VIRTUAL UNIVERSITY OF PAKISTAN

Contemporary Issues and Trends in Education

EDU401

Course Handouts

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Contemporary Issues and Trends in Education (Edu401)

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Lesson No. 1

INTRODUCTION TO CONTEMPORARY TRENDS AND ISSUES AND NATIONAL AND INTERNATIONAL CONVENTIONS ON EDUCATION

Topic 1

Education in twenty first Century

In the title of the course there are three (3) key terms:

1. Contemporary
2. Trends
3. Issues

These three terms can be explained like as under.

1. Contemporary

Contemporary means related to the present time or starting as of today. What we experience in education today.

2. Trend

Are positive kinds of things that are happening in other words the patterns that we like to see and continue.

3. Issues

Issues deal with the negative. They deal with the not so good things that happen in education. In this course we will focus on trends and issues in education. If I ask you what one factor causes the change in the education, today? I hope most of you will come up with technology. In twenty first century even yet we are using yesterdays' training with today's students. To be compatible with twenty first century education we have to give technology due importance.

We have to see what trends we have to study in technology and what issues in technology we would talk about. In order to provide education to each and every child we have to uplift our resources. We, the teachers of today are basically the product of twentieth century; unlike the students are also twenty first century students. The teachers have to unlearn the concepts of last century and update ourselves with twenty first century.

Education must enable nations and communities to gradually evolve and strengthen their systems of social justice, democratic institutions, and foster values of peace, harmony, tolerance, and mutual respect among diverse populations. All these skills are necessary to survive in twenty first century. Education should also promote individual freedom, empower people and a vehicle to uplift the economic situation.

Topic 2

International Conventions for Free and Quality Education

Provision of free and quality education has been declared as fundamental rights. They want all children to get basic elementary, secondary education.

1. **Universal declaration of human rights**

This convention was approved by the world nations at the United Nations General Assembly in 1948. According to this convention everyone has the right to education and education shall be free at least in the elementary and fundamental basis.

Elementary education involves pre-school, the early years and education up to grade 5. It is supposed to be free. It means that govt. or any other agency shall be sponsoring that. All the children shall be in school in those grades.

2. **Convention on the rights of the child**

Convention on the rights of the child in 1989 explicitly recognized education as a fundamental right. All children must be in school progressively meaning gradually. They also have equal opportunity for all the students. The elements of this convention states make primary education compulsory and available free to all children. Encourage the development of different forms in secondary education including general and vocational. Education of a child does not stop at elementary level. Vocational education helps a student to earn a living.

3. **DAKAR world education forum**

April 2000 164 countries combined together, to ensure Education for All (EFA). They focused at achieving the goal in developed, developing and under developed countries to achieve till 2015. Pakistan has not met most of the targets set under that convention.

EFA Goals

Following are some of the EFA goals with explanation.

- **Expanding and improving comprehensive early childhood education**. There is a need to improve the comprehensive basic education
- **Ensuring that by 2015 all students particularly girls and those belonging to the ethnic minorities receive an education.** 2015 was the target, 15 years were given to countries to plan that. We have not met this target. Many of our children are not going to school. We have to see what countries have achieved these targets. We have to compare our country

with others.

- **Ensuring that the learning needs of all young people and adults are met through equitable access to appropriate learning and life skills**

  Every child should have equitable access. No child should say that there is no school in my area. For that we have to improve our infra-structure

- **Achieving 50% improvement in levels of adult literacy by 2015**

  Based on 2000, whatever the adult literacy was then, they wanted that in coming 15 years it should improve by 50%. Most of our adult population is not literate.

- **Eliminating gender disparities in primary and secondary education by 2005**

  Only 5 years were given to remove gender disparity from schools. In 2015 the target was set to equalize the gender in schools i.e. to make the same number available for boys and girls. We have to look at the countries in our region, the developing countries that have come close to achieving the targets.

- **Improving all aspects of the quality of education and ensuring excellence of all so that recognize and measurable outcomes are achieved by all**

  Improving education, it is not a simple task. By improving education we mean we mean to improve the facilities, teacher training, schools, curriculum, examination, and assessment system. Unless all that is improved, the quality of education cannot be improved.

1. Convention Millennium Development Goals (MDGs)

Eight millennium development goals were set by the United Nations for the signatory countries. Following are the details of those 8 MDGs

I. Eradicate extreme poverty and hunger

We need to feed our population through a balanced diet.

II. Achieve universal primary education

Universal means across the globe. Primary education up to grade 5 should be provided to all free and mandatory.

III. Promote gender equality and empower women

Equal access to primary and post primary education for girls. Gender equality especially in Pakistan is a difficult task. But according to MDGs girls have to achieve that as well.

IV. Reduce child mortality

Mortality is the death rate. There could be many reasons like malnutrition, diseases, poor health care, poverty, not enough food. We need to get sure that we can eradicate that.

V. Improve maternal health

Good healthy mother would breed good healthy child.

VI. Combat HIV aids, malaria and other diseases

In our case it could also include dengue.

VII. Ensure environmental stability

We have polluted water, polluted air. Our entire population should receive clean and safe water.

VIII. Develop a global partnership for development

More aid, more debt relief, more access to essential drugs etc. in other words living in cooperation.

Topic 3

Status of Education in Pakistan

As discussed, that we have not been able to bring all children to schools. Lot of work is to be done, in order to achieve that, even in the coming 5 or 10 years. Population growth is not helping achieve us the target. In result, boys are expected to do the field work and girls are expected to do the household work. Even if we have children in schools, we can even have a problem of dropouts. Had our population been less, our school enrollment rate would have increased. In fact, Pakistan's illiterates have increased. In 1951 they were 20 million that number rose to 50 million in 1998. That is more than double. We will have to ensure that our young children are in school to combat that increasing number.

It is estimated that about 55 million of age 10 plus, cannot read and write and 7 million students of age 5 to 9 years are out of school. By reading and writing we mean reading and writing in Urdu. It is extremely more difficult for them to read and write in any other language, especially English.

In rural areas 52% of girls are not enrolled in schools. 67% of women are illiterate. There are 2 reasons for that. Over population and the second reason is because the women themselves did not go to schools so they do not realize the importance to send their girls to school. With children not going to schools, where are you going to find women doctors or nurses? To get a service of a female for a female we have to send our girls to schools.

Due to low rates of literacy and primary education, Pakistan has been ranked at lowest ranking of below 125^{th} position in Human Development Index for 20 years. If that has to be changed our young people need to be in schools.

Topic 4

Pakistan's Constitutional Provisions for Education

1973 the constitution says ***that state shall remove illiteracy and provide free and compulsory secondary education Article 37B.*** There are two things in this article. Remove illiteracy but how to remove illiteracy? Second point is compulsory and free secondary education, so it is even better than the conventions that we have studied. Secondary education means up to level 10 or matric

Article 25A, as part of the 18th amendment of the constitution, it is tilted as fundamental rights. It states that the state shall provide free and compulsory education to all children of the age of 5 to 16 years in such manners as may be determined by law. From 5 to 16 is kindergarten through Matriculation. This education is considered as a fundamental right. A flaw in the article is that it states as determined by law. What law will determine the education? It is a critical point in the article.

At present, even after the abolition of fee and free textbooks for the children, there are more than 7 million children of the school age not going to school. Where are other stationary and other expenses coming from including that of lunch, paper, eraser, sharpener, notebook, transport and uniform? They cannot bear the cost of these miscellaneous items. We are not talking about the computers and other technology items.

The following pre-requites are essentials in order to implement Article 25A.

a) Further legislation is needed to define and elaborate different modalities and rules for provision of free and compulsory education. Without giving standard operating procedures (SOPs) how can we expect to give free education?
b) The last piece of the article as determined by law is also ambiguous. Where are those policies coming from? The job the lawmaker is to determine that.
c) We have to estimate the additional costs. No tuition fee is good but do we have infrastructure, transportation, necessary equipment, paper, color pencils, schools, food and nutrition to get the students to get education.
d) About 30% of the people in Pakistan live below the poverty line. How do you address this disparity? How to bring the balance between the haves and haves not?
e) The compulsory dimension is also to be addressed. The dimension of compulsory has to be explained. Being physically present in the class is enough alone?
f) Universal declaration of human rights 1948 and Article 25A focuses on free and compulsory primary education. How are we assuring that without any financial liability?
g) Awareness needs to be created for these conventions.

Lesson No. 2

EQUITY ISSUES IN EDUCATION

Topic 5

Equity Issues in Education: Poverty

Here are some of the equity issues in education in Pakistani perspective. The first issue is poverty. More than 65 years in independence we have not eradicated poverty. Education can eradicate poverty. What are the factors that continue the poverty to grow in Pakistan rather than helping in eliminating them?

When children come to schools lacking some skills it is the teacher's job to enable them to learn those skills. But what happens is that teachers belittle them, make fun of them instead of motivating them.

Impact of poverty on learning

Children of mothers who receive 5 years of primary education are 40% more likely to live beyond the age of 5. Because when the mothers are educated, they know something about the health. Therefore, children tend to survive beyond infancy.

Research proves that a farmer with at least 4 or 5 years of education can be more productive than those who did not attend a class. Because these 4 or 5 classes can help him in thinking in getting him involved in wondering how things can be improved. He is willing to take risk; he is willing to try new things. Poverty affects student learning in many ways. Poverty results from several factors. Of course, food is one major factor. Lack of emotional support, stress and distress also do not help you learn much. Health issues also need to be addressed. A healthy body can have a healthy mind. Cognitive stimulation and safety are critical issues in 21st century.

There is high correlation between poverty and academic success. This correlation in inverse. Poorer you are the less you are going to perform. The good you are from the family the good you are going to perform. Students with less economic base have more chances to fail almost 63% to 85% more as compared to the students with good economic base.

What does conventional wisdom say?

If we want to reduce poverty, we have to increase schooling. Have more schools and help them educate. Have further facilities through education.

Topic 6

Equity issues in Education: Silent Exclusion

Second equity issue is silent exclusion. If you never come to school you are excluded, you come to school and drop out you are excluded. We know these students. Then what is silent exclusion.

Silent exclusion is the children who come to school yet gain nothing. Along with those who are drop out the students who gain nothing are also affected by poverty. They are vulnerable to get drop out. These students are low attenders, they have less attendance. They are repeaters as well. They get fail. Then they are low achievers. They get low grades. These students are actually there but teachers do not give attention to them. Teachers have to look for these teachers. Every child can learn.

The ***identification of silent exclusion*** students is very difficult. A lot of changes have to be made in the classroom system so that these kinds of students can be identified early. Vigilant teacher behavior can help this identification. Do not ignore the missing child in the classroom. Keep an eye on the ***attendance*** of the children.

Low achievers the bottom 25% of the class. Pull the child out, work with the child, help him/her.

Repeater child has repeated the class again. The teacher should open eyes to help that child. Research has identified that low achievers, repeaters, and low attendance students are affected by the low economic condition of their family. This pushes them to the silent exclusion. Motivate the child to remain in the school and be successful.

Topic 7

Equity issues in Education: Income

Income is the money that comes into the household, whether it is through agriculture, industry, or job, but whatever the money that comes into house is the income. The research has shown that better the income of a house, the chances are more that the child will get better education, better life. Compared to less income the chances are that the child will get less opportunities. The family size is also way too large in low income families.

How are we going to address these issues? Health comes in and along with health family planning is also important. The life of their children will be better if they had lesser children. Additional private cost includes things like examination fee, private fee because sometimes schools do not deliver what they are supposed to do. The stationary items, notebooks, transportation cost. When the family is unable to provide food three times a day, they are more likely to not to provide these additional private costs.

If we want to control poverty by preventing the children of poor to grow up into poor we have to

ensure that through education, services, and training. As it is said that if you are born poor that does not matter, but if you live poor then it is your fault.

Topic 8

Equity issues in Education: Health

Next issue that we will discuss is health. Different family backgrounds, different cultures, financial situation all this helps in determining what kind of health facilities your family is able to provide to you. Without proper health care a child will not be able to make it through even the primary years of education.

If you have good health you are able to do a lot. Of course, good health comes from lots of factors like: food, nutrition, exercise, relaxation all of these contribute in good health.

Inequality and social conditions give rise to unequal and unjust health outcomes for different social units. We may have health facilities but more detailed facilities like medicine, injections, x-rays are not available. Government health care facilities do not guarantee proper health treatment. Private health care facilities are frightfully expensive. Again, you are not able to afford that you will not be able to do well for your children and the children will not be able to do in education.

Poor nutrition includes poor protein intake children performed less in the achievement test. Protein is what human muscles are made of. Students who get more protein perform well in the achievement tests. ***Iron*** is an important part of the hemoglobin of the blood, less iron includes less energy and hence not able to get good education.

Along with malnutrition the problem is of ***obesity***. Obesity comes in the families are privileged, where food is rich, they get fat/ obese. Children with obesity also get teased in schools, resultant in low self-esteem. When children get bullied like this they miss at the schools.

Physical environment is also important. You need to get exercise in the parks. Who can go there, of course people from good families?

Mental tasks such as concentration, memory recall can be compromised if you do not have good quality air in the room, poor ventilation, humidity can also affect your learning. Poor ventilation can cause a decline in the performance of the teacher as well as of the schools. Many schools do not have even windows in the classrooms; such environment is not conducive for learning to happen.

Topic 9

Equity issues in Education: school equipment

Next topic is of school equipment and school supplies. What happens what you do not have adequate school supplies. A child who attends classes without pencil and paper, it is impossible for him/ her to remember everything. This is impossible. Because of this child struggle. I could borrow from a friend. My friend could not have a separate pencil, he/ she will break his/ her pencil into two. Then what do I do? I will look for a sharpener. One thing leads to another. So, like this the learning experience damages, unless we are able to provide the equal supplies to all.

Clearly lack of basic school equipment, is significantly related to parents' low income. A family that earns less, the geometry box is quite an expensive thing. You cannot share the geometry box. It is the poor who cannot buy good equipment. The poor tend to get poorer, because they cannot afford.

Having the geometry will help me learn these concepts and only then I can get good grades. Students without school bags are low achievers. Without a school bag either I will come to school without books, or with 2, or 3 books. That will not help. If all children receive these resources from whatever source, there will be equity. Then only better equitable education can be provided to all children.

Lesson No. 3

EQUITY ISSUES IN EDUCATION II

Topic 10

Equity issues in Education: Gender

Next equity issue is based on gender. Gender equity has been an issue in Pakistan and it still is. The disadvantaged group is females. The disadvantage affects them in three ways which are: Their opportunities for success in education It means that even if girls come to school, they are not allowed to take subjects / fields that they will like to get in. For example, physics, teachers and parents do not appreciate girls taking physics as subject. If girls are provided with proper education then they can be responsible citizens of Pakistan.

The statistics related to the number of primary schools, teachers, literacy rates, and net enrollment rates is given as under for better understanding. Why and how the female students be the disadvantaged group at all level be it schools, colleges, and universities.

Schools

The number of primary schools for both boys and girls is important. It is required in order to ensure equality in education. Here is the list of schools in Pakistan. The breakdown is given province wise.

Table 1: Number of boys, girls, and mixed schools

Province	School for boys	School for Girls	Mixed	Total
Punjab	22248	23258	10398	55904
Sindh	18646	7810	21337	74793
KP	12111	8060	2041	22212
Baluchistan	7107	2898	373	10378
AJK	1043	1934	598	3575
GB	538	277	1048	1863
FATA	2532	1975	75	4582
Islamabad	84	58	242	384
Total	64309	46270	36112	146691

We have seen in the table the schools for the girls are lesser than the boys.

Table 2: Number of boys' and girls' schools in rural and urban areas

Province	Urban				Rural			
	Boys	Girls	Mixed	Total	Boys	Girls	Mixed	Total
Punjab	2216	2435	5007	9658	20032	20823	5391	46246
Sindh	1808	1587	3896	7291	16838	6223	17441	40502
KP	675	534	610	1819	11436	7526	1431	20393
Baluchistan	688	287	158	1133	6419	2611	215	9245
AJK	31	74	76	181	1012	1860	522	3394
GB	28	24	112	164	510	253	936	1699
FATA	-	-	-	-	2532	1975	75	4582
Islamabad	-	2	121	123	84	56	121	261
Pakistan	5446	4943	9980	20369	58863	41327	26132	126322

Topic 11

Equity Issues in Education: Gender (for Teachers)

One reason for low enrollment of girls is that parents do not like to send girl students to schools where teachers are not female. Thus, there is disparity, because schools are far, they are not nearby. So, when the schools are distant, females are not allowed to go to teach to schools far across.

The table below highlights the picture of teachers across Pakistan.

Table 1. Number of teachers in Pakistan, by province

Province	Male	Female	Total
Punjab	80760	106345	187105
Sindh	72915	43635	116568
KP	46258	29923	76181
Baluchistan	12285	6351	18636
AJK	3217	4361	7578
GB	2301	2046	4347
FATA	7108	4457	11565
Islamabad	758	2707	3465
Total	225602	199843	425445

The table reflects that Punjab, AJK, and ICT have more female schools, other than these the situation is evident that female teachers are far less than the male teachers. In rural and urban divide of teachers it is seen that in urban areas there are more female teachers in schools, but in rural areas the number of male teachers exceed over female teachers. So, our rural schools have more male teachers. This could be because of the transportation facilities in the rural areas. Along with the transportation facilities, there is accommodation problem. Security and safety issues will complicate the issues of accommodation more. We have to ensure safe and secure accommodation facilities too, in order to ensure equity in male and female teachers.

Topic 12

Equity Issues in Education: Gender (Non-Enrollment rates)

Net enrollment rates

The number of primary school age children enrolled in schools compared to the overall population in that particular age group.

First, let us see what percentage of children is enrolled in schools. The net enrollment rate is an indicator of the level of accessibility of education for school-age children. It depends upon the locality and infrastructure of the schools. Unless we address these problems, this will remain an issue.

Here is the table reflecting the NER.

Table 1. Primary NER, Pakistan (2000-2008)

Year	Male NER	Female NER
2000-01	67.5	45.8
2004-05	73.3	55.7
2005-06	56	48
2006-07	60	51
2007-08	59	52
2008-09	61	54

The male enrollment is unfortunately dropped over the course of time. However, in the female side there is 8-9 % increase in the enrollment. If we want to keep the balance every child of school age should be in school. The table shows that girls at all years still have lesser enrollment rate than boy's enrollment in primary sector.

A real issue is to educate the parents, that by sending the girls to schools carries significant important. In rural urban divide we see that especially in rural areas, girls are consistently less enrolled than boys in rural schools. However, in urban area school the enrollment rates fluctuate.

Topic 13

Equity Issues in Education: Gender (Literacy)

Literacy is at the heart of basic education and is essential for many reasons.

1. It eradicates poverty
2. It helps in reducing child mortality rate.
3. It ensures sustainable development, peace and democracy.

Literacy is defined as the ability to read a newspaper and writing a letter in Urdu.

Literacy rates are much lesser for females than males. Literacy rates for girls and women are far less than the males. May be a province or two have better numbers but in general it is not much appreciating. In SAARC countries our position is also not hopeful. We are only above Nepal and Bangladesh. Only 54% of literate population we have 46% illiterate population.

Our girls are particularly disadvantaged in this matter. This can be addressed that by proving schools (small schools) around the populated areas so that female students can be sent to schools.

Although Pakistan has a higher Human Development Index (HDI) than Nepal and Bangladesh, it still has less Net Enrollment rates (NER) than these countries and other countries in the same region.

Topic 14

Equity Issues in Education: Gender (Reasons for Gender Disparity)

What are the reasons for gender disparity in education? Why is that more boys are in schools than in girls. Why is that boys move from primary to secondary to tertiary education than girls do.

1. **Poverty and absence of free and compulsory education to all**

The constitution provides as a basic right free and compulsory basic education for all school age going children. This will take a lot of time to implement that. Poverty has many other aspects. The additional costs are also not afforded by the low economic status families. Because of poverty household income gets low and they educate boys as they think that educating boys will bring income in the home.

2. **Low education budget**

With low education budget it is not possible for schools to raise their facilities, to rise the salaries of the teachers, and to bring technology in schools. We have to ensure that there is a decent allocation of budget for education. On an average the budget is 2% allocated for the education.

3. **Cultural norms restricting freedom of movement of girls and women**

The mindset of the people has to change. This can be done by changing the mindset of parents. Also, the government needs to step in by providing nearby schools. This limits the movement of girls, infrastructure, distance, other facilities. This restricts them to go to schools.

4. **Gender division of labor**

The girls are not allowed to work in the field. They are to stay at home. The point is why we give education to girls if they have to set in the homes.

5. Shortage of schools

The number of schools is not enough. We need more schools in rural and sub-urban areas. Unless we increase the number of schools thereby increasing the number of classrooms, we will not be able to accommodate the extra students who would like to come to schools. This majorly affects the girl's education. Parents do not allow to send their girls far across.

6. Shortage of female teachers

Girls will be allowed to go to schools only when they have female teachers. This will require an extra effort to fill this gap. Especially in rural areas this shortage is causing the gender disparity in school going children.

7. Conflict

Conflict between different groups has compounded the issue affecting the education. This includes safety and surety issue. With scarce resources we are not able to endure safety and surety. Many people think at this point before sending their children to schools.

Topic 15

Equity Issues in Education: Religion

Pakistan is significant on the geopolitical state. Pakistan is second largest Muslim populated country and fastest youth population increase. This is important to understand the role that religion plays in social, economic, and political life of its citizens.

We only spend a little of the GDP in education. In last decade or so, Pakistan has seen violent extremism in Pakistan. The minorities are not secure in Pakistan. With this trend of thinking going on in the country it is getting more difficult to keep the minorities secure so that they can contribute in the development of the country. Starting from the independence of Pakistan, there were missionary schools, like convents, were available and providing good education to Pakistan. But now they have become scarce.

In 2006 when the curricula were revised, the government focused on revising the old curricula of the country to build reforms. The reforms have leaned on the 22nd article of the constitution which codifies the rights of religious minorities.

Despite the efforts of the government it has been 6 years the revision has been incorporated. Who is evaluating what new textbooks offer? The existing textbooks have been reprinted since 2006. Content needs to be looked at. What kinds of content and texts/ pictures are given in the textbooks? There are some groups that see others with tolerance and some groups who see religious minorities with bigotry. So, there are two extremes in our society.

Lesson No. 4

RELIGIOUS DISCRIMINATION AND SOCIOCULTURAL RELATED ISSUES

Topic 16

Religious Discrimination-I (Textbook Analysis)

An integrated curriculum is frequently used for early grades with no clear separation in religious and non-religious content in materials given to religious minorities. In early grades all the students study the same content, be it religious and/ or non-religious. Doing the same ethics, mathematics, etc. but religious beliefs, the means may be different. It is fair to the minorities? This is violation of minorities' right. No religious group should be able to perform worships that are not based on particularly their own beliefs.

Dominant cultural values, religious values are major part of our textbooks. They are heavily loaded with Islamic teachings. A review of textbooks suggests that all national heroes, social reformers are all Muslims. Many other minorities have played a significant role in Pakistan but them not to be seen in the textbook. This study found 96 chapters and poems of 362 had strong orientation of Islamic values.

You haven't mentioned minorities' stories. An examination for 1st grade curriculum titled "Meri Kitab" or "My Book" has 7 out of 16 chapters containing Islamic sermons.

We have to remember that we are all Pakistanis first. Unless we address this, we will see this disparity in the minorities. The teachers are asked to not to focus on those Islamic content mentioned in the books. There is no point in giving those lessons in the textbooks and then ask the teachers to not to focus them.

Topic 17

Religious Discrimination (textbook Analysis)

In the revised curriculum of 2006, the subject of ethics was offered. However, many students do not have access to this ethics course. The minorities are a contributing piece to the whole Pakistan. Our flag even clearly indicated one fourth white portion for the minorities. The constitution of Pakistan does not reckon Ahmadis as Muslims. That does not make us Non-Pakistanis, we are only non-Muslims.

According to the National Commission for Justice and Peace report government issued textbooks that teach students that Hindus are backwards and superstitious and given the chance they will assert the Muslims. May be that was true 67 years ago, may be that was a reason for the partition but today, we have to combine the minorities and majorities to come together and work for the mutual growth.

Extensive interviews of government schools revealed that they had limited knowledge of religious minorities and their beliefs. The reason for that is when they went to schools, they were not offered the same education. This is why today is the time of multi-religion education.

Public school teachers often advocated respectful treatment of religious minorities. This shows that are acknowledging them but they don't know how to deal with them. Qur'an also reflects that there are people of the book i.e. Jews, Christians. Teachers have favorable dispositions towards the people of the book. Unless the teachers realize that there are people of the people and people not of the book, they are diversified. We have to engage with them too, for the larger benefit of Pakistan.

Then there is divide of Shia-Sunni Muslims. There are teachers who respect both and there are teachers who do not respect both. We have to understand that groups within Islam shall be treated with tolerance. Madrassa teachers were agree on the fact that Jews and Christians are referenced in Qur'an but they say that the teachings have been changed with time. But we have to understand the concept of inter- faith harmony. These people understand that these religious minorities exist but they are not tolerant about them.

Lack of exposure to the madrassa students/ teachers they are not exposed to the religious minorities outside the premises of their madrassa. The people at the madrassa know about the minorities but they do not know how to be tolerant towards them. The madrassa school systems are only Muslims students. A large portion of public schools were not able to identify the minorities as citizens of the Pakistan. Although they knew that there exist religious minorities, they were skeptical about how to deal with them. The students of public schools reflected that the teachers taught them to deal with respect with the students/ citizens of others minorities.

Topic 18

Sociocultural related Issues (Reform Opportunities)

In teacher –training we focus a lot on the content, professional characteristics but we do not focus on how to deal with the minorities. If we included these types of content in teacher training, then we could see a lot more tolerant society. Create interface with other minorities. Bring them on grounds, in classrooms, so that when they mix in constructive healthy activities, they will learn to be tolerant.

Make the subject Ethics as compulsory for all students. All religions teach the same values.
Develop public private partnership to build resources. In this way many minorities come into play via private members of the society.

Encourage public curricula reforms. Unless we begin with the textbooks, we cannot bring harmony. We have to include some portion of the minorities that have really contributed in the society of Pakistan then we must include them. This refers to the education opportunities of socio-culturally disadvantaged groups. Even females are disadvantaged in our minorities.

There can be many types of minorities in the society, including those as defined in:

1. Economic terms (the income poor)
2. Political terms (dissidents- people who do not go with your ideology or philosophy to politics
3. Cultural terms (sub cultural groups-Balochi, Punjabi)

Then there are many other minorities based on language. Should language be allowed to determine minorities? Just because someone can speak some language and someone cannot. Then there are those who are living below the poverty line? In fact, they are in majority in Pakistan, but those who are in power are financially sound people. As a result, people living below poverty line become minority.

The school attendance of females also gets affected by socio-cultural issues. Boys are more likely to make it to school. Those kinds of things need to be addressed. This is clearer in tertiary education since they require more financial resources.

Topic 19

Free and Accessible Education

Free and accessible is both a trend and an issue in education. In developed countries it is already a trend while in developing countries it is an issue. Despite encouraging developments there is still an estimated 115 to 130 million children not attending schools. How do we get these children in schools?

Among those who enroll in primary schools' large number drop out. This is because of the hidden cause which the families are not able to manage. UNESCO views free and accessible education as a dynamic approach of responding positively to pupil diversity and of seeing individual differences as problems, but as opportunities for enriching learning."

The move towards free and accessible education is not technical movement but a movement with a philosophy- A philosophy to tolerate and motivate them in a diverse classroom. All children have a right to get education that does not discriminate based on any factor.

A rights-based education approach has three basic fundamental principles need to be looked at.

- Access to free and accessible education equality
- Inclusion and non-discrimination
- The right to education, content, and processes

Implementing free and accessible education by:

- Generating collective thinking and identifying practical solutions such as how human rights can be made part of the local school curriculum.
- Linking the human rights movement with educational access.
- Fostering grassroots action and strengthening its ties to the policy level in order to promote protection.
- Encouraging the creation of community and children's councils where issues of access can be discussed
- Developing community-school mechanism to identify children not in school as well as develop activities to ensure that children enroll in school and learn.
- Adequate resource must match with political will.
- Ultimately success will be judged by the quality of basic education provided to all learners.
- Use education as a tool for social cohesion and integration by guaranteeing continuous access, outside of teaching hours, to educational and communal spaces to permit students to socialize and express their creativity.

Lesson No. 5

FREE AND ACCESSIBLE EDUCATION AND ITS BENEFITS

Topic 20

Free and Accessible Education (21st Century)

Enhancing civic education in primary and secondary schools, ensuring free language courses to favor a better integration of children with marginalized backgrounds in to the education system.
Ensure an adequate teacher-student ratio to permit quality teaching in small class settings

Promote the development of affordable hardware and software, to allow wider access to ICT particularly in developing countries like Pakistan. As we see technology as a fundamental provider of education in future years

Promote awareness and understanding of the sustainable development topic through education, which would encourage the societal change in behavior and create a more sustainable future.
Particularly in the areas of environmental integrity, economic viability, and just society for present and future generations.

Free and accessible education is about

- Welcoming diversity
- Benefitin all learners not only targeting the excluded
- Children in school who may feel excluded
- Providing equal access to education or making certain provisions for certain categories of children without excluding them.
- Reforms of selected students or community
- Responding only to diversity
- Meeting the needs of children with learning disabilities only
- Meeting one child's needs at the expense of another child.

Topic 21

Elements of Free and Accessible Education

There are four key elements of free and accessible education
Free and accessible education is process.

1. It is about learning how to live with difference and learning how to learn from difference.
2. Free and accessible education is concerned with the identification and removal of barriers. It involves collecting collating and evaluating information from a wide variety of sources in

order to plan for educational improvements in policy and practice.

3. Free and accessible education is about the presence, participation, and achievement of all students.
    - Presence means where children are educated, and how reliably and punctually they attend.
    - Participation relates to the quality of their experiences whilst they are there.
    - Achievement is the outcome of the learning.
4. Free and accessible education involves a particular emphasis on those groups of learners who may be at risk of marginalization, exclusion or underachievement. The groups that are more at risk should be given special attention. This is where keen steps are to be taken.

Topic 22

Benefits of Free and Accessible Education-I

Free and accessible education strives to provide quality in education in classrooms. There are a lot of changes occurred so these changes need to be addressed in classrooms. Human variations and differences should be reflected in the classrooms.

Schools with free and accessible education offer opportunities for a range of working methods and individualized learning in order that no pupil is obliged to stand outside the fellowship of and partnership in the school. Schools need to be flexible in the goal what they offer.

Characteristics of a school for all include exercising flexibility with regard to the individual pupil's capabilities and placing his / her needs and interests at the core. The school for all is therefore a coherent, but differentiated learning environment. Placing the pupil at the center does not imply that students need to be taught and will learn the subject matter and content separately. Furthermore, it involves students supporting one another according to their abilities and strengths.

Topic 23

Benefits of Free and Accessible Education-II

Free and Accessible Education is concerned with the need to ensure that learning opportunities contribute to effective inclusion of individual and groups into the wider fabric of society. Quality education is therefore education that is inclusive as it aims at the full participation of all learners. We have learned from constructive and transitional theories that the quality of learning can be enhanced by the diversity of student involvement. Teacher attitudes and tolerance are vehicles for the construction of an inclusive and participatory society.

Focusing on quality education for enhanced inclusion of all students implies identifying strategies for overcoming or eliminating the barriers to full participation for individuals and groups which experience discrimination, marginalization and exclusion or which are particularly vulnerable.
Teacher has to ensure that every student participates in the classroom. This will boost his confidence and give exposure to him.

Topic 24
Benefits of Free and Accessible Education-III Cost effectiveness of free and accessible education

According to a recent World Bank study and a growing body of global research, free and accessible education is not only cost efficient but also cost effective to the state considering that equity is way to excellence.

Most disadvantaged children- girls, the rural poor, children with disabilities- when have access to school, they get better health, education, nutrition, and sanitation facilitators.
This also helps address the socioeconomic and gender related inequalities. Therefore, the effectiveness of free and accessible education is measurable not only in terms of educational outcomes, reduced wastage, less repetition but generally through enhanced returns on educational investment.

The cost of education is a critical issue to all school systems, especially when creating education facilities for all learners. Often questions are raised about the costs of education for traditionally excluded groups. It is falsely perceived as being costly when it is often only about making minor adjustments to accommodate all learners.

If we adopt a holistic perspective of society, it is more relevant to ask about the costs to society when it does not provide education for all children. In such a context, it is clear that the most cost-effective solution is to offer education to all students. Education is the fundamental basis upon which the survival of the human race and development of a nation depend; it is an important investment where no compromises should be made.

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Lesson No. 6

FREE AND ACCESSIBLE EDUCATION KEY PLAYERS, ATTITUDES, VALUES, CURRICULA & EMPOWERMENT

Topic 25

Free and Accessible education: Key Players I

Incorporating free and accessible education as a guiding principle typically requires change in education systems, and this change process is frequently faced with several challenges. It involves important shifts and changes at the systems as well as the societal level.

It is important to note that these change processes towards free and accessible education often begin at small scale and involve overcoming some obstacles such as:

- Existing attitudes and values
- Lack of understanding
- Lack of necessary skills
- Limited resources
- Inappropriate organization

Some dimensions of education change must be measured. Such measurements include:

- Direct benefits to children
- Wider impact on policies, practices, ideas, and beliefs.
- Enhanced children participation
- Reduced discrimination e.g. gender, disability, caste, minority, status, etc.
- Strengthened partnerships and improved collaboration between ministries at the national and local level of government and at the community level.
- Development and strengthening of education system, technology and pedagogy to include all learners
- Teachers, parents, communities, school authorities, curriculum planners, training and institutes and entrepreneurs in the business of education are among the actors that can serve as valuable resources in support of free and accessible education
- Some teachers, parents and community are more than just a valuable resource; they are the key to the inclusion process.

- It is the classroom teacher who has the utmost responsibility for the pupils and their day to day learning. But at the same time, it is also the responsibility of the ministry of Education to ensure that school accessible and child centered programmes are elaborated, Implemented and evaluated. The outcome of such programmes will facilitate new incentives and ideas for teaching.

Topic 26

Free and Accessible education: Key Players II

Family members and communities can be important resources-when informed, stimulated, entrusted, and prepared in effective ways. Efforts should not be spared when guiding and directing families in work that is supportive to their child.

It is often a great challenge to get the families of the most marginalized learners involved.

Examples from South Africa

At a primary school in Durban, south Africa, teachers use grandmothers as a resource to develop the reading abilities of the children. Grandmothers have been trained to listen to children read and to encourage them to interact with texts. Twice a week, grandmothers come to the school and work with the groups of children in the playground or under a tree.

This also frees up the teachers to work with the children who may be experiencing difficulties in learning and who may need individual attention from the teacher.

Topic 27

Free and accessible education: Attitudes and Values

It has been shown that teachers' positive attitudes towards free and accessible education depend strongly on their experience with learners who are perceived as challenging.

Teacher education, the availability of support within the classroom, class size and overall workload are all factors which influence teachers' attitudes.

Several studies have revealed that negative attitudes of teachers and adults (parents and other family members) are the major barrier to inclusion of marginalized students; children do not have prejudices unless adults show them. Thus introducing inclusion of all as a guiding principle in these different areas will have implications for teachers' attitudes.

Shared values make cooperation possible, just as lack of them makes it difficult for people to work together. However, when common values are lacking, common interests, which are precursors to values, may substitute for them and in daily life are often a significant driving force.

Changes in attitude involve significant changes in conceptions and role behavior.

Negative attitudes towards differences and resulting discrimination and prejudice in society manifests itself as a serious barrier to students' learning. However, it is a barrier that can be overcome through the practice of inclusion and is not a necessary precursor to the process.

The implementation of more inclusive systems of education is possible if schools themselves are committed to becoming more inclusive. The development of enabling mechanisms such as national policies on free and accessible education, local support systems and appropriate forms of curriculum and assessment are important in creating the right context for the development of inclusion.

Free and accessible education has important benefits for all children as it produces schools with more enriching learning environments that view diversity as a positive force which must be acknowledged and celebrated.

Inclusion produces schools that move away from rote learning and place greater emphasis on hands-on experience based, active and cooperative learning.

Topic 28
Free and Accessible Education: Curricula

Education quality and access are intricately linked. The concept education for all thus questions a large part of the current school's way of organizing teaching. Teachers often retain the perspectives gained from their own school experiences.

Accessible and flexible curricula can serve as the key to creating schools for all. It is important that the curriculum be flexible enough to provide possibilities for adjustment to individual needs and to stimulate teachers to seek solutions that can be matched with the needs and abilities of each and every student.

Many curricula expect all pupils to learn the same things, at the same time and by the same means and methods. But students are different and have different abilities and needs. Therefore, the curriculum must take into consideration the various needs of students to ensure access for all.

Strategies for developing accessible curricula

1. Providing a flexible time frame for students studying particular subjects
2. Giving greater freedom to teachers in choosing their working methods
3. Allowing teachers, the opportunity of giving special support in practical subjects (e.g. orientation, mobility) over and above the periods allotted for more traditional school

subjects.

4. Allotting time for additional assistance for classroom-based work
5. Emphasizing aspects of pre-vocational training

Questions to consider for accessible curricula

1. What human values promoting inclusion are being fostered through the curriculum?
2. Are human rights and children's rights part of the curriculum? Do they address the coexistence of rights with responsibilities, and how they are taught?
3. Is the content of the curriculum relevant to children's real lives and future?
4. Does the curriculum take gender, cultural identity and language background into consideration?
5. Does the curriculum include environmental education?
6. Are teaching methods child centered and interactive?
7. How is the feedback gathered / integrated for curriculum revision?
8. How the curriculum is related to national assessment systems?
9. To what extent are education authorities responsible for monitoring the school in tune with the curriculum revisions and transactions?

Together with the flexible curriculum, flexible teaching-learning methodology should be introduced?

Topic 29

Free and Accessible Education: Empowerment for All

When communities can hold teachers, administrators, and government officials accountable for the inclusion of all children through formal institutional mechanisms, community members become more interested in school improvement and more willing to commit their own resources to the task. This commitment may include forming partnerships with outside contributors.

According to the World Bank, "programs that expand the access of excluded groups to education have led to important shifts in the mindset among community members and government leaders regarding the contributions that those groups can make to society." This is where change processes and empowerment go hand in hand to move towards free and accessible education for all learners.

Lesson No. 7

PEACE EDUCATION

Topic 30

Peace Education

Why study Peace education?

Why the peace education is important. Safety and security of an individual is important. When these two things are threatened then conflict arises.

Peace studies, is a process. It has to be born, reborn, again and again. It means you have to refine the curriculum every now and then. Therefore, we need to revisit the curriculum for peace studies on a regular basis. Conflict could be in the system, society, or even in the families. Starting from smaller units we will look into the macro level.

Peace studies explore handling of conflict by peaceful means. Conflict can be resolved through argumentation but how do we resolve a conflict peacefully is what we study in peace studies. Only then the peace can prevail.

Topic 31

Introduction to Peace Studies

Another word for peace is equality. And other words for equality are equity, symmetry, reciprocity, equal rights, and equal dignity. One can see them as part of the definition of peace or peaceful means. As such they are necessary rather than sufficient conditions.

Equality does not guarantee peace. But inequality almost guarantees the opposite, direct violence, in one form or the other, physical or verbal, directed against the body, mind or spirit of the human beings.

As critical studies peace studies do the same as critics of human behavior—moral philosophers, priests, criminal judges— do compare data with values related one way or the other to peace, and then conclude in terms of right, wrong, both-and-neither-nor.

For this the criteria have to be explicit and the comparison carried out with the same rigour as in any other fields. As constructive studies peace studies would not shy away from making recommendations, the "therapy" part of the useful diagnosis-prognosis-therapy triangle taken from

health studies. Expectations from therapy can then be held against values relating to peace to conclude in terms of adequate, inadequate, both and neither-nor.

Topic 32
Peace Education I

Peace studies are an applied science

We are better served today by may be as many as 44 health professions. Peace studies should be able to deliver the same, at the same level of adequacy, through conflict transformation, peace building, peace keeping, and reconciliation to mention some approaches.
Let many peace professions grow, mediators, conciliators, and so on.

Peace studies are trans- rather than inter-disciplinary

Like women studies make women and their conditions of suppression and liberation visible. Peace studies make peace visible, understandable, and obtainable.

Topic 33
Peace Education II

Peace studies are trans- rather than inter-disciplinary

As a rule, in a good peace researcher, the PhD field is no longer visible. There are often four stages on this road.
In the *multi-disciplinary stage*, a university, or a conference, invites specialists from several disciplines to contribute to peace studies from their angle. People or discipline who never meet because our universities fragment human knowledge keeps us apart fighting for funds and recognition, learn the art of tolerance.

In the *inter-disciplinary stage* a university or a conference encourages dialogue among approaches, an obvious method being to address the same event or phase in history, or the same problem.

In the *cross disciplinary stage* this dialogue goes further, into mutual learning.
A psychologist may pick up a sociological hypothesis about status disequilibrium (like high on education, low on power) as aggression productive and explore the psychology; a sociologist may explore the social effects of cognitive consonance as peace of mind. Usually such explorations are bilateral.

Topic 34

Transcend Approach

In the trans-disciplinary stage, based on the preceding three or not, the problem that determines the choice of intellectual tools and they will usually have to come from the tool chests of several disciplines.

Like for health studies. But in this process other disciplines will also learn and change. Historians for instance, will focus more on peace and on how war could have been avoided, economics more on survival and equity etc.

No country has monopoly, nor does any gender, generation, race, class, nation. As peace belongs to all of us so do peace studies.

This is important because study of peace is so intimately related to the study of conflict.

About conflict we know something for sure: each actor in a conflict has its own angle.

Lesson No. 8

PEACE EDUCATION: PHILOSOPHY, ELEMENTS OF CURRICULUM & HISTORY

Topic 35

Why do Human Clash

The conflict always looks different when looked at from different angles. Hence, we have to listen to all parties, understanding what they want, to sort between legitimate and illegitimate using, for instance, human rights as a measure, and then try to bridge the gap between legitimate goals.

Such is the transcend approach. All parties to a conflict have equal rights to be understood, but not the same right to be accepted and supported.

Peace studies focus less on actors, more on deep cultures and structures and how they affect mediation and conciliation. There has been much focus on the role of structure for peace, particularly of gender and class relations. Time has come for much more focus on culture, and not only in the sense of religion.

Why do humans clash?

It may be two neighbors disagreeing over a fence or a devastating worldwide war. Whatever a conflict's scale, students of peace and conflict resolution seek the causes. They hope eventually to use their skills to help prevent war and encourage peace.

An eye for an eye will only make the whole world blind.

Topic 36
Philosophy of peace education

There is no way to peace- Peace is the way.

Peace Studies discussion

Patriotism means love of one's country. To love your country does not mean blindly accepting and supporting its policies. We, the people, have the right and duty to help from the policies our country adopts.

Once a student, Raza, who was about six at that time, said to me, "if the people next door to us are our neighbours and the people next to them are their neighbours and it goes on like that forever, then it means everybody is everybody's neighbour. Then he looked at me and said, why would people kill their neighbours?

It is not enough to talk about peace. One must believe in it. And it is not enough to believe in it. One must work at it.

What is peace education?

Peace education is the pedagogical efforts to create a world at peace. By peace, we mean more than the absence of violence (negative peace). Peace in its most positive aspects embraces ideas of justice, global sustainability and the eradication of structures that promote insecurity: poverty, hunger, malnutrition, and lack of access to resources.

Peace education resets on two assumptions

1. Conflict is ubiquitous
2. There are ways to transform it

Education *for peace assumes peace in education*.

Topic 37

Elements of Curricula

Philosophy of peace education involves

- Non violence
- Love as the basis of transformation—translated into caring classrooms
- Reverence for the environment and for all life

We have to include these elements in the curriculum to ensure peace studies education.

Processes of peace education include the following

- Skills of conflict resolution (transformation)
- Attitudes
- Values

These rest on the ethos of having enough for all to sustain life.

Topic 38

History I

Peace education seeks to build on the philosophy and the processes of nonviolence to help us

understand the role that conflict and violence have played in our lives, seeking ways to transform them

Peace educators point out both the value of and the risk of conflict and social change.
Peace education appreciates the richness of the concept of peace

- Addresses fears
- Provides a futures orientation (imagination)
- Teaches peace as both a process and philosophy
- Promotes peace as a concept alongside justice
- Promotes the care of and love of earth and respect for all life
- Teaches nonviolence as a way to settle differences

Peace education is practiced throughout the world in many settings

- All have in common the idea of transforming conflict into something positive and sustainable so that our world will continue to turn
- Peace education seeks to make and build peace through pedagogy

Topic 39
History II

Peace education rests on the assumptions that morals and ethics cannot be separated from the classroom
The concept of responsibility, both individual and shared, is embedded in the philosophy

How is it done?
An educator teaching peace will use conceptual elements of the philosophy and the processes to structure formal, informal, and hidden curricula. Including classroom climate, tolerance, respect and those teachable moments that can transform classroom interactions and learning.

Some elements of the curricula

- an understanding of war and its causes
- an understanding of violence and its causes
- knowledge of the military and its structures
- an understanding of some principles of world order, including the united nations system
- an understanding of the role of citizen participation

Lesson No. 9

AIMS, KNOWLEDGE, SKILL, ATTITUDE, AND IMPORTANCE OF PEACE

Topic 40

Aims: Knowledge

Some elements of the curricula

1. Knowledge of NGOs and their impact on social change
2. Knowledge of worldwide and local grassroots initiatives
3. Principles of restorative justice
4. Listening and dialogue
5. The importance of nonviolence

Who has gone before?

"our hope for the future lies not in the formal knowledge that we pass on, but in the normal development of the new man"
(Montessori 1937)

Montessori has often been quoted as saying:

"establishing peace is the work of education" all politics can do is keep us out of war"
(John dewy)

Dewey's philosophical ideas involved concepts of educating for peace.
He saw the necessity of teachers loving their students – "love through common self-sacrifice to reach the common good.

Horace Mann hoped that common education could free humankind from the ever-present danger of war.

Topic 41
Aims: skill More modern educators

Non-Deweyan ***Maxine Greene***'s understanding of education is releasing persons to be different—

inherently reflecting concepts of freedom and choice, listening and dialoguing in order to view things as they might be.

J. R. Martin

He gave the concept of schools as homes
In this concept he emphasized and laid stress on the importance of nurturing

Sara Ruddick

Maternal love giving rise to maternal practice can promote peace.

Hooks—teaching to transgress—only happens with adequate nurturing. No dichotomy between education and social change. Healing of the world can happen if teachers know themselves and their students.
The goal of knowledge arising from love is the reunification and construction of broken selves and worlds.

A brief history of peace education

Contemporary view on peace education reflects the evolution of its concept from the beginning of the peace research movement – 40s and 50s

However, its roots go much further

Reformers such as Addams and Fannie fern Andrews and IPRA (The International Peace Research Association) –1965 and COPRED (Consortium on Peace, Research, Education and Development) – 1970, were outgrowths of the work done by Women's International League for Peace and freedom.

Topic 42
Aims: Attitude

The knowledge-based subject approach

Defining peace as a multi-disciplinary academic and moral quest for solutions to the problems of war and justice with the consequential development of the institutions and movements that will contribute to a peace that is based on justice and reconciliation.

Cremin (1993) places a greater emphasis on skills and attitudes, defining peace education.

Topic 43

Peace?

Peace is "a global term applying to all educational endeavors and activities which take as their focus the promotion of knowledge of peace-building and which promote, in the learner, attitudes of tolerance and empathy as well as skills in cooperation, conflict avoidance and conflict resolution so that learners will have the capacity and motivation, individually and collectively, to live in peace with others."

Aims of peace education

These are commonly expressed as:

1. Knowledge
2. Skill
3. Attitudinal programs

Knowledge

1. Awareness of own needs, self-awareness
2. Understanding nature of conflict and peace
3. Ability to identify causes of conflict, and nonviolent means of resolution
4. Conflict analysis
5. Enhancing knowledge of community
6. Mechanisms for peace building and resolving conflict
7. mediation process
8. understanding of rights and responsibilities
9. understanding interdependence between individuals and societies
10. awareness of cultural heritage
11. recognition of prejudice

Knowledge aim:

- Understanding the causes of conflict

Possible outcome

- Students will be able to describe likely causes of typical conflicts in their lives.

Possible indicators

Students will be able to list various causes of conflict including:

- conflicts over feelings
- conflicts over resources
- conflicts over values or beliefs

When presented with a description of a typical conflict in their school or community, students will be able to identify a likely cause, and explain their reasoning.

Students will be able to identify conflicts in which there may be more than once cause.

Skills

- communication -- active listening, self-expression, paraphrasing, reframing
- assertiveness
- ability to cooperate
- affirmation
- critical thinking
- ability to think critically about prejudice
- ability to deal with stereotypes
- dealing with emotions
- problem solving
- ability to generate alternative solutions
- constructive conflict resolution
- conflict prevention
- participation in society on behalf of peace
- ability to live with change

Topic 44
Why Peace for Education? Skill aim

Improved communication skills

Possible outcome

Students will demonstrate effective listening

Possible indicators

After listening to another, students will show that they can accurately restate the speaker's ideas.

After listening to another, students will show that they can accurately reflect speakers' feelings.
Students will demonstrate an ability to ask open-ended questions

Skills aim

Students will demonstrate that they can listen without redirecting the conversation to another topic.
Students will remain silent while listening to another, when appropriate.
Students will demonstrate body language that conveys respect to the speaker

Attitudes

- Self-respect
- Positive self-image Strong self concept
- Tolerance
- Acceptance of others
- Respect for differences
- Respect for rights and responsibilities of children and parents
- Bias awareness Gender equity

Lesson No. 10

THEMES FOR PEACE EDUCATION

Topic 45

Theme 1: A) Attitudes

Following are the terms related with the attitude

- Empathy
- Reconciliation
- Solidarity
- Social responsibility
- Sense of justice and equality
- Joy in living

In attitudes these things are of importance.

Attitudes aim
The aim of attitude is the development of tolerance

Possible outcome
Students will demonstrate attitudes of acceptance and respect for persons who are different from themselves in terms of ethnicity.

Possible indicators
When asked to work together to complete a task in group of peers of varying ethnic groups, students will cooperate effectively.

Students will demonstrate that they can refrain from using stereotypes in their speech.

Topic 46

Theme 1: B) Attitudes Aims

In situations where others express ethnic stereotypes, students will respond by countering the stereotype in some way, such as correcting misinformation, or providing examples of individuals

who do not fit the stereotype.

Student has to identify the stereotype. Unless the student identifies stereotypical behaviours he will not be able to cater that behavior. Then you can correct the behavior. Student also to control has to misinformation. If someone is giving misinformation then you have to correct it.

Students will be able to list the contributions of the different ethnic groups in their community or country to the society as a whole.

Students will be able to give at least one reason why ethnic stereotypes can be harmful.

Topic 47
Theme 1: C

Peace Education: A response to major societal challenges

The greatest source for building a culture of peace is the people themselves for it is through them that peaceful relationships and structures are created.

Culture of peace will bring positivity around us
Non-Exploitive- We have to be non-exploitive, not only to relationships between human but also between relationships between humans and nature. We have to be non-exploitive in our dealings with the humans and with the dealings with nature as well.

Topic 48
Theme 2: A Peace

Negative peace

Absence of direct / physical violence is known as negative peace.

Direct Violence
The examples of director violence are war, torture, and child and women abuse.

Positive peace
Presence of conditions of well-beings and just relationships: social, economic, political, ecological

Structural Violence
The examples include: poverty, hunger etc.

Socio-Cultural violence
The examples are racism, sexism, religious intolerance

Ecological violence
E.g. pollution over consumption

Personal peace
Self-respect inner resources: love, hope

Interpersonal peace
Respect for other persons justice, tolerance, and cooperation.

Topic 49
Theme 2: B Inter-group / Social peace

Respect for other groups within nation, justice, tolerance, cooperation

Global Peace
Respect for other nations justice, tolerance, cooperation.

The Peaceable Teaching Learning Process
Cognitive phase
Active phase (taking practical action)

Affective phase
(Being concerned, responding, valuing)

Why educate for peace
Purposes of peace education are the elimination of social injustice, the rejection of violence and the abolition of war.

Knowledge

1. Holistic concept of peace
2. Conflict and violent-causes
3. Some peaceful alternatives
    - Disarmament
    - Non-violence-Philosophy & practical conflict resolution
    - Transformation,
    - Prevention human rights
    - Human solidarity
    - Democratization
4. Development based on justice sustainable development

Topic 50
Theme 2: C
Attitudes /Values

1. self-respect
2. respect for others
3. gender equality
4. respect for life
5. compassion
6. global concern
7. ecological concern
8. cooperation
9. openness and tolerance
10. justice
11. social responsibility
12. positive vision

Skills

1. reflection critical thinking
2. decision making
3. imagination
4. communication
5. conflict resolution
6. empathy

7. group building

Peace Theme 1: Upholding human dignity

Upholding human dignity is at the Centre of the values system that we associate with social peace
Universal declaration of human rights

Article 1- right to equality

Article 2- freedom for discrimination

Article3- right to life, liberty, personal security Article4- freedom from slavery

Article5- freedom from torture and degrading treatment

Article 6- right to recognition as a person before a law

Article 7-right to equality before the law

Article 8- right to remedy by competent tribunal

Article 9-Freedom from arbitrary arrest and exile Article 10- right to fair public hearing

Article 11- right to be considered innocent until proven guilty

Article 12- freedom interference with privacy, family, home and correspondence

Article 13- right to be free movement in and out of country

Article 14- right to asylum in other countries from persecution

Article 15- right to a nationality and freedom to change it

Article 16- right to marriage and family

Article 17- right to own property

Article 18- freedom of belief and religion Article 19- freedom of opinion and information

Article 20- right of peaceful assembly and association

Article 21- right to participate in government and in free elections

Article 22- right to social security

Article 23- right to desirable work and to join trade unions

Article 24- right to rest and leisure

Article 25- right to adequate living standard Article 26- right to education

Article 27- right to participate in cultural life community

Article 28- right to a social order that articulates this document

Article 29- Community duties essential to free and full development

Article 30- freedom from state or personal interference in above rights

Lesson No. 11

CONFLICT- INTRODUCTION, DEFINITION, SOURCES, RESPONSE STYLE AND DEALING

Topic 51

Conflict: Introduction Challenging prejudice and Building Types of prejudice

Racism- the belief that one's own culture or racial heritage is innately superior to that of others, hence,
the lack of respect or appreciation for those who belong to a different race.

- **Sexism**

A system of attitudes, actions and structures that subordinates others on the basis of their sex where the usual victims are women.

- **Classic**

Distancing from and perceiving the poor as 'the other'

- **Religious intolerance**

Prejudice against those who are followers of religious other than one's own.

- **Education for tolerance and respect**

There is a need for schools to educate citizens not to accept hateful propaganda about the different other and instead appreciate other cultures and respect cultural differences.

Topic 52

Conflict: Definition

Some Components of a peace education curriculum Peace Education

- Emotions and feelings
- Anger and anger management
- Violence in media
- Communication
- Empathy

- Cooperation
- Self esteem
- Tolerance
- Conflict resolution
- Keeping safe
- Emotions and feelings
- How emotions affect behavior
- The effect of violence on the emotions and feelings of children

Topic 53
Conflict: Sources Anger and Anger Management

- anger is the root of almost all violent behavior
- anger itself is not bad
- anger management as a tool for peace

Violence in the media

- effects of violence in media
- teaching children that the violence in the media does affect them

Communication

- cognitive and emotional communication
- how effective communication can reduce violence

Empathy
Definition of empathy

Understanding someone from someone's perspective. understanding from the perspective of the person without feeling sorry for that person, if we feel sorry for the person then it is sympathy

How empathy leads to peace in the classroom and the community- we have to understand how people are, instead of changing them, empathy can prevail and that can help bring peace.

Topic 54
Conflict Response Styles

Dealing with conflict individual differences

Personality traits versus learned behavior- the difference between the learned behavior and the innate behavior of an individual.

Relationship of disputing parties- relationship of the two parties

Gender differences- there are certain differences on how the different gender resolves the conflict.

Past conflict experiences- your past experiences on how you have dealt with the conflict also affects your present preferences.

Conflict response style- there are different conflict response styles, we will see them in detail.

The Sage

- Problem solver
- Win / win orientation
- Cooperative problem solving
- Emphasis on preserving relationship and meeting own goals as well as that of others

The Diplomat

- Goal oriented
- Compromising orientation
- Provide evidence Persuasion
- Emphasis on relationship and each other's goals

The Ostrich

- Avoidance
- Withdrawal orientation
    - Quit
    - Complaining to others
- Over-emphasis is on preserving relationship

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The Philanthropist

- Accommodating
- Smoothing and conciliation
- High concern for satisfying needs of others

The Warrior

- Win / lose orientation
- Wining at all costs
- Potential problem creator
- Focus on own goals

Topic 55
Dealing with Difficult People Direct Intervention

Address behavior

Explain impact of behavior on others

Indirect Intervention

Positive feedback when appropriate behavior is used.

Direct coping

Separate difficult individual from others

Indirect coping

Provide training to others on dealing with difficult personality

Effectiveness of techniques depends upon

- Disputing parties' communication skills
- Conflict perspective
- Power distribution
- Personal accountability

When is conflict positive?

When we are able to resolve internal and interpersonal conflicts, using win-win problem solving every relationship will have some conflicts at some time or other. When we use win-win problem
solving, it strengthens its relationship. When we do not, it destroys it.

Who owns the problem?

The person who is negatively affected by the problem

What is the owner's responsibility?

To find a way to resolve the problem, even if he is not the cause of it.

Preparation

- Include only those involved
- Give a description of the problem that respects all involved.
- Explain how conflict resolution can enable all to win, and explain the steps.
- agree not to slip back to the win lose method
- find a good time and place with no distraction.

Lesson No. 12

LOOKING AT CONFLICT AND APPROACHES TO DEAL

Topic 56

Looking at the problem or issue Identify the problem or issues

Use "I" messages to explain your own concerns, needs and goals

Use reflective listening to hear and acknowledge the other's needs basic goals Evaluate exactly what each of your actual needs are with the problem

Do not accept sudden promises not to cause the problem

Brainstorm all possible solutions that meet both people needs

Looking at the things from another's perspective and try to see their point of view and look for a solution that meets both underlying needs.

Brainstorm to generate all possible solutions

Think of any and all possible ways to solve the problem so that everyone will have needs met Evaluate later not now

Do not criticize any suggestion Feedback with reflective listening Write down all ideas suggested

Decide on the best solution

Find a solution that is mutually acceptable to both of you

If agreement seems difficult, summarize areas of agreement. Restate needs and look for new solutions. Make certain that both of you are committed to the solution

Follow up evaluation

Carry out agreed method. Wait to see if the conflict seems resolved.

If the agreed upon solution does not work, remember it is the solution that failed, not the person, and seek for the new solution.

Topic 57

Rules for the road

No 'you' statements.

Use statements that begin with the word "I". Do not use statements that include the word you, because these statements make people feel defensive.

Slow

Remember, it takes time to settle a conflict. Go slow at first because conflict resolves usually encountersome rough roads in the beginning. Keep using your I-way map to reach safer roads.

Detour Ahead

Sometimes tempers are flaring so much that it may be necessary to take a temporary detour from thecommunication I-way.

Once the tempers have calmed down, you may begin using I statements to solve the problem

Exit ahead

Most conflicts can be resolved through effective communication. However, if you begin to feelthreatened or unsafe, you should exit the communication I-way and seek safety.

Construction zone

Construct an I-way statement by following these directions:

Use the word I State how you feel

State specific behavior that you do not like

State your willingness to cooperatively resolve the problem

Merge Ahead

After using properly constructed I-way statements, individuals can begin to share ideas for how to solve the problem. Often, the best solution is reached when two people merge their ideas together.

End of construction

After reaching a solution that the two individuals agree will work, they can resume normal activities.

Topic 58

Approaches IWhat do people do?

Five basic ways of addressing conflict were identified by Thomas and Kilman in 1976

- Avoidance
- Collaboration
- Compromise
- Competition

- Accommodation **Avoidance- what does it look like** Avoid postpone conflict by:
- Ignoring it
- Respecting that everyone has different opinions
- Not rising to it
- Asking to talk about it later, when it's less busy

Avoidance- when to use it

For minor, nonrecurring conflicts

Avoidance potential outcomes

Ignoring negative verbal behaviors can diffuse situations May exacerbate situations

Avoidance consider

Is a conversation required?

Is this actually a pattern involving the same individuals? If this is pattern—do you need support? Collaboration—what does it look like?

Working together to find a mutually beneficial solution. When to use it?

As part of problem solving in meetings or 1:1

Collaboration- potential outcomes

Win-win situation to conflict or disagreement

Collaboration consider

How much you have available and how well you know those you are speaking with

How to use your questioning skills to capture everyone's requirements and gain agreement?

Compromise- what does it look like?

Finding a middle ground in which each party is partially satisfied. As part of problem solving

When the time to collaborate effectively is not available. When the situation is less complex.

Compromise- potential outcomes

The key requirements or expectations of those involved may be resolved.

Compromise- consider

Will those involved be satisfied with a partial solution How to use questioning skills to capture requirements How to gain agreement before continuing **Competition- what it looks like**

Asserting your viewpoint at the potential expense of those involved

When to use it?

Rarely

Potential outcomes

You may appear aggressive or arrogantPoor working relationship **Competition- consider**

Why would your viewpoint be any more correct or relevant than anyone else's? What you could ask those involved in order to understand the situation better?**Competition note**

It is almost always best to ask questions and get an understanding of context before offering an opinion.

Accommodation- what does it look like?

Surrender your own needs and wishes to cater to the other party

When to use it?

If this will achieve the best outcome

Accommodation- potential outcomes

A short term solution that you can live with

If you are the one accommodating, then overtime, you might resent working in this way.

Accommodation- Consider

1. Why would your viewpoint be any less correct or relevant than anyone else's? What the circumstance is?
2. Do you need to build a working relationship?
3. Are you choosing to do this because of hierarchy?
4. What you could ask those involved in order to understand the situation better?

Lesson No. 13

CONFLICT STYLES

Topic 59

Conflict style based on TKI-I

Determining your conflict style with Thomas Kilman Inventory (TKI)

To identify your conflict style is helpful for you when you get into the conflict.

T-K Conflict Instrument

- Assesses individual preferences or inclinations in handling conflict.
- Compares individual styles to those of other managers who have taken the assessment.
- Suggests ways to most effectively use and expand your repertoire of conflict management skillsThere are five styles according to this tool
- Competing
- Collaborating
- Compromising
- Avoiding
- Accommodating
- Let us see these five styles in detail
- These styles can be understood in relation to cooperativeness and assertiveness
- These two variables have a range from being cooperative to uncooperative and from assertive tounassertive.

Competing

It goes like 'Might Makes Right'

It is high on assertiveness and low on cooperativeness

Accommodating

Kill your enemies with kindness

It is low on assertiveness and high on cooperativeness

Avoiding

Leave well enough alone.

It is low on assertiveness and low on cooperativeness

Collaborating

Two heads are better than one

It is high on assertiveness and high on cooperativeness

Compromising

Split the difference

It is moderate on assertiveness and moderate on cooperativeness

Which style is best?

Most people use all at various times Most people naturally prefer one style Situation, culture, personality can influence the best style at a given timeAll styles can be useful

Different styles have different goals *Competing*: the goal is to win ***Accommodating***: the goal is to yield***Avoiding***: the goal is to delay

Collaborating: The goal is multiple participation ***Compromising***: the goal is to find a middle ground.**Competing is effective**

When quick decisive action is needed

On important issues when unpopular action must be taken. When the issue is vital, and the right course is clear.

To protect against people who take advantage of noncompetitive behavior

Accommodating is effective

- When you are wrong, when learning is important, or when demonstrating reasonableness is criticalWhen creating goodwill is paramount
- When harmony is important
- When it's important for others to learn from experience

Avoiding is effective

When the issue is relatively trivial when the issue is relatively trivial when you know you can't besatisfied

When the costs of conflict outweigh the benefits of resolutionto allow cooling off

When it's important to have more information

Collaborating is effective

When it is important that both sides be integrated

When you want to learn and fully understand others' views to merge different perspectives and insights

To work through hard feelings that has interfered with interpersonal relationships

Compromising is effective

When goals are less important than avoiding the disruption caused by more assertive conflict resolution styles

To temporarily settle complex issues

Topic 60

Conflict Style based on TKI-II

Compromising is effective

To quickly achieve an expedient solution

As a backup style when collaboration or competition fails

Basic skills for conflict resolution

1. Manage anger
2. Listen actively
3. Avoid assumptions
4. Find something on which to agree
5. Be cautious with criticism
6. Negotiate
7. Get help

Your style and negotiation

What is negotiation?

A discussion between two or more disputants who are trying to work out a solution to their problem. Win-Lose or Win-Win

In a successful negotiation everyone wins. The objective should be agreement not victory.

Getting to a yes basic negotiation framework

1. Separate the people from the problem
2. Focus on interests not positions
3. Generate a variety of options before deciding what to do
4. Work for a result based on objective standards or criteria

Separate the people from the problem

- Perceptions- put yourself in their shoes Separate your fears from their intentions…
- Don't blame them for your problem
- Share the process (and give others a stake)Listen actively
- Save face- proposals consistent with their valuesRecognize and understand their emotions
- Speak purposely to be understood (don't debate)Build relationship to face the problem

Focus on interests not positions

- Try to understand the interests behind positionsAsk why and why not? about choices
- Make lists of multiple interests
- Try to understand the impact on interests'.Be specific: make interest come alive Make their interest part of the problem
- Look forward not backBe flexible, but specific
- Be hard on the problem, soft on people

Generate multiple options

Avoid:

- Premature judgment Single answers. Assuming a fixed pie Assigning responsibility
- Brainstorm- be expansive, flexible and creativeToggle between general and specific
- Consider the perspectives of various experts Change the strength of options- scope, duration etc.Identify shared interests
- Make the decision easy a first draft should be yes able

Use objective criteria

- Objective criteria provide a principled foundation Criteria involve both outcomes and procedures Frame issues as a joint search for criteria
- Reason and be open to reasonDon't just yield to pressure

Preparation for negotiation

- What do the parties want?
- What can be traded?
- What are the alternatives to agreement?
- How does the relationship affect the negotiations?What can be expected based on the past?
- What's at stake? Consequences on both sides?What are the power issues?
- What are possible compromises? creative options?What are conflict styles on negotiating parties?

Know yourself

What feelings do you have when you are in a conflict situation?Common feelings associated with conflict

1. Anger
2. Frustration
3. Fear
4. Excitement

Topic 61

Conflict styles. What is your conflict style?

To understand your conflict style we need to study it in terms of relationships and goals. Following are the different types

Turtle: withdrawing

- Avoid conflict at all costs
- Give up their personal goals and relationships, believe it is hopeless to try to resolve a conflict Feel helpless
- Easier to withdraw than to face conflict

Uses of Turtle

- When issue is trivial
- When potential damage of confrontation outweighs the benefits
- To let people, cool down and reduce tensionWhen gathering information
- When gathering information
- When others can resolve the conflict more effectively

Shark: forcing

- Try to overpower opponents by forcing them to accept their solutions
- Not concerned with needs of others
- Do not care about how others perceive themWinning give them a sense of pride?
- Try to win by attacking, overwhelming, and intimidating others

Uses of shark

- When quick, decisive action is vital

- On important issues where unpopular actions need to be implemented
- To protect yourself against people who take advantage of noncompetitive behavior

Teddy Bear: Smoothing

- Relationships most important, goals of little importance want to be accepted and liked by other people
- Believe conflict should be avoided in favor of harmony Fearful that conflict will hurt someone

Uses of teddy bear

- When you realize you are wrong to learn from others
- When issue is more important to the other person than to yourself as a goodwill gesture to maintain cooperative relationship
- To allow others to experiment

Fox: compromising

- Moderately concerned with relationships and goals
- Willing to sacrifice part of their goals and relationships in order to find agreement for the common good

Uses of the Fox

- When goals are important, but not worth the effort or disruption When opponents with equal power are strongly committed
- To achieve temporary settlements to complex issues

Owl: confronting

- Value their own goals and relationships View conflicts as problems to be solved
- See conflicts as improving relationships by reducing tension Seek solutions that satisfy both parties
- Not satisfied until solution is found and tension is reduced

Uses of Owl

- To find an integrative solution when both sides are too important to compromise
- When your objective is to learn
- To work through hard feelings which have been interfering with a relationship.

Topic 62

Conflict Situation

The issues

- The facts: present situation, problems
- The goals: how things ought to be, the future conditions sought .The methods: the best, the easiest, the quickest, the most ethical
- The values: the beliefs about priorities that should be observed in choosing goals and methods The history: what has gone on before?

Components of a conflict situation

- Frustration- when you feel blocked Conceptualization of problem- what's going on?
- Conceptualization of behaviors and intentions- what does that mean? Outcome- emotional, cognitive, behavioral
- In a conflict situation, what can we do?
- How do we intervene?
- Accept that you will have conflict
- Work toward having positive versus dysfunctional conflictUse conflict management skills
- De-escalation I-Messages

Indicators of escalators Competition Righteousness

- Not listening
- Spreading to news is dealing in personalities
- Threats
- Intentional hurt violating social rules
- Sues

Indicators of Deescalation

- Listening
- Trying to understand
- Showing tact
- Concern for other's feelings
- Goodwill gestures
- Appeals to d-escalate

- Airing feelings
- Finding alternatives

Tips for managing conflict

- Build good relationships before conflict occurs
- Do not let small problems escalate; deal with them as they arise
- Respect differences
- Listen to others' perspectives on the conflict situation
- Acknowledge feelings before focusing on facts
- Focus on solving problems, not changing people
- If you cannot resolve the problem, turn to someone who can help
- Remember to adapt your style to the situation and persons involved

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Lesson No. 14

MADRASSA EDUCATION: CLASSIFICATION AND HISTORICAL STATUS

Topic 63

Madrassa Education: An overview

- The importance of education in a society cannot be disowned. A well-established education system is animportant constituent of a civilized nation and society.
- As an alternate track to Western style of education, religious seminaries – madaaris and religious education have played a vital role in the history of Islam to fulfill the education needs of Islamic society.
- The Madrassa Education has been prevalent since the time of Prophet Muhammad PBUH in the Muslimworld.
- The examination of the status of madrassa in Islamic history testifies to its success due to strong senseof respect among the Muslims for 'Knowledge'.
- In the initial days of Islam, the aim of religious seminaries or Madaaris was preservation and spread ofknowledge ---
- A role that has somehow lost its efficacy over time.
- The position of madaaris from simple schools for education changed into breeding grounds of Islamistfundamentalists.
- Lately, post 9/11, the madaaris are perceived as a crucial medium for promoting extreme religious,sectarian, social and political views which lead towards militancy.
- Meanwhile it has been highlighted time and again that there is a need to reform the madaaris to transform the radical ideologies with real Islamic moderate values, and provide an applied-educationmode where madaaris students become useful members of the society.

In this unit, we will explore the following questions:

1. What is the role of Madrassa Education in the provision of formal education in Pakistan? Howare the Madaaris important?
2. What should be the role of madaaris in the current security situation of the country?
3. What are the developments in the dialogue process between the government and the Madaaris on the issue of reforms and challenges, and what are the major obstacles in this regard?
4. Why does the role of madaaris in terrorism and militancy, remain unanswered in the context ofPakistan?

5. What is the reaction of madaaris in the background of the leveled allegations against them?

Topic 64

What is Madrassa Education?

The term 'Madrassa' originates from the Arabic word 'Darasa' which means 'To Study'. Madrassa, in general, is referred to a school that imparts Knowledge.

But in the context of Pakistan or even in the contemporary South Asia the term 'Madrassa' is often used for Islamic educational institutions along with 'Dar-ul-aloom' and 'Jamia'.

Madaaris, plural for Madrassa, are at least a thousand years old. Accounts differ as to where madaris began, with origins being traced back to Baghdad, Syria, Morocco, and other rich cultural hubs in the Middle East.

Today, however, the madrassa typically functions as a privately owned school where a religious teacherinstills his pupils with the basic tenets of Islam and the Arabic language.

The main subjects of Madrassa Education include:

1. Qur'an
2. Hadith
3. Fiqh

Please note that although the above mentioned generally constitutes the core curriculum but there is no universally fixed course of study. The interpretation of these texts may also vary from one madrassa to another.

The language of instruction is usually the regional language with a local dialect, though Arabic may also be used. Cramming and rote memorization are usually the only pedagogical methods employed anddiscipline is usually strictly enforced.

The Madrassa Education system is organized in terms of the following levels and grades: "*ibtidaya*" - first to the fifth grades of primary education

"*Mutawasitah*" - sixth to eighth grades of middle school "*thanviyah-e-ammah*" - ninth and tenth grades *"thanviyah-e-kassah"* - 11th and 12th grades *"aliya" - the university Bachelor's degree (consisting of the 13th and 14th years) "alimiyah" - the Master's degree (being the 15th and 16th years) "takmeel" - advanced post-graduate education*

Differences between Islamic and secular education in the structure of education systems make comparisons somewhat difficult.

Unlike in Western schools, under the Islamic education system students do not progress regularly from one grade level to the next, nor are there clear-cut divisions between primary, secondary, and tertiary levels, based on performance standards and examinations.

Schools generally have looser time tables and students' progress individually, with those who are moreadvanced helping those who have learned less.

Madaris vary widely in size and quality, and also in duration of studies. They range from informal religious instruction for young children, with classes usually taught at the local mosque or in private homes, to prestigious seminaries. Most unregistered/informal madaaris offer a few hours of instruction over the weekend in makeshift classrooms. Some madaaris are full-time, offering classes five to seven days a week.

A few well-endowed institutions offer a program of intensive study often leading to tertiary Islamic studies. Depending on the madrassa and its resources, classes have been offered to young children, from as young as pre-school age to older children and youth of high school age or even beyond.

Topic 65

Classification of Madrassa Education

In Pakistan, the madaaris are based on sect, and every sect has its own madrassa network that iscontrolled by a board or **Wafaq**.

Every board has its own system of education and they hold annual exams and distribute certificatesamong students.

There are five madrassa boards or wafaqs in Pakistan, and they are also members of Ittehad Tanzeemat Madaaris Deenia (ITMD), an umbrella organization of madaaris, which was established in 2003.

Five Wafaqs 1

Wafaq	Tanzeem-ul-Madaris Ahl-e Sunnat-wal-Jamaat
Established	1959
Sect	Sunni
Maslaq	Ahl e Sunnat (Barelvi)
HQ	Karachi

1. Tanzeem-ul-Madaris

The total number of registered Madaaris affiliated with Tanzeem-ul-Madaaris is about 8,000.

The Barelvi sect follows the creed of Sufism that prevailed in the sub-continent.

Within the network of Barelvi Madaaris, Dar ul-Uloom Muhammadia Ghosia Bhera, district Sargodha, Punjab which has more than four hundred branches, and Minhaj-ul-Quran, which has schools and colleges equipped with modern education, make a distinction as they are not affiliated with Tanzeem-ul-Madaaris and have separate education and examination systems.

Wafaq	Wafaq-ul-Madaris Al-Arabia
Established	1959
Sect	Sunni
Maslaq	Deobandi
HQ	Multan

Five Wafaqs 2

2. Wafaq-ul-Madaris Al- Arabia

Although within the Sunni sect, Barelvis are greater in number, Deobandis have more religious seminaries in Pakistan because they are more organized in the realm of religious activities.

The registered number of Deobandi madaaris is about 16,800 affiliated with Wafaq ul-Madaaris al-Arabia.

Jamia Ashrafia Lahore and Dar-ul-Uloom Korangi Karachi are distinguished within Deobandi Madaaris because they are operating independently, and their degrees and certificates were approved by the government during the Zia-ul-Haq regime. However, their students also appear in the exam board of Wafaq ul-Madaaris al-Arabia.

Five Wafaqs 3

Wafaq	Wafaq-ul-Madaris Al- Salafia
Established	1955
Sect	Sunni
Maslaq	Ahl e Hadith
HQ	Faisalabad

The other Sunni group is the Ahl-e-Hadith, a small minority, which holds 1,400 registered madaarisaffiliated with Wafaq ul-Madaaris al-Salafia in Pakistan.

The Pakistanis often refer to this group as the Wahhabis and/or Salafis, as their teachings are close tothat of Abdul Wahhab

The controversial Jamaatud-Dawa is also registered in Wafaq ul-Madaaris al-Salafia. Jamia SalafiaFaisalabad is the only madrassa within the

Salafi school of thought which is independent with regards to examinations, and distributes degreeswith the approval of the government.

Five Wafaqs 4

Wafaq	**Wafaq-ul-Madaris Al- Shia**
Established	**1960**
Sect	**Ahl e Toshea**
Maslaq	**Jaffari Shia**
HQ	**Lahore**

Although Shias are in minority in Pakistan, they have a considerable number of Madaaris; about 413 madaaris are registered under Wafaq ul-Madaaris al-Shia.

There is no distinct seminary in the Shia sect of Pakistan that has authority to issue a degree or hold examinations independently.

Five Wafaqs 5

Wafaq	Rabita-ul-Madaris Al Islamia
Established	1983
Orientation	Islamist
Party	Jamat-e-Islami
HQ	Mansoora, Lahore

The Jama'at-e-Islami, founded by the prominent Islamic thinker Al Mawdudi, is a revivalist and religio- political movement that considers itself as the "vanguard" of the Islamic revolution in Pakistan

There are about 1,000 registered madaaris affiliated with Jama'at-e-Islami's madrassa network Rabita- ul-Madaaris.

Madaaris in Pakistan are considered as Non- Governmental Organizations (NGOs) that provide free education, boarding, and lodging to their students, and help to 'educate' the poverty stricken children in society.

Topic 66

Historical Status of Madaaris in Pakistan Madaaris in Pakistan 1947-2010

Year	No. of Madaaris	Source
Pre-1947	137	Nadhr Ahmad 1956
1947	245	IPS 2002:25, Mansoor 2003
1971	908	Ahmad 2004:107
1988	2861	IPS 2002, Mansoor 2003

2000	**6761**	**Mansoor 2003**
2010	**19104**	**GoP, 2010**

The number of madaaris has grown since independence when there were recorded some 245 madaaris in the country, to some 19,104 in 2010. This accounts for approximately 7700 percent increase in 63 years.

The madrassa sector is still growing, though not significantly, compared to the growth in private schools. Although, there exists a growing trend in Madrassa Education, it must be noted that the numbers of Pakistani madaaris and their enrolment rates have been the subject of much controversy and debate in recent years.

Both definitional issues ('what is a student?', 'what constitutes a madrassa?') and a lack of reliable data,make it difficult to establish how many schools and graduates exist.

Lesson No. 15

DOMINANCE OF MADRASSA EDUCATION, ITS DEBATES; CONTROVERSIES AND POLITICS

Topic 67

Dominance of Madrassa Education

The political role of the madrassa has been the main focus and concern of policymakers, analysts andthe media.

By keeping a narrow focus on the madrassa's political role and linkages, one runs the risk of missing outon the broader picture, which is important to develop appropriate policies.

Diversity of Institutions

Pakistan's madaaris constitute a highly diverse sector in terms of size, financing, level of education offered, theological and ideological positions and links to political parties.

Diversity of Institutions

Access to resources and funding varies greatly among the different schools.

Diversity of Institutions

Commonly, Pakistan's madaaris are private institutions funded by charity, private donations and incomegenerated from religious endowments ("waqf").

Diversity of Institutions

The Islamic tradition of charitable donations has contributed to the growth of the madrassa sector. Some madaaris receive government-administered Islamic alms ("zakaat").

Traders are traditional supporters of madaaris, and have contributed to the development andgrowth of some of the bigger madrassa complexes in Pakistan. Pakistan has a number of big university-style Madaaris, which attract students from all ofPakistan and from abroad.

The majority of Pakistan's Madaaris are, however, modest in size and resources. Many are housed inside or adjacent to the local mosque. These Madaaris are funded by the communities; the local imam is commonly the head of the madrassa and former students are employed as teachers on minimal wages.

Islamic Education is valued in itself

For those who choose a madrassa education for themselves or for their children, it provides not only religious knowledge, but a value system that sets it apart from other, non-religious forms of education.Some families choose madrassa education because it is seen as the most appropriate form of schooling,and having a child with a religious degree grants the family prestige.

Nelson's study of local educational demands in Rawalpindi finds that 41% of the respondents hadreligious education as their top priority (2006).

Topic 68

Madrassa Education (Debate Controversies)

Madaaris are being discussed and criticized widely as they are facing many challenges. There are three types of opinion dominant in the current debate on madaaris.

Firstly there are supporters or blind followers of madaaris; secondly, there are elements which are anti-madaaris, and lastly, there are neutral observers. The entire debate is revolving around Madaaris controversies and challenges.

1. In Pakistan, madaaris are established on the basis of sect, and they educate according to their belief systems. Therefore, the establishment of sectarian organizations and involvement or participation of madrassa students in sectarian violence is a major apprehension.
2. It is believed that over the years, madaaris have advocated for jihad. The issue arises that without permission of the government, is participation of seminary students in jihad permittedor not?
3. Amidst such a situation, establishment of jihadi outfits and their networks in madaaris is alarming for law and order in the country.
4. Madaaris are often said to be linked with terrorism directly or indirectly, whereas the administration of seminaries vehemently denies this.
5. The perception exists that terrorists in disguise take refuge in madaaris due to their sympathizers.
6. If law enforcement agencies launch raid on madaaris, it is considered a violation against their independence.
7. Establishing offices of religion-political parties in madaaris is also a major concern by various sectors. The role of madaaris in politics is also criticized.
8. It is perceived that Madaaris have their own semblance of government in their areas and no oneis allowed to intervene, thus, people raise questions about the writ of the state.
9. It is perceived that Madaaris have their own semblance of government in their areas and no oneis allowed to intervene, thus, people raise questions about the writ of the state.

Topic 69

The debate (challenges)Madrassa Challenges

1. Registration of madaaris is a major problem which is debated across the board. The exact figure of madaaris is not clearly identified. Only those madaaris which are registered with one of the five previously mentioned wafaqs or boards can be numbered It is believed that a large number of madaaris are operating without any formal affiliation and registration.
2. Madrassa curriculum is under heated debate inside the madaaris and beyond. According to one school of thought, madrassa curriculum does not address the modern requirement of the present era. Many observers believe that some subjects being taught in madaaris foster provocation, leading students to extremism and militancy.
3. Since 1999, the issue of madaaris reforms has been negotiated between the government and the administrations of wafaqs or boards. It is not clear what development has been made so far. What are the demands of the madaaris and which of them have been accepted by the government? What is the stance of the government in this regard?
4. Fund raising is also a major issue. Some analysts believe that madaaris take funds from foreign countries to promote their agendas. It is considered that madaaris are being used as platforms for exerting influence of their favored sect(s) by foreign countries.
5. Funding education of foreign students is an important topic of debate between the government and the madaaris. Modalities of education of foreign students in Pakistani madaaris are yet to be resolved.
6. Madaaris are major societal institutions. They have ardent followers, and thus they can play vital roles for reforms of society, but they do not pay much attention to the society besides influencing religion. It remains to be seen how madaaris can play a positive role for promoting peace and harmony in the society.

Topic 70

Madrassa and Politics

The role of madaaris in politics has been important ever since the inception of religious political parties in Pakistan. Religio-political parties have been present in Pakistan since pre-partition days of the sub- continent.

After partition, Deobandis in Pakistan formed the Jami'at Ulama-e-Islam (JUI) whereas the Barelvi school of thought followed a similar line by establishing its political party, Jami'at Ulema-e-Pakistan (JUP).

The Ahl-e-Hadith sect and the Shia also developed religious political parties in the same manner. All the religious political parties have extended their network in Madaaris of their respective sect. According to a PIPS survey (2008), a majority of madaaris have political affiliations. According to that survey, about 62% of the Madaaris had political linkages – 59% were affiliated with religio-political parties while 3 % with other mainstream parties, and 18 % with sectarian or jihadi outfits.

About 18 %did not express any kind of association.

The majority of wafaqs or madrassa boards dislike associations of madaaris with any political parties, however Rabita ul-Madaris fully support its political party; Jamaat-e-Islami. Nevertheless, there is consensus that students can take part in politics after completion of theireducation.

On a query about the role of madaaris in politics Qari Hanif Jallandhary said, "Politics on the basis ofreligion is the need of the hour in the country. But I think that the madaaris should pay attention oneducation and avoid practical politics.

Students should not take part in any kind of political activities besides education. However, after attainment of degree, they are free to do whatever they want to do." It is observed that involvement of the madaaris in politics detracts students from education, and creates a rigid mindset amongst them which leads towards extremism. During affiliation with a single political party, students confine themselves to its manifesto and politicalviews.

In such circumstances, politically affiliated seminary students lack ability to tolerate other's views. This polarized thinking also compels them to join sectarian and violent organizations to fulfill their agenda aspart of a political agenda.

Madaaris and Sectarianism

Research finds a close link between religious seminaries and sectarian violence.

As mentioned earlier, madaaris are divided on sectarian bases, thus the divisions' show that every sect is preserving and propagating their respective interpretation of the correct form of Islam, referred to as its Islamic creed.

Madaaris not only spread a certain brand of sectarian identity among its students but also spread it insociety, to the families and extended families of these students. This division of sect binds society and students to follow their ideology, and do not allow pupils and society to look at alternative perspectives within the religious discourse.

Sectarian divisions among Muslims in the subcontinent are part and parcel of these divisions, and alsoto be blamed for the unprecedented increase in sectarian violence recently in Pakistan.

Militancy in sectarian conflicts cannot be attributed solely to the madrassa teachings, though, of course, the propagation of divergent beliefs does create the potential for negative bias against people of other beliefs. Sectarian violence is also alarming for madrassa authorities as it damages their cause and system ofeducation.

An overwhelming majority of madaaris are against sectarian violence, and seem willing to overcomethis menace. However, they are also not amenable to stop propagating their sect, even at the risk of exclusivity fromreligious harmony among sects in Pakistani society.

Lesson No. 16

MADRASSA, RADICALIZATION AND REFORMS

Topic 71

Madaaris and radicalization

Perceptions prevail that madaaris are promoting extremism and radical views among their students and the people, but madaaris deem themselves custodians of Islam, and claim that they provide education that is based purely on Islamic injunctions.

During the Zia regime, the U.S. and its allies used the madaaris for recruitment of manpower to wage their proxy war in Afghanistan against the Soviet Union. By the time the Soviets pulled out from Afghanistan in 1989, many Madaaris had matured in their militant worldview. These changes propelled Madaaris from their historic role as centers of education to indoctrination centers of Islamic extremism.

There are various factors which can create extremist and radical tendencies among madrassa students. Existing biased political views, inclination and sense of superiority of specific sects, and intellectual curiosity towards jihad as a means to dominate the world are major factors that propagate extremist ideas among students.

Even though the madaaris ostensibly claim to not be directly involved in radicalizing students, during education, Madaaris create a mindset to make seminary students vulnerable to adopt footsteps of militants to join 'the holy war'. Moreover, leaders of sectarian outfits motivate students against other sects through speeches anddistribution of literature which leads to sectarian violence.

Following 9/11, there has been a debate to differentiate jihad, terrorism, violence and militancy, which attracts a lot of attention particularly in conservative Muslim circles in Pakistan. Many in these circles argue that if earlier, the struggle of seminary students in Afghanistan and Kashmirwas deemed as jihad, why are these terms now being defined according to 'vested interests'.

According to a research, about 200 Deobandi, 77 Ahl-e-Hadith, and 23 Barelvi Madaaris were affiliated with jihadi organizations or supporting jihadi outfits in Pakistan.

Lashkar-e-Tayyaba (LeT), one of the largest and most active jihadist group involved in Jammu and Kashmir, was established in 1993 as the military arm of the prominent Markaz-ud-Daawa-Wal-Irshad, a madrassa located in Muridkee, Punjab.

Some experts have also challenged the role of madaaris in militancy. Christine Fair writes in her book "The Madrassa Challenge", that the madrassa market share has remained stable or even declined somewhat since 1991. She cites studies which disagree about direct ties between Madaaris and militancy. However, she admits even if few militants come from Madaaris, they are still a matter of concern.

Madaaris also reject links with militancy, whereas on the issue of jihad, they do recognize that some Madaaris have affiliations with jihadi outfits and groups. With regard to the education of jihad, the

madaaris unanimously agree that the education of jihad is obligatory in Islam and they will continue it

Topic 72

Madrassa Reforms: Ghost Madaaris

Reforms in madrassa education has been underway for some time, but post-9/11, both international and national players are forcing the Pakistani government to take immediate measures in this regard.

Since then government has been trying to introduce some reforms in the madaaris, but these have failed due to differences between the government and the Madaaris.

Many aspects of the madaaris reforms pertains to registration of madaaris, curriculum reforms, inclusion of modern subjects and the presence of foreign students; all of these are being discussed in a way to bring madaaris education at par with mainstream education systems.

Registered and Ghost Madaaris

The issue of madrassa registration is a very important one in the current debate. Historically, madaaris registered under the Societies Registration Act 1860 as charity organizations, but requirements for registration were removed in 1990. The issue of registration once again surfaced during Musharraf's time in office.

After a long discussion amongst stakeholders, the government promulgated the Societies Registration (Amendment) Ordinance 2005 for the registration of madaaris.

This ordinance was the amended form of the 'Societies Registration Act 1860.' The 2005 Ordinance stipulated the following clauses:

1. Every madrassa will give an annual report of its activities to the registrar.
2. Each Madrassa will also present a report of the annual budget as well as receipts of their revenue and expenditure.
3. No madrassa will teach or publish any literature or material that promotes terrorism, sectarianism or religious hatred.
4. All the madaaris will be registered, and no madrassa can be established and run without registration.

The Ordinance did not work out in its intended spirit. The ITMD claimed that the government was seeking credentials from madaaris directly, violating the agreement that any information about any seminary would be sought through the wafaq instead of the government. They said any interference in the working of Madaaris would not be tolerated.

Fortunately, madrassa registration process has resumed once again during the last year or so.

Current government, under the umbrella of National Action Plan has been attempting to streamline the functionality of all Madaaris.

Topic 73

Madrassa Reforms: Foreign FundingForeign Students at the Madaaris

Foreign students have been studying religious education subjects in Pakistan for a long time. Students of more than 64 countries including the US, UK, Africa, India, China, and Russia are gettingeducation from the Pakistani seminaries.

After 9/11, the issue of foreign students came into the limelight. Under pressure, the government of Pakistan started an operation to send them back. With strict enforcement, numbers of international students are nominal at the moment, and no freshstudents are allowed to study in Madaaris.

The government has put forward two pre-conditions for remaining students to continue their education. Firstly, extension of NOC from Interior Ministry is imperative, and secondly, that the embassy of their country permits them the continuance of their education.

Foreign Funding

The madaaris want to remain independent in terms of their financial matters. They do not allow state intervention regarding their sources of funding. Some madaaris even maintain their budget through audits, and present it before the students and theadministration of the madaaris.

Nonetheless, the issue of funding from foreign countries is heavily debated. It is perceived that foreign funds are used to promote political agendas of foreign countries, in particular that of Iran and Saudi Arabia.

One of the Madrassa official, Maulana Yasin Zafar, defends foreign funding by saying, "Foreign countries may provide facilities pertaining to health and food. They are funding through proper channels instead of open hands (his language) and banks can provideinformation in this regard."

He further argues, "Foreign NGOs and institutions donate towards education and health sectors; why can't they be allowed to support madaaris on ground of Islamic brotherhood. (To ensure transparency) madaaris should attain funds, if foreign countries send it through the respective embassies".

Topic 74

Madrassa Reforms: Demands

Madaaris often demand for following reforms:

1. The wafaq degrees of Matric (Sanwiya Aama) and Intermediate (Sanwiya Khaasa) are not approved yet, whereas its higher degree, Shahadat ul-Aalmia is recognized as equal to MA Islamic Studies and Arabic. The government should accept these lower level degrees as equal

tothe formal educational system.

2. The wafaq should be affiliated with the Federal Ministry of Education or Federal Ministry of Religious Affairs. Despite passing of the 18th amendment, the madaaris prefer to remain part ofthe federal government. Madaaris should also link with the Higher Education Commission (a Government higher studies oversight body) and all education grants should be distributed among madaaris through it.
3. The Madaaris should be exempted from all utility bills, and this will be the best way of cooperation from government side.
4. Obstacles of bureaucracy for registration of madaaris should be removed in the registration process.
5. Opportunities should be provided for madaaris students for easy admission in universities andparticipation in competitive exams.
6. The government should provide opportunities of job to wafaq students in all its departments.

Topic 75

Madrassa Reforms; ObstaclesMadrassa Independence

Pakistan's Madaaris are predominantly private institutions, and the independence of the madrassa institution is integral to its identity. The Madaaris see themselves as sustainers of a particular religious tradition. Government control and Madrassa reform initiatives have been firmly resisted throughout Pakistan's history.

The core of the Madrassa tradition – the education of children and training of religious leaders and clergy in the "true interpretation of religion" – lies in the curriculum. Thus, Madaaris resist government control over curriculum because they believe that the curriculum in religious schools ought to be decided by religious experts.

The resistance to register and open Madrassa accounts to government scrutiny may partly reflect loyalties to their financial supporters -some of whom form part of transnational networks, including foreign Muslim supporters.

It appears that while Madaaris are willing to accept a certain degree of government regulation and oversight, they will not risk losing their independence – particularly if such regulation is seen as part of aforeign agenda.

Topic 76

Madrassa Reforms: Capacity constraints

There are considerable variations among the schools in the Madrassa sector, not only in terms of

sectarian and ideological linkages, but also in terms of size, organization and access to resources. This affects the Madaaris' ability to implement government reform programs.

The larger well-established schools have already introduced 'worldly' subjects as part of the curriculum. These schools are part of the policy debate through the sectarian Madrassa boards and the ITMD.

The real challenge to Madrassa reform may be in reaching out to the many smaller Madaaris, which lack the resources and ability to implement the required changes following reforms. Lacking teachers, teaching materials and basic facilities, the introduction of the regular government curriculum may be beyond the means of these smaller Madaaris.

Government Ambiguity

It is not only Madaaris that are resisting some of the government reforms; the government itself seems to be split internally on the matter. In her study, Bano argues that the government already has regular contact with most Madaaris, and through visits by district-level officials, the government has an overview of who attends Madaaris, how they are financed and what is taught.

The government position is also seen as ambiguous by the Madrassa leaders, who are critical of the government clamping down on moderate schools, while Madaaris known to have links to militant groups are perceived to operate freely. The relationship between the Pakistani state and the religious institutions is thus marked by distrust.

Lesson No. 17

POLICY RECOMMENDATIONS

Topic 77

Policy recommendations for the government

Following are the recommendations for Madrassa reforms for the government

1. Madrassa boards must be taken into confidence before any step of reform, rather than general bureaucrats; the reform committee should include senior ulema amongst its members, obstacles of bureaucracy for registration of madaaris should be removed in registration process.
2. The government should accept the lower level degrees (Saanwiya Aaama and Saanwiya Khaasa)as equal to the formal educational system.
3. The government should take measures to enhance/rationalize the economic benefits/avenues available to the people of Madaaris and religious scholars. The government should take measures to provide comparable economic benefits to madrassa graduates and religious scholars, and provide opportunities of job to them in all its departments.
4. Wafaqs should be affiliated with the Federal Ministry of Education or Federal Ministry of Religious Affairs. Despite the passage of 18th amendment, the madaaris prefer to remain part of the federal government. Madaaris should also link with HEC and all education grants should be distributed among madaaris through it.
5. In order to nurture the intellectual discourse among religious scholars, measures should be taken to keep them updated and aware of current affairs. The madrassa teachers and staff should be provided advanced training, and steps should be taken to enhance their capacity.
6. The madrassa boards should be given the status of an independent examination board. By endorsing educational certificates of Madaaris as equal to other educational certificates, discrimination should be eliminated so that madrassa graduates could serve in government andprivate organizations, that too on merit.
7. To improve working of the 'tangible' and moderate madaaris, government should close illegal and ghost madaaris. To dilute international pressure and accusations on the madaaris, the government will have to take firm steps to overcome the menace of ghost madaaris.
8. There should be ban on the formation of new madaaris without government permissions. The government should advise district administrations to check seminaries annually. There must becomprehensive mechanisms to check the illegal formation of madaaris.
9. There is ambiguity about various questions at the academic, intellectual and jurisprudential levels, and due to this ambiguity, intolerant behaviors find a space to thrive. Government should form a higher level board of ulema, representing all schools of thoughts, to address

thesequestions.

10. For promotion of religious tolerance and dialogue on inter-sectarian harmony, activities shouldbe initiated at the level of madrassa students, such as inviting position-holder students of different madrassa boards in prize distribution ceremonies, and organizing training sessions forthem etc.
11. The government should arrange joint congregations of different sects on various special religious days at Madaaris and mosques. Commonalities among different religious sects shouldbe promoted through discussions on the media, including TV and radio.

Topic 78

Policy recommendations for the madrassa administration

Following are the policy recommendations for madrassa administration for madrassa reforms.

1. Religious clerics and madrassa authorities should be sensitized to follow positive, modernizingreforms from the government side.
2. The madrassa curriculum needs to be reformed to highlight pluralistic traditions in Islam, particularly in dealing with differences of opinion between faith and traditions.
3. Basic introduction and awareness about modern knowledge and disciplines should be impartedto madrassa students.
4. The administration of madaaris should exert utmost care about fund collecting; they must focuson the Pakistani community and should not look towards foreign secret funding.
5. The commonalities between various sects should be highlighted and sectarian differences limited to only academic discourse. Moreover, they should be expressed in such a manner thatcontroversies should not spread further.
6. The Madaaris should concentrate on religious education; they should not allow jihadi commanders and politicians to interfere with their policies.
7. There should be contacts among sects, and writing competitions and tournaments should be held to inculcate a sense of sportsmanship.

Topic 79

Policy recommendations for civil society

Following are the policy recommendations for civil society for madrassa reforms

1. Every segment of society should express its disassociation with mischievous elements among them who try to create differences. All the pillars of the civil society including madaaris

should establish relations with each other, and work together to promote peace and harmony in thesociety.

2. Improved monitoring mechanisms for Madaaris through effective public-private partnerships should be evolved to ensure credibility of madaaris.
3. Dialogue between diverse segments of society (Muslims, non-Muslims, liberal and conservative, non-religious, etc.) should be a constant practice. Efforts should be made to invite and engage elements that display extremist tendencies rather than just ignoring them.
4. Civil society and academic institutions should act as a bridge between various segments by promoting dialogue between them, and should provide analytical and informative material regarding social issues, making them accessible to the trendsetters among all segments of society.

Topic 80

Success stories: Indonesia and CubaIndonesia

According to the Asian Development Bank's project on Madrassa Education Development in Indonesia 2014, the madrassa education system in Indonesia is under the responsibility of the Ministry of Religious Affairs, while the general education system is decentralized.

Madaaris were formally integrated into the national education system, and now follow the national curriculum and education standards set by the government. Madaaris mostly serve disadvantaged communities and attract more female students so targeting them through education programs helps promote economic growth and improve civic knowledge. Madaaris have improved education management information system and district education statistics ofschools and Madaaris.

With decentralization, local governments also need to pay significantly more attention to Madaaris in remote areas. Lately, Madaaris in Indonesia have increased enrollment rates, reduced dropout rates and improved academic performance of students in the national exams, providing the foundation for better employment and advanced education opportunities and identifying candidates for overseas trainingprograms.

Recent madrassa reforms improved salaries and provided resources for teachers and principals to upgrade their qualifications and undertake professional certification programs and training focused on sciences, mathematics and English.

Further reforms include: teaching methodologies, implementation of new curriculum's, after-school remedial programs and scholarships for disadvantaged students, capacity building of madrassa administrative leadership etc.

Cuba- Success Story

Cuban model for education can also be comprehensively applied to our madrassa education system

inorder to provide worldly as well as religion-oriented education, ultimately providing young minds withhealthy future prospects.

After the completion of high school, in madaaris or otherwise, the children are given a choice of a degree or a line of career. The children may opt for either a Philosophical Degree or Vocational Training,before embarking on their future career paths.

The State then picks professionals and skilled persons from this lot and integrates them into the economic, social, industrial or political sector. This way the gaps in unemployment and inequality in theeducation system gets bridged.

Lesson No. 18

UNIVERSAL EDUCATION

Topic 81

Universal Literacy

In this topic we will look at universal literacy. Universal is the adjective in this topic. We will see how the universe defines education. If education has to be universal then students shall be taught the same education throughout the world. What does literacy mean?

Definition

- Literacy means the ability to read and write at a level that enables a person to develop and function effectively in their day-to-day activities.
- There are no universal definitions and standards of literacy. Unless otherwise specified, all ratesare based on the most common definition the ability to read and write at a specified age.

Topic 82

Levels of Literacy

There are three levels of literacy.

Three levels of Literacy

- Baseline literacy
- The bare minimum to be considered literate is baseline literacy. The ability to read verysimple and ability to write very simple, is included in it. Further includes, the ability to do simple Quantitative (arithmetic) analysis. It may also include basic computer skills.
- Functional literacy
- The functional literacy means that you become functional within the society. In otherwords, a person is not dependent on reading the letter or writing something. It is an advanced level.
- Multiple literacy
- Further advanced level of literacy is multiple literacy. When one can become able to distinguish between different words of similar meanings. As there is a very minute difference in the synonyms of the words, if a person can distinguish those words then it is multiple literacy.

Topic 83

Literacy and EducationLiteracy and Education

- The difference between them is much like the difference between a tool and a process.
- Literacy will give you the ability to read a book. Education is when you, at least, understand what the author is trying to convey.

Importance of Literacy

- It can enable the individual in acquiring knowledge and understanding of themselves and the world
- literacy is helpful to student's success in education institutions
- social and economic development in a country.

Topic 84

Literacy in IslamSeeking Knowledge

Battle of BADR

- "Read! In the Name of your Lord, who has created (all that exists). He has created man from aclot (a piece of thick coagulated blood).
- Read! And your Lord is the Most Generous, Who has taught by the pen, He has taught man thatwhich he knew not." (Quran 96:1-5)
- And Say: Can You Put On Equal Footing Those Who Are Learned With Those Who Are NotLearned? (Surah 39: Ayah 9)

Hadiths

"Seek Knowledge, even if it is in faraway China"

Nabi Mohammad (S.A.W)

Seeking Of Knowledge Is An Obligation Upon Every Muslim, Be It A Man Or A Woman.

Lesson No. 19

LITERACY AND LIFE OF LITERACY IN PAKISTAN

Topic 85

Literacy as social practice

- Literacy practices are used by us in the practices of our everyday lives.
- When we buy a car, do the shopping, visit the doctor, or pay a bill, we are engaged in social practices in which literacy give us help.
- There are culturally accepted ways of engaging in social practice and these can vary across cultures and over time, greeting people etc.

Topic 86

Life on the basis of Literacy

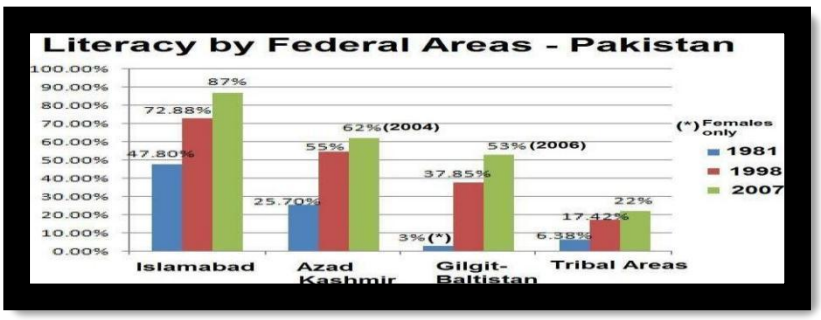
- Literacy is a human right, a tool of personal empowerment and a means for social and humandevelopment. Educational opportunities depend on literacy.
- Literate parents are more likely to send their children to school
- Literate people are better able to access continuing educational opportunities
- Literate societies are better geared to meet pressing development

Topic 87

Literacy rate In Pakistan

How literate is the Pakistani population.LITERACY RATE:

- Total: 57%
- Male: 69%
- Female 45 %



Topic 88

Definitions and Literacy rates

CENSES YEAR	DEFINITION	LITERACY RATE
1951	"One who can read a clear print in anylanguage".	16.4%
1961	"One who is able to read with understanding a simple letter in anylanguage".	16.3%
1972	"One who is able to read and write in some language with understanding".	21.7%
1981	"One who can read newspaper and write a simple letter".	26.2%

Topic 89

NETCOM

- The Literacy and Mass Education Commission was established in 1981 and converted into National Education and Training Commission (NETCOM) in 1990.
- Mass education means literate everyone.
- National education means everyone and universal education.

In its second meeting held on February 18, 1984 defined a literate person as that who can:

- (1) "read and write a simple statement in the national or any of the regional languages"
- (2) "count and write numbers and do simple calculations"

Lesson No. 20

NATIONAL EDUCATION POLICY AND LITERACY

Topic 90

National Education Policy

1998-2010

- National literacy movement will be launched on an emergency basis in every village, tehsil and district.
- Mosques, wherever feasible, will be utilized as one of the means to provide non-formal basic education to increase literacy.
- PMLC will prepare a plan of action in consultation with provinces for a coordinated effort in the national literacy movement.

Topic 91

National Education policy II 1998-2010

- All the industry units registered under the Factory Act would consider it mandatory to make the employees and their dependents literate.
- Another useful resource, available in the country in the form of boys' scouts and girl's guides, can be effectively used in the expansion of literacy programs.
- The existing non-formal basic education community schools/centers will be increased to 82,000 (including the existing 7,000).

Topic 92

National Education policy III1998-2010

- Literacy corps comprising of colleges/university students/teachers shall be established forliteracy programs during vacations.
- If an illiterate prisoner becomes literate, the duration of his/her imprisonment shall becondoned accordingly.
- Development grants to local governments shall be linked with literacy programs.

Topic 93

National Education policy IV 1998-2010

- Radio and television will play a crucial role and be extensively used for social mobilization and promoting the cause of basic education, particularly amongst rural females. Media will also be used to impart life skills to the neo-literates.
- Khankahs, mazars shall donate a portion of their earning to the literacy fund.
- The justification for a new policy given by the minister was that the previous education policywas not producing required results.
- Problem was with implementation.

Topic 94

Private School growthFoster Universal Literacy

- Millennium Development Goals (MDGs) set the agenda for the attainment of universal literacy by 2015 primarily to be delivered by the state sector.

FOSTER UNIVERSAL LITERACY

- This agenda tends to ignore the significant private school growth.
- Private school's effect on literacy is stronger among 10 -14 year old children.

Topic 95

UNESCO and Universal Literacy

- For over 65 years UNESCO has worked to ensure that literacy remains a priority on national and international agendas. Through its formal and non-formal literacy programs worldwide, the organization works to realize the vision of a literate world for all.
- Every year UNESCO offers a prize for the activities of outstanding individuals, governments or governmental agencies and NGOs whose work in literacy serves rural adults particularly women and girls.

Lesson No. 21

WORLD LITERACY AND PROBLEMS IN LITERACY

Topic 96

World Literacy Rate

Total population:

7.46 m i l l i o n

Male: 88.6%

Female: 79.7%

Almost three-quarters of the world's 775 million (75%), illiterate adults are found in only ten countries (in descending order: India, China, Pakistan, Bangladesh, Nigeria, Ethiopia, Egypt, Brazil, Indonesia, and the Democratic Republic of the Congo)

Of all the illiterate adults in the world, two-thirds are women; extremely low literacy rates are concentrated in South and West Asia and Sub-Saharan Africa (2010)

World literacy Rate

COUNTRY	LITERACYRATE	MALE	FEMALE
Afghanistan	28.1%	43.1%	12.6%
Bangladesh	**78.8%**	**81.3%**	**75.2%**
Burma	**89.9%**	**93.9%**	**86.4%**
China	**95.1%**	**97.5%**	**92.7%**
India	**74.04%**	**99%**	**61%**

COUNTRY	LITERACYRATE	MALE	FEMALE
Iran	**85%**	**89.3%**	**80.7%**

Iraq	**78.2%**	**86%**	**70.6%**
Saudi Arabia	**86.6%**	**90.4%**	**81.3%**

Topic 97

Problems in Literacy

Gender Differences:

- There is great difference in the rates of enrollment of boys, as compared to girls in Pakistan.
- According to UNESCO figures, primary school enrolment for girls stands at 60% as compared to84% for boys.
- The secondary school enrolment rate stands at a lower rate of 32% for females and 46% males.
- On July 09, 2012 the Senate passed a law on 'The Right to Free and Compulsory Education'.
- All over the world poverty is the main cause of low literacy rate.
- Now for the literacy rate compared to Sri Lanka and India that stand at a literacy rates of 91.2%and 61% respectively, Pakistan is lumbering at a mere 57.8%.

Topic 98

Problems in Literacy II

- Only less than 2% invested in the Education sector.
- Pakistan has also remained one of those few countries where education falls under the federal government

Conclusion

- One thing a government could do is to increase the budget which is to be allocated towards education
- Another thing is to create awareness amongst people about the importance of education
- Most people in Pakistan are Muslims and they are still unaware of the fact that Islam promoteseducation
- Even when Hazrat Muhammad (PBUH) said that he would set free the prisoners who would teach Muslims; we can seek to comprehend to what degree education is important in Islam

Lesson No. 22

ISSUES IN UNIVERSAL EDUCATION

Topic 99

Medium of Instruction

Language is contentious, and the debate between national languages and mother tongues more so.

Mark Turin

Should local language or official language or international language be the medium of instruction (MOI)?

Should we use language as a subject of study or a MOI?

Topic 100

Medium of Instruction

- What is the appropriate level to shift from MT - NL - IL?
- When and for how long should the MT be used as a MOI and taught as a subject?
- When and how should English be introduced as a subject and as a MOI?
- What about the right of ethnic minorities to have primary education in their own mother tongue?
- Should it be the mother tongue of the majority of students whereby it would not be fair to some of the students whose mother tongue is different; or should it be Urdu the Lingua franca and thenational language; or should it be English

Topic 101

Why Mother Tongue?

- It promotes access, equity, self -esteem, faster acquisition of basic literacy and contributes to higher academic achievement.
- There are significant human and linguistic resources in the regions that can be built upon to support mother tongue as MOI throughout primary schooling and teacher training.

Topic 102

Why International language?

- Can MT educated students compete in the global market?

- Can MT education be equivalent to International Language education?

Early Childhood Education

- With a view to promoting a child friendly environment in schools and to ensure children's rights to learn in their own mother tongue, children's mother tongue should be employed as the medium of instruction.

Topic 103

Basic and Secondary Education

Basic education

Policy direction

- Quality and relevance
- Introducing mother tongue as a medium of instruction

Secondary education

Policy direction

- Quality and relevance
- Adopting the NCF as the basis for core curricula and local curricula

Topic 104

Literacy and Lifelong Learning

- Implementation arrangement
- Delivery mechanism
- Mother tongue medium literacy programs should be emphasized.
- Implementation matrix
- Introduce and expand mother tongue literacy courses in local languages

Topic 105
Quality Education Instructional provisions Medium of instruction

- Children's right to basic education through mother tongue should be guaranteed in at least the first three grades

- The choice of MOI in school should be determined by the school heads in consultation with thelocal government
- English should be taught as a subject from grade one onwards.
- The MOI in Madraasas should be determined by their respective management in consultation with the Department of Education

Topic 106
Instructional provisions

- To ensure that children learn in their MT at least in the early grades up to three, the schools candetermine the language(s) of instruction in consultation with the local body..
- Grades four and five can follow a transition from the mother tongue MOI to Urdu. From grade six to eight, the MOI can be fully in Urdu. English will be taught as a subject from grade one onwards.
- The language of instruction will be the Mother Tongue in early grades i.e. Pre-primary to grade5.
- There will be provision for language transition from the mother tongue to Urdu and/or Englishfrom grade 4.

Lesson No. 23

MODELS OF EDUCATION

Topic 107

4 Models of Education

Assimilation Model:

Starting in the mother tongue, and continuing to national language immersion

- **Pluralistic Model:** Recognizes the importance of the language spoken at home; thus, first language teaching is not restricted only to the early grades
- **Immersion Model:** Initial instruction is given in the national language with oral discussion and instruction permitted in the local language
- **National Language Model:** Sole instruction in the national language, with no teaching in the mother tongue.

Topic 108

Implementing Mother Tongue as Medium of Instruction Challenges

- Practical only in homogeneous communities.
- No teacher recruitment and training modalities have been developed yet.
- As a result of external production, the Textbook Boards have not been able to prepare even basic elementary readers in any of the mother tongues
- Current political unrest makes it difficult to implement changes in local contexts

Topic 109

Learning Types

- Formal
- Informal
- Non-formal
- It is difficult to make a clear distinction between formal and informal learning as there is often a crossover between the two (McGivney 1999).

1. Eraut (2000): Formal and non-formal learning in the workplace
2. EU's definition (EC 2001): The framework of life-long learning
3. Livingstone (2001): Formal, non-formal and informal learning of adults

Topic 110

Learning types II

1. Billet (2001): There is no such thing as informal learning. All learning takes place within social organizations or communities that have formalized structures.
2. Beckett and Hager (2002): Informal learning is not only more common, but also more effectivethan formal learning.

Topic 111

Eraut (2000) I

Formal and Non-Formal Learning:

- uses the concept of non-formal learning, (no informal)
- learning takes place mainly outside formal learning contexts

Presents five features of formal learning:

- A prescribed learning framework
- An organized learning event or package
- The presence of a designated teacher or trainer
- The award of a qualification or credit
- The external specification of outcomes

Topic 112

Eraut (2000) II

Defines the dimensions of non-formal learning:

- The timing of stimulus (past, current, future)
- The extent to which such learning is tacit (tacit, reactive or deliberative)
- To the extent to which learning is either individual or social

- To the extent to which learning is either implicit or explicit
- Eraut's definition of non-formal learning is based on an investigation into learning in the workplace.

Lesson No. 24

EU'S DEFINITION AND FORMAL, INFORMAL AND NON-FORMAL LEARNING

Topic 113

EU's Definitions (EC 2001) I

Formal Learning:

Learning typically provided by an education or training institution, structured (in terms of objectives, learning time or learning support) and leading to certification. Formal learning is intentional from the learners' perspective.

Non-Formal Learning:
Learning that is not provided by an education or training institution and typically does not lead to certification. It is, however, structured (in terms of learning objectives, learning time or learning support).

Topic 114
EU's Definitions (EC 2001) II

Non-Formal Learning:

Non-formal learning is intentional from the learner's perspective.

Informal Learning: learning resulting from daily life activities related to work, family or leisure. It is not structured (in terms of learning objectives, learning time or learning support) and typically does not lead to certification.
Informal learning may be intentional but in most cases it is non-intentional (or incidental / random). EU's definitions are related with the context of Life-Long Learning policy.

Topic 115
Livingstone (2001) I

Formal, Informal & Non-Formal Learning of Adult
Formal education occurs when a teacher has the authority to determine that people designated as requiring knowledge effectively learn a curriculum taken from a pre-established body of knowledge whether in the form of age-graded and bureaucratic modern school systems or elders initiating youths into traditional bodies of knowledge

Non-formal or further education occurs when learners opt to acquire further knowledge or skill by studying voluntarily with a teacher who assists their self-determined interests, by using an organized curriculum, as is the case in many adult education courses and workshops.

Topic 116
Livingstone (2001) II

Informal education or training occurs when teachers or mentors take responsibility for instructing others without sustained reference to an intentionally-organized body of knowledge in more incidental and spontaneous learning situations, such as guiding them in acquiring job skills or in community development activities.

Informal learning is any activity involving the pursuit of understanding knowledge or skill which occurs without the presence of externally imposed curricular criteria …in any context outside the pre- established curricula of educative institutions
This definition has a different organizing principle – the relationship between the teacher / mentor and learner.

Topic 117
Billet (2001) I

There is no such thing as informal learning:

- sees learning as ubiquitous in human activity
- most learning takes place outside formal educational settings

This means that something akin to non-formal learning should be regarded as the standard form, rather than what is left over, once formal learning is accounted for.

Topic 118
Billet (2001) II

There is no such thing as informal learning:

- has strong objections to the term informal because all learning takes place within social organizations or communities that have formalized structures
- never addresses the term non-formal but the logic of his argument is that learning cannot be non-formal either

Informal Learning

- Learning is organic or holistic, engaging the whole person, so that intellect, emotions, values and practical activities are blended
- Informal learning is more common and also more effective than formal learning.

Lesson No. 25

FORMAL, INFORMAL AND NON-FORMAL LEARNING II

Topic 119

Beckett and Hager (2002)

Characteristics to informal learning:

- Practice-based informal learning is organic / holistic.
- Practice-based informal learning is contextual
- Practice-based informal learning is activity- and experience-based
- Practice-based informal learning arises in situations where learning is not the main aim
- Practice-based informal workplace learning is activated by individual learners rather than by teachers / trainers
- Practice-based informal workplace learning is often collaborative / collegial

Topic 120
Colley, Hodkinson and Malcom I

Features of Formal and Informal Learning:

Formal Learning	Informal Learning
Teacher as authority	No teacher involved
Educational premises	Non-educational premises
Teacher control	Learner control
Planned and structured	Organic and evolving
Summative assessment accreditation	No assessment
Externally determined Objectives / outcomes	Internally determined objectives

Topic 121
Colley, Hodkinson and Malcom II

Features of For Formal and Informal Learning

Formal Learning	Informal Learning
Interests of powerful and dominant groups	Interests of oppressed and dominant groups
Open to all groups, according to published criteria	Preserves inequity and sponsorship
Propositional knowledge	Practical and process knowledge
High status	Low status
Education	No education
Measured outcomes	Outcomes Not precise; immeasurable

Topic 122

Colley, Hodkinson and Malcom III

Features of Formal and Informal Learning:

Formal Learning	Informal Learning
Learning to preserve the status quo	Learning for resistance and empowerment
Pedagogy of transmission and control	Learner-centered; negotiated pedagogy
through agents of authority	through learner democracy
Learning mediated	Learning mediated
Fixed and limited time frame	Open – ended engagement
Learning is the main explicit purpose	Learning is either of secondary significance or implicit
Learning is applicable – in a range of contexts	Learning is context-specific

Lesson No. 26

POPULATION EDUCATION

Topic 123

A Contemporary Concern

Introduction 1

The word population has at different times meant different things to different people. In the sixteenth century in England it was used as synonym for devastation, for laying waste.

Today most people associate the word population with growth though the depopulation of rural areas- both in industrialized and developing nations- it's not an unusual phenomenon. Despite the popular association of population with fertility it is also concerned with movement of people within and between nations and with morality.

This module, however, it's not about population as such but about an educational process - Population Education ---- designed to help people understand the nature ---- and particularly the causes and consequences ---- of population events.

Topic 124

Introduction 2

It is directed at people ---- as individuals or as members of groups, as decision-makers or potential decision-makers within their families, as citizens within a community, as leaders within a society and as policy makers within a nation.

All people are population actors, making population related decisions throughout their lives. The sum of their decisions shapes the nature of population forces (fertility, mortality, migration) which operate within a society and which then affect other social, political and economic forces.

In turn, the population, social, political and economic decisions made by the larger mass of people (the society or nation) influences the behavior of the individual, the families and the small communities in which they belong. Population education in essence, is an educational response to contemporary economic, social and political issues.

Topic 125

Population Situation 1

For the first thousands of years of human history, population growth was negligible: annual growth rates of about 0.002 percent meant that a given population would double in about 35,000 years.
The last thousand years showed only a slight increase until the twentieth century, during which population growth has risen to unprecedented levels.

The rapid increase in the rate of population growth since mid-20th century has been caused not by increasing fertility but by drastic declines in mortality rates (particularly among infants and children) due to improved public health and advances in in medical technology.
In the industrialized world, birth and death rates both declined gradually over a period of centuries beginning about 1650.

In the developing world, however, death rates have dropped rapidly only in the last few decades of this century, while birth rates have remained high. However, to report an average world population growth rate at present of 2 percent is misleading. Of the ten populous nations in the world: none currently have growth rate of 2 percent.

Topic 126
Population Situation 1-II
Six have higher rates and four have lower rates. Population is growing more quickly in developing nations: industrialized nations average annual rates of 1 percent, which means that their population will double in 70 years.

Developing nations average annual growth rates of 2.5 per cent, which means that their populations will double in 28 years.
The large proportion of young population in developing countries has important implications for development, since this group makes a heavy demand for services like health, education and housing from governments whose financial resources are limited.

Population situation 2
Migratory population shifts ---- which are seldom anticipated or planned for ---- place an extra burden both on the area receiving inhabitants and on the area from which the migrants have come.

In the typical situation, rural areas in developing countries lose their better education youth ---- the people most capable of future leadership and innovation to the cities. Migration may so seriously cripple a community that it is forced to discontinue its services and cut back employment opportunities.

Lesson No. 27

POPULATE DEBATE AND ISSUES

Topic 127

Population Debate

Population phenomena affect so many aspects of life at so many different levels ---- political relations, resources, the environment, food and nutrition, health, social services, education, employment, human rights,---- that nations, regions and individuals have differing viewpoints about population questions.

"The consideration of population problems cannot be reduced to the analysis of population trends only. It must also be borne in mind that the present situation of the developing countries originates in the unequal processes of socio economic development which have divided peoples since the beginning of the modern era.

This inequity still exists and is intensified by lack of equity in international economic relations with consequent disparity in levels of living.
Different population structures and different levels of development combine to make developing and industrialized nations view similar social issues from different angles.

Topic 128
Health Care
In terms of health care, developing nations continue to concentrate on decreasing infant mortality and on preventing common infectious diseases.

Industrialized nations, having rid themselves of the more common contagious diseases, struggle with unprecedented man-made threats to health, such as air, water and noise pollution and the stresses of modern urban living.

Topic 129
Food
While developing nations wrestle with agrarian reforms, the industrialized nations either produce enough food or have enough capital to purchase large quantities of foodstuff.

Although population growth is not the sole reason for the world's food problem, it is estimated that this growth accounts for about 70% of the medium-term increase in the total demand for food in developing countries.

Topic 130

Human Rights

There are implications of population composition ---- socio-economic, religious, and cultural/ethnic groupings ---- for the attainment of human rights and social justice.
The status of women and girls is a subject of particular concern today within the general area of social justice.

In the "World Population Plan of Action", women's rights are recognized in the following manner:

"Women have the right to complete integration in the development process particularly by means of an equal access to education and equal participation in social, economic, cultural, and political life."
From a population standpoint, what is at stake in a number of nations is the right to women to make informed and conscious decisions of life-cycle events, but this freedom may not easily be obtained in societies where marked inequalities of opportunity exist between men and women.

Lesson No. 28

WHY POPULATION EDUCATION

Topic 131

Why population education

The "World Population Plan of Action" urged the need of population education in the following way: "Educational institutions in all countries should be encouraged to expand their curricula to include a study of population dynamics and policies including, where appropriate, family life, responsible parenthood and relation of population dynamics to socio- economic development and to international relations"

Programs of population education can contribute to solve either the population or the educational problems faced by individuals and nations. The solutions of these problems depend basically upon social changes that will lead to greater equity and social justice, greater independence and self-determination.

As an educator recently observed: "by itself, education cannot bring about social change. It is a necessary but not self-sufficient condition for change. The potential of education as an instrument of change, however has not been exploited in many Third world countries and the same is also true for the industrialized world.

A number of issues have been debated among population educators over the years. Many of these issues are not unique to population education but are shared in varying degrees by educators in other areas.

Topic 132
The role of Ideology and Culture 1

The nature and scope of educational programs are influenced by political and ideological orientations, and population education is not an exception to this rule. It is influenced by the views held in a particular society concerning the nature and significance of population matters in social, economic and political development and by the character and function of educational systems as such.

Ideological theories and culture provide a framework for setting goals and filters for selecting content. People acquire population-related knowledge throughout their lives ---- a process of absorption which is generally part of a larger process of socialization.

When attention is focused on the learner, it is obvious that, in many cases, his world, his macro level may not extend far beyond the boundaries of his village, local area or community. This is particularly true in more isolated rural communities among the learners where literacy level is low but it is an important consideration for school programs as well.

Planners of population education activities must identify the level of aggregation ---- the type and size of social group ---- to which learners are able to relate. To try to widen the learners view beyond a narrowly - defined world is a legitimate aim but will be unsuccessful if the macro or societal level is too far removed from his experience.

Ways must be found to translate family problems into broader terms and to create an awareness today of what the problem might be for others tomorrow.

Topic 133

The Role of Ideology and Culture 2

Family, kin, peers and community play a dominant role in acquisition of a folk demography the knowledge, attitude, values norms, systems of belief that people come to hold about population related matters, such as family and marital relationships, social customs, and status and role of women and children and the choice of residence.

Sometimes this learning is clearly perceived as having population repercussions; most often, however, it is, part of the conventional wisdom of the group or culture.

One of the goals of population education is to assist learners to identify, examine and understand their folk demography and implications it has for population decisions. In this way, the folk demography of learners becomes a significant content area of population education.

Identification of cultural differences and sensitivities is an important part of program planning and development for its raises issues about the relevance of the curricula, the adaptation of content and method to meet specific needs and the administration of decentralized programs.

Topic 134

Levels of Aggregation

In many past programs, the society or "macro" level has been assumed to be the nation or even the world. Indeed, many of the earlier curricula for school programs emphasized world and national issues.

It is becoming increasingly clear, however that if population education programs are to be meaningful to learners and more responsive to their needs, they must place more emphasis upon individual and family situations ---- the micro level.

When attention is focused on the learner, it is obvious that, in many cases, his world, his macro level may not extend far beyond the boundaries of his village, local area or community. This is particularly true in more isolated rural communities among the learners where literacy level is low but it is an important consideration for school programs as well.Planners of population education activities must identify the level of aggregation ---- the type and size of social group ---- to which learners are able to relate. To try to widen the learners view beyond a narrowly - defined world is a legitimate aim but will be unsuccessful if the macro or societal level is too far removed from his experience.

Ways must be found to translate family problems into broader terms and to create an awareness today of what the problem might be for others tomorrow.

Topic 135

Decision making

Few individuals make population-related decisions outside a group context and in many cases, the decision-making unit is the group itself, such a large family unit in Pakistan or a street committee in the local villages.

Less obvious but equality significant is the impact which the group has upon decisions made by individuals and within families. Clarifying these influences is part of the process of creating informed decision-makers. In all cases, the aim is to increase understanding of the inter-relationships between macro and micro units of the society.

However, the range of options that are theoretically open to individuals and groups may, in reality, be quite limited due to lack of equity and social justice and to the presence of cultural norms, traditions and taboos.

Lesson No. 29

RELEVANCE AND PARTICIPATION

Topic 136

Relevance and Participation

Relevance is the raison d'etre of population education. Its goal is to improve learners' and nations' abilities to deal effectively with population issues.
This is a most practical concern. The challenge facing population educators is to ensure that, in translating this goal into action, the program retains its focus on the needs of the learners, their families, communities and societies.

Furthermore, there is an increasing recognition that learners need to participate more in the various planning and implementation stages of population education programs but, in most cases their participation is still more spoken of than practiced. In the absence of mass participation in pre-program activities, who can stand in for the learners?

How does the educator avoid imposing his perception of need on them? Can efforts to increase learners' participation at the local level be generalized when programs are being designed for provinces/states and regions within countries or when a national program is being planned.

Topic 137
Program Planning/ Implementation

Formal education systems in the developing world and in most industrialized nations are financed and directed largely from the national center. Deciding how these systems can be responsive to the needs of learners in different parts of the country, in different racial and ethnic groups, in different social and economic classes is another problem for population educators.

The academic organization of schools has not always been sufficiently in tune with these differences, and this has contributed to the recent disillusionment over schooling in many parts of the world.

Nationally-directed out-of-school programs are also likely to face the same problem unless special efforts are made to localize their activities. Decentralization, in both school and out-of-school programs, of teacher training, of program planning, of curriculum and material development is usually difficult to achieve because of the large-scale programs and the usual shortages of resources.

Topic 138
Future Oriented learning

In school programs, many of the population related decisions likely to be considered are those that will be made in the future: where to live, when and if to marry, when and if to have children and so on. Even out-of-school programs for adults educate for future decisions, although this future may not be distant as it is for many school children.

In addition, the repercussions of these decisions may be spread over a number of years. This presents special problems for population educators, because the situation may change between the end of the educational process and the time for decision.

This raises the problem of how best to train for an unknown future, how to reinforce the learning process so that the content will be better retained, how to emphasize the process of finding solutions rather than the solutions themselves.

Viewing population education in a lifelong context emphasizes the importance of further development for both school and out-of-school programs and the need to link these efforts through all available educational settings and channels. But the linking together of the various parts of the total educational and learning system of a society --- school and out-of-school ---- is quite a complex enterprise, still in the first steps of its development.

Topic 139
Persuasion and prescription 1

No education system, anywhere in world is free from some degree of persuasion and prescription, despite the theoretical commitment to truth telling. Training for citizenship and developing the sense of being part of a nation usually involves elements of conditioning. Furthermore, no educational process can be totally value free, because any selection of facts involves conscious and unconscious value choices.

Population education faces these general problems and is also potentially confronted with a more direct conflict between theory and practice: the degree to which the educational system can or should directly support the population policies of the nation.

If the government has determined that the small family shall be the norm, or that migration must take place in order to relieve dense population, or that country's population should increase, what is the proper and possible role of the educational system?

Topic 140
Persuasion and prescription 2

Should the system adopt these prescriptions as educational goals? Or should it assume a value- fair stance in which various points of view are examined (even though some may have more weight than others) and the decision left to the learners?
Obviously, such a statement of issues is overly simplistic but it helps to focus on one of the key issues facing the population educator in planning and implementing his program.
And even if it is decided that a prescriptive approach is necessary (either because of the severity of a population situation because government policy would not permit otherwise), the efficacy of prescription is, in certain circumstances, questionable.

Lesson No. 30

POPULATION STUDIES

Topic 141

Population Studies

Population education is not an attempt to develop a new discipline. Although demography and folk demography form the core of knowledge needed for population education, they do not cover the whole range of issues involved.

Facts, theories and concepts from a broad spectrum of academic disciplines and professional fields are needed to help individuals and societies fully understand population interactions and thus the effect of population factors on the quality of their individual and collective lives. The sum of this knowledge is referred to as population studies.

These studies raise a number of issues. Since the potential sources of information are vast, and since culture and ideology, among other things, will play a large role in determining what is most relevant to the needs of any particular group, there Is no agreement on what should or should not be included.
Various factors and assumptions act as filters in determining the priority given to areas of knowledge and the framework used to organize the knowledge selected for inclusion.

Unfortunately, much of what is known deals with larger population units, making it difficult to extrapolate findings that can be applied to smaller units, like the community, the family and the individual. This encourages the generalized belief that population education deals primarily with national or global concerns, whereas in reality, the problem is caused by the inadequacy of available data.

Topic 142

Methodological issues

The emphasis on relevance, decision-making and future orientation raises questions concerning the methods to be used in population education activities: are certain methods particularly suited to population education? Intuitively, it might be suggested that methods which emphasize learner participation and practice of various skills would achieve the results desired by the population educator.

For example, it seems that effective decision making can best be learned through a process which

actually involves the making of decisions. However, little evidence exists to support or refute this contention. There are also problems of reinforcement and transfer of learning from one context to another.

Methodological issues also concern effectiveness of different ways of adding population education to the school curriculum ----- whether it should be integrated with other materials or given separate courses ---- and the way it is related to out-of-school programs.

Topic 143
Population Education/Other "Educations"

A number of other educational activities share some of the content associated with population education. The greatest confusion that arises concerns population education's relation to sex education, family life education, environmental education and development education.

Differences in goals and objectives give population education a separate identity at the present stage of its development. However, future developments may bring interests closer together and blur present dividing lines.

Topic 144
Population Education and the Media

Concerns about population issues has stimulated activities among people working in the field of information and communication, just as it has stimulated educators. These activities are potentially mutually supporting. Educators certainly need to know what the communicators are doing since informal learning through various media has an impact on the learning that takes place in school and out-of-school settings.

However, these activities have differences: first, the educator is concerned essentially with a continuous process of interaction between learners and teachers. Although communication media can be of considerable use to the educator, the media specialist has so far been primarily involved in a process of transmitting information.

Second, much of work in communication has tended to be heavily prescriptive, urging support for particular decisions rather than exploring the consequences of these decisions.
In particular, most although not all information and motivation activities have been aimed at supporting family-planning activities and at decreasing family size ---- aims which, as has been stressed, are not necessarily those of population education.

Lesson No. 31

RESEARCH FOR PROGRAM DEVELOPMENT

Topic 145

Research for Program Development

Although it is recognized that program development cannot always wait for research results, it is equally clear that a broader research agenda needs to be initiated now so that future programs can be planned more rationally and systematically.

Systematic research – investigations that might survey, for example the relevant literature concerning the nature of the learner and his learning context
Basic research – studies that might indicate, for example how learners acquire population related concepts in a variety of settings.

Program research – investigation that might establish, for example the comparative efficiency of different strategies in reaching particular audiences

The continued absence of research findings in these areas appears to be one of the major barriers to the further progress in the conceptual and methodological development of population education

Topic 146

Conclusion

Few of the conceptual and methodological issues confronting population education are likely to be solved in the immediate future. One objective is to identify issues and clarify difficulties so that population educators and educators working in related fields can focus attention on their solution. A second purpose is to identify areas where development is needed to indicate those that can be dealt with by alternative strategies or by research.

In surveying the present status of population education, it is recognized that much remains to be accomplished if present population education theory is to match population education practice.

Topic 147

Innovation and Renovation

An important goal often suggested for population education concerns the contribution it might make to educational renovation and innovation by introducing new content and methodologies.

So far, the introduction of population education in school and out-of-school programs has, in the main, simply meant adding and integrating new content. In a very limited sense, these additions may be thought of as innovatory insofar as any extra content implies at least some re-organization of a learning system.

But population education programs have generally used the methods and approaches of the educational systems of which they were a part.
Today, many educators argue that goals of population education require teaching/learning methods which will be innovatory and renovator in most education systems, in traditional or formal settings and where the teaching/learning process tends to be teacher rather than learning oriented, the focus of population education upon learner evaluation, decision making and response will represent a significant shift in emphasis.

Here, the methods implied by these goals can rightly be viewed as proposals of change.
In systems already using less formal and learner-centered approaches population education is bound to reinforce the trends towards innovation and renovations.

In case of educational or learning systems, which are not being significantly changed, it is unlikely of course that introducing a population education program would in itself greatly modify the system.
However, in the educational settings undergoing change in organization and content, population education can contribute to these changes ---- particularly where innovation and renovation is directed toward interdisciplinary organization or integration of content, increased relevance, increased learner participation and the acquisitions of skills which will still be useful later in life.

Topic 148
Population Education: Integration

Some scholars consider that population education programs and particularly school programs -- are an integral part of other "educations", such as developmental education or environmental education.

They argue that the goals and objectives of population education should reflect these "broader frame works" and might be appropriately and meaningfully integrated into them.

Before passing on to the question of integration, it seems necessary to indicate briefly the goals of both population education and other educational programs which are in some way related to population education.

Lesson No. 32

PRIVATIZATION OF EDUCATION

Topic 149

Introduction of Privatization

The term privatization is the transfer of activities, assets and responsibilities from government/public institutions and organizations to private individuals and agencies.

Definition

'Privatization' is also thought of as a 'liberalization' --- where agents are freed from government regulations, or as 'marketization' --- where new markets are created as alternatives to government services or state allocation systems.

The trend towards privatization is strong. It is taking place in many countries and within many sectors of the economy. The education sector, because it is a large expenditure item in government budgets, often faces pressure to privatize.

Topic 150

Three forms of Privatization 1

The three most common privatization forms include:

1. **Private Provision**

Education can be provided by private agencies, such as privately owned and managed schools or universities.

It need not be provided through government-run institutions; instead, private schools could be operated by religious groups, for-profit entrepreneurs, charities, or other interested parties.

Indeed, many families already prefer the private option and choose to forgo the free, public education systems. Internationally, the proportion of students who are educated by private providers varies substantially.

For example:

- In the United States, approximately 11 per cent of school-age children are in private schools, mostly at the elementary level.
- In the Netherlands, the proportion of schools administered by private school boards is almost 70%. Although, these schools in the Netherlands are privately operated, they do receive public funds.
- Denmark has a system of publicly funded private schools that enroll about two-thirds of all students, most of which are religiously affiliated.

- In Belgium, around 50 per cent of all student enrolments are in private schools.
- There is an equally broad mix of public-private provision in higher education in the Philippines, where over 75 per cent of students are enrolled in private universities
- In the United Kingdom and much of continental Europe, the proportion is almost zero.

Topic 151

2. Private Funding

Education can be funded by private individuals rather than through government subsidies. Privatization may therefore mean that parents pay for schooling rather than the government (via tax revenues).

Often, private schools are supported directly through tuition fees paid by students' families, but in many cases, both families and governments contribute funds in a cost-sharing approach.
Public universities in the United States charge tuition fees, but these only cover approximately half of the total costs, the remainder being covered by government subsidies.

In the Republic of Korea, private education spending on schooling and on additional tutoring in subjects not covered in school amounts to approximately the same total as that of government expenditures.

In many developing countries, families must pay additional 'top-up' fees to the local state funded schools (e.g. for textbooks or classroom materials). So, privatization also occurs when a portion of the total funding is paid by families instead of by the government.

Topic 152

3. Private Regulation

Education services can be monitored by those who receive the services directly, i.e. the students and their families.

They will make sure that the education is of satisfactory standard --- either by refusing to enroll at poor quality schools or by demanding better services.

Privatization can include giving parents more choice over what goes on in schools, or what types of school are available, even where all these choices are within the public sector.
Also, governments can regulate education: states often set compulsory schooling laws and monitor schools' performance through inspection systems, audits and accountability frameworks.
In England and Wales, schools are inspected by the Office for Standards in Education (OFSTED), a government agency that monitors educational quality.

In Denmark, all schools --- whether they be privately operated or run by the state --- must meet state accountability requirements with regard to teacher licensing, a core curriculum, and academic standards for the students.

The alternative to these government-run information systems is a private market in information, where parents make their own school-choice decisions based on their personal preferences.

Lesson No. 33

PRIVATIZATION POLICIES IN EDUCATION I

Topic 153

Privatization Policies in Education 1

Privatization trends are developing as education policies across each of the three sectors of primary, secondary and tertiary education. The main policies and programs include:

1. **Educational Vouchers**

Vouchers are educational coupons that entitle each student to a prescribed amount of schooling.
A voucher system is very different. Each student is allocated an annual amount of funding that could be used to enroll in any eligible school.

The schools obtain revenues based on the number of students who enroll: if not enough students enroll in a particular school, that school has to cut its costs or close.
Education under a voucher system still involves government funding, but it need not involve government provision of schools.

By giving parents the power of being able to freely use the voucher, private choices are significantly expanded. Vouchers need not cover all the costs of schooling, but may simply serve as an incremental inducement to enrolment.
In Guatemala, scholarships are targeted at female students, whose enrolment rates are typically low.

Topic 154

2. **Public School Liberalization**

Liberalization would involve reducing the 'red tape' and bureaucracy that public schools face, making them more efficient and more flexible.

With fewer regulations, public schools may be better able to respond to changes in students' needs, and in the prices of key inputs, such as teachers. One way to reduce the number of rules is to create new schools that are clearly exempt from them.

During the 1990s, many states in the United States passed laws permitting charter schools; these are government-funded schools, but they are subject to fewer regulations than regular public schools. By 2002, there were over 2,700 charter schools in about 37 states, catering to students of various socio- economic groups and with different educational preferences.

Topic 155

3. **Private Contracting**

Schools provide a range of services under the title 'education'. These include instruction, but they also provide food, sports facilities and welfare counseling.

Many of these ancillary services could be provided by private firms under contract rather than by government agencies. If private contractors are more efficient at delivery, then governments may seek to encourage more contracting of educational services.

Given this large number of services that schools provide that are not directly educational, numerous companies have emerged as contractors to the schools for textbooks, food, transport and cleaning services.

In the United States in the 1990s, a new niche opened up in the form of Educational Management Organizations (EMOs). These companies supply management services to schools (i.e. student assessment, budgeting and administration).

Private contracting may therefore allow a school district to concentrate on education without also having to operate a cafeteria or transport service.

Topic 156

4. **Tuition Credits and Deductions**

One way to encourage private expenditures on education is to make those expenditures exempt from taxes.

A tax credit is where either the total amount or some portion of the permissible expenditure is subtracted from the amount of tax that is owed by the individual.
A tax deduction is where the permissible amount is deducted from the gross taxable assets of the individual.

If families benefit from either type of tax advantage from the purchase of education-related services, they are likely to buy more of them. These services can be provided either by public schools or private companies.

Lesson No. 34

PRIVATIZATION POLICIES IN EDUCATION II

Topic 157

1. Subsidies and Assistance Grants

One way to foster competition between public and private schools --- in a form similar to that of an educational voucher --- is to give subsidies or assistance grants directly to private schools.
Where these grants reduce the fees that private schools charge, families will be attracted to the private sector. These grants may reduce the financial burden on the public sector.

2. Home – Schooling

Some families believe that neither existing public nor private schools can deliver an appropriate or desirable education for their children. These families may opt out of the education system entirely and school their children at home.

This is the ultimate form of education privatization: privately funded, privately provided, and monitored only very lightly by government agencies.

In the United States, home-schooling is a legitimate way of meeting the compulsory schooling laws, and over 800,000 students (1.7 per cent of all school-age children) are estimated to spend at least two years as home-schools.

Topic 158

3. Private Payments

More common, however, is the partial step towards such home-sourced privatization through payments by families for supplementary schooling. In some countries, it is also referred as home- tuition.

Many households directly contribute a large share of their household income to education through private tutoring or exam preparation. These payments are used to augment the schooling provided by the government.

4. Competition among Schools and Education Agencies

One way of creating an education market is to encourage schools or agencies at other levels to compete with each other.

Where a school has a captive market or monopoly, it is less likely that it will respond to students' needs. In contrast, where families have a choice of schools, they will select the one that best meets their needs.

Therefore, one privatization reform would involve creating systems wherein schools compete with each other to offer the highest quality education.

Topic 159
Implementing Privatization Programs

Overall, there are many opportunities to privatize the provision, funding and accountability of educational services. Indeed, international reviews of the demand-side and supply-side policies show that many countries have implemented some form of privatization.

For example, grant schemes for students in private schools have been tried in Brazil, Botswana, China, Ghana, India, Mauritius and the United Republic of Tanzania.

Bursaries and targeted scholarships in private schools have been implemented in Bangladesh, Brazil, China, Colombia, Gambia, Guatemala, Indonesia, Mexico, Morocco, Mozambique, Senegal and the United Republic of Tanzania.

Topic 160
Implementing Privatization Programs 2

These countries, which span the continents, have different education systems, as well as different labor markets. The multitude of these programs suggests that education privatization is a practicable possibility.

There are many experiences across different countries at different stages in the process of privatization. Policy makers must decide which of these reforms is appropriate, and which would have the greatest impact in raising the quality of educational services, allocating resources fairly, and meeting the needs of society.

Lesson No. 35

WHY IS PRIVATIZATION HAPPENING?

Topic 161

Why is Privatization Happening? 1

There are many factors driving privatization in education. These factors differ in intensity between countries and across the three sectors of primary, secondary and tertiary education.

It is worth noting that some advocates of privatization are motivated by an ideological commitment to individual rights over government intervention. These advocates believe that a family's right to choose its own education is paramount.

Other advocates may stress efficiency; detractors may argue that any private education system based on ability-to-pay is inequitable. The conventional view is to see privatization as a way of redressing the balance from government involvement to greater autonomy for families. Both government and family are important, and privatization shifts emphasis on to the latter relative to the former.

Topic 162

Why is Privatization Happening? 2

Following are the dominant pressures for Privatization:

1. Demand – Side Pressures

The first factor that can be cited to explain privatization in education is simple: many parents want it. In many countries, education is viewed as an important way to gain social and economic advancement.

Therefore, the demand for education is high, and if governments cannot afford to provide and fund quality education, then parents seek private suppliers.

This type of demand is 'excess demand', over and above what is provided by the government.
In addition, many parents want for their children an education different from that offered in public schools. This is 'differentiated demand' and it may encourage privatization across all three sectors.
Both excess and differentiated demand have increased in recent decades.

Excess demand has grown because education has become more important for social and economic betterment: to get high-paying jobs, for example, workers must have a high level of skills and

credentials that are only available from universities.

Differentiated demand has grown for two reasons.
One is that many public schools offer education that is standardized or uniform. The greater the uniformity in the public schools, the larger the number of parents who will seek differentiated demand. The other reason is that economies and societies have become much more specialized. Many more trades and occupations have developed, and the education system must cater to these.

Topic 163

Why is Privatization Happening? 3

2. Supply-side Pressures

The second factor that motivates privatization is the decline in the quality of, and in some cases the reductions in funds available to, the public sector.
Many parents may feel that the local public school is inefficient in providing education of the type that is most needed; this dissatisfaction is reported by parents in very basic terms (such as the inability of the school to guarantee their children's safety).

In some cases, enrollments have expanded much faster than funding, resulting in overcrowding, large classes, and double or triple shifts for delivery of instruction. Part of the perceived decline in quality may be a consequence of a fall in per-student funding.

Higher education often has a high cost per unit, governments expect students to bear an increasing financial burden for their higher education., These pressures have thus prompted a number of privatization-type reforms to include private payments by students, the creation of private institutions, and resource allocation based on performance.

Another explanation for the perceived decline in quality may be that the public-school system has reached a capacity constraint. With rapid population growth, government schools may be overcrowded; therefore, private school providers are needed. In the Dominican Republic, for instance, private schools are subsidized if they enroll low-income students where the public schools are at excess capacity.

Topic 164
Why is Privatization Happening? 4

3. General Pressures

In addition to these push-and-pull pressures discussed previously, there are general pressures to privatize education systems. One such factor is global economic and social change.

Globalization, linked with market liberalization, has both pressured and encouraged governments to seek more efficient, more flexible, and more expansive education systems. Privatization may be one response to these changes.

Another factor that explains some of the growth in privatization is the encouragement of world aid agencies, such as the World Bank. Within the last decade, for example, the World Bank has given assistance to countries like El Salvador, Indonesia, Mali, and the Dominican Republic.

Lesson No. 36

PRIVATIZATION IN PAKISTAN

Topic 165

Privatization in Pakistan I

Private provision of education is not new in Pakistan. At the time of its inception in 1947, the state promised universal primary education as well as sought 'other actors' to participate in realizing it. It justified the need for participation of the extra-state actors in view of lack of resources.

Since then, the private schools have existed in the form of madrassahs, Christian missionary schools as well as schools run by business entrepreneurs and non-governmental organizations.

The growth of private schools received a serious setback due to government's drive for nationalization in 1972. Their role was revived after denationalization in late 1980s but little is known about the dynamics of pre and post-denationalization differences due to absence of data.

Minimal research was carried out on the role of the private sector in education after denationalization. This deficiency was partly due to lack of a population census in Pakistan between 1981 and 1998. Until the late 1990s, it was believed that the private schools were largely serving the elite segments of Pakistani population. After denationalization, growth of private schools was no more an urban elite phenomenon.

Topic 166

Privatization in Pakistan 2

Over the past few years, data has shown that private provision of education has also become a significant phenomenon in the rural areas of Pakistan. Schools have started spreading in rural areas rapidly and are affordable to middle and even low-income groups.

Some view the rise of private schooling as complementary to the governmental efforts for achieving "Education for All", others consider it as an inevitable change due to the emergence of marketplaces and shrinking role of the state in the provision of public good.

This is evident from the growing share of private sector in number of educational institutions, national workforce of teachers and enrolment especially since 2000.

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Topic 167

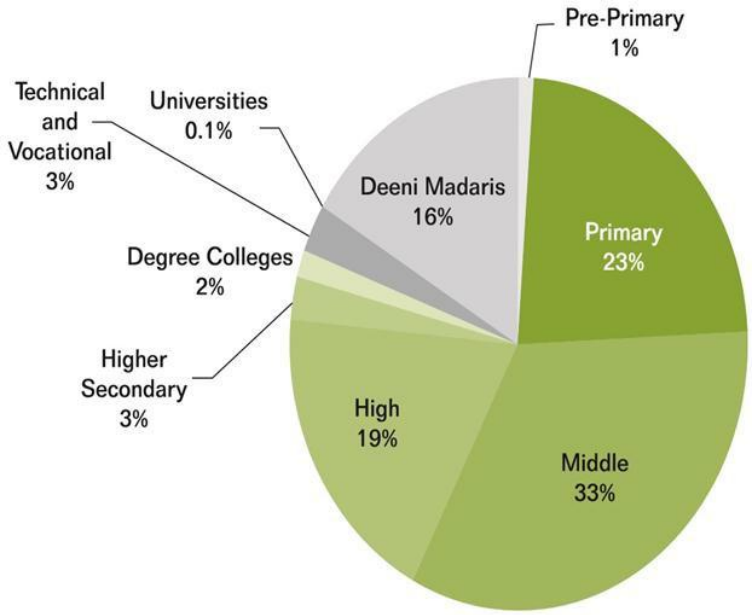
Privatization in Pakistan 3

Year 2000 is important in the sense that international community began to exert great pressure on developing countries like Pakistan for achieving Millennium Development Goals (MDGs).

This pressure was one of the most important forces which moved the Pakistani government to accelerate its efforts for achieving universal primary education and as a result it supported the emergence of private sector education in a liberal policy framework.
Number of Private Educational Institutions in Pakistan

Type	Private
2000	35,889
2007-08	73,529
Change (%)	105%

Source: I-SAPS' calculations from NEMIS report for 2007-08



Distribution of Private Educational Institutions by Region

Punjab	65%
KPK	11%
Sindh	16%
FATA	1%
Balochistan	1%
ICT	1%
Gilgit-Pakistan	2%
AJK	3%

Source: I-SAPS' calculations from the NEMIS report for 2007-08

Number of Teachers in Private Educational Institutional

Type	Private
2000	81,264
2007-08	191,854
Change (%)	136%

Source: I-SAPS' calculations from the NEMIS report for 2007-08 Enrolment of Student in Private Educational Institutions

Type	Private
2000	5,952,9224
2007-08	12,140,458
Change (%)	104%

Source: I-SAPS' calculations from the NEMIS report for 2007-08

Lesson No. 37

FINANCING, DIVERSITY AND EVALUATING PRIVATIZATION PROGRAMS-I

Topic 168

Financing private Education in Pakistan I

The size of private sector engaged in delivery of education services and its rapid growth in terms of number of institutions, teachers and enrolment draw attention to some fundamental questions pertaining to financing of private education in Pakistan.

- How much does the private sector invest in education annually?
- How much do different types of private schools cost to children from households in low-, middle- and high- income groups?
- How much profit do the private schools earn?
- How does the fee structure correlate with quality of education in private schools?
- To what extent does the cost of private provision of education vary in different regions and in urban and rural areas?

Topic 169
Financing Private Education Pakistan 2

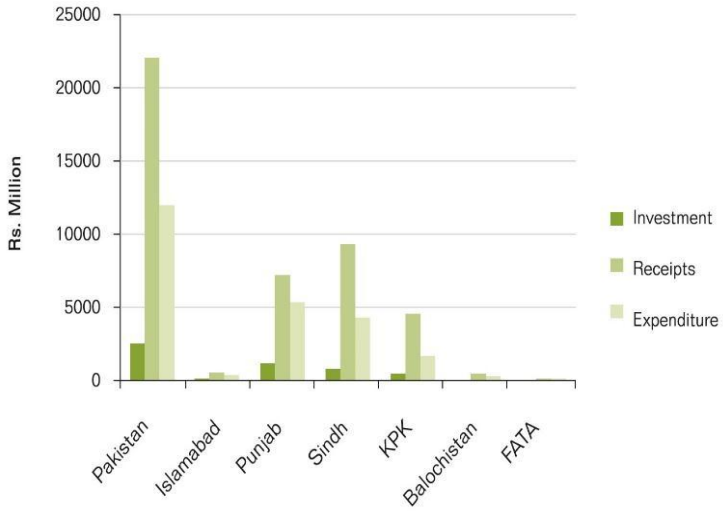
The data available to answer these and similar questions related to financing of private education is insufficient and whatever is available is too much scattered.

The deficiency of data is evident from the fact that the most comprehensive set of financing statistics are available only in the Census of Private Educational Institutions 1999-2000.
Since then, considerable changes might have occurred in trends and patterns of investment, receipts and expenditure of private educational institutions but it is difficult to analyze those changes because National Education Census 2005 and NEMIS haven't collected this information.

The Census 1999-2000 showed that annual investment by the private sector was Rs. 2.5 billion whereas the recurrent expenditure amounted to about Rs.12 billion in the year preceding the Census.

Topic 170
Financing Private Education Pakistan 3

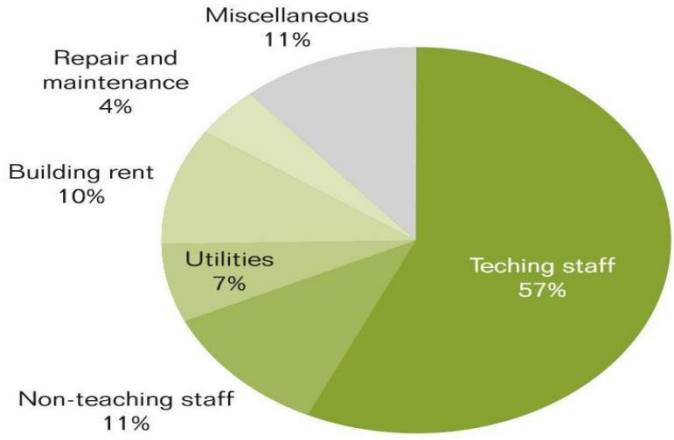
Investment, Receipts and Expenditure of Private Educational Institutions (1999-2000)



Source: I-SAPS' calculations from the NEMIS report for 2007-08

According to the Census 1999-2000, the largest chunk of private sector's expenditure went to teaching staff (57%). The other two major types of expenditure were salaries for non-teaching staff (11%) and rent of building (10%).

Distribution of Expenditure of Private Educational Institutions



Source: I-SAPS' calculations from the NEMIS report for 2007-08

Topic 171

Diversity Private Education Pakistan 1

Diversity of private education in Pakistan is a characteristic feature and has tremendous

implications for policy research but this aspect remains largely under explored in the literature.
As a result, private sector as the provider of education has generally been treated as a homogeneous category, though to a lesser degree than the public education sector.

Ordinarily, differentiation is made between low- and high-fee schools, Urdu- and English-medium schools with different syllabus and between boys, girls and mixed schools. However, in reality the private educational institutions can be classified along a much broader range of categories.

Topic 172
Where has this diversity come from?

The answer to this question draws attention to the variance in demand for education emanating from the ethnically diverse and ideologically divided society of Pakistan.

Some segments of population are interested to get their children educated in schools with English as the medium of instruction while the others prefer those schools which focus on Islamic education or both.

In rural areas, parents favor single-sex schools for older girls due to which growth of girls' private schools has been much higher than that of the mixed school.
Such differential demands for a certain kind of education within a particular school environment have given rise to a vibrant private educational marketplace in Pakistan.

Topic 173
What are the implications of diversity in the provision of education?

It is important to understand that unlike the government schools, different types of private schools entail different implications in terms of their impact on policy and socioeconomic milieu.
From one point of view, diversity in the private educational marketplace is a response to variance in the demand which already exists in the society.

However, some believe that from the vantage point of harmony and equality in the society, the very fact that private educational institutions are configured to a diverse range of social, economic, ideological and religious lines is a matter of concern.

This apprehension is best explained by the fact that a textbook used in a private school preaches to the students that listening to music, watching television and even playing carom board or flying kites are sinful acts.

On the other hand, there are many private schools which teach music to children in regular classes and promote liberal arts. Therefore, the two types of schools are producing two groups of students with entirely opposite worldviews. This case illustrates the potential implications of different types of schools for social harmony, peace and national integration.

Topic 174
Quality of Teaching and Learning 1

Quality of teaching and learning is a main factor in the rapid growth of private educational institutions in Pakistan. The popular perception is that quality is much better in private schools than the government schools. The extent to which this perception is true is a matter of debate.

Generally, quality is hardly questioned as far as high-cost private school chains which cater to the elite are concerned. The issue of quality is raised more frequently for low-cost private schools which are prevalent in both rural and urban areas.

Andrabi, Das and Ijaz (2002) argued that parents infer quality variation between schools through the range of fees which varies in predictable ways to measured school inputs.
While correlation of fees with measured inputs taken as the crude indicator of quality can be helpful for the households to choose a good private school, it is not necessarily useful in many instances.

Parental choices are affected by many other crucial factors as well such as personal references, marketing and publicity campaigns and scores of school students in annual examinations.

Topic 175
Quality of Teaching and Learning 2

In some instances, even good measured inputs become misleading and examples abound of complaints about quality for schools with good building and low student-teacher ratios.
Assessments of learning and student achievements shape an idea of overall level of quality in private schools but they present different pictures.

For examples, the World Bank commissioned an assessment under LEAPS project based on test scores of grades 3 students from both public and private schools in rural Punjab. Researchers claimed that private school students are outperforming their public counterparts.
Another evidence comes from comparative performance of private schools based on the testing of grade 5 and grade 8 students by the Punjab Examination Commission (PEC) in Punjab and National Educational Assessment System (NEAS) nationally.

Unlike LEAPS, the data from PEC and NEAS shows only marginal differences between performance of pupils from public and private schools.
Indeed, the threshold for performance of private schools remains very low with the performance of already failing public schools as the reference point for comparison.

Topic 176

Evaluate Privatization Programs 1

A comprehensive framework for evaluation presented here has four criteria, allowing for many aspects of the privatization policy to be understood and assessed.

1. **Freedom to Choose**

This criterion refers to the rights of families to choose schools for their children that are premised on their values, educational philosophies, religious teachings and political outlooks.
Advocates argue in favor of increasing opportunities for parents to choose their children's education for two reasons.

First, and clearly a priority, parents have a fundamental right to decide what is in the best interest of their children.
Parents are likely to have greater incentives to sustain and improve their children's welfare than would a government agent. Parents have a better idea of the educational needs of their children and of which learning styles they prefer.
Although some parents may be derelict in their obligations to their children, this is likely to be the exception rather than the norm. Where there are varied preferences among students, freedom of choice becomes especially important.

Topic 177

Evaluate Privatization Programs 2

A second motivation for greater freedom of choice is to make the education system more accountable. Where the responsibility is on parents to choose the type of education they desire for their children, they will be more concerned with the education offered.

Parents will hold schools accountable by their choice of school. If a school offers poor quality education, parents will not choose it, enrollment will decline, and some organizational change (e.g. closure or restructuring) will be necessary.

Topic 178
Evaluate Privatization Programs 3

Concerns:

Two possible concerns arise as a result of greater freedom of choice for parents. The most important is the possibility that some choices are socially, culturally, or politically unacceptable. For example, a family may choose to educate its children in a manner intolerant to others in society, or it may choose an education that is segregated from other groups (e.g. by race, religion or income).

The other concern is that, even for those who value freedom of choice, the costs of deciding which school to go to --- or to change to --- may be high.

Topic 179
Evaluate Privatization Programs 4

2. **Productive Efficiency**

This criterion refers to the maximization of educational results for any given resource constraint. It is important that any activity be conducted efficiently, because the resources used for it could be used for other activities.
Education privatization may be an important way to enhance efficiency: economists have given many reasons as to why private agents use resources in a more efficient manner than government agencies.
The strong argument for privatization rests mainly on productive efficiency. We note here that this argument refers to *internal* efficiency, i.e. how efficiently a chosen output is performed.

Topic 180
Evaluate Privatization Programs 5

Strictly speaking, it does not refer to *external* efficiency, i.e. whether or not the most valuable outputs are produced.
Educational planners, of course, must direct both types of efficiency. This stimulus to internal efficiency is expected to come from three sources:

(a) greater competition
(b) superior ownership and managerial structures within the enterprises
(c) enhanced accountability / incentive systems

Lesson No. 38

EVALUATION OF PRIVATIZATION PROGRAMS-II AND ENVIRONMENTAL EDUCATION

Topic 181

Evaluate Privatization Programs 6

Although the evidence in favor of privatization in education seems consistent with that of other sectors, the beneficial effects of privatization are perhaps more modest in education.

3. Equity

This criterion refers to a universally accepted goal of schooling: the quest for fairness in access to educational opportunities, resources and outcomes by gender, social class, race, language origins and geographical location of students.

Equity can be assessed in terms of inputs --- do all students receive an appropriate amount of funding and resources from the state, commensurate with their needs? Do students with special needs get appropriate schooling?

Topic 182

Evaluate Privatization Programs 7

Equity can also be assessed in terms of outcomes --- do all students finish their schooling with sufficient skills and a fair opportunity to progress in life?

Those who challenge privatization argue that it will produce greater social inequities (although, to repeat what was said previously, this depends on how the reform is implemented).

4. Social Cohesion

Schools should promote the social good; this is the main reason why they are publicly funded. What constitutes the 'social good' will vary from one society to another.

Topic 183

Evaluate Privatization Programs 8

In a democracy, this social good is reflected in the provision of a common educational experience that will give students the start that they need to become full participants in the social, political and economic institutions of our society.

In general, the democratic purpose of schooling is usually interpreted as necessitating

common elements of schooling with regard to curriculum, values, goals, language and political orientation
There are two routes by which an education system can generate social goods.
One is by designing the system itself: social goods are created when collective action is undertaken, i.e. when all students are offered the same system of education.

Topic 184
Evaluate Privatization Programs 9

This is the idea of 'common schooling': social goods are created through communal activities.
The **second** way to produce social goods is through the instruction that students receive in school. If students are taught socialization skills and the importance of civic virtues, this may be an effective way to generate social cohesion.
Some schools may include courses such as civics, political science or religious education as part of the curriculum; other schools may encourage charitable acts on the parts of the students, or offer instruction on environmental issues.

Topic 185

What is Environmental Education? 1

Most simply, environmental education is education in, about, and for the environment.

Environmental education is an "approach, a philosophy, a tool, and a profession," built on the following three goals:

1. To foster clear awareness of, and concern about, economic, social, political, and ecological interdependence in urban and rural areas.
2. To provide every person with opportunities to acquire the knowledge, values, attitudes, commitment, and skills needed to protect and improve the environment.
3. To create new patterns of behavior of individuals, groups and society as a whole toward the environment.

Topic 186

What is Environmental Education? 2

Environmental education has a range of audiences ---- from youth to elderly, and from families to policy makers and takes place in a range of settings ---- from school and courthouses to museums and boardrooms.

Environmental education is said to be formal or informal where 'formal' refers to education that occurs in a traditional school setting and 'informal' refers to education in broader public settings such as zoos, or community centers and through media outlets such as the Internet or television.

Environmental education also uses a range of strategies and teaching techniques, which can be used separately but ideally build one upon the other.

Education researchers Scott and Gough (2003) describe this continuum as including:

- **Information activities** which aim to increase awareness and understanding and are defined as "informal" education.
- **Communication activities** delivered in both formal and informal settings, which aim to establish a dialogue between audiences and environmental organizations or agencies for the mutual sharing of experiences, priorities, and planning.

Topic 187

What is Environmental Education? 3

- Education activities also delivered in both formal and informal settings, which aim to promote knowledge, understanding, an attitude of concern, and the motivation and capacity to work with others in achieving goals.
- Capacity building activities delivered primarily in informal settings, which aim to increase the capacity of civil society to support and work for environmental preservation.
- In practice, environmental education is intended to exemplify sound education principles based on sound pedagogy and sound science.
- It is hands-on, contextualized, and interdisciplinary, linking natural and social sciences, the arts, and mathematics, among other subjects, to address complex and multifaceted environmental issues.

Topic 188

Vision of Environmental Education

- Environmental education (EE) aims to create an environmentally literate citizenry, poised and motivated to take action on pressing environmental issues ----- from climate change to habitat conservation and from endangered species to water scarcity.
- Environmental education is about engaging students, community members, policy makers, the young and the old. It is about empowerment, skills development, and providing opportunities for action.

- As its best, environmental education represents hope and change. It is a strategy by which people can make proactive, informed decisions that honor ecological, economic, and social integrity ----- the foundations of sustainability.
- With its emphasis on instilling these values to guide our individual and communal actions, environmental education allows everyone to work toward a better quality of life.

Topic 189

Climate Change 1

How our changing climate affects children?

On any given day, more than a billion children are in primary or secondary school.However, many fail to complete their education, deterred by poor school quality and persistent challenges caused by deepening poverty, gender inequities, location, disabilities, chronic environmental degradation and climate related hazards.

Recent scientific findings indicate that a changing climate has a significant impact on our planet. In 2007, the Intergovernmental Panel on Climate Change (IPCC) issued its Fourth Assessment Report, so far, the most convincing assessment on the science and implications of climate change.

This report concluded that only immediate and sustained action will stop climate change from causing irreversible and potentially catastrophic damage to our environment.

The IPCC noted that climate change will manifest itself in various ways, including:

a. Rising temperatures, droughts and desertification

b. Heavy precipitation, flooding and rising sea levels

c. Extreme weather events such as cyclones, floods and droughts

Topic 190

Climate Change 2

Evidence suggests that developing countries, already struggling with social, economic and environmental issues, will suffer most from greater weather extremes and the increasing incidence of droughts and floods.

These areas include the Arctic region, Asia (major deltas, Bangladesh, China, India, Pakistan) and the Pacific, the Caribbean, Central Asia, Gulf of Mexico, Latin America (especially the Andean region and Amazonia), the Middle East and North Africa, the Sahel Zone and Southern Africa.

Climate change threatens the broader sustainable development agenda to reduce poverty and child mortality, ensure universal primary education for all children and enhance gender equality.

It jeopardizes efforts to meet the Millennium Development Goals (MDGs), especially those related to child welfare.

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Lesson No. 39

IMPLEMENTING ENVIRONMENTAL EDUCATION AND EE IN ENVIRONMENT FRIENDLY SCHOOLS

Topic 191

Existing Frameworks 1

Several existing frameworks suggest parameters for environmental education and sustainable development.

The Convention on the Rights of the Child outlines the necessity of a safe and healthy environment for children to thrive. Every child should enjoy a standard of living that promotes his or her physical, mental, spiritual, moral and social development.

Education must equip children with the necessary skills to participate in a free society and enable them to realize their potential. It is important to note the diversity in children's backgrounds and capacities to cope with climate change.

The UNESCO's Convention against discrimination in education (1960) acknowledges the crucial role of education in ensuring equality of opportunity for all children. In the last two decades, Climate Change and Environmental Education have become a major tool for protecting the environment and ensuring sustainable development.

The Rio Declaration on Environment and Development of 1992 confirmed the indispensability of children in achieving sustainable development.

Topic 192

Existing Frameworks 2

The United Nations Framework Convention on Climate Change (Article 6) and the Kyoto Protocol (Article 10) both encourage governments to educate, empower and engage all stakeholders and major groups on climate change policies.

There is currently no strong global institutional framework to address children's unique vulnerabilities to climate change.

National Adaptation Programs of Action and other plans, for example, rarely address the specific needs, knowledge and skills that educated children can offer in mitigating and adapting to climate change and other disaster risks.

Incorporating key concepts such as human rights, child rights, poverty reduction, disaster risk reduction, climate change, and protection of indigenous peoples, Environmental Education (EE) teaches children to think critically about sustainability and their society. The challenge is to integrate EE concepts into all aspects of quality education by considering three domains: the environment, economics and society.

Students will need basic knowledge from the natural sciences, social sciences and humanities to understand the principles of sustainable development. Reorienting the existing curriculum of environment-friendly schools towards EE is the next innovative and relevant step towards enhanced quality education.

Topic 193

Implementing EE 1

To respond to the needs of children most at-risk and marginalized by climate change, quality education aims to make all girls and boys more resilient to the impacts of climate change.

Quality education is a key component of adaptive capacity, the knowledge and skills needed to adapt lives and livelihoods to the ecological, social and economic realities of a changing environment.

The Environment-friendly schools' approach is most effective when it starts before school, continues throughout the child's life cycle and leads to lifelong learning in adulthood.

Topic 194

Implementing EE 2

For education to be trans-formative, it must be based on:

a. Active, inclusive and participatory learning and teaching processes

b. Supportive and qualified teachers

- Safe, supportive learning environments

c. Inherent links to local communities and local issues

While children are among the most vulnerable to climate change, they need not be considered passive or helpless victims.

Through education, projects and action, children can contribute to every aspect of climate change policy making, mitigation and adaptation.

Topic 195

Implementing EE 3

When empowered and educated on climate change by environment-friendly schools, children can reduce the vulnerability of themselves and their communities to risk and contribute to sustainable development.

According to the research, educating girls and women is one of the best ways of strengthening community adaptation to climate change. Children can be extraordinarily adaptable in the face of significant challenges and their knowledge and capacities are invaluable to the development of realistic and practicable adaptation plans.

Topic 196

EE in Practice

As weather patterns manifest themselves in different ways, schools will differ in their approaches to climate change and disaster risk reduction.

Communities in sub-Saharan Africa, for example, respond to lack of water and frequent droughts, while Bangladeshi and Pakistani communities cope primarily with floods and contaminated water.

Regardless of how climate change is manifested, mitigation and adaptation are two complementary strategies that reduce risk and strengthen affected communities.

'Mitigation' covers all actions to decrease greenhouse gas emissions. 'Adaptation' changes natural and human systems to minimize the risks faced by vulnerable populations. Based on context, both mitigation and adaptation should be incorporated within environment-friendly schools.

Topic 197

EE in Environment-Friendly Schools 1

Many environment-friendly schools around the world have incorporated EE into their design, operation and curriculum.

The most common strategies are:

Incorporating EE into the curriculum, with adaptations for the local context. Lessons on key climate change topics such as global warming, the greenhouse effect and weather-related disasters are not enough.

At-risk communities must develop local adaptation policies and practices, addressing disaster risk reduction, emergency preparedness and locally relevant sustainable development options.

A nationally significant, child-focused, participatory approach works best. In South Africa, for example, stakeholders including the National Environmental Education Program and the weather service designed curricular material for climate change.

The tools included resource guides, training workshops, a competition among schools and a national media campaign.

Topic 198

EE in Environment-Friendly Schools 2

Teacher training:

A large number of teacher training programs and modules now cover climate change, environmental education and sustainable development.

These modules and programs share some basic goals: increasing teachers' understanding of the environment, climate and sustainability issues; helping them develop necessary skills and providing them with pedagogical support.

Truly innovative teacher training approaches for environment-friendly schools must prioritize two concepts:

1. Coordinated training of teachers to design methodologies rooted in children's rights
2. Intensive and organized participation of the community.
3. These programs should also increase teachers' understanding of the social aspects of climate change, including the roles of gender, social status and other social differentiators.

Attempts to incorporate EE into teacher training may face resistance. Policymakers may worry that EE will distract teachers, already burdened with heavy schedules, from their principal duties. However, once teachers are given enough responsibility, they quickly appreciate the social relevance of this training and are encouraged by increased parent and student support.

Topic 199

EE in Environment-Friendly Schools 3

Strategies to raise awareness: Media campaigns, messaging through youth radio programs, theatre and music, conferences, environment day celebrations, and other events and programs within and outside of school can complement formal curricula and significantly strengthen learning.

These strategies require collaboration with non-governmental organizations and the private sector. In Albania, for example, the Child-Led Environmental Education Initiative created a partnership with local companies that introduced schools to recycling, curricular reform, teacher training and a community-wide media campaign. As a result, nearly half of the children in selected schools adopted at least one environmentally-friendly behavior at home.

Topic 200

EE in Environment-Friendly Schools 4

Non-formal education: The environment-friendly school approach is a comprehensive concept that encompasses the child's life cycle (ages 0–18). Ideally, non-formal and formal education systems are complementary, working as one holistic system to provide quality education for all learners.

After-school activities provide opportunities for children to interact with their environment through field trips, research and action projects, and to practically apply what they have learned.

Education focused on green jobs and disaster risk reduction helps young people develop their creativity, engage in productive work and contribute to the emerging green economy.

Topic 201

EE in Environment-Friendly Schools 5

Guaranteeing a protective, environment-friendly physical environment: EE projects are likely to start in school buildings and on school grounds.

Natural disasters and climatic events such as earthquakes, storms, drought or floods require schools to consider a range of safety and disaster preparedness measures.

School environments can also promote child-friendliness by visually incorporating environmental education messages.

For example, Children took the lead in the 2004 post tsunami reconstruction and repair of the schools in the Trincomalee district of northeast Sri Lanka.

Some of their murals included messages on how to protect the environment. But most importantly, the project ensured that protection and safety were primary goals.

With the direct participation of 800 children, this initiative showcased the key principles of environment-friendly schools: child -centeredness, protection, inclusiveness and child participation.

Topic 202

EE in Environment-Friendly Schools 6

Water, sanitation and hygiene in schools: One of the most devastating effects of climate change, especially in arid, drought-prone areas, is the threat to water security.

As drought and desertification become more serious, water and sanitation emerge as staple issues within environment-friendly schools.

The most successful examples combine physical improvements with life skills-based hygiene education, and follow a gender-sensitive approach.

Qualitative evidence in Malawi, for example, shows that when girls have access to soap and private sanitation facilities at school, attendance rates increase and dropout rates reduce.

Topic 203

EE in Environment-Friendly Schools 7

Development of green schools: Changes in the school setting demonstrate the key concepts of quality EE. The 'green schools' design approach describes environmentally sustainable schools.

Well-designed green schools provide ample natural light, good indoor air quality and ventilation. They are water and energy efficient and use nontoxic, locally available construction materials and renewable energy.

The Green School in Bali, Indonesia is built almost exclusively with bamboo, a locally renewable resource.

The school's mission is to develop responsible green habits in its learners in an environment that models the principle of sustainability being taught.

Topic 204

EE in Environment-Friendly Schools 8

Carrying out EE projects in the community: The Child Friendly School Manual identifies the fundamental link between schools and communities and the mutual benefit of community engaged EE.

In southern Nepal, disaster risk management projects within schools and communities were successful because they maintained a gender-sensitive focus. One project promoted girls' leadership in school-based disaster risk reduction. The real-life efficacy of the approach was tested when these communities suffered floods.

While no quantitative studies are available, strong anecdotal evidence found that community response in girl-led environment-friendly school project sites was more proactive and organized, limiting the loss of lives and assets.

Lesson No. 40

METHODS FOR EE I-IV

Topic 205

Method of EE 1

We will now turn our attention to methods for environmental education. If, you are going to teach environmental education, you have to be aware of how are you going to do it. Methods for investigating climate change and sustainability with children should include a range of visual techniques at which children can excel.

The environment is all about observation, visual skills. Visual skills can only be learned if you practice using these skills. A range of visual techniques should be taught and practiced with children so that they can excel at those skills. These include mapping, modeling, community touring with the purpose, observational techniques that require careful record-keeping at home in the community and at the school.

1: Mapping

Some of these visual techniques are **mapping**. Maps are a good way to learn and maps are colorful. Using maps making sure children are aware and accustom of what different maps mean, what different maps show is important.

2: Modeling

Modeling is making models. You can even practice earthquakes through models. You just have to be creative there are a lot of ways to doing this.

3: Community touring

Community touring with a purpose, you don't just aimlessly walk around. You take a tour with a purpose, to find out where are the garbage dumps in my locality, Why are these garbage dumps overflowing, how many more garbage dump should be placed, what can we do. You take a tour, it's a visual activity, a purpose observational technique that demand record-keeping.

4: Record-keeping

The record-keeping is at home at school and in the community, it needs to filter out of the school. Taking a tour of the school grounds is not going to help. You need to get out of the school, you need to take a local tour of the area around and see, so providing young people with visual activities and opportunities to see and observe and get first-hand information for themselves is essential.

The most common approaches used for children in the exploration of the environment are mapping is one of the most important methods to help children understand how to reconstruct the physical environment. We talk of Hills ,Plains, valleys, rivers ,ponds, pools and all that .How do we transfer all that on paper ,how do we make a map ,why do we need to make a map .You need to know when disaster hits you, there is this pool there is this deep pit here that can be used to store water or that's why young people need to be equipped with mapping skills .They can then use those skills in order to find solutions.

Even young children can create revealing maps with some support. In terms of climate change, children can develop maps that identify dangerous and safe locations in their community, best route for safe evacuation, and environmental hazards such as garbage, quicksand and wells.

The mapping skills not only equipped children with creativity but they also help children associate, these are safe places these are dangerous places, if a natural calamity strikes, this is a safe route don't go from that route. They need to create those maps in advance distribute them to the appropriate and right people, tell them when this happens if this happens this is what you need to do.

It's a skill again that young people can incorporate in their learning. Maps can also show locations of play areas and highlight different types of play. Children like to play the need spaces; they need to release their energy and no better place than the ground. Why should children release the energies in the classroom because then they become discipline problem. Identify those areas where in your locality in your community in your immediate surroundings our open spaces safe where children can actually play and release their excess energy.

Topic 206

Method of EE 2

Community tours

The second method of EE is community tours. Its example is here, if you are ever take students out, even on the school ground and you ask them to observe the leaves, the insects, the worms, the birds and so on, You do it right after rains, what do children see? Children should see lot of earthworms that they did not see on the first tour that they took. Question them, why are these earthworms out now because earthworms eat earth they live in the earth. The earth is now moist and wet they cannot eat wet earth and so they tend to come out.

Once the monsoon is over, all the rain is over, the ground dries up, the earthworms will also disappear. This is learning and actual observation. It's visual, engaged and exhilarating children enjoy it.This is just on the school grounds but imagine if you took a tour of the community ,to understand features of the community ,where are the garbage dumped why is this place the way it is and how you can fix it .

Only when you take a tour will you know the good and bad things. The good we need to keep. Keep means we need to sustain the good if we don't look after it eventually it will become bad things. During these tours' children point out factors they think are important and the teacher ask questions to better understand the issue. A tour is not an aimless walking. You stop every so often you ask questions if children haven't noticed something.

You put questions to them make sure they see what they should be seeing .If a child has suddenly stopped you stop do you wonder you ask the child what have you seen why have you stopped because remember you have two eyes children have two eyes two .You may have missed something the child may not have missed it. You also begin to learn from the child what children learn is.

Learning and teaching is two-way, it is not the teacher teaching and asking everything .The child can stop and ask questions about something ,Whether it is right ,wrong, good, bad correct ,incorrect is not important .The fact that the child has stopped to ask a question shows the child is thinking.

That's what we want young children to be doing, using their own heads thinking because only when you think only when you have questions are you truly learning.Taking photos and videos during the tours helps with review and communication with other groups. Children can be creative photographers and film maker. Today with the mobile phones and every child has one okay. You can take photographs; you can come back talk about it you could. See it as a group and have a good healthy discussion. These gadgets should be used fruitfully, to help our students learn about the environment and then debate it and come up with the solutions that we need.

Topic 207

Methods for EE 3

C: Designing with templates

The third method of approach is designing with templates**.** what is the template? A template is a blank form that needs to be filled. It. has areas that are designated with subtitles and you need to fill it.Instead of starting from scratch because young students may have difficulty working with a blank sheet of paper so if you give them a template with things drawn on it that they need to fill in they will begin to work on the template.

That is a good way to begin students working on designing things. A blank sheet of paper may not be as fruitful, creating physical change through participatory design is a great way for communities to respect the input of children. Participate redesign mean a child is not working alone.
The child works in a small group, four or five people together work on a template. They negotiate and might finally fill in the empty boxes on the template. Cardboard templates are arranged and rearranged on a base map as a method of collective design. You could not do it once it can be done again.

They do it with pencil, you can erase it, if they actually do it with cardboard pieces you can actually move the cardboard pieces to where you think these should appropriately fit.
There are different ways in which you could use the template it's left to the student. If the students decide whether they want to use a pencil and an eraser whether they want to use cardboard pieces

whether they want to use those small post-it notes now that you get today in I don't know lots of colors it will be beneficial.

Give the student the option of how to fill the template. Telling the student how to do it is not creative at all. The projects can range from building new school toilets, separate for girls and boys to re-configuring the school yard, all children have equal access and opportunities for play .You can begin with a template for the school if we want to have Toilets built for the boys and girls separate well where should they go what should they look like how many should there be and all that the children can design on a template. Another thing child can do is if there is ground space if there is a school yard big or small depend, what is the best use of that school yard.

Now if you have a school that runs from class 1 through 10 has 20 students in a class that's 200 students. Imagine 200 students out during recess at the same time no one's going to be able to play or run around especially if the ground space is small so what do you do. You stagger the reset you could bring in three or four classes at a time and give them half an hour each stagger the break time. Children will have opportunity just to run around play expand their energy out on the grounds rather than in the classroom**.**

Measuring and recording environmental features:

Things like rain, the weather, sunny days, cloudy days, hazy days with the short training and techniques of measuring counting and observing. Children can collect reliable data for use in various environmental projects. Children are pretty good at it ask them to design a rain gauge.

They can do it they might do a fantastic job, let them design their own rain gauge see this monsoon how much rain is collected tell them to make for a month a weather chart which days were sunny which were cloudy what happened where was haze where was mist and all that let them collect the data young children are good data collected even if you ask them to record temperatures you know at noon or when they're out at recess every day record the temperature at recess they will do a wonderful job so give the students the skills that they will need to conduct these kinds of activities on their own.

Topic 208

Method of EE 4

The next method or approach is **item rating and card sorting.** Boys and girls can make clear judgments about the quality of the environment by rating the features that are important to them individually or as a group, so allowing students to get out on the grounds in the field in the community and society outside to collect information about the quality.

The quality of garbage disposal, garbage collection, water drainage, Sanitation all that they can find. These kids will be happier to get this data collect the data for you. You can put the students together and tell them about good and bad things. Let the students tell you what to do in each case. Many techniques can be used from card sorting using markers or stickers to other conventional rating methodologies.

Focus groups with children

This is something teachers shy from because we teachers believe or understand to believe that students cannot talk about issues focus group is simply five or six no more than 8 or 10 students maximum. Bring together to discuss a concern, it's a focus group that talks only about this issue for 30 minutes 40 minutes. Getting a focus group together that your students will be focused you will be surprised the students can be more focused than many adults are in focus group.

A common way of working with children is to engage them in discussion about issues at stake. In this case climate change, disaster risk, environment sustainability. These are issues connected with the environment connected with the future of this child sitting in our classrooms. They want solutions and to help find answers what better way than to get groups of children together and let them talk. Don't you as the teacher take over the discussion. You have to make sure that the students are discussing talking focus on task concentrating on the issue.

The school environment provides numerous opportunities to engage children in focus groups. It is often more effective to meet separately with different groups isolating girls' boys' young children and teens.

Lesson No. 41

CHILDREN VOICE I-II & TEACHER EDUCATION I-III

Topic 209

Children Voice 1

We've been talking about environmental change and with a focus on climate so with climate change. It is important to incorporate young people into discussions about the impact of climate change. What happens in **environment friendly schools,** one of the purposes and focus of environment friendly schools is to include the voice of young children into the discussions based on these issues. One key factor to consider is, these issues will affect these young people in the long run. They are not going to affect you and me as much. Incorporating these young people into these kinds of discussions is critical.

Especially children from marginalized communities, these are communities that are out of the bounds of the urban and rural. The distant locations that are difficult to reach those are the marginalized communities that need to be brought into the mainstream. Throughout the world children are becoming more involved in key environmental issues within the communities and effectively expressing their finding. This is something that we've learned from young children participating in the discussion on environmental change .When young children focus on something they want the solution, if solution A doesn't work, they will look at other alternatives that is why it is important to involve young people into these kinds of discussions.

Research from El Salvador and the Philippines, for example, have found the children engaged in child-led Disaster Risk Reduction and adaptation activities at various levels. You see examples here from two countries where it was Jai let the children actually led the measures to reduce the risk from disaster factors.

It worked when it worked other people from the society and the community picked it up and took it outside of the community of those children alone. Children are key it is important that

we understand that young people have a role to play. Young people can contribute and do have thinking and understanding skills that can benefit others in the long run.

At the local level, children-initiated change through specific activities to prevent landslides, removing large rocks hanging above school buildings and planting stabilizing shrubbery on steep hills. One area where the children worked on what's preventing landslides, their schools were in areas where landslides were common. How do you prevent landslides, the first thing they did was they removed the large rocks because when large rocks fall, they create more damage and provide opportunities for greater hurt.

Once the large rocks were removed the next thing that they did was, planting stabilizing shrubbery, not just any old plants trees and shrubs, but shrubbery that would hold the rock and the soil in place so that landslides would be reduced. This calls for a lot of research for beyond what classrooms and teachers can provide for. That is why young people need to be involved because they are able to and willing to put in the extra time and effort that would be needed to find appropriate solutions.

Children also raised awareness and initiated change in adult's behavior identifying high res structures and increasing awareness about communal waste disposal. Taking these measures outside of the school community these children focused on adult behavior. They talked to adults and incorporated changes within the behavior of the adults in the community. They identified structures that were at risk why they were at risk and how do you remove waste from the community, garbage disposal was critical. The children initiated this and changed the mindset and thinking of the adult .

Children propose significant changes that surpassed community boundaries, lobbied for effective law enforcement on legal logging and riverbed mining, and requested structural changes to schools and roads. Children facilitated, initiated and moved beyond the school boundaries. They lobbied for effective laws because laws are important. When laws are important and the correct laws are in place and people follow the laws, the good things will automatically follow.

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Topic 210

Children voice 2

Children can play their role in more than one way. Children communicate the views about climate change and disaster risk management through informal channels, such as conversation with friends' parents and teacher and through formal channels such as school-based communities and community-based organization. Both opportunities are there, it begins with the informal with friends' parents' teachers' people that they know people that they are familiar with. Then it goes beyond the informal into the formal such as school-based communities and community-based organizations. which means other NGO's that are also working for the benefit of the local community but outside the school arena.

The children play a critical role in leading those NGO's into areas where they think information and action are both necessary. Information and communication technology play an important role in facilitating exchanges of experiences and views among children in different countries and regions. Now when something good happens in one area it should not be limited to that area. with the internet and video conferencing and Skype and those kinds of facilities today it is important to interact and exchange ideas with children and individuals from around the world.

What works in one area can be modified adapted change to suit the local conditions and tried out somewhere else. You learn from one another experiences. you don't have to reinvent the wheel every time. You want to do something new and something different. You want to start out with the basis of what somebody else has tried and then use that for your advantage and benefit. Formal communication channels are especially powerful components of environment friendly school.

In El Salvador and the Philippines children used music, street theatre, video photographs, discussion forums, street protests and murals to communicate the views on disaster risk and preparation. Lot of different media can be used in order to communicate what young people feel and try to get their message across, formal settings and informal settings. The more options you have the chances of reaching a wider community is guaranteed. When you have limited communication that you're focused on, you will not get across to the larger population. Children's school-based research and

contribution to climate change mitigation and adaptation should reach beyond local action and communication influencing policies and programs at national and international levels. Students work begin in the classroom but only classroom time is not enough to do something like this.

Therefore, children go beyond the classroom, work at home, outside on their own time with friends on weekends after school hours. Whatever work the children do needs to be shared, it's not enough to share it only with the school population. It needs to be shared with the local community and then beyond with the global community.

Technology provides the opportunities for anyone to do just that with technology. Today there is no excuse for saying I could not connect. We want young people to work and do right, we need to make sure that they can exchange their experiences and ideas with other people. When young people realize that their work is good, it is transformed into other areas of the world. They tend to put in more effort. They tend to put in more time because they begin to see that their work is fruitful has benefits and reaches beyond just their local community.

Topic 211

Teacher Education 1

Effective teacher preparation in environmental education requires pre-service teacher training at the minimum. Before a teacher is permitted to come into a classroom and teach in the pre-service program in the teacher education program environmental education should be a key component and teachers should be told two to three things.

1: Why environmental education is important
2: Why should every teacher focus no matter
3: What the teacher teaches needs to focus on environmental education
4: How the teacher can build in EE into what the teacher is trying to teach
5: How do you allow and permit students to express
6: What they think are the problems and the percent potential solutions to those problems.

However, it is important to note that pre-service training alone is insufficient for quality life skill-based education. The problems are not going to remain the same problems change and therefore with pre-service there also needs to be an in-service component or a refresher component that continues beyond what the teacher has learned before starting his or her career.

Ideally, teacher should access continuing education and professional development through in-service training and teacher resource centers on climate change the environment and life skills-based education. It's not enough just because you've done something in the pre-service program to come now you've taught for a year or two years things have changed issues have so you need to refresh yourself and that comes from in-service training and in-service preparation and in-service teacher education.

Teachers must be informed that through their service years they will need once every year or once every two years they will need to take in some refresher courses that will help them get up-to-date with environmental issues and concerns. Lack of teacher knowledge and understanding remains the primary barrier to the effective implementation of child centered sustainable development curricula in the schools. Two factors are responsible

1: lack of knowledge
2: understanding

Either teachers don't know what environmental education is, what is the scope the depth the sequence of activities under environmental education, they don't understand its simply knowing something is not good enough.
You need to understand, what you know and then you will be able to transfer it to the next generation. Teachers must be in a need to learn, what environmental education is? we can't have brand-new teachers going into schools. It is up to the school systems to make sure that through the year at different times that provide opportunities for in-service teachers to come in and get the refresher training in environmental education. They can deliver the right things at the right time in their classrooms.

Stronger interdisciplinary links to key stakeholders such as researcher, teachers, NGOs and public offices can eliminate this obstacle. The teacher needs to make connections with people in the community .when the teacher makes connections with people in the community those individuals can come into the classroom and fill in where the teacher thinks is not able to fill in those gaps .Making Association layers awning with individuals in the community is the critical factor in enabling teachers to deliver the right environmental education to all our young children in our classrooms.

Topic 212

Teacher Education 2

Teacher education on climate change and environmental and social issues must go beyond tools and messages. It should also include worldviews on the environment. Action based research approaches for environmental education have also been proven effective. Finally, environment education must be locally relevant and culturally appropriate, and should include do reference to equity issues. Action based research that is done on the ground not in a classroom not in a lab. Action based research takes young people into the real world makes them experience the reality. They can actually do the right kind of findings. Environmental education must be locally relevant we have to address our issues first if we don't address our issues first, we will not be able to go out and address the global issues.

You cannot start from the outside and come in be you need to start from the inside and step out so looking at local issues that are relevant and pressing today in our society particularly issues of equity. Equity here does not necessarily mean male and female, equity is beyond gender, are all people getting the same opportunities and chances, are we intentionally marginalizing some people in the community and favoring others.

Where computers and web-based instruction accessible to schools, technology contributes to teacher training. Distance learning is a common approach. This is what you are experiencing right now. You are part of a distance learning program. You can't come, you are in a remote area or you

are not allowed especially if you're a female to go long distances or to live in hostels. You take advantage of opportunities like this right now that you are doing. Computers and web-based instruction are becoming common, if Institute have these facilities, they should open up to distance education to distance learning, to provide opportunities for young people to interact when normally they would not be able to. There are lots of technological means that are available today.

It is not just this that you are experiencing. There are lots of other means available you can do it in small and large groups. You can do it in your own area, you can do it across the city ,across the country, across the entire globe.

Coupled with teacher training via computer technologies, distance learning allows teachers to improve their skills and knowledge without being pulled from their classroom. When teachers are also involved in distance learning, you don't need to give them leave, they don't need to be away, you don't need to find a substitute teacher for the duration of the program of course.

Distance learning allows you to work at your place, at your time. Not only the student but also the teacher benefits from distance learning. Our teacher should take advantage of this today. There are available lots of courses around the world that are free if you are interested, you'll find those courses and you will develop your own information knowledge content and skills areas.

Topic 213

Teacher Education 3

How does distance-learning facilitate and help teachers and schools

Teachers gain the expertise but schools do not lose the teaching hours, resulting in economic benefits. The teacher gets better prepared through distance learning opportunities and the school benefit because now the teacher knows more, the teacher has better skills the teacher can convey to the students and work with the students in a much better manner.

The new technology available to teachers and students with respect to environmental education allows schools in the developing world to link directly with those in industrialized countries. Today on the social media, you have lots of schools from around the world asking if there are schools interested in joining hands with them in other parts of the world. You should be aware you should find those opportunities that are interested in making a link with you and develop that link and let the students in these two different areas interact with one another.

The teachers in these two different areas should also interact with one another, exchange experiences, exchange ideas, share suggestions, recommendations, opinions. There is so much to learn sitting in your own classroom from elsewhere around the world. Technology provides this opportunity we have to learn what to do with it.

You don't need fancy equipment, basically need a laptop with Skype on it and you're set to go. You need bandwidth and connectivity but no expensive equipment is needed and laptops are not that expensive today if you have one in the classroom. Everyone in the classroom can benefit learn how to use and in our next module we will be looking at the impact of technology.

There we will be talking about how you can build classrooms with these kinds of gadgets and how you can use a one gadget classroom to benefit all the students in the classroom. The discussions between children and schools and opposite sides of the climate change mitigation and adaptation debate are likely to produce amazing ideas and contribute significantly to
education on these issues.

People sitting in two different parts of the world, one at this end and one at the other, can see the same issue in very different perspectives. Therefore, it is important to interact with people from elsewhere because then you get a fresh perspective to the same issue. Things that we may not think of as important people on the other side of the globe may think it is important and it may open our eyes and other understanding to the breadth and depth of the issue. Therefore,. allowing children to do it on their own, the teacher in this case is only a facilitator.

If, the teacher is doing most of the talking in this exchange then the children are not learning, if we want children to learn we have to allow them to do most of the talking. Which means you will have to prepare your children with the right kind of questions .just wean them through see what they intend to say how good it is or should they say it should they not say it you can have a preliminary pilot run in your classroom before actually going on line with somebody in another part of the world.

The global learning and observations to benefit the environment initiative is an example of this approach. Look on the internet find this global learning and observation to benefit the environment. How you as the teacher how your classroom can join this discussion this group and learn and benefit from the exposure that you might get. It is an excellent opportunity for young people. The program instills a sense of environmental stewardship and students and advances a broader understanding of global environmental science.

Lesson No. 42

EE IN THE SCHOOL AREA I-VII

Topic 214

EE in the School Area 1

Now focus on environmental education in the school area. The school ground should be the place where individuals young people can begin to work on environmental issues. School buildings and grounds should serve as laboratories to increase the physical environment child friendliness while promoting key environment-friendly school principals such as inclusion and participation. What this means is that if children are allowed to use the school grounds to learn everybody becomes part of environmental education no student is left.

All students take part and are involved and do different things in their particular areas. Every child is participating and you begin to experiment and try out things on a small perspective in areas. You are familiar with and the school area, all students are familiar with, you start it simply by garbage that school and classrooms generate. There is paper, there is glass there is all sorts of things why should we put all this garbage in one bin, can't we separate the garbage? Begin with the school area and from there lead it out into your local community.

School-based environmental projects that encourage full child participation are a good starting point. When you start something on the school ground let the child participate completely. The child should be allowed to experiment to try out different things. What works, what does not work, how you can share it with the wider community. Ensuring democratic decision-making is not easy. In most environment-friendly schools may propose direct involvement of all students or a system of voting by democratically elected student representative. This depends on the size of the school, if the school is small getting every student involved should be easy but if the school is large you can't have all children participating at the same time.

You can do it for these two months this group of students for the next two months, another group of students for the next month. You can change the student groups that work so that over the span

of a year all students have contributed. Something to the school development plan in terms of environmental education how you do it depends on the school. Obviously, the school head, the principal, the teachers know what the student population is what will work for the school, how they can divide students into the different groups, for how long will the groups be allowed to work that is left to the school.

Topic 215

EE in the School Area 2

A truly democratic decision-making process needs to be sensitive to the views and participation of excluded minority groups within the school. In any classroom, you will always have a small group of students that tend to be in the minority tend to be for whatever reason. you need to make sure that group also becomes part of what the class is trying to do, in terms of learning and building on environmental education. You truly want a democratic process, everyone needs to be involved and not just in the talking phase, but also in the action phase.

The teacher has responsibility to make sure that all students in your care and under your tutelage come in and are actively involved at all stages of learning about the environment. In most cases the participation of adult stakeholders, such as parents and teachers, should be sought. But their voice should not override children's preferences. Again involves the parents there that are educated and involved in community service and doing things with the teacher, try to get some parents involved those adults should come supervise, facilitate, monitor, but not take over the student discussion.

You need to have people who understand environmental education, who understand the rights of students, who understand the students should be given opportunities to speak and display and talk about what they think is important. Share what is on their mind and what their concerns are. You will be surprised when you allow students to share. You will be absolutely surprised as to certain things that you didn't think of students have thought of and that is why providing the opportunity as the facilitator it is important to let the student speak their mind.

Involve parents, stakeholders, involves people from environmental agencies, like the garbage disposal people, the security squad or the hospital people because all these people are involved in creating the environment within your local community. Call them, let them discuss with students what students have to think, say, contribute to a more fruitful discussion.

Remembering, the adult is only the facilitator not the contributor to the discussion. School buildings and grounds can be made more friendly safe and sustainable through various concrete actions ask students what can they do to make the school building and grounds more safe and secure for themselves. You will be amazed at the kind of ideas, they can come up with talk about costing what is the cost, what low cost, no cost options are available.

Students will come up with ideas that don't necessarily cost a million rupees to work out. Children think, understand, they don't have money so they think within their means. Involving students in such issues and products, discussions is absolutely essential, what you won't think of our students can think of and do a fantastic job in trying to tell you how something can be done at a no cost.

Common activities include planting trees on school grounds, introducing solar water pump project, harvesting rainwater, installing wind pumps, improving waste management projects and upgrading school play playground, lots of opportunities where students can come in, contribute planting trees is not a difficult thing to do and trees eventually over time will provide shade.

You don't want decoration trees you want trees that over time down the line will provide shade, introducing solar water pump projects especially in areas where in our case electricity is an issue. Solar energy or wind power or harvesting rainwater all those kinds of things can be worked out a lot of rainwater goes normally to waste how can you harvest the rainwater, how can you keep and secure and store the rainwater and use it over time waste management is another issue you need to see what can you do with all the waste that schools generate.

Topic 216

EE in the School Area 3

Some projects will require children s, participation not only during the construction and installation of the system, but also in long-term maintained and repair. The teacher has responsibility to make sure that all students in your care and under your tutelage come in and are actively involved at all stages of learning about the environment.

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Rainwater harvesting projects in school in Myanmar are a good example. Prior to the projects, the school rarely used rainwater for drinking, instead transporting water from long distance. Now the rainwater is collected in tanks from corrugated galvanized roofs of the school buildings.

The system requires maintenance, cleaning and repairing, completed collaboratively with the student, parents and local NGO's. The system provides children the opportunity to participate equally with adult stakeholders.

Topic 217

EE in the School Area 4

Another area that schools should focus on our school gardens. Now when we talk of school gardens we are not talking of flowers, color. School gardens in terms of the kitchen garden, if the school that have ground space can develop school gardens where they grow vegetable. It does wonder for the nutrition of the student and the family.

Today, when we do mass farming, we talk of pesticides and contaminant. You can do all that wonderful stuff in school. You plant a kitchen garden in schools and the students look after it. When this happens in school students will also take this back home. If, they've got ground space, they will start making a kitchen garden and sometimes even if there is no ground space, quite a lot of vegetables can also be grown in pots. You see how something that begins in the school moves outside beyond the school into the local community.

The child family does a little pot kitchen garden another family sees it they ask questions, why are you doing it, what are you doing they begin and so you get good nutritional fresh vegetables on your table. Look for opportunities that will not only help the intellectual benefits of the child but will also help the child in other areas. Good healthy fresh vegetables are a great source of nutrition for young children and for their families.

Many schools have underutilized outdoor spaces that are suitable for going crop and plant. Gardens can also be created in an unused car tire. Be imaginative, you don't have parks, unused car tires old car tires create slice them in half, you have two rubber pots, put soil and seeds, you've got a nice

little kitchen garden ready in a tire. Be creative, find our students to be creative find out brainstorm what can you use as potting material. Lots of objects normally that we should be throwing away as garbage can be put to good use, when we think like this. Look for areas, where children can contribute how they can contribute and what benefits their families and the local communities can get. You see, it must begin with the school, it starts in the school, and then get filtrated outside.

In addition to the educational value of school gardens in the developing world, in very poor areas, gardens can provide much-needed nutrition for the children. Vegetables in the markets tend to be expensive, if you grow your own in-home grounds or in parts of wherever you have fresh vegetables which have lots of nutrition and can offer good health. It means you have a better next generation coming up and there's a better next generation this cycle continues.

Young people learn to be self-sufficient; you are not dependent on somebody else growing your food for you at least things like vegetables. You have enough area planting fruit trees is another thing that can be done you have to wait awhile fruit trees don't grow very fast. Over time you can also get good fruit which tends to be expensive today so with fruits and vegetables that you grow on the school grounds on your home grounds I think is a wonderful way that children can be put to use their skills.

Topic 218

EE in the School Area 5

In South Sudan here many children have only one meal a day, a local agricultural consultant help develop school gardens to supplement young children's diets and provide them with food alternatives. In many of our rural areas also normally you don't get three meals a day. You may get one and so how do you supplement, you don't get meals not because there is the stuff , you don't know what to do with it. The problem is the raw materials are not there.

When the raw materials are not there, that's what you need to focus on. School gardens, home gardens, kitchen gardens help develop this facility for young people and for their families. You can get two to three good proper meals a day, because you are growing your own food or part of the food supply that you need. You can't grow everything but there are some things that you could

certainly grow vegetables are a good example. We want young people to have a good nutritious meal or two a day let us teach them how to grow their own food and take care of their food Gardens. School gardens teach gardening and strengthen food security. They also impart the principles of ecology, the origins of food and respect for all living systems.

There is a lot of learning through environmental issues that children do. Informally, without having to read through textbooks and pass exams, Gardening skills, you learn ecology skills, principles of food farming, respect for all living things. All living things need food plants, animals, humans need food and nutritious food is what we need. Just food is not good enough otherwise we could survive on junk food which is not good for anybody we don't we need good nutritious food and when we grow our own, we know it is clean it is free of pesticides, it is free of contamination. Things you buy in the market today produce through mass farming techniques are not necessarily all safe and healthy.

The principles of child centered pedagogy, gardens link to the rest of the schools curricula, from literature to mathematics to science. Gardening is like a storytelling, you can develop stories around it mathematics because numbers how much soil, distance to put the plants, what is the yield how many tomatoes, what was the area that you put for garden.

You see how different areas of the curricula automatically get covered when children are exposed to and involved in informal learning that benefits not only their intellect but also other areas of their own personal development. Its examples are including calculating, drawing and building garden blocks which includes of course math and geometry.

The use of gardens to inspire reading and writing about nature, literature, creative writing, so lots of options once the garden is there you can have students do a lot of mathematical calculations. You could have students write stories develop a sequence activity. You can have students learn about science, what are the nutritional values, what is a tomato good for versus, what is the cucumber good for, what is the potato good for versus, why should we eat onions. You need it's up to the teacher to then make sure that the intellect of the child flourishes based on what the child is involved in through environmental education.

These activities also strengthen values such as cooperation and respect for nature and each other's. Students are working as a team in groups cooperation essential. These are lifelong skills that students will need in the real world. If, we don't cooperate today, we are not going to be able to survive because no individual is a one individual show, we need a group and we need to cooperate and work with the group. Through activities like this, we are teaching to the children are lifelong skills that they will need to be successful in their real world.

Topic 219

EE in the School Area 6

School gardens can also effectively involve the community in the school. Community members with expertise in agriculture, for example, can support children in their gardening activity. This is not just the children you can involve people from outside. There are lots of NGO's local government organizations with expertise in these areas. They can come in help the children, work with the children at least in the starting phase to get them started, give them tips, hints clues, on what to do what is good expertise, what is good practice, and then leave them alone.

If, the children have issued the community members can be called back. All the children could go to the offices of the community members and talk to them. Either way it develops a camaraderie it develops a relationship which is important if these young people are to survive in the real world. There is mounting evidence of the positive relationship between green schoolyards and student health. When your school yards are green instead of just brown mud.

Student health is better why because green plants release oxygen, when there is enough oxygen, for all the children in a particular school area then student health becomes better. With the intellect how student health gets also affected through the greening program in school, what you should look for what should ask is? Is my school green? do I work in a green school? can I make my school a green school? when teachers talk about it and the head gets involved and talk about it, the students automatically will be involved because green is the way to go today.

School cluster approach:

Linking geographically proximate schools brings well-documented benefits. The school cluster approach promotes more efficient use of resources. You have five schools in a particular area, you can make a cluster of these five schools work together. One school focuses on growing tomatoes and other school focuses on growing potatoes and other school focuses on growing ginger and garlic or whatever and you work together and then when the produce comes the schools share with one another. What do students learn, students learn lots of skills.

1: you cannot do everything on your own you need others to help you.

2: sharing is critical if I have so many tomatoes why should they go to waste.

See a lot of times, the amount of food we waste is absolutely criminal. we need to share the excess that we have. School cluster makes the efficient use of resources that individual schools may have in a certain area. Our cases we have lots of schools in a particular area, we don't have school at distances particularly in many of the urban area.

In some of the rural areas, we may be at a shortfall but then in the rural areas the independent schools have lots of ground space to grow their green vegetables, to make that school green. In most locations, environmental projects and climate education can take many forms, but single schools can really implement more than a few of these at a time. why single schools are a disadvantage you cannot work on more than one or two issues or problems at a time?

When you have a cluster of school and each school within the cluster works on to three issues. You actually are then working simultaneously, on maybe ten issues. when that happens, the results are faster that is efficient use of human resource and capital resource also. Trying to get clusters together, making sure that people especially the heads are willing to cooperate and work with one another is absolutely essential.

Topic 220

EE in the School Area 7

Introduction

The school cluster approach also provides for diversity. Different schools within the cluster can do different things, either they work on different issues, they address different problems, they find different solutions or if they are doing gardening, they do different kinds of gardening. So, every school within the cluster is not doing the same thing. So, you actually have a greater chance of diversifying what you do intellectually and on ground in action.

Cluster Resource Center

Related to climate change adaptation and environmental issues because you are looking from a different perspective. One school added look from a different perspective another school looks from a different perspective, a third school looks in their own perspective. You diversify and create a better understanding of the problem, the issue and therefore you get a good solid solution of the way higher. Children encounter variety of environment related issues in centers with relevant resources.

The centers also encourage exciting and efficient teacher training. So, what these centers can do when you are a cluster, the teachers need to work together through good efficient teacher training. How do all teachers within the clusters learn to be facilitators? How does one teacher who is a good facilitator train others teacher who are not so good in facilitating in becoming good efficient facilitators. So, children benefit, teachers benefit and you learn from the expertise's of one another instead of isolated within your own system in a box.

School Cluster Approach

The school cluster approach can multiply the reach of environmental projects at the community level. No matter how successful a single school, its impact is limited. So, if you have five school in the cluster imagine, the families of all the students in each of the five-school benefit. Appose to a single school trying to do something only the families of those children so, 20 % would benefit.

When you have five school then hundred percent would benefit. So, the outreach is vast. Outreach is beyond what a single school is capable of doing.

Disaster Preparedness

Disaster preparedness is a good example of cluster approach synergy. Specially in our cases with monsoon and all that or droughts those are disasters and when school work as a cluster you are better prepared to meet the challenges or even prevent the challenges of flooding and so on and so forth. You know that this is going to happen get the cluster going. Think, brainstorm, workout measures and put them in action and in practice.

Clustered Schools

When clustered schools coordinate their efforts in developing disaster preparedness activities at the community level, their positive influence exponentially because you are not only focused on saving the school or trying to make the school less prone to disaster but you are trying to save the community because you are not going to look at the solution for the school. The solution can equally be applied at home other buildings in the area and community.

So, the outreach go beyond the school. Clustering is a good way to bring people together and teach them and work them together. So, that that everybody within the local community or most of the people within the local community can benefit. This brings us to the end of the module on environmental education. We have seen a lot of environmental issues. We have look at how young people can be involved in identifying environmental problems and coming up with solution. We have seen examples from different paths of the world. What young people in other parts of the world have done.

Let us learn what other children have done. Let us involve our children in identifying issues that are local that are indigenous to our areas and locations and help us find the right solution. If we trust our children, if we put our children into the task, they will prove us that they are as capable if not more than the adults in the same capacity.

Lesson No. 43

TECHNOLOGY EDUCATION AND ENGAGING DIGITAL NATIVES

Topic 221

Technology Education

Introduction

Today we shall begin our last module in this course on contemporary trends and issues in education. This is the technology education module. As we are all aware technology surrounds us in all aspects today no matter what field which field, we proceed to study no matter what kind of job we do no matter where we go technology place a definite role and impact s how much and what an individual can do and contribute.

Engaged Learning: Today's Digital Natives 1

Our students are digital natives today. These young people are born with technology while we teachers if you honestly look at your selves, we are all products of the 20st century. Our students are products of the 21st century today thus we need to bridge the gap and just technology will help us to bridge this gap between two different two different centuries unless we can do that, we will not be able to serve our students with honesty.

We need to prepare students with lifelong learning which requires new approaches to education. We will not be able to use approaches, techniques and methods that our teachers use with us. We will have to change and adapt new techniques and approaches of the 21st century. This heavily depends on technology. Our students are so good with technology but unfortunately their entire focus on using technology is entertainment that needs to change. We need to try and bring our students to use technology academically for their learning experiences.

While the importance of reading, writing and arithmetic still holds true. If you remember those were the three hours we talked of in education when we were growing up. It was reading, writing and education. Today we talked of the fourth hour which is computers and computers means technology and we must incorporate this fourth hour together with the other three hours. It's not that we ignore

the other three, we kind of entertain, engage, merge bring the fourth hour in line with other three hours that already exists.

This means that technology must engage and inspire students to take a more active role in learning because that's what they are doing. They are constantly with technology and which the mobile phones and smart phones today and the iPhone today it has become all the easier. They are constantly pushing buttons that's what technology is all about. Why not use it in the classroom to teach students? Why not to use it to interact with students? Why not to use it to have students turn in their assignments and activities? Use it so that students feel comfortable because honestly speaking students with technology are more comfortable than our teachers with technology.

We need to unlearn the paper and pencil modes of learning and learn the pushing the buttons modes of learning so to say and we need to learn the technology. Our students learn the technology so much better than many of us do today. So, as teachers we need to make changes if we want to impact students and let them learn in ways that will help them in their real life. If you been around as I have, we have seen the monsters room sized computers.

When you look at that and we see the evolution of the computers to the desktop to the laptops and now the smart phones. Indirectly we carry our world with us in our mobile devices as small as the smart phones today. It is accepted that the well-rounded education is the gateway to the personal success. It sets students on a path to lifelong learning that enables them to succeed in a changing world.

Technology is changing very rapidly and therefore what we teach students today will not all be appropriate one year even sixth months down the line because technology is still evolving and its evolving much more rapidly than it did may be five, ten twenty years ago. So, if we give the skills to students, students will learn the changes in technology and will in those changes in their modes of doing things in future but they key is are we giving them the technological skills today.

Through education, individuals can expand their minds and embrace new ideas and opportunities, and at the same time, build better lives for themselves and their communities. So, there are two

purposes of education. One is to learn to get to know the facts and the skills. This is to use those facts and skills for a better life for yourself and your next generation.

Topic 222

Engaged Learning: Today's Digital Natives 2

With technology the geographical boundaries should be disappearing. Distance should not be an issue in learning and finding things out. So today we live in a world where geographical boundaries are blurring, students also need the flexibility to connect with people anywhere in the world communicating information in a more dynamic and engaging ways.

So, what technology does is, it provides our students the opportunity to interact with individuals around the world. People who are interested in same areas of study may be even in the same areas of concern the topics of interest and research students may be interested in all you need to do is log on the net and find people around the world with the same interest and interact with them.

Today Video conferencing, Skype, Whats App and all these wonderful facilities allow our students to interact with people around the world and therefore what do you get? You get the multiple perspectives on the issues a topic a skill and area of concern with multiple perspectives you get broader understanding of what this topic particularly is all about. You share concerns, you can ear your views, you may not agree you may try to convince the other individual or the other individual may try to convince you but you don't need to be physically present there with this crew.

It is not only a one to one but you have a collaborative group conferencing through digital means and so you could sit together with the same time with five, six ten people from around the world and talk about the issue the topic and the concern you may have that builds a stronger foundation a better foundation to help you understand what this topic is all about. Are we providing these kinds of digital collaborative ventures for our students? If we are not today, we need to.

In addition, it is necessary to consider the impact education plays in competitive economics, where once local industries now compete on a global scale. Economics has become competitive where once these industries produce things for one area are now producing things for the world.

So, economics is becoming competitive who gets the orders who gets the better deal all this is important to teach the students. How do you interact today in a global setting? We are talking of a global economy. we are talking of a global market. We are talking about restricted areas of concern. We are not talking of the Punjab or Pakistan or Asia we are talking about the world and the world is on our finger tips at the push of a button. Are we gaining the benefits? Will our students gain the benefits of this digital world in their life?

In other worlds will our students still be looking for jobs? Will they be job seekers or will they be job creators or job providers that is world the digital world makes individuals do and as the common jobs we are familiar with shrink and the new jobs of the 21st century comes above our students will have to be very strong in the digital world .They will have to know technology at the back of their fingertips only then they will have to contribute in a positive constructive way wherever they may live their lives.

For today's students to become tomorrow's leaders in science, technology, healthcare, the arts, and other areas, they need to know how to use all the tools at their disposal. So, it does not better what areas you are studying. It does not better what area of job you will be doing? the key is do you have all the tools and all the tools includes technology the digital world is all around us. We have to teach our students how to exploit and use this digital world for their advantage so that they can have a better life in the future for themselves.

Topic 223

Education Revolution 1

Let's focus on the educational revolution. Let's take a look at the past. Everything in the education fortunately or unfortunately has come from the industry and the business world. Even today the use of technology, the incorporation of technology in education comes from the business world. So, as the technology for the business and personal use evolves, so do the tools available to teachers to enhance student learning.

So, the key here is not teaching using technology but to teach the technology to the students. They will be able to use technology for their means and ends. So, the thing is its not technology in

education. It is technology for education. So, are we giving our students those kinds of experiences where they can explore?

Simple example, if you are to serve students for a simple topic and you put the keywords in the search engine, you get ten thousand sites opening up. You don't have the time to go to ten thousand sites. How do you train students in using the information they get to serve through how much time to spend? Do you open all the sites? How do you get the information you want?

This information fluency has to be taught to students even in the digital world. Of course, through libraries we are hopefully try to teach information fluency to the students in the print media but the same needs to be exists and the same needs to be taught for the digital world because there is so much more than a library can hold there in the digital world.

Everything is available to our students in the digital world. In the world of library and print media only what library provides that is available to our students. So, there is massive explosion of information, material and content that is available in the digital world. We cannot possibly go through every single piece of information. We can choose what to go through that is young people need to learn today.

By looking at changes in the technology as an opportunity to advance student learning. Particularly the technology is widely adopted by students. The educators can better engage students and give them foundation for continued learning. Our students are using technology. They are using Whats App, they are using Skype, they are using all these wonderful digital tools. Why cannot we use those in education? Why cannot we bring these tools that students are so good at using into the classroom.

There are lots of simple ways of sending messages to students. Don't make announcements in the classrooms, send messages. Do a lot of readings, writing, speaking, listening all these different language skills can be done by using technology students are so good at using.

When students see what they use for entertainment is also brought into the classroom, it helps them learn better. It will take their education seriously. Prints today is out of fashion. Let's be honest, how many of us read books today? How many of us are not using technology to do our reading? We have this little gadget that can help us read any time. Its light, its less weight. I don't have to have a

bag to carry it in like we use to do with our books and so life actually has become easier with the help of technology. We in education have to look at is are we focusing those benefits for our students in the classroom in their learning approaches because if we are not, we are disadvantaging our students.

So, as teachers as people in education we need really to focus on how can we bring into the classroom what students are using good at outside the classroom. When the outside and inside of the classroom are parallel and they match learning experiences for our students will become much more meaning full and they would take education more seriously

In a sense, the education revolution driven by technology is at once old and new. Technology offers educators the opportunity to revisit old challenges with new tools. It's all they knew, it's not that they knew, it changes so rapidly that at the same time it becomes old and new. So, what do we do with the new tools that technology brings forth so often in a much more rapid manner then it used to some years ago?

The new tools are coming. Can we incorporate these new tools into old challenges we have? How do we get students to read? How do get students to meet deadlines. How do we get students to answer these questions in class and stay focused if we used the tools the digital technology world brings out? We should be able to bridge the gap between the old and the new.

Topic 224

Education Revolution 2

Instead of simply viewing technology at the skill set that students need to learn. It can be used to transform curricula to provide students with learning that is at once more relevant and customized to the unique learning styles. Now technology and computer science are not something you can learn and be good at by reading and writing about it, this needs to be practiced.

Unfortunately many of us in education think if we teach the theory the students should be fine that's not going to work because theory alone is not important it is what we can do how we can apply the things that we've learned that technology can do for us only if we give the relevant practice in the different skills will our students actually benefit through this new age education. technology should

transform curricula should change the way we teach should change the wavy death students should change the way we examine student.

New ways have to be brought about technology and with technology this can be easily done. The key is do our teachers are we aware of how we can use this technology in the classroom so that students get the applications of what they are learning and not just a regurgitation of what they have already learned. Students through technology can learn in their own unique styles. Students learn differently, one type fits all has not worked is not going to work and it is technology that really helps us tailor what we teach to the individual needs and patterns of the student.

With technology this becomes ways simpler and a lot of technological material in education is already available again we teachers need to surf and sift through the materials we come across use the materials we need adapt some of the materials that we can adapt to our cultural and traditional settings and then give the students the opportunities .to use those tools in meaningful ways.

A 2008 article in Education Week focused on effective teaching in the United States by examining different learning styles and explaining that customized learning approaches are needed to help students succeed. This study in 2008 done in the US was trying to see the different learning styles of students and how they learn. Of course, we've been aware for many years that students learn differently. Every child has his or her own way of learning.

Unfortunately we teach one way we test one way we examine one way and students fall out because that one way doesn't match is not congruent with the way the student is supposed to be learning and so if we want to customize students learning we will have to take massive help from technology. As I said earlier lots of material is available there are wonderful simulation, games, puzzles activities discussion forums the blackboard and lots of other forums that our students should be using in collaboration with students their age from around the world.

If we can hook students up with students their age in other countries and help them learn together there is a whole massive program going around called Skype in the classroom where children from

other parts of the world are asking this is what we are studying currently, if your classroom is studying the same thing at this level we'd like to hook up with you on Skype and learn together. Those are opportunities that teachers should be looking for grab because opportunity is not going to come all the time and make good use of that opportunity for our students.

As, the article highlights all students learn differently most of us know this intuitively. We learn best through different methods with different styles. Some learn better through visual means others need to talk it through write it down play it out and so on. So, the different key styles teaching and learning has to be amalgamated brought together put together so that all students in a classroom will learn.

The visual learner needs to see things happen, the auditory learner needs to hear things happen, the kin-esthetic learner needs to write things down and the learner, the tactile learner needs to move. So how do we provide all these opportunities in one classroom in one lesson at the same time. Technology is the answer. All these different modes of learning are available for a multiple topic in multiple subject areas of a multiple grade level please surf the net list what you find and use what is appropriate in your classrooms.

Topic 225

A Look at Yesterday and Today 1

- **Industrial Revolution**

Let's take a look at yesterday and today. The current education system in modernized countries dates back to the Industrial revolution, when agricultural works needed to be prepared for factory jobs. What did the Industrial revolution do? It changes what the people have to do. It changes the kind of jobs that were available. So, what the modern countries did, they move from agricultural into factory jobs which meant education had to change. Somehow, they had to teach in schools in colleges and universities. What factory workers needed in order to be successful? That was the first step in modernization in the developed countries. We have to keep pace. We have not kept pace and we need to keep pace.

So, with the industrial revolution that change happen. The developed countries took the first step, changed what they were teaching, changed the end products, outcomes for the students because now tilling the ground and growing the food was not the only thing that was needed. Other things were needed and those skills had to be taught and where do you teach this except schools, colleges and universities. In today's age of instant information, the Industrial revolution is a distant memory. As our most jobs involving assembly line and machine work.

The Industrial revolution is a thing of the past today. Today we live in an age of instant information. You click a button you get the information you need. You click another button you get some other information you need. Ten people in the same room clicking buttons can get ten different pieces of information at the same time and so this rapid instant world has to change in our classrooms and what we do in our school, colleges and universities also because jobs now don't require people to be factory workers.

Jobs don't you to be good with different machines. Jobs don't require assembly line production. Jobs require intellect and creativity. Do we have that? Do our students have that? Are we giving that to our students? What creative things, what kind of creative things are we doing in our classroom with our students today? Unfortunately, we are still telling them most of the staff and that is not helping them. We not helping them in the long run. We have to stop telling.

We have to train our students in finding the relevant information that they need on their own that will lead to creativity. With creativity intellect grows. When intellect grows our students will be able to stand a part with other students around the world.

Former strategies that involved teaching by rote and following rigid academic agendas no longer engage the majority of students and do little to prepare students to compete in an agile, global economy. Rote learning is a thing of the past. Lot of our education unfortunately is still dependent on rote learning that needs to be changed.

The rigidity that our education system has to be change into flexibility for the students. We expect all students at one time to be doing the same thing. That's rigidity. We should be expecting all students to be doing according to their flexible notion of what is expected of them.

So, students could write, a student could draw, a student could compare a flow chart. All these things tell us that yes, the student is able to use and apply what we have taught or what the child has learn. That should be the key. We have to move away from this rigidity and allow for more flexibility with our students. What this calls for is the teacher being little more tolerant with things in the classroom. When students are flexible the noise level will go up.
The teacher needs to be tolerant a certain amount of knowledge level in the classroom. Students will be engaging, students will be talking one another, students will be helping each other that is what we want to be our young people to be doing. In the job market those are the skills sharing, cooperating, working with one another, listening. Those are the things that are important for today's job market not how much content do you know.

The shift in skill set requires to prepare students for success is occurring at an accelerated pace. In less than three decades, developed countries have moved from manufacturing economics to knowledge economics that require unprecedented analytical and interactive skills. So, times are changing. We have to understand and believe that times are changing for our students also. If our students are going to compete with the world at a global level they need to be prepared for that kind of competition.

Developed countries in three decades that is thirty years have move from manufacturing economy to knowledge-based economy. In the knowledge-based economy it is the intellect that matters more than you know. What can you do? What are you able to do? What are you able to contribute with the knowledge, information, contents and skills that you have? If you are not able to contribute you are not a 21st century individual. 21st century individuals need to be contributing no matter what's they do. No matter what area they are in, no matter what kind of job they are in.

Topic 226

A Look at Yesterday and Today 2

If we look at what our parents did in school and what our parents did on the job market and we look at ourselves in one generation times have changed the skill requirements have changed dramatically and today's employers are demanding workers who can think and work differently from their parents. If our young people can do exactly what we were able to do they are not going to be successful and they should not be doing what we were able to do if they can do only what we were able to do then we've only produced a clone which is not good today.

We need to produce individuals who can do things on their own because they know what is the right thing to do. They have to be different from us and so our students will need to do things differently then as we teachers are used to doing only then will the technology available benefit them.

To strengthen student success in school and beyond students need to become effective communicators, who can understand manage and create exceptional written and multimedia communication in a variety of forms and contexts., So, skills of writing and communication yes were needed when we were growing up and we were looking for jobs they're needed today but today the writing and communication is digital it's not print so can our students communicate and communication is not to tell ,communication is two ways it has to go back and forth unless you get a response unless you get a comment a recommendation a suggestion something communication hasn't happened and communicating digitally it's instant fast instantaneous.

Of course you have to be aware that the other person may not be online and so as soon, as that person gets online you should be able to get an answer but if you let the people know in advance a certain time when you would like to communicate people would be available.

Written work and multimedia presentation in a variety of contexts. What do design application memos reports proposal those are the kinds of things today; we are not writing application we are writing reports and proposals because that is the intellectual work that is demanded by the 21st century. What multimedia proposals are we presenting it's not just PowerPoint there is Prezi there

are lots of other animation things that you could do, are our students able to do all that.?Do we give them the opportunity to experiment in the different areas of communication, written work and multimedia technology?

They also need to be able to think critically exhibit sound problem-solving skills and know how to frame and synthesize what they've learned, this is what employers are looking for or if a problem happens don't run to your boss, because you're not going to get any help the boss expects that you've come prepared with problem-solving skills, there is a problem, solve it, don't look at others for solution, what would you do this problem is what you have how do you address the problem?

How do you solve the problem whether you do it alone get a team together, whatever but you need to have the problem-solving still today that will show that you can synthesize what you've learned, you need to pull things from different areas of your learning put it together, to solve that problem.

Technology, literacy and the ability to access manage, analyze, integrate, evaluate and create information in a variety of forms and media are essential. I hope you realize that the fixed verb I just mentioned are Bloom's taxonomy from the lowest to the highest level so are our students able to work at the upper levels of Bloom's taxonomy? Can they integrate, evaluate and create? Creation as I said earlier our young people should be job creators not job seekers, they can create jobs, if they know what to do with technology and the rapid changes that are happening in and with technology today.

Students' need to know more than just how to use technology they must be able to engage with technology to gather knowledge and use it to communicate collaborate and innovate. Simply using technology as I said earlier at the beginning of this module are young people normally use technology for entertainment that's not good enough, can they do the other wonderful stuff that technology allows them to do? Are they able to communicate, collaborate and innovate?

Communicate interact with other people, collaborate work together with teams from around the world and in a way is bring about new ideas, bring about new suggestions, bring about revolutions in the realm that they are good at and in areas that they are interested in.

Topic 227

The communication Revolution 1

Let then focus on communication revolution, the way people communicate has changed in the 21st century and part of what is driving the need for new types of skills is an enormous shift in how people access information and communicate. In other words, our young people are not reading books to get information they are reading digital stuff, they are not communicating, nobody's writing long letters nobody's writing applications anymore they simply send emails, sms, and instant messages and those kinds of things.

So, with the change in the skill set for communication thanks to technology our young people need to be aware of those use those and use them comfortably so it is our job in education as teachers to make sure that our students get the experience using all the different tools that are available and at their disposal not just for entertainment but for academic and job-related purposes as well.

With the advent of the Internet information has gone from scarce to abundant and it can be accessed using many different devices from computer and forms to personal digital assistants. The internet obviously has changed our way of life completely, what we do what we don't do how we do when we do why we do all this the Internet has impacted and the amount of information available from scarce to abundant.

There is so much everything that is possibly around is on the internet, everything do we need all that? How much of that do we need so how do we go about surfing and sifting through this plethora of information that is available to young people today. Previously we were limited by what a library could hold today we are limited by what the world can hold through the internet and the digital medium and this can be accessed from desktop computers from laptop from ipad's from iphone's

from smartphone. Name the device any device can get to you what you want and faster than we used to do in libraries in the past.

At the same time new communication avenues are everywhere from blogs and social networks to web conferences that connect anyone anywhere anytime. So now even the avenues are open it's not limited to oh I have to attend this conference you don't have to attend you just have to click a button and you'll virtually be at the conference. So, there are blogs there are social network there are web conferences that help connect people from around the world, your geography doesn't matter where you are doesn't matter, what language you speak doesn't matter there are instant translators available and all that that will help you benefit from what the world has to offer.

Are our student benefiting from what the world has to offer them? not what we as teachers have to offer them but what the ,world outside the classroom the city, the province, the country the continent has to offer everything available on the Internet is for anyone anywhere anytime. It doesn't matter if in the other part of the world people are sleeping you can still access the information. So, it is a 24/7 opportunity for a young people and we have to make sure that the benefit from that opportunity.

Many students participate in the publishing process by writing in democratic channels viewing themselves as content creators who share the opinion stories music and videos all with the aim of expressing the creativity and exchanging information.

So, when you get into a group when you write for a blog when you get into a web conference your material whatever it is opinions stories music videos are shared you become a creator you become upon contributor and that is what we need to teach our young people. They don't have to be followers of what the teacher says. Only they need to be created and contributors in their own right exchanging information with people from around the world, only when our students are able to do that on their own will, we truly have taught them for being prepared in the digital age.

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Topic 228

The Communication Revolution 2

If you are looking and listening to young people today they are not telling one another, you didn't write to me, I am waiting for your letter today what young people are saying is you didn't reply to my message so communication has changed and the forms of communication have changed and as new forms of media come about such as blogging, instant messaging and social networking they are redefining what it means to be connected.

To connect it today is not writing long letters being connected today is are you on Whats App, are you on Skype ,do you do messenger, do you have Facebook that's what connected means today for our young people and that means our connections in the classroom have to be adaptable to their connections outside the classroom ,if that is possible and it is if we could use these wonderful apps to teach and to help students learn in classroom and provide them the opportunities of experiencing what they actually experience outside the classroom.

Within the classroom our students will become serious learners because this is their life their life is not getting big thick books; their life is carrying the small gadget with them that has everything in it. Imagine carrying five books your smartphones can store 5, 10, 15, books at a time maybe more some of them depending on the memory and the space but you can carry this little gadget around that will help you solve many of your problems that we had to face, when we were growing up.

A 2007 survey conducted for the National School Boards Association focused on social networking and involved 13,19, and 20 ages nine to nineteen seventeen year more than 1,000 parents and 250 school district leaders this survey was done with children, parents and school leaders people in education to see social networking, how were these people networked socially. You know today you don't need to join a club you need to be part of a social networking and you'll get everything that you need. So, everything that you need today can be done from the comfort of your home.

The fact is are we doing the right thing if the only thing we do is entertain ourselves, watch movies listen to song that's not good enough that will not help us in the real world of the job market. If we

want our students to be successful in the real world of the job market, we will have to make sure that they are socially networked for academic and intellectual rigor. 96% of responding students said that their networks socially using various online communities.

Students report that they are engaging in highly creative activities on social networking internet sites including writing art and contributing to collaborative online projects so there is lots of wonderful academic stuff happening online - thanks to the internet and our students should also be able to do what 96% of these US students said they do. hey are socially connected they are socially networked but they contribute through the internet through writing art and online collaborative projects.

So, there are lots of wonderful ways in which young people can come together with people from around the world, learn through multiple ex audiences, learn through how the same issue or situation is seen differently in different parts of the world. So, you get cultural awareness you get geographical awareness and at the same time you get intellectual and academic rigor to work with.

Also 96% of school districts report, using the internet and other technologies for educational purposes including online collaborative projects. So, schools in different locations could come together work collaboratively a school in Punjab, can work with the school in Sindh or a school in Baluchistan and learn from one an other's experiences and expertise.

All expertise cannot be present in one place at the same time. Different expertise will be in different places, and technology the internet today allows us to exploit this expertise from different paths around us at the same time by collaborating on online projects. Our young people need to do just that they need to collaborate with people from around the world to get a flavour of what it is to experience creativity intellect, academic rigor in different parts of the world.

Topic 229

Engaging "Digital Natives" 1.

I said earlier our students today are digital natives they are born in the digital age they are born with technology how do you engage them it is not an easy task to engage these digital natives in our traditional classrooms today but it can be done and it should be done.

Today's students are the most wired generation yet according to Marketer 95 percent of U.S college students will use the Internet at least once a month that time spent online is measured in hours per day not per week that's the amount of time young people spend on the internet doing whatever whether you're on Facebook whether you are doing Whats App whether you are in a collaborative session with people from around the world the hours spent per day how many hours per day do our students spend on the internet?

Calls for a good research piece, if somebody is interested that would really help us in education learn and find out if so many hours per day our young people are spending on the Internet how are we going to get a piece of those hours so we could use that in the classroom as well with them that's the job of us teachers. We know our students are involved on the Internet we know that how do we grab that and use it for our advantage in the classroom.

On many campuses more than eighty percent of students use social networking sites on a regular basis on many campuses that's colleges and universities. So, what are they using is for yes many students are using it for entertainment in their free time but many students are using it also for academic and intellectual work that is what we need to focus on with our students are we giving them opportunities assignments activities that will make them get ? to the social networking sites for academic work ?

International education consultant and author Marc Prensky refers to students who have been immersed in technology since birth as digital natives and that's what our students are they are born with technology they are growing up with technology you'll be amazed what young infants can do with cell phones today they know it somehow they are wired that thing of what this gadget is already in built in them we have to make sure that as teachers we exploit that inbuilt curiosity of these young people with these gadgets so that we can teach and they can learn using those gadgets give an

example of Jordan, schools in Jordan went paperless in 2015 summer of 2015 everything that Jordan did that textbooks everything our digitalize their exams testing everything happen online there is no paper and pencil in form of textbooks copies writing anything and everything happens digitally.

That's the way to go that's how we need to move we need to move towards a digital world for our students because that is what their life in the future is, see we look at things that are wired today there is wireless technology already we already have technology that converts sound into words so our students will not even be pushing buttons anymore they'll be speaking and things will happen are we preparing them for that reality in their real life in the future.

To digital native's technology is not a tool instead it is a fundamental part of the way they live technology is not something to use technology is a way to live with these digital natives. They rely on the web for information communication and to connect with the world around them regardless of the distance between communities so everything that young people do is done through this little gadget today and we need to make sure that a lot of what we do in our classrooms is not everything that we do in our classroom is done through.

Those gadgets also which in short simply means we as teachers will have to be more gadget filling instead of gadget phobic only when we begin to understand what these gadgets are for; we'll be able to use it with our students in our classrooms.

Topic 230

Engaging "Digital Natives" 2

What is the key, how do we do what we want to do in our classrooms with technology. The key is in engaging the digital generation for educators to apply the right technology at the right time. If we want them to right, we have to use the right technology, want them to be collaborating we need to use the right technology. So, we have to be aware of what is the right technology for what I'm trying to teach students today.

Using technology advantage teachers can present lessons and ways bed suited to the cognitive styles of their students. As we said earlier different students learn differently and technology can help provide the right kind of teaching tool for the students so that they learn according to their modes of learning. We cannot do that as human teachers in the classroom.

We possibly cannot work with twenty thirty different types of students individually and that is why in a traditional classroom we work with students as one group in a digital classroom ,you can work with the twenty thirty different students individually because technology will roll out what the student needs according to what the student does with technology.

So, there is built-in analytic that built-in system in the machine will lead students in the path that is good for them and as teachers we only have to depend on the machine on the software put in and the analytic that software will offer for each individual student. For example, the use of video audio and texts can mutually reinforce concepts and enable students to engage the same ideas in multiple ways. We want the text for reading, we want the audio for sound, we want the video for the animations and the colour and all that.

Now imagine you already have three media that the student is exposed to, don't you think the students will learn better rather than with the textbook all you have is a text and normally textbooks are black and white they don't help much. They don't stimulate the brain although research tells us that the brain works better with colour than with black and white but then producing colour text books is not an easy task neither is it a cheap task good-quality colour textbooks are expensive.

However, accomplishing this means that educators must view technology not as the enemy but as the key tool to motivate an engaged student. If you talk to teachers normally you get to hear that technology is a waste of time they will be listening to songs they will be texting their friends well if you, if the machine comes into the classroom and you don't use it benefits officially for learning yes it will be used in other ways.

So, you know these gadgets come to the classroom you may tell students to leave it out you're may tell students to turn it off you're may tell students to put it on vibration it is not going to happen. So, knowing that the gadget will come in why not use that tool to help students learn and to help you teach. By addressing student at that level. Schools can overcome problems with emotional truancy where students show up for class but each essentially tune out the lesson.

So, we've said that to students many times you're physically here where are you mentally that's what this means emotional truancy, I'm here because I need to be here but I'm not listening to what the teacher is saying so physically I'm there mentally and somewhere else. If we have the digital tools available the students will be there physically and mentally because teachers will be expecting them to do things that they enjoy doing and pushing buttons looking at messages and stuff is what students are interested in today how can we make sure that our students will be learning through the digital tools in the digital way so that they will be the beneficiaries of the teaching learning process.

Lesson No. 44

PATHS TO SUCCESSFUL EDUCATION & TECHNOLOGY ENABLED EDUCATION

Topic 231

Paths to Successful Education 2

We teachers are not digital native. Our students are, what path are we going to follow to make education for our students successful? because teachers are typically not digital natives. The key to success isn't to simply add technology to the classroom putting a computer there or putting two three computers there having a computer lab in a school simply putting the technology there is not what is needed today instead the focus needs to be on enabling teachers to integrate the tools into the curricula.

So, they are comfortable letting their students use them. How do teachers get together? I think teachers should get together as a group. So, all English teachers get together, math teachers get together science teachers get together because as a group these are the topics we are going to cover. Where and how can we put in the technology component? How can we integrate this content with technology? What kind of applications do we need? What kind of software's can be used? How much time will be provided for this? All this can be worked out. So, what teachers need to do is to sit talk collaborate work together.

This is not what one teacher can do on his or her own, if you work alone you will not be successful. Technology calls for collaborating and integrating that happens when you have a nice intelligent group come together and work and when I say group, I don't expect ten and people in the group nothing will happen five or six teachers working together can get good results on how technology can be integrated into what they are trying to teach at the different grade levels.

Adobe believes that both K through 12 and higher education will evolve along four paths to help ensure that current and future generations are engaged in the classroom and a proper three develop skills to succeed in the global economy. Now Adobe is a digital company it works for education K

through 12 the school education. Higher education is college and university education and they recommend for path that young people will need to follow and if these young people are going to follow those four paths and they follow all the four paths I think they will become successful in using technology and the digital world to help them in their learning and it would also indirectly help teachers in their teaching.

When students do things on their own. It helps teachers teach better because then the student is not dependent on every single direction coming from the teacher.

Customized

The first one is customize. The content will need to be customized. Educational institutions will need to offer personalized instruction to accommodate different learning style and tailor courses and services to meet the individual needs of students' faculty and staff. Something that we've said again and again in this course one size does not fit all. We will have to customize, we will have to tailor subjects' courses materials to fit with the student and there is no easier way today than trying to use technology to do just that.

With technology a lot of technology today is available using different learning styles for students and a lot of technology can be developed and there are sources that are willing to develop technology courses in education based on content for your needs,All you have to do is to find the source talk to them and put them to work.

Topic 232

Paths to Successful Education 2

Collaborative

The second pathway is that of collaboration. The level of collaboration between students and faculty will continue to grow, and faculty will increasingly become facilitators who help co-create knowledge. So, in the 21st century, education is not about competition. It's about collaboration. Young people will need to come together, will need to collaborate, will need to understand on another and brings

in unity that diversity young people offer around the world and the teacher will have to understand that too and when teachers understand students can collaborate help one another, the teachers role automatically changes to that of a facilitator.

The teacher facilitates only the students coming together. The collaboration, offers them the time not the input what the students are doing. So, the second pathway that will help students become digital learns is through collaboration.

Students and faculty will work in face-to-face and virtual teams worldwide to tackle complex and sophisticated projects, and bring together different perspectives and skills. So, you are not bound by region any more around the world because you want perspectives from outside and you have multiple perspectives. It gives you better understanding of what the topic or issue is. It helps you to better find a better collaborative solution to what you are trying to do and to work together as a team and a team simply means together everyone achieve more.

Isolated you can't. After all, two brains are better than one. So, in a team when you have three, four or five brains working together, hopefully come up with a better option and a learning outcome.

Creative

The next is creativity. Young people need to be creative. By integrating the technology that students use, admire, and aspire to, education institutions will appeal to digital natives, driving innovation and enthusiasm and setting students on a path to success. The technology that students use, admire and aspire to educational institutions will appeal to digital native, driving innovation and enthusiasm and setting students on a path to success.

The creativity aspect is extraordinary critical. Technology does it very well, because there is color, there is sound, there is animation, there is movement. It's not static its always flexible, it's on the go. Its moving it's on the go and that is what appeals to students. Students today are not interested in sitting behind the desk listening to one person talk.

So, are we providing these kinds of creative opportunities'? Are we providing opportunities to our students to help them show us that yes, they can be creative as well? They can, we have to believe in them and provide them the opportunity to show us their creativity.

Distributed

The fourth aspect is that of distribution. Students will increasingly be attending institutions virtually, making knowledge more accessible to a greater number of people. In other words, in lots of good top-notch universities have lots of online programs and they connects students from around the globe.

Online programs are slightly expensive today because they are new, technology has been worked at and collaboration from around the world enriches students. So, we should be looking at online things to an education as well and what better place them to begin with very own classrooms.

Do we bring online things like a Skype discussion or a Skype interaction with students from somewhere else? Why don't we connect our student to two and three with two and three students in other parts of the world. Have them talk at Skype may be night at home and let these two or three students' teams come together and shared what they learn? What different additional, additional new unique perspectives they learn through this Skype interaction? Other than simply learning from the textbook or the physical teacher in the classroom.

Schools can also customize the learning experience to meet the needs of individuals, while seamlessly fitting into the existing infrastructure of the institution. Schools have an infrastructure that's already in place.

So, many classrooms, a science lab, a computer lab and so on and so forth. Hats not going to change but technology helps you use the existing infrastructure in much better ways to help students learns from individuals, students, teachers' and people around the world. Let's open the door of global learning for our students so that they get the lighter perspective and a larger horizon to explore as they learn.

Topic 233

Effects of Using Technology 1

Continuing with our unit on technology education, let's get our focus to effects of using technology. If technology is used appropriately, we should be able to see some effects and results. So, how does technology support instruction? what does technology do to help the teacher teach?

One according to the student's perception that their work is authentic and important, what is help students understand is what they are doing is real-life work which makes it authentic, which makes it important.

So, students take their learning more seriously, tasks assigned activities asked of the students to be completed are taken more seriously by the student because they see this as real-life application because a lot of what they do in real life is based on gadgets and technology When this comes into the classroom it brings the real life from outside into the classroