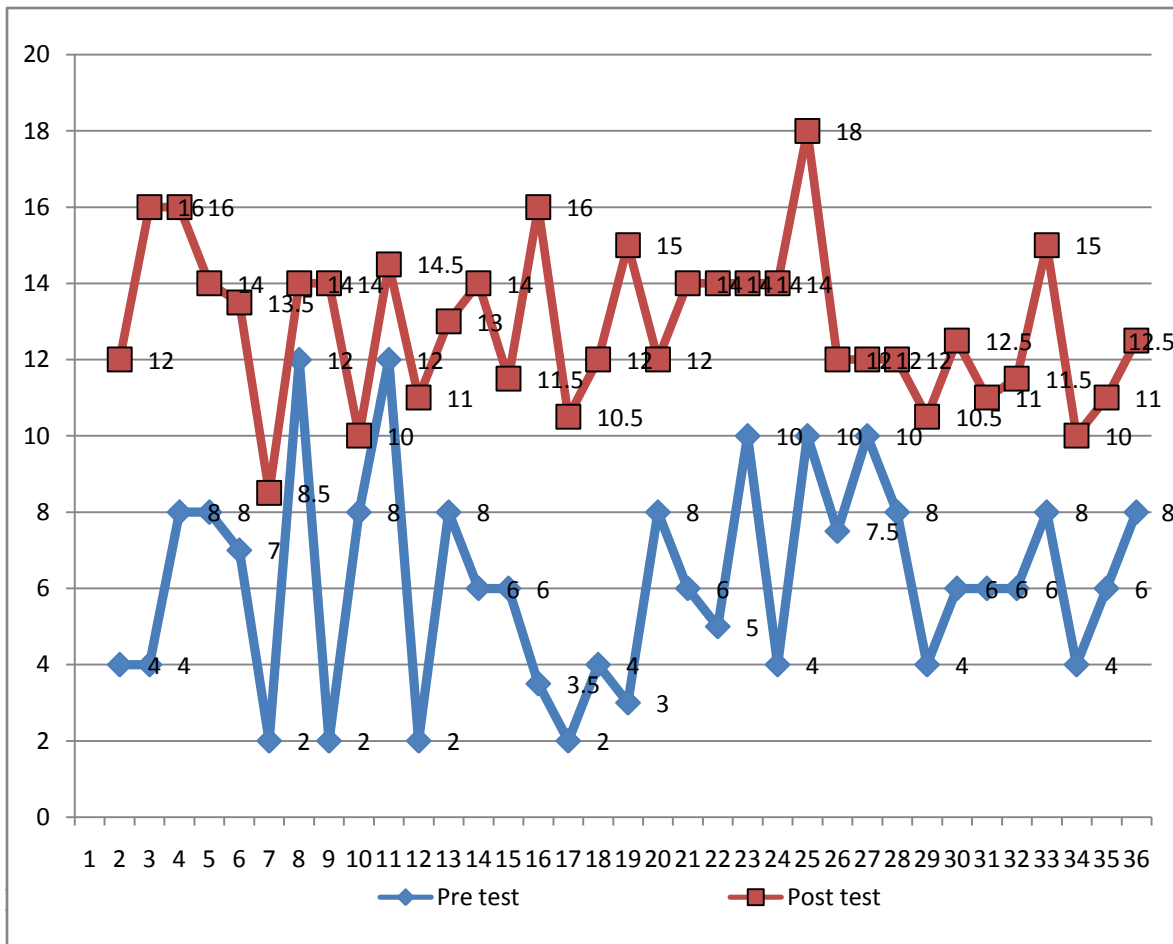
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
<b>Sample no.</b>	<b>Pre test X</b>	<b>Post test Y</b>	<b>Mean- X=x</b>	<b>Mean- Y=y</b>	<b>xy</b>	<b>x<sup>2</sup></b>	<b>y<sup>2</sup></b>
1	4	12	2.22857	0.9	2.005714	4.966531	0.81
2	4	16	2.22857	-3.1	-6.908571	4.966531	9.61
3	8	16	-1.77142	-3.1	5.4914286	3.137959	9.61
4	8	14	-1.77142	-1.1	1.9485714	3.137959	1.21
5	7	13.5	-0.77142	-0.6	0.4628571	0.595102	0.36
6	2	8.5	4.228571	4.4	18.605714	17.88082	19.36
7	12	14	-5.77142	-1.1	6.3485714	33.30939	1.21
8	2	14	4.228571	-1.1	-4.651429	17.88082	1.21
9	8	10	-1.77142	2.9	-5.137143	3.137959	8.41
10	12	14.5	-5.77142	-1.6	9.2342857	33.30939	2.56
11	2	11	4.228571	1.9	8.0342857	17.88082	3.61
12	8	13	-1.77142	-0.1	0.1771429	3.137959	0.01
13	6	14	0.22857	-1.1	-0.251429	0.052245	1.21
14	6	11.5	0.22857	1.4	0.32	0.052245	1.96
15	3.5	16	2.72857	-3.1	-8.458571	7.445102	9.61

16	2	10.5	4.22857	2.4	10.148571	17.88082	5.76
17	4	12	2.22857	0.9	2.0057143	4.966531	0.81
18	3	15	3.22857	-2.1	-6.78	10.42367	4.41
19	8	12	-1.77142	0.9	-1.594286	3.137959	0.81
20	6	14	0.22857	-1.1	-0.251429	0.052245	1.21
21	5	14	1.22857	-1.1	-1.351429	1.509388	1.21
22	10	14	-3.7714	-1.1	4.1485714	14.22367	1.21
23	4	14	2.22857	-1.1	-2.451429	4.966531	1.21
24	10	18	-3.7714	-5.1	19.234286	14.22367	26.01
25	7.5	12	-1.2714	0.9	-1.144286	1.616531	0.81
26	10	12	-3.7714	0.9	-3.394286	14.22367	0.81
27	8	12	-1.77142	0.9	-1.594286	3.137959	0.81
28	4	10.5	2.22857	2.4	5.3485714	4.966531	5.76
29	6	12.5	0.22857	0.4	0.0914286	0.052245	0.16
30	6	11	0.22857	1.9	0.4342857	0.052245	3.61
31	6	11.5	0.22857	1.4	0.32	0.052245	1.96
32	8	15	-1.7714	-2.1	3.72	3.137959	4.41
33	4	10	2.22857	2.9	6.4628571	4.966531	8.41
34	6	11	0.22857	1.9	0.4342857	0.052245	3.61
35	8	12.5	-1.7714	0.4	-0.708571	3.137959	0.16
					$\sum xy$	$\sum x^2$	$\sum y^2$
					60.3	257.67143	143.9

Table 2 shows the achievement scores of the teacher trainees in pre test and the post test.

Sample of 97 teacher trainee were selected for the study. Out of which 52 teacher trainees took part in the pre-test and 35 teacher trainees took part in the post test. Hence, a comparison of pre and post test scores of only 35 teacher trainee was analyzed.

**Comparison of pre test and post test scores on Terrorism**



**Figure 1: A graphical presentation of achievement test Comparison of pre test and post test scores on Terrorism**

**Table 3: Comparison of percentage of Pre test and Post test scores of Terrorism based on percentage**

Column 1	Column 2	Column 3	Column 4	Column 5
Sr. No.	Total number of students	Percentage of marks	Pre test Percentage (Terrorism)	Post test Percentage (Terrorism)
1.	35	40 % and above	37.14%	100%
		50% and above	14.28%	100%
		60% and above	5.71%	68.57%
		70% and above	Nil	42.85%
		80% and above	Nil	11.42%
		90 % and above	Nil	2.85%

Figure 1 and the table 3 presents comparison of pre test and post test scores of the sample based on percentage of marks. It was found that in pre test 37.14% of the sample score 40% and above marks. 14.28% of sample scored 50% and above marks. 5.71% of the sample scored 60% and above marks. None of the sample scored 70% and above marks in Terrorism

In post test 100% of the sample scored 50% and above marks. Out of that 68.57% of sample scored 60% and above marks. 42.57% of the sample scored 70% and above mark. 11.42% of the sample scored 80% and above marks. 2.85% of the sample scored above 90% and above marks in Terrorism

### 5.3 CALCULATION OF DATA

The mean of pre test and post test scores of the selected sample was calculated by taking the formula. The scores of pre test and post test presented in table 2 was used to calculate mean of pre test and post test further

**Table 4: Calculation of mean of pre test and post Test**

Pre test	Post test
MEAN I $\Sigma X/N$ $=218/35$ M1=6.2285714	MEAN 2 $\Sigma Y/N$ $=451.5/35$ M2=12.9

The mean of the pre test was calculated by summing of the total scores of pre test (218) and dividing by n (35). And the answer was 6.2285714. The mean of the post test was calculated by summing of the total scores of post test (451.5) and dividing by n (35). And the answer was 12.9. From the above mean scores of pre test and post test, it was found that the scores of the teacher trainees increased in post test.

**Table 5: Calculation of standard deviation**

Pre test	Post test
SD1= $\sqrt{\Sigma x^2/n}$ $=\sqrt{257.67143/35}$ $=\sqrt{7.362}$ SD1 =2.713	SD2= $\sqrt{\Sigma y^2/n}$ $=\sqrt{143.9/35}$ $=\sqrt{4.1}$ SD2 =2.0248

The standard deviation was calculated on the basis of the deviation of pre test and post test from the respective mean. The standard deviation of pre test was calculated dividing total score of  $x^2(257.67143)$  by n (35) and after the square root the answer was 2.713

The standard deviation of post test was calculated by dividing total score of  $y^2(143.9)$  by  $n(35)$  and after the square root the answer was 2.0248

**Table 6: Calculation of correlation of pre test and post test**

Correlation
$r = \frac{\sum xy}{\sqrt{\sum x^2 * \sum y^2}}$ $= \frac{60.3}{\sqrt{257.6714286 * 143.9}}$ $r = 0.31315$

Calculation of Pearson correlation was done by using the formula, in which  $\sum xy$  was divided by the square root of  $\sqrt{\sum x^2 * \sum y^2}$ . The value of  $\sum x y$  (60.3) and then answer was divided by the  $\sqrt{\sum x^2 * \sum y^2}$  ( $\sqrt{6714286 * 143.9}$ ). and final answer was 0.31315

From the above data, it has been found, that there is a positive correlation between scores of pre test and post test of teacher trainees.

**Table 7: Calculation of standard error of mean of pre test and post test**

Pre test	Post test
$SEM1 = \frac{SD1}{\sqrt{N}}$ $= \frac{2.713}{5.9160797}$ $SEM1 = 0.458581$	$SEM2 = \frac{SD2}{\sqrt{N}}$ $= \frac{2.0248}{5.9160797}$ $SEM2 = 0.342253672$

Standard error of mean of pre test was calculated using formula  $\sigma_1/\sqrt{N}$ . Standard deviation (2.713) was divided by square root of the n(5.9160797) and the answer was 0.458581.

Standard error of mean of post test was calculated using formula  $\sigma_2/\sqrt{N}$ . Standard deviation (2.0248) was divided by square root of the n (5.9160797) and the answer was 0.342253672.

**Table 8: Calculation of standard error of deviation of mean**

Standard error of deviation of mean
$\begin{aligned} \text{SEDM} &= \sqrt{\text{SEM}_1^2 + \text{SEM}_2^2 - 2r \text{SEM}_1 * \text{SEM}_2} \\ &= \sqrt{(0.458581)^2 + (0.342253672)^2 - 2 * 0.31315 * 0.458581 * 0.342253672} \\ &= \sqrt{0.3274338 - 0.0982984} \\ &= \sqrt{0.2291355} \\ \text{SEDM} &= 0.4786808 \end{aligned}$

Standard error of Mean (SEDM) is calculated using the formula  $\sqrt{\text{SEM}_1^2 + \text{SEM}_2^2 - 2r \text{SEM}_1 * \text{SEM}_2}$ . The value of  $\text{SEM}_1^2$  (0.458581)<sup>2</sup> was added to  $\text{SEM}_2^2$  (0.342253672)<sup>2</sup> and the answer was 0.3274338.

2 was multiplied with the value of r(0.31315)\*  $\text{SEM}_1$ (0.458581)\*  $\text{SEM}_2$  (0.3422536) and answer was 0.0982984 and after getting the square root the answer of SEDM =0.4786808.

**Table 9: Calculation of the correlated t value**

Correlation of t- value
$t = \frac{M1 - M2}{\sigma D}$ $= - 6.671429 / 0.4786808$ $t = -13.93711$

Calculation of t value was done by inserting formula and the answer -13.93711

**Table10: Degree of freedom**

Degree of freedom
$n - 1$ $35 - 1 = 34$

The calculation of the degree of freedom was done using the formula  $n - 1$ . The value of  $n$  was 35 and 1 was subtracted and the answer of  $df$  was 34

**Table 11: Below shows Mean, SD, r, "t" value, df and level of significance**

Mean		SD		R	"t" value	df	Level of significant
Pre test	Post test	Pre test	Post test				
6.228571	12.9	2.713	2.0248	0.31315	13.93711	34	0.05

It was found that mean of pre test and post test achievement scores of teacher trainees on global issues were 6.228571 and 12.9 respectively, that mean achievement scores of the students in the post differed significantly from that of pre test, with standard deviation of 2.713 and 2.0248 respectively. The calculated "t" value is -13.93711



It was found. It showed there was increase in the mean of the achievement scores of the student after the implementation of the training program.

The above mentioned findings were further confirmed by the “t” value for 34 degrees of freedom. The calculated “t” value 13.93711 was higher than table value of t that was found to be 1.697 at 0.05 level of significant. The null hypothesis stating that, there will be no significant difference in the achievement test of global issues in the pre test and post test scores of the teacher trainee is rejected. The post test scores are significantly higher, so significant gains in terms of achievement through training program.

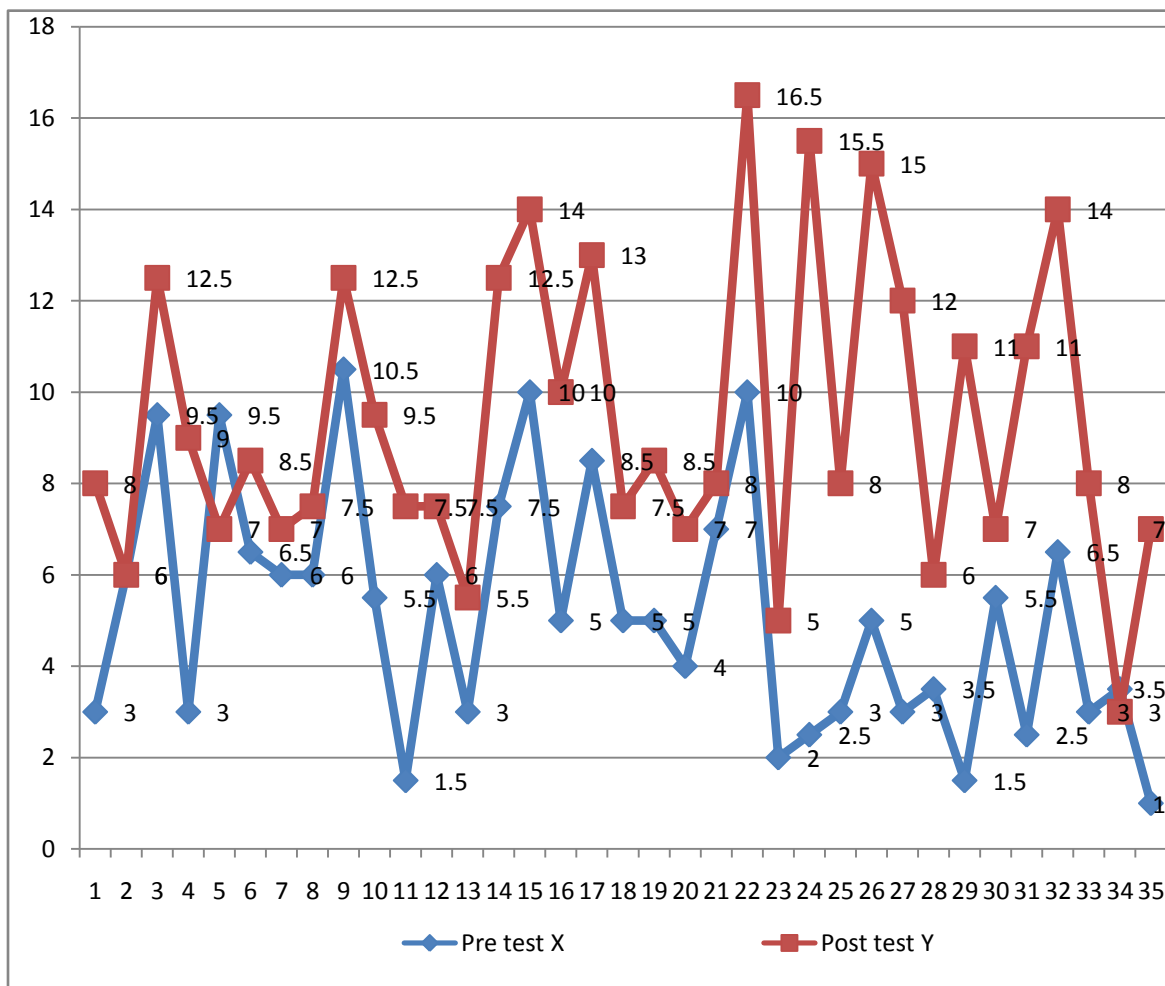
**Table12: Achievement scores of pre test and post test of teacher trainees for Gender Inequality**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Sample no.	Pre test X	Post test Y	Mean- Y=x	Mean – Y=y	Xy	x <sup>2</sup>	y <sup>2</sup>
1	3	8	2.157	1.36	2.92704	4.65264	1.84144
2	6	6	-0.843	3.36	-2.82995	0.71064	11.2694
3	9.5	12.5	-4.343	-3.1	13.6500	18.8616	9.87844
4	3	9	2.157	0.36	0.77004	4.65264	0.12744
5	9.5	7	-4.343	2.36	-10.2364	18.8616	5.55544
6	6.5	8.5	-1.343	0.86	-1.15095	1.80364	0.73444
7	6	7	-0.843	2.36	-1.9869	0.71064	5.55544
8	6	7.5	-0.843	1.86	-1.5654	0.71064	3.44844
9	10.5	12.5	-5.343	-3.1	16.7930	28.5476	9.87844
10	5.5	9.5	-0.343	-0.1	0.0490	0.11764	0.02044
11	1.5	7.5	3.657	1.86	6.7910	13.3736	3.44844
12	6	7.5	-0.843	1.86	-1.5654	0.71064	3.44844
13	3	5.5	2.157	3.86	8.3195	4.65264	14.8764

14	7.5	12.5	-2.343	-3.1	7.3640	5.48964	9.87844
15	10	14	-4.843	-4.6	22.486	23.4546	21.5574
16	5	10	0.157	-0.6	-0.1009	0.02464	0.41344
17	8.5	13	-3.343	-3.6	12.1785	11.1756	13.2714
18	5	7.5	0.157	1.86	0.2915	0.02464	3.44844
19	5	8.5	0.157	0.86	0.1345	0.02464	0.73444
20	4	7	1.157	2.36	2.7270	1.33864	5.55544
21	7	8	-1.843	1.36	-2.5009	3.39664	1.84144
22	10	16.5	-4.843	-7.1	34.5935	23.4546	51.0224
23	2	5	3.157	4.36	13.7550	9.96664	18.9834
24	2.5	15.5	2.657	-6.1	-16.321	7.05964	37.7364
25	3	8	2.157	1.36	2.9270	4.65264	1.84144
26	5	15	0.157	-5.6	-0.8859	0.02464	31.843
27	3	12	2.157	-2.6	-5.7009	4.65264	6.98544
28	3.5	6	1.657	3.36	5.5625	2.74564	11.2694
29	1.5	11	3.657	-1.6	-6.0084	13.3736	2.69944
30	5.5	7	-0.343	2.36	-0.8084	0.11764	5.55544
31	2.5	11	2.657	-1.6	-4.3654	7.05964	2.69944
32	6.5	14	-1.343	-4.6	6.2355	1.80364	21.5574
33	3	8	2.157	1.36	2.9270	4.65264	1.84144
34	3.5	3	1.657	6.36	10.5335	2.74564	40.4114
35	1	7	4.157	2.36	9.7980	17.2806	5.55544
					$\sum xy$	$\sum x^2$	$\sum y^2$
					124.786	242.88	366.79

The Present table 12 gives details of the sample scores of pre test and post test Sample of 97 teacher trainees was selected for the study. Out of which 52 teacher trainees took part in the pre-test and 35 teacher trainees took part in the post test. Hence, a comparison of pre and post test scores of only 35 teacher trainees was taken for the analysis.

### Comparison of pre test and post test scores on Gender Inequality



**Figure 2 : A graphical presentation of achievement test Comparison of pre test and post test scores on Gender Inequality**

**Table 13: Comparison of percentage of Pre test and Post test scores of Gender Equality**

Column 1	Column 2	Column 3	Column 4	Column 5
Sr. No.	Total number of students	Percentage of marks	Pre test Percentage (Gender inequality)	Post test Percentage (Gender inequality)
1.	35	40 % and above	17.14%	60%
		50% and above	8.57%	37.14%
		60% and Above	Nil	28.57%
		70% and above	Nil	14.28%
		80% and above	Nil	2.85%
		90 % and Above	Nil	Nil

The table number 13 presents comparison of pre test and post test scores of the sample based on percentage of marks. In pre test 17.14% of the sample score 40% and above marks. 8.57 % of sample scored 50% and above marks. None of the sample scored 60% and above marks in Gender Inequality.

In post test after training program 60 % of the sample scored 40% and above marks. 37.14 % of sample scored 50% and above marks. 28.57 % of the sample scored 60% and above mark. s 14.28 % of the sample scored 70% and above marks. 2.85% of the sample scored above 80% and above marks in Gender Inequality.

**Table 14: Calculation of mean of pre test and post test**

Pre test	Post test
MEAN I	MEAN 2
$\Sigma X/N$	$\Sigma Y/N$
=180.5/35	=327.5/35
=5.1571	=9.3571

The mean of the pre test was calculated by summing of the total scores of pre test (180.5) and Dividing by n (35). And the answer was 5.1571. The mean of the post test was calculated by Summing of the total scores of post test (327.5) and dividing by n (35). And the answer was 9.3571. From the above mean scores of pre test and post test, it was found that the scores increased in post test.

**Table 15: Calculation of Standard Deviation**

Pre test	Post test
SD1= $\sqrt{\Sigma x^2/n}$	SD2= $\sqrt{\Sigma y^2/n}$
= $\sqrt{242.88572/35}$	= $\sqrt{366.79/35}$
= $\sqrt{6.9395919}$	= $\sqrt{10.47959186}$
SD1 =2.6342	SD2 =3.2372

The standard deviation was calculated on the basis of the deviation of pre test and post test from the respective mean. The standard deviation of pre test was calculated by total score of  $x^2(242.88572)$  was divided by n(35) and after the square root the answer was 2.6342.

The standard deviation of post test was calculated by total score of  $y^2(366.79)$  was divided by

n(35) and after the square root the answer was 3.2372

**Table16: Calculation of correlation of pre test and post test**

Correlation
$r = \frac{\sum xy}{\sqrt{\sum x^2 * \sum y^2}}$ $= \frac{124.786}{\sqrt{242.885715 * 366.7857}}$ $r = 0.4180784$

Calculation of Pearson correlation was done by using the formula in which  $\sum xy$  was divided by the square root of  $\sqrt{\sum x^2 * \sum y^2}$ . The value of  $\sum x y$  (124.786) and then answer was divided by the  $\sqrt{\sum x^2 * \sum y^2}$  ( $\sqrt{242.885715 * 366.7857}$ ). and final answer was 0.4180784.

From the above data , it has been found there is a positive correlation between scores of pre test and post test of teacher trainees

**Table17: Calculation of standard error of mean of pre test and post test**

Pre test	Post test
$SEM1 = \frac{SD1}{\sqrt{N}}$ $= \frac{2.6342}{35}$ $SEM1 = 0.445261074$	$SEM2 = \frac{SD2}{\sqrt{N}}$ $= \frac{3.2372}{35}$ $SEM2 = 0.54718667$

Standard error of mean of pre test was calculated by standard deviation (2.6342) was divided By square root of the n(5.9160797) and the answer was 0.445261074.

Standard error of mean of post test was calculated by standard deviation (3.2372) was divided by square root of the n (5.9160797) and the answer was 0.54718667

**Table18 : Calculation of standard error of deviation of mean**

Standard error of deviation of mean
$\begin{aligned} \text{SEDM} &= \sqrt{\text{SEM1}^2 + \text{SEM2}^2 - 2r \text{SEM1} * \text{SEM2}} \\ &= (0.445261074)^2 + (0.54718667)^2 - 2 * 0.4180784 * 0.445261074 * 0.54718667 \\ &= \sqrt{0.445261074 + 0.547186678 - 0.203721996} \\ &= \sqrt{0.29395} \\ \text{SEDM} &= 0.5421702 \end{aligned}$

Standard error of Mean is calculated using the formula  $\sqrt{\text{SEM1}^2 + \text{SEM2}^2 - 2r \text{SEM1} * \text{SEM2}}$ . The value of  $\text{SEM1}^2 (0.445261074)^2$  was added to  $\text{SEM2}^2 (0.54718667)^2$  and the answer was 0.98706.

2 was multiplied with the value of  $r(0.4180784) * \text{SEM1}(0.445261074) * \text{SEM2}(0.54718667)$  And answer was 0.29395 and after getting the square root the answer of  $\text{SEDM} = 0.5421702$

**Table19: Calculation of the correlated t value**

Correlation of t- value
$\begin{aligned} t &= M1 - M2 / \sigma D \\ &= -4.2 / 0.5421702 \\ t &= -7.746645 \end{aligned}$

Calculation of t value was done by inserting formula and the answer -7.746645

**Table20: Degree of freedom**

Degree of freedom
df = n-1
35-1=34

The calculation of the degree of freedom was done using the formula n-1.

The value of n was 35 and 1 was subtracted and the answer of df was 34

**Table 21:Below shows mean, SD, r, “t”value, df and level of significance**

Mean		SD		r	“t” value	df	Level of significant
Pre test	Post test	Pre test	Post test				
5.1571	9.3571	2.6342	3.2372	0.4180784	7.746645	34	0.05

It was found that mean of pre test and post test achievement scores of teacher trainees on global issues were 5.157 and 9.357 respectively. Mean achievement scores of the students in the post test differed significantly from that of pre test With standard deviation of 2.6342 and 3.2372 respectively. The calculated “t” value is = 7.746645

It showed there was increase in the mean of the achievement scores of the student after the Implementation of the training program.

The above mentioned findings were further confirmed by the “t”value for 34 degrees of freedom The calculated “t” value 7.746645was higher than table value of t that was 1.697 at 0.05 level of Significant. The null hypothesis stating that there will be no significant difference in the achievement test of global issues in the pretest and post test scores of the teacher trainee was rejected The post test scores are significantly higher, so significant gains in terms of achievement through training program.



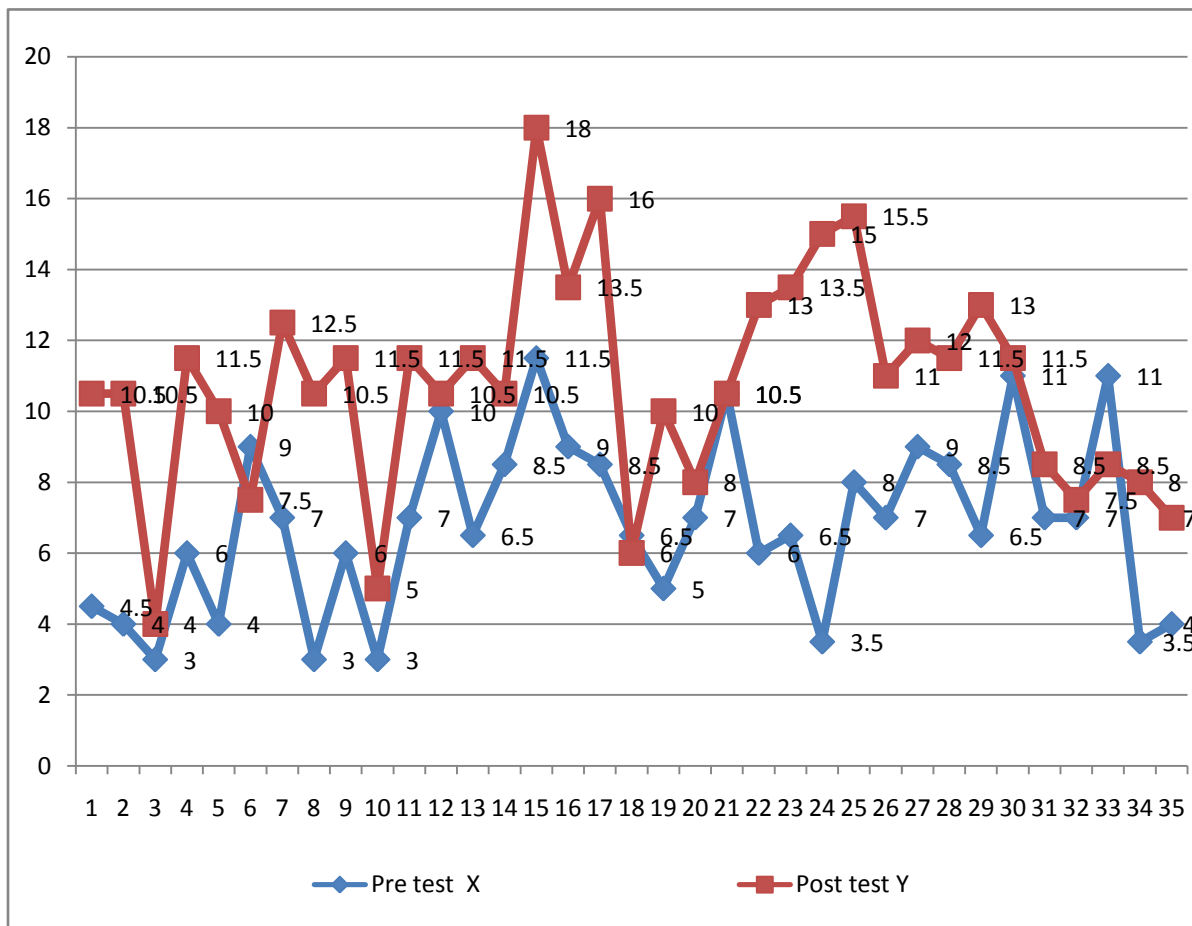
**Table 22: Achievement scores of pre test and post test of teacher trainees on Global Warming**

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7	Column 8
Sample no.	Pre test X	Post test Y	Mean-X=x	Mean – Y=y	xy	x <sup>2</sup>	y <sup>2</sup>
1	4.5	10.5	2.3	0.21429	0.492867	5.29	0.04592
2	4	10.5	2.8	0.21429	0.600012	7.84	0.04592
3	3	4	3.8	6.71429	25.51430	14.44	45.0816
4	6	11.5	0.8	-0.78571	-0.628568	0.64	0.61734
5	4	10	2.8	0.71429	2.000012	7.84	0.51021
6	9	7.5	-2.2	3.21429	-7.071438	4.84	10.3316
7	7	12.5	-0.2	-1.78571	0.357142	0.04	3.18876
8	3	10.5	3.8	0.21429	0.814302	14.44	0.04592
9	6	11.5	0.8	-0.78571	-0.628568	0.64	0.61734
10	3	5	3.8	5.71429	21.71430	14.44	32.6531
11	7	11.5	-0.2	-0.78571	0.157142	0.04	0.61734
12	10	10.5	-3.2	0.21429	-0.685728	10.24	0.04592
13	6.5	11.5	0.3	-0.78571	-0.235713	0.09	0.61734
14	8.5	10.5	-1.7	0.21429	-0.364293	2.89	0.04592
15	11.5	18	-4.7	-7.28571	34.24283	22.09	53.0815
16	9	13.5	-2.2	-2.78571	6.128562	4.84	7.76018
17	8.5	16	-1.7	-5.28571	8.985707	2.89	27.9387
18	6.5	6	0.3	4.71429	1.414287	0.09	22.2245
19	5	10	1.8	0.71429	1.285722	3.24	0.51021
20	7	8	-0.2	2.71429	-0.542858	0.04	7.36737
21	10.5	10.5	-3.7	0.21429	-0.792873	13.69	0.04592
22	6	13	0.8	-2.28571	-1.828568	0.64	5.22447

23	6.5	13.5	0.3	-2.78571	-0.835713	0.09	7.76018
24	3.5	15	3.3	-4.28571	-14.14284	10.89	18.3673
25	8	15.5	-1.2	-4.78571	5.742852	1.44	22.9030
26	7	11	-0.2	-0.28571	0.057142	0.04	0.08163
27	9	12	-2.2	-1.28571	2.828562	4.84	1.65305
28	8.5	11.5	-1.7	-0.78571	1.335707	2.89	0.61734
29	6.5	13	0.3	-2.28571	-0.685713	0.09	5.22447
30	11	11.5	-4.2	-0.78571	3.299982	17.64	0.61734
31	7	8.5	-0.2	2.21429	-0.442858	0.04	4.90308
32	7	7.5	-0.2	3.21429	-0.642858	0.04	10.3316
33	11	8.5	-4.2	2.21429	-9.300018	17.64	4.90308
34	3.5	8	3.3	2.71429	8.957157	10.89	7.36737
35	4	7	2.8	3.71429	10.40001	7.84	13.7959
					$\sum xy$	$\sum x^2$	$\sum y^2$
					97.5	205.6	317.1

The Present table 22 gives details of the sample scores. Sample of 97 teacher trainees was selected for the study. Out of which 52 teacher trainees took part in the pre-test and 35 teacher trainees took part in the post test. Hence, a comparison of pre and post test scores of only 35 teacher trainees were taken for the analysis

### Comparison of pre test and post test scores of Global warming



**Figure 3: A graphical presentation of achievement test Comparison of pre test and post test scores on Global Warming**

**Table 23: Comparison of percentage of Pre test and Post test scores of global warming based on percentage of marks.**

Column 1	Column 2	Column 3	Column 4	Column 5
Sr. No.	Total number of students	Percentage of marks	Pre test Percentage (Global Warming)	Post test Percentage (Global Warming)
1.	35	40 % and above	34.28%	82.85%
		50% and above	14.28%	71.42%
		60% and Above	Nil	28.57%
		70% and above	Nil	11.42%
		80% and above	Nil	5.71%
		90 % and Above	Nil	2.85%

In pre test on Global Warming of 38.28 % of the sample score 40% and above marks. 14.28 % of sample scored 50% and above marks. None of the sample scored 60% and above marks.

In post test on Global Warming, after training program 82.85 % of the sample scored 40% and above marks. 71.42 % of sample scored 50% and above marks. 28.57 % of the sample scored 60% and above mark. 11.42 % of the sample scored 70% and above marks. 5.71 % of the sample scored 80% and above marks and 2.85% of the sample scored 90% and above marks.

**Table24: Calculation of mean of pre test and post test**

Pre test	Post test
MEAN 1 $\frac{\sum XN}{n}$ $=238/35$ $=6.8$	MEAN 2 $\frac{\sum YN}{n}$ $=375/35$ $=10.71428571$

The mean of the pre test was calculated by summing of the total scores (238) and dividing by n (35). And the answer was 6.8. The mean of the post test was calculated by Summing of the total scores (375) and dividing by n (35). And the answer was 10.71428571

From the above mean scores of pre test and post test, it was found that the scores of the Teacher trainee increased in post test.

**Table25: Calculation of standard deviation**

Pre test	Post test
$SD1 = \sqrt{\frac{\sum x^2}{n}}$ $=205.6/35$ $= \sqrt{5.874285714}$ $SD1 = 2.4236925$	$SD2 = \sqrt{\frac{\sum y^2}{n}}$ $=317.1/35$ $= \sqrt{9.06122449}$ $SD2 = 3.010186$

The standard deviation was calculated on the basis of the deviation of pre test and post test from the respective mean. The standard deviation of pre test was calculated by total score of  $x^2(205.6)$  was divided by n(35) and after the square root the answer was 2.4236925.

The standard deviation of post test was calculated by total score of  $y^2(317.1)$  was divided by  $n(35)$  and after the square root the answer was 3.010186

**Table26: Calculation of correlation of pre test and post test**

Correlation
$r = \frac{\sum xy}{\sqrt{\sum x^2 * \sum y^2}}$ $= \frac{97.5}{\sqrt{205.6 * 317.1428571}}$ $r = 0.3818261$

Calculation of Pearson correlation was done by using the formula, in which  $\sum xy$  was divided by the square root of  $\sqrt{\sum x^2 * \sum y^2}$ . The value of  $\sum x y$  (97.5) and then answer was divided by the  $\sqrt{\sum x^2 * \sum y}$  ( $\sqrt{205.6 * 317.1428571}$ ). and final answer was 0.3818261

.From the above data , it has been found there is a positive correlation between scores of pre test and post test of teacher trainees

**Table27: Calculation of standard error of mean of pre test and post test**

Pre test	Post test
$SEM1 = \frac{SD1}{\sqrt{N}}$ $= \frac{2.4236925}{35}$ $SEM1 = 0.409678811$	$SEM2 = \frac{SD2}{\sqrt{N}}$ $= \frac{3.0101867}{35}$ $SEM2 = 0.508814427$

Standard error of mean of pre test was calculated by the formula  $\sigma_1/\sqrt{N}$ .

Standard Deviation (2.4236925) was divided by square root of the  $n(5.9160797)$  and the answer was 0.409678811.

Standard error of mean of post test was calculated by the formula  $\sigma/\sqrt{N}$ . Standard Deviation (3.0101867) was divided by square root of the n (5.9160797) and the answer was 0.508814427

**Table28: Calculation of standard error of deviation of mean**

Standard error of deviation of mean
$\text{SEDM} = \sqrt{\text{SEM1}^2 + \text{SEM2}^2 - 2r \text{SEM1} * \text{SEM2}}$ $= (0.409678811)^2 + (0.508814427)^2 - 2 * 0.381826 * 0.16783672 * 0.25889212$ $= \sqrt{0.167836729 + 0.25889212 - 0.170795498}$ $= \sqrt{0.42672 - 0.170795498}$ $= \sqrt{0.255933352}$ $\text{SEDM} = 0.5058985$

Standard error of Mean is calculated using the formula  $\sqrt{\text{SEM1}^2 + \text{SEM2}^2 - 2r \text{SEM1} * \text{SEM2}}$ . The value of  $\text{SEM1}^2$   $(0.409678811)^2$  was added to  $\text{SEM2}^2$   $(0.508814427)^2$  and the answer was 0.42672

2 was multiplied with the value of  $r(0.381826) * \text{SEM1}(0.409678811) * \text{SEM2}$   $(0.508814427)$ . And answer was 170795498 and after getting the square root the answer of SEDM was 0.5058985

**Table29: Calculation of the correlated t value**

Correlation of t- value
$t = \frac{M1 - M2}{\sigma D}$ $= - 3.914285714 / 0.5058985$ $t = -7.7372$

Calculation of t value was done by inserting formula and the answer -7.7372

**Table30: Degree of freedom**

Degree of freedom
$n - 1$ $35 - 1 = 34$

The calculation of the degree of freedom was done using the formula  $n - 1$ .

The value of n was 35 and 1 was subtracted and the answer of df was 34

**Table 31: Below shows mean, SD, r, "t" value, df and level of significance**

Mean		SD		R	"t" value	df	Level of significant
Pre test	Post test	Pre test	Post test				
6.8	10.71428571	2.4236925	3.010186	0.3818261	7.7372	34	0.05



It was found that mean of pre test and post test achievement scores of teacher trainees on global issues were 6.8 and 10.714 respectively. It was found that mean achievement scores of the students in the post differed significantly from that of pre test, with standard deviation of 2.42369 and 3.010186 respectively. The calculated “t” value is 7.7372

There was increase in the achievement scores of the student after the implementation of the training program.

The above mentioned findings were further confirmed by the “t” value for 34 degrees of freedom. The calculated “t” value 7.7372 was higher than table value of t that was 1.697 at 0.05 level of significant. The null hypothesis stating that there will be no significant difference in the achievement test of global issues in the pre test and post test scores of the teacher trainee was rejected. The post test scores are significantly higher, so significant gains in terms of achievement through training program.

#### **5.4 FINDING WITH RESPECT TO OBJECTIVE 1, 2 AND 3**

Following major findings were drawn for the present study on the basis of the analysis and interpretation of the data.

1. There was a significant difference between the mean scores of and post test scores the pre test at 0,05 levels. It shows that awareness of the teacher trainee was increased significantly.
2. The developed training package was found to be significantly effective in terms of enhancing awareness on global issues

## 5.5 ANALYSIS AND INTERPRETATION OF DATA WITH RESPECT TO OPINION OF THE TEACHER EDUCATORS ON MAKING GLOBAL ISSUES A PART OF B.ED CURRICULUM

Interpretation of Opinionnaire with reference to the objective 4 to study the opinion of teacher educators on making global education a part of B.E d curriculum

Four colleges of education of the city were taken as sample by the researcher to collect opinion of teacher educators on making global education a part of B.E d Program. Data was collected through an Opinionnaire from teacher educators of different B.Ed colleges in Vadodara city. Opinion of forty teacher educator was collected for the study.

### Questions and the response:

#### Opinion 1 : How seriously global issues should be taken?

Very seriously	Not at all seriously	Little seriously
85%	10%	5%

85% of the sample felt that global issues should be taken very seriously. 10 % felt it should not at all be taken seriously.5% felt it should be taken little seriously.

#### Opinion 2: Are global issues a matter of concern to present generation?

Yes	No	To some extent
72.5%	7.5%	20%

72.5% of sample agreed that global issues are matter of concern to present generation.20% felt that they are matter of concern to some extent whereas 7.5% didn't consider global issues as a matter of concern to the present generation.

**Opinion 3: Do the awareness program like *Satya Mev Jayate* have positive effects in generating awareness?**

<b>Yes</b>	<b>No</b>	<b>Don't know</b>	<b>May be</b>
65%	2.5%	Nil	32.5%

65% hold the view that awareness programs have a positive effect in generating awareness where as 32.5% had opinion for maybe .2.5% held the view that awareness programs do not have positive effect in generating awareness.

**Opinion 4: Like environmental education, should global issues be made part of B.Ed Curriculum?**

<b>Yes</b>	<b>No</b>	<b>May be</b>
<b>70%</b>	<b>10%</b>	<b>20%</b>

10 % said no in making global issues a part of B.Ed curriculum.20 % felt to some extent it may be made. 70% of the sample supported global issues to be part of curriculum. “It can be integrated in teaching related content” comment from one of the sample

**Opinion 5: Will the present and future generation will be benefited if the topics related to awareness on global issues are included in B.Ed curriculum?**

<b>Yes</b>	<b>No</b>	<b>To some extent</b>
<b>70%</b>	<b>2.5%</b>	<b>27.5%</b>

70% felt that present and future generation will be benefited if topics on global issues are made part of B.Ed curriculum. 27.5 % felt that that to some extent it can benefit and 2.5% did not agree to the above view.

**Opinion 6: Will it help in enhancing knowledge and help in solving the problem of global issues by increasing awareness on global issues?**

Yes	No	To some extent
67.5%	Nil	32.5%

It was agreed by 67.5% of the sample that inclusion of global issues to the curriculum will improve the quality of knowledge and help in solving the problem of global issues. None of them dissent from to the above view. 32.5% had an opinion that to some extent it can help in solving the problem of global issues.

**Opinion 7: Will it be an extra burden on teacher trainee to study topics related to global issues?**

Yes	No	May be
20%	47.5%	32.5%

It can be extra burdens if it not radically balanced with the core curriculum. 20% of the samples go along with the above view. 47.5% percentage gave their assent that it will not be an extra burden .32.5 had an opinion that it may be an extra burden on teacher trainee to study topics related to global issues as a part of curriculum. One of the sample wrote comment stating “It depends how it is integrated in the curriculum”

**Opinion 8: Will it be an extra burden on teacher educators to teach topics related to global issues?**

Yes	No	May be
12.5%	42.5%	45%

There was a mixed opinion. 12.5% of the sample had an opinion that integration of global issue in the curriculum will be an extra burden to the job of a teacher educator. 42.5% did not agreed to the above view, where as 45 % felt may burden teacher educators.

**Opinion 9: Do the awareness on global issues will have a positive impact on the student's knowledge?**

Yes	No	May be
85%	Nil	15%

85% percentage of the sample were in favor of the statement. It may or may not be so (implying that this is not a significant consideration) by rest of the fifteen percentage.

## **5.6 FINDINGS WITH RESPECT TO OBJECTIVE 4**

1. It was found that majority of the teacher educators (85%) had the opinion that global issues should be taken seriously and awareness on global issues will have a positive impact on the knowledge of the students.
2. It was found that teacher educators (72.5%) shared the opinion that global issues are a matter of concern to present generation.
3. It was further found that teacher educator (65%) felt that awareness programs on global issues will have a positive effect in generating awareness,
4. It was further found that teacher educators (70%) were in favor of making global issues a part of B.Ed curriculum and felt that present and future generation will be benefited if topics on global issues are made part of B.Ed curriculum
5. It was found that teacher educators (67.5%) had opinion that inclusion of global issues to the curriculum will help in solving the problem of global issues

6. It was further found that teacher educators (47.5%) percentage gave their assent to the study of the global issues as a part of curriculum and will not burden teacher trainees, Whereas 20% of the teacher educators go along with the view that it may be an extra burden on teacher trainee to study topics related to global issues as a part of curriculum and 32.5% of the teacher educators felt it may be an extra burden on the teacher trainees to study topics related to global issues as a part of curriculum.

7. It was further found that teacher educators (42.5%) did not agreed to the opinion that making global issues as part of B.Ed curriculum can burden teacher educators, where as 45 % felt that it may burden teacher educators. 12.5% of the sample had an opinion that integration of global issue in the curriculum will be an extra burden to the job of a teacher educator.

From the above analysis it can be concluded, that opinion of the teacher educators for making global issues a part of B.Ed curriculum was positive. But there was diversity their opinion relating to burden on teacher trainees and teacher educators for studying and teaching of global issues as part of B.Ed curriculum.

## **5.7 MAJOR FINDINGS OF THE STUDY**

From the analysis and interpretation of the data the following major findings can be stated as:

1. There was a significant difference between the mean scores of pre test and post test. It shows that awareness of the teacher trainee was increased significantly
2. The developed training package was found to be significantly effective in terms of enhancing awareness on global issues, the effectiveness of the training program was measured using correlated t-test. The results lead to the rejection of the null hypothesis

which stated that there will be no significant difference in the pre test and post test scores of teacher trainees at 0.05 level of significant.

**3.** Teacher trainees lacked in knowledge on global issues; their awareness level depended on their interest and subject of specialization.

**4.** There was a significant rise in the scores which showed that teacher trainee from all the three disciplines gained insight of the global issues irrespective of their subject stream

**5.** Teacher educators were in favor of making global issues part of B.Ed curriculum. They felt that present and future generation will be benefited if topics on global issues are made part of B.Ed curriculum

**6.** Awareness on global issues will have a positive impact on the knowledge of the teacher trainee.

**7.** 47.5% of teacher educators gave their assent to the study of the global issues as a part of curriculum and will not burden teacher trainees.

**8.** 42.5 % of teacher educators agreed to the opinion that, making global issues as part of B.Ed curriculum will not burden teacher educators.

## **5.8 DISCUSSION**

The study was under taken by the investigator with the objective of enhancing the awareness on global issues of the teacher trainees with the help of training program and find out the enhancement of the knowledge on the global issues through a post test. To support the objective, opinion was collected from teacher educators for making global issues part of B.Ed curriculum.

Based on the major finding of the present study the following points are discussed.

The developed training package was found to be significantly effective in terms of enhancing awareness on global issues. The training program was able to develop a new understanding towards gender equality focusing mainly on transgender and inequality faced by them, understanding of causes and inequality faced by man and women in society, identify the causes of global warming, and effect of green house gasses. The training program was able to develop an understanding towards terrorism, its Causes and psychological perspective of terrorists; knowledge about various terrorist groups, their functioning and aims.

According to findings of present study, Teacher trainees lacked in knowledge of global issues. In present study, in pre test on gender inequality, answer to the question “How many genders are there? Name them.” The listed genders by teacher trainees in pre test were neuter gender, Eunuch, bisexual, LGBTQ, unspecified gender, common gender, intersex, homosexual. In post test almost majority answered correctly to the question stating third gender as “transgender”.

After the training program teacher trainees found ways to relate global issues to day to day teaching. Some suggestions’ on ways to relate global issues given by them were: (i) Making students learn behaviorism (ii) Showing films documentary videos on terrorism. (iii) Making them aware of what is happening around etc. For global warming, suggested ways were: (i) Making students aware of news at national and international levels on climate change (ii) Tree plantation activity and its importance (iii) Setting up of an environment club etc .

There was a significant rise in the scores which showed that teacher trainee from all the three disciplines gained insight of the global issues irrespective of their subject specialization. It was found that after training program, all the teacher trainees’ from all the three specialization scored 40 % and above marks in post test of Terrorism.



It was found that on comparison of pre test and post test scores of Gender equality based on subject specialization, there is an increase in the post test scores. 60% of Teacher trainee from Commerce, Science and Arts specialization scored 40% and above.

Comparison of pre test and post test scores of global warming based on subject specialization, showed 80% of the sample from commerce specialization score 40% and above in post test which was nil in pre test. It was further found that percentage of marks of teacher trainee from Science background scored 40% and above almost doubled in post test of global warming. There was an increase from 20% in pre test to 40% in post test of teacher trainee from Arts background who scored 40% and above marks.

Findings of the study conducted by Rathode (2011) that found that major number of students under study responded that environmental education helps in understanding of environmental issues support the present research findings that awareness on the global issues can be enhanced through a well developed training program.

Study conducted by Karen, Mundy, K & Manion, C (2007) supports the fact that global issues were not new to the teacher trainees but the degree of awareness depended on their attitude and subject of specialization. Findings of the present study are also supported by the findings of the study conducted by Pandey & Kulshreshtha (2012) stress on developing among pupil teachers the general awareness and bringing attitudinal change of environmental degradation and problems at local, national and international level. According to study findings of Kenneth (1999) The barrier identified was lack of teacher skills, training, interest, attitude of teachers simply don't care enough about global issues. Shahnawaj (1990) study aimed to find that the environmental trained teachers and untrained teachers did not differ in their attitudes

Findings of the study done by Placide (2011) that teaching with a global perspective is interesting, rewarding and meaning. It was found that there were significant gains with the implementation of the global awareness curriculum. Teachers who participated in the study felt that the global instruction was effective and improved the students' mastery of

social studies content which substantiates, Support opinion, that awareness on global issues will have a positive impact on the knowledge of the students and will improve the quality of knowledge and help in solving the problem of global issues.

As far as the opinion of the teacher educators were concerned, their opinion were found favorable towards making global issues a part of B.Ed curriculum. The study of the global issues to be made as a part of curriculum and present and future generation will be benefited if topics on global issues are made part of B.Ed curriculum. That finding is supported by the view of Julie Andrzejewski & John Alessio (1999), Educators have not usually been taught about issues of social and global responsibility in our own school experiences.

Opinion on the work load by the teacher educators says that it may be an extra burden on teacher trainee to study topics related to global issues as a part of curriculum and integration of global issue in the curriculum can be an extra burden to the job of a teacher educator. According to Julie Andrzejewski & John Alessio (1999), Teachers and educational institutions are already under pressure from multiple studies. Integration of global issue in the curriculum can be an extra burden to the job of a teacher educator.

Another opinion was just opposite to the above opinion which concludes that studying or teaching of global issues will not be burden for teacher trainee or educators can be supported by the findings of the article written by Jacobs & Cates (1999) where Author had proposed how global issues can be part of curriculum through second language. James M. Dennis (2011) wrote in his article that true global learning must be integrated throughout the curricula. Our challenge is to incorporate our local institutional values within a broader framework to prepare students for the global challenges and opportunities ahead

In conclusion, it can be said that objective of enhancing awareness of the teacher trainee through the training has been achieved to a large extent.

# **CHAPTER 6**

## **SUMMARY**

## **CHAPTER 6**

### **SUMMARY**

#### **6.0 INTRODUCTION**

It is important that the study conducted has to be briefly wrapped up so as to get an idea about the entire study .this chapter gives an over view of the entire study. This chapter discusses the major findings and conclusion and ends with suggestions

Research methodology is a way to systematically solve the research problem. It may be understood as science of studying how research is done scientifically. In this chapter we study the various steps that are generally adopted by researcher in studying the research problem along with the logic behind them

#### **6.1 CONCEPTUAL FRAMEWORK**

**The Maastricht Global Education Declaration (2002) states:**

“Global education is understood to encompass Development Education, Human Rights Education, Education for Sustainability, Education for Peace and Conflict Prevention and Intercultural Education; being the global dimension of Education for Citizenship

Global education educates about values, responsibility. There are certain domains in which global education is different from education. Unlike history geography & science, Global education does not have a typical subject matter. Global education is not content bounded. It is study of environment, geography, cultures, world problems etc that keeps on changing with time. There are two side of a coin. One side shows the vary issues in world and on other hand other side put light on what is to be done to eradicate them.

### **Global issue prospective is about**

- Study of national and international problems, their cause and effect.
- Cross cultural thinking and concern. Understanding of various existing cultures and being a part of them.
- It gives knowledge of social economic and political connection and their repercussions on each other.
- Standing up for inequality and discrimination .Focuses on critical thinking and shared responsibility.

Educational as a tool is the best to enrich us with the happenings. Multicultural knowledge develops tolerance. We learn to appreciate diversity. Complexities of the world can be brought to end by acknowledging and globally working. New world can be achieved through awakening. Passage to new consciousness is by going beyond and thinking unconventionally. For this we need to have a system that educates us to think collectively. Education educates about existing issues in the system and enables people to participate in the movement of solving it. Present generation can actively participate along with the government and policy makers. It gives power to the people to make world a better place owing to it being their shared responsibility.

Educators of 21<sup>st</sup> century is expected to foster cognitive development, critical thinking decision making and problem solving capacities and attitude in students . Nurturing these skills in class room is an important task .Cognition is the product of complex interaction between the maturation of nervous system and language. The maturation of nervous system depends in children's social and physical interaction with the world around them Teachers can provide students a platform, with a way to capture their ideas on a daily basis and can effectively implement strategies in their daily teaching to help students tap their creativity and problem solving, decision making aptness.

All the skills are equally important to be nurtured in a student. Critical thinking skills refine cognition skills. Cognitive skills are genetic where as other two are independent. Critical thinking elevates cognition skills as students go in depth of knowledge to be a

critic, more they push themselves, more is the development of cognitive power. Creativity is dependent on cognition. Student's visualization and actualization depends on his or her cognitive development.

It should be taught as a regular part of curriculum, not once or twice a year in form of an activity. Education must reflect on life need and problems in a society. School curriculum and teachers have ratio to contribute to it. Present education is compact .We cease it to our national boundary.

Curriculum acquires creativity when children are show their relatedness to world and develop their capabilities to heal the world. From "known to the unknown", from "concrete to abstract", and from "local to global

### **National curriculum framework (2005) focuses on**

Conceptual understanding, evaluation of issues, Interdisciplinary approaches towards human rights and poverty. Light to be thrown on non acceptance to violence and accelerating peace, to reflect critically on issues in terms of their political, social, economic and moral aspects. Through Critical analysis children will know their connection to multiple issues and understand them .A critical framework helps children to see social issues from different perspectives. Water crises, human dignity human rights caste gender to be critically reflected.

### **National curricula framework for teachers (2010) states:**

- A) Need to educate teacher to connect school knowledge with community knowledge and life outside the school.
- B) Need to re-conceptualize citizenship education in teacher education program.
- C) Existing curricula should focus in cosmopolitan issues to broaden up the thought patterns of upcoming generation and making them aware of their action in future.

Teacher training program is needed to have a futuristic approach. Mélange educational policies and emphasis on social problems, cultural and tradition to re program teacher's

professional development. New social order desires for changes in educational outlook towards formal and in formal education.

### **Teacher trainee and their**

Traditional curriculum does not prepare students to deal with International issues nor the teachers adequately prepared to teach them from global perspectives. Growing stress in relations and intolerance is because of natural and psycho-social environment put to question mark on teacher's role.

New social order desires for changes in educational outlook towards formal and in formal education. Role of educational intuitions is broadening and call for improvement in teacher education program to prepare quality teachers with global competency. Commissions have put forward need for quality teachers to plinth the social status, financial security and well being of individual.

Only Environmental education has found place in diverse discipline but on teacher education program there is much to be achieved, a better compressive information system to be developed in cooperation with University grants commission, and technical educational bodies. Some countries organize special lectures on global issues for students and teachers.

Teacher training program to include aspects peace development and integration at global plane. Understanding of problem at global level as their own and working collectively for it. Teachers role to sensitize and inform the present generation to work for up gradation of environment, biological balance, abolition of un touch ability, racial discrimination healthy and prosperous society.

Teachers are the pillars on which educational industry rests. They are nation builder. Therefore it becomes a necessity to churn new roles of teachers .Education of future citizens is teacher's contribution. Teacher, fountain head of knowledge should update

knowledge pertaining to subject and direction of trends of developments in which society is heading. Teachers are curriculum translators. They have to influence generation. Child in turn can go and educate family. So class room teaching reaches society. Modern teachers can be the instruments to bring change in society.

## **6.2 RATIONALE**

It is what that child sees, hears around himself makes him become how responsible a world citizen that child is going to be in future. Individuals are part of social structure. With the Insight of rights and wrong, rules and limitations, we are able to question. When we aim for preparing our children for the world Global competency helps them to engage them as global citizen and the even learn to cope up at local and national level issues.

Global issue prospective is about study of national and international problems and their cause and effects globally. Cross cultural thinking and concern, understanding of various existing cultures and being a part of them. It gives knowledge of social economic and political connection and their repercussions on each other .Standing up for inequality and discrimination.

There is a relationship between community and curriculum. Student to be successful in the world must have courage confidence and knowledge. It should be taught as a regular part of curriculum, not once or twice a year in form of an activity School curriculum and teachers have ratio to contribute in it. We need to develop an international outlook and make child feel world as his own. To actualize this, curriculum framers should go beyond boundaries of nation and weave curriculum in a global view.

Education system cannot work without teacher. Every teacher is a philosopher and architect. New challenging role for teachers have transferred more objectives to their job. Catering to specific need of growing education system specialized training .To actualize this Countries kike Australia Canada UK, USA have proposed separate curriculum for students at various levels. New Zealand has proposed for a separate inter disciplinary



elective or compulsory course to be introduced on global education for Bachelors and masters program in education

It was found that there were significant gains with the implementation of the global awareness curriculum. Teachers who participated in the study felt that the global instruction was effective and improved the students' mastery of social studies content. (Placide, K. L. (2011). According to Karen, Mundy, K., Manion, C. (2007) strongly held view that coverage of global education themes rests with individual teachers. Hoody, L.L. (1996) in his study founded that International studies on environmental awareness revealed scarcity of Environmental education studies and is poor represented in studies. The barrier identified was lack of teacher skills, training, interest, attitude of teachers simply don't care enough about global issues (Kenneth A. Tye. (1999). Study done by K, Tahsin in (2000) revealed the presence of misconceptions among the pre-service teachers and their lack of knowledge of these common environmental issues and many misconceptions among the students. Finding of K. Pandey, A.K. Kulshreshtha (2012) said, developing awareness and bringing attitudinal change of environmental degradation among pupil teachers, the general and problems at local, national and international level Sensitizing and Convincing pupil teacher that it is an integral part of their duty to organize environment related effective curricular and co curricular.

Practitioners should accommodate gender differences through gender-sensitive teaching A Spinthourakis, J.A., Lempesi, G.E., Papadimitriou, I. (2009) . Media influence also affects society's knowledge of and cooperation with policies and strategies for facing the problem of terrorism. Al-Ameri, M. S. (2013). With reference to article written by Julie Andrzejewski & John Alessio.(1999) Educators have not usually been taught about issues of social and global responsibility in our own school experiences If teachers/faculty is not aware of global issues if we are not active citizens ourselves. Therefore, as we continue to re-educate ourselves about issues of race, class, gender and disability, we must face the challenge of global issues on the horizon.

As a student teacher, investigator noticed that students were interested in learning about worldwide happening .As a science teacher when researcher used to relate many concerning issues to students. They willingly participated in discussion and came up with solutions. Some of them implemented the solutions at their homes and even made their parents aware of their cause and effects.

In the present study investigator had made an attempt to capture other issues along with environmental concerning issue. Awareness on other issues prevalent in society is made part of the study. Investigator did not come across any study during the review of literature which involved awareness on terrorism, gender in equality and global warming together .Study also focuses on view of teacher educator views on making global issues part of teacher education program, which has not been identified by the researcher.

Academicians irrespective of our academic discipline will be able to relate topics on global issues and will be able to sensitize students, if provided with understanding on issues with matter to our lives in parts and world as whole and developing as sense of duty to educate students on global concerns apart of course content.

Present study will help Colleges running teacher training programs in making a fair decision for making global issues part of their curriculum. In near future if global issues are made part of teacher education programs almost all the students- teachers will have to study the core issues, and will level up their knowledge without reference to their subject streams

Teacher trainees of Navrachana University academic year 2014-15 are chosen as sample as present curriculum of Navrachana University do not hold topics on global issues. It has more accommodation for changes and modifications in curriculum.

### **6.3 RESEARCH QUESTIONS**

- Is knowledge on global issues a matter of concern to present educators?
- Do the teachers understand what global issues are?

- If global issues are part of curriculum what impact will it have impact it will have on the awareness levels?
- What is the opinion of the educators on making global education a part of curriculum?

#### **6.4 TITLE OF THE STUDY**

Developing and implementing a training program on “Global Issues” among teacher trainees at Navrachana University of Vadodara city

#### **6.5 OBJECTIVES OF THE STUDY**

- 1 To study the awareness of teacher trainees on global issues
- 2 To develop and implement a training program on global issues to the teacher trainees
- 3 To study the impact of training program on global education on teacher trainees
- 4 To study the opinion of teacher educators on making global education a part of B.E d curriculum.

#### **6.6 HYPOTHESIS**

There will be no significant difference in the mean achievement score of pre test and post test of teacher trainees. The following hypothesis is formed which will be tested at 0.05 level of significance.

#### **6.7 DESIGN OF STUDY**

The study was a single group pre- test and post- test experimental design. The design of the study is shown graphically as follow.

$$O1 \quad X \quad O2$$

Where,  $O1$  = Pre test,  $O2$  = Post test and  $X$  = Treatment

As per design of the study 97 teacher trainees were selected to be tested with the prepared achievement test on global issues before experimentation. A training program was developed as a part of study and they were taught through a training program. They were tested again through similar achievement test

## 6.8 DELIMITATIONS

- Study is delimited to topics related to environmental issue, socio- economic-cultural- political issue and human right issue.
- The training program was implemented at Navrachana University of Vadodara city on teacher trainees of B.Ed program of academic year 2014-15 only.
- Survey of the opinion of teacher educators is limited to the colleges in the city area.

## 6.9 OPERATIONAL DEFINITION OF TERMS

**Awareness:** Understanding of the cause and effect.

**Global issues:** Global issues are those problems that affect the whole of the planet, and potentially of all the people who live on it. Global issues are trans-national, or trans-boundary.

**Global Education:** Global education involves learning about global issues, the awareness on the cause and effects of global issues and their preventions

The issues selected for this research are:

- 1) Terrorism
- 2) Gender Inequality
- 3) Global Warming

**Teacher trainee:** A qualified student who aspires to become a teacher and under goes a teacher training program.

**Impact:** Impact refers to the difference, which training program has made to the initial awareness level of the teacher trainees. Increase in the score from pre test to post test is termed as impact for the present study.

**Training program:** Training program refers to the teaching learning material developed by the researcher for teaching on the aspects of global issues.

## 6.10 POPULATION OF THE STUDY

A research population is generally a large collection of individuals for whom the study can be made applicable or generalized in specific areas .and it is for the benefit of the population that any study is carried out in general

For objective 1.2.3 Population group includes all the teachers' trainee undergoing B.E d program in year 2014-15 in Gujarat.

For objective 4 Population group includes all the teacher educators of the Gujarat.

## 6.11 SAMPLE

Teacher trainees of Navrachana University (2014-15) were taken as sample and that comprised a total of 97 students.

The sample also included 40 Teacher educators from Maharaja Sayaji Rao University, Navrachana University, S.D. Patel College and Akshar Mahila College..

## 6.12 SAMPLING TECHNIQUE

In present study the purposive sampling technique was used by the researcher for objective one and three and four

The criterion for the selection of the sample

- e) The willingness of the college administration to make teacher trainee available for the study

- f) The vision of the college emphasized on the development of the teacher trainee
- g) Level of the sample Autonomy of the teaching staff to make innovative curriculum a frequency at which had done it.
- h) All the teacher training institutions were part of the present study.

### **6.13 TOOLS AND TECHNIQUE**

**Achievement test:** An Achievement test in form of questionnaire was prepared to know the initial awareness levels of the sample. A questionnaire was prepared based on the training program. Three separate questionnaires prepared on three different issues. Maximum marks for each questionnaire was 20 marks. Questions were in form of multiple choice questions and short answers. Total time given for each questionnaire was 30 minutes. Same achievement test was used as post test

**Opinionnaire:** Opinionnaire was made to get the view of sample for the fulfillment of the objective four. Prepared Opinionnaire consisted of nine closed ended questions.

### **6.14 DEVELOPMENT OF THE TRAINING PROGRAM**

Development of a training program required systematic process to be followed .In the present study, certain steps were followed to develop the training program .These steps are elaborated in next section.

#### **6.14.1 STEPS INVOLVED IN THE DEVELOPMENT OF TRAINING PROGRAM**

The first step of the process is to select the content, to analyze the content and arrange it in a logical sequence. To develop intervention package a good amount of reading was done on global issues including case studies. This was followed by the formation of the

objectives to be achieved through the training package. Then finally three issues were short listed to be the part of the training program.

Pre test was prepared based on the training program. A post test questionnaire was used to study the impact of training program.

#### **6.14 .2 SELECTION OF THE CONTENT**

The content was selected and analyzed in the following way. The content selection was done for the issues of terrorism and gender inequality (for transgender) which are not discussed in the course content at school level. One environmental issue was taken to know the awareness level on environmental education.

#### **6.14.3 FORMULATION OF THE INSTRUCTIONAL OBJECTIVES**

After the content was identified and arranged in sequential order, instructional objectives were fixed.

- 1) The teacher trainee will be able to understand cause of global issues.
- 2) The teacher trainee will be able to understand the effects of global issues.
- 3) The teacher trainee will be able to understand psychological perspective behind global issues.
- 4) The teacher trainee will be able to make others aware of global issues.

#### **6.14.4 VALIDATION OF THE EXPERTS**

The entire training package was shown to three experts in field of education for suggestions on the contents validity and appropriateness of the sequence. The necessary suggestions given by experts were in cooperated in the training program.

## 6.15 THE PROCESS OF DATA COLLECTION

The required data is collected in the following manner the process includes different stages. The nature of data is quantitative. It is analyzed using the co related t-test and chart to explain the change in awareness levels of students on the global issues from pre test and post test

Before implementing the training program, the investigator administered pre test. The investigator distributed the questions papers to the teacher trainees' .The investigator then gave detailed instruction regarding how to answer the questions. The teacher trainees took the test and also got their doubt clarified. The investigator collector the answer papers back when the teacher trainees had completed the test. Average time taken by the teacher trainees to answer the test was 20 minutes. The collected answer papers were evaluated to obtain pre test scores.

The investigator implemented the developed training program one week after the pre test was conducted .The sessions of implementation has been described below

The implementation was done for a weeks. Total numbers of session were 3.Duration of each session was one and a half hour. List of sessions is given as in table number one.

**Table 41: List of the sessions conducted**

<b>SESSIONS</b>	<b>DATE OF SESSIONS CONDUCTED</b>	<b>THEME OF SESSION</b>	<b>TIME REQUIRED</b>
Session1	09/02/2015	Terrorism	90 minutes
Session 2	12/2/2015	Gender inequality	90 minutes
Session 3	19/2/2015	Global warming	90 minutes

The administration of post test using same questionnaire, after all the sessions were over. Time gap is one week was maintained between intervention and post test.



For the objective 4 - To study the opinion of teacher educators on making global education a part of B.E d curriculum, investigator had constructed opinionnaire for teacher educators.

## **6.16 DATA ANALYSIS**

Collected data were analyzed through appropriate statistical techniques. To determine the effectiveness of developed instructional package, Mean, Standard Deviation and Co-related t-test were computed .To study the opinion of the teacher educators, frequency and percentage were computed for closed ended items.

## **6.17 MAJOR FINDINGS OF THE STUDY**

From the analysis and interpretation of the data, the following major findings can be stated :

- 1.** There was a significant difference between the mean scores of pre test and post test. It shows that awareness of the teacher trainee was increased significantly
  
- 2.** The developed training package was found to be significantly effective in terms of enhancing awareness on global issues, the effectiveness of the training program was measured using correlated t-test. The results lead to the rejection of the null hypothesis which stated that there will be no significant difference in the pre test and post test scores of teacher trainees at 0.05 level of significant.
  
- 3.** Teacher trainees lacked in knowledge of global issues; their awareness level depended on their interest and subject of specialization.

4. There was a significant rise in the scores which that after the training program was implemented showed that teacher trainee from all the three disciplines gained insight of the global issues irrespective of their subject stream
5. Teacher educators were in favor of making global issues part of B.Ed curriculum felt that present and future generation will be benefited if topics on global issues are made part of B.Ed curriculum
6. Awareness on global issues will have a positive impact on the knowledge of the teacher trainee.
7. 47.5 % gave their assent to the study of the global issues as a part of curriculum and will not burden teacher trainees.
8. 42.5 % of teacher educators agreed to the opinion that, making global issues as part of B.Ed curriculum will not burden teacher educators.

## **6.18 IMPLICATIONS FOR THE FURTHER STUDIES**

- Present study will help institutions running teacher training programs in making a fair decision for making global issues a part of their curriculum.
- Present study will help students- teachers to level up their knowledge on global issues irrespective of their subject streams
- Present study will help student teacher to know the importance of awareness on global issues and can adopt way to teach similar topics in class

## **6.19 SUGGESTIONS FOR THE FURTHER STUDIES**

- The investigator, during the process of the research could see there is still enough scope for further research, including more number of global issues.
- Present study can be done on different sample and bigger sample
- The same study can be conducted with a different design such as two group control and experimental
- Similar studies could be conducted taking the sample randomly for more generalization
- An advanced multimedia training package incorporating more of 3D and digital aspect, and an interactive one can be developed for teaching same or alike topics of global issues for future research.
- Longitudinal studies could be conducted to see the effectiveness of training package over a longer period of time in different topics.

## **6.20 CONCLUSION**

The objective of this study was to find to study the awareness of teacher trainee on global issues and to study the impact of training program on global issues on teacher trainee. Results showed that group of teacher trainee did very good as far as achievement is concerned. It shows that training program helps in improving the learning of global issues. Both private sector and public sector institutions need to initiate measures to sensitize teacher trainee of the education system of present and generation.

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# **APPENDICES**

**Appendix II**  
***Terrorism***  
***(Pre and Post- test)***

***Total time: 20 minutes***

***Total marks: 20 marks***

***Objectives of the study***

- 1) To study the awareness of teacher trainee on global issues.
- 2) To study the opinion of teacher educators on making global education a part of B.E d program.

***Instructional objectives***

- 1) To develop insight in to various aspects of global issues
- 2) To develop an understanding of the major causes of global issues
- 3) To develop competency to spread awareness about global issues and their causes.

***Section A***

***QI Each question carries two marks each***

**1) Terrorism means**

- |  |  |
|--|--|
| a) Use of violence to achieve a political goal | b) Control of an ancestral homeland or holy                              |
| c) To end prominent rule in country            | d) To establish a government or to destroy one, or to establish a state, |
|  | e) All of above  |

**2) Terrorists are mostly**

- |                            |                                       |                     |
|----------------------------|---------------------------------------|---------------------|
| a) Non Depressed people    | b) Suffered from traumatic experience | c) Identity seekers |
| d) Children of Millionaire | e) Have damages self esteem           | f) All of the above |

**3) Terrorism is not practiced by**

- |                        |                     |              |
|------------------------|---------------------|--------------|
| a) Political parties   | b) Religious groups | c) Civilians |
| d) Governmental bodies | e) Revolutionaries  |              |

**4) Terrorist groups get finances through**

- |                                     |   |
|-------------------------------------|---|
| a) Kidnappings and ransoms          | b) Selling vast quantities of illegal drugs and annual revenue. |
| c) Donations from affiliate parties | d) Expansive drug trade, human                                  |

- trafficking extortion
- e) Looted weapons and bank robberies
- f) Self finance
- g) All above of the

**5) What is full form of ISIS?**

- a) The Islamic State in Iraq and Siberia
- b) The Islamic State in Iraq and Syria
- c) The Islamic State in Iran and Syria
- d) the Islamic State in Israel and Siberia

**6) Major financial support for ISIS is**

- a) Looted weapons and bank robberies.
- b) Through crime
- c) Selling priceless artifacts from archaeological
- d) Stripping oil reserves sites
- e) All above

**7) What is not a major cause for terrorism?**

- a) Religious beliefs
- b) Poverty
- c) Political grievance
- d) Social economic status

**8) Is poverty one of the major causes of terrorism? Give reason for your answer. (Yes/no)**

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**9) Is lack of education real cause of terrorism? Give reason for your answer. (Yes/no)**

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**10) As a teacher how will they relate terrorism to day to day experience of the students for enhancing their knowledge on terrorism.**

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**Appendix III**  
***Gender Inequality***  
***(Pre and Post- test)***

***Total time: 30 minutes***  
***marks***

***Total marks: 20***

***Section A***

***QI Multiple choice questions*** **[3x2]**

**1) Gender equality refers to**

- a) To the equal rights, responsibilities and opportunities of women and men,
- b) Attend and stay in school, Earn income free from job discrimination, Have access to meet their sexual and reproductive needs for all genders
- c) Gender equality is a “women’s issue”, but concerns and should fully engage men as well as women
- d) Recognizing the diversity of different groups of women and men and their needs.

**2) How many types of gender are there?**

- a)One                                      b) Two                                      c) Three                                      d) Four

**3) Gender inequality fuel\_\_\_\_\_**

- a) Population growth      b) Investment in social services      c) Increases competition
- d) pressure on natural resources e) All the above

***Section B***

***QII Write short answers*** **[7x2]**

**1) Give the names and types of gender**

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**2) What are the causes of gender inequality?**

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**3) How does rapid growth in population effects gender in equality?**

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**4) List the major areas according to international human rights standards where countries still lack to provide equality?**

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**5) Give two examples where men face gender inequality**

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**6) What are the barriers in development of transgender?**

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**7) As a teacher how will they relate to equality of gender to day to day experience of the students for enhancing their knowledge?**

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**Appendix IV**  
**Global warming**  
**(Pre -Post- test)**

*Total time: 30 minutes*

*Total marks: 20 marks*

**Section - A**

**QI Multiple choice questions**

**[12x1]**

**1) What do you understand by Global Warming?**

- a) Rise in sea level
- b) Melting of glaciers
- c) Increase in earth's average water bodies and land surface temperature
- d) Ozone layer depletion

**2) What is the major cause of Global Warming?**

- a) Increase in concentration of Oxygen in atmosphere
- b) Increase of CFC in atmosphere
- c) Increase in concentration of carbon dioxide
- b) Burning of fossil fuel

**3) Compounds like CFC, HCFCs Halons, methyl bromide, carbon tetrachloride methyl chloroform, contributes to ozone depletion by releasing atoms of**

- a) Chlorine and Bromine
- b) Fluorine and Bromine
- c) Chlorine and Fluorine
- d) Bromine and Fluorine and Chlorine

**4) What are sources of CFC?**

- a) Burning of petroleum
- b) Fertilizers, burning forest, grasslands and biomass
- c) Photochemical reactions in troposphere diffusion from stratosphere
- d) Refrigerant, aerosols, sprays, and in production of foam

**5) Name the gas that causes large scale deterioration of ozone. It has 1600-15000 times more potential than carbon dioxide**

- a) CFC
- b) Methane
- c) Oxygen
- d) Nitrous oxide

**6) Name the gas which is known as ozone layer destroyer**

a) Methane                      b) CFC                      c) Nitrous oxide                      d) Carbon dioxide

**7) Name the gas which has 11 times higher global warming potential than CO<sub>2</sub>**

a) Methane                      b) carbon dioxide                      c) Nitrous oxide                      d) CFC

**8) Identify which Green house gas is generated from garbage dumps, paddy fields and swamps**

a) Fluorine                      b) Nitrous Oxide                      c) Methane                      d) Carbon dioxide

**9) A Compound that acts as a catalyst to deliver chlorine ions which deplete ozone**

a) CCl<sub>4</sub>                      b) ClF<sub>3</sub>                      c) ClF<sub>5</sub>                      d) Cl<sub>4</sub>

**10) The green house gas trapped in the glaciers.**

a) Carbon dioxide                      b) Methane                      c) CFC                      d) Hydrogen

Sulphide

**11) Which Green house gas liberated from fertilizers, burning forest, grasslands and biomass**

a) Methane                      b) Carbon dioxide                      c) Sulphur                      d) Nitrous oxide

**12) Sun produces UV which commonly splits in to three bands UVA, U V B and UVC. \_\_\_\_\_ is mostly absorbed by Ozone**

a) UVA                      b) U VB                      c) UVC                      d) All the three

### *Section B*

*QII Write Short Answers*

[4X2]

**1) How is CFC responsible for ozone layer depletion?**

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**2) How does global warming affects marine life?**

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**3) Suggest ways to overcome global warming**

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**4) As a teacher how will they relate global warming to day to day experience of the students for enhancing their knowledge?**

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**Appendix VI**  
**LIST OF EXPERTS FOR VALIDATION OF THE PACKAGE**

**1. Dr. Arachana Tomar**

Assistant professor, B.Ed and M.Ed program,  
School of Science and Education  
Navrachana University.

**2. Ms. B.Valli Pillai**

Assistant professor, B.Ed and M.Ed program,  
School of Science and Education  
Navrachana University.

**3. Dr. Pramila Ramani**

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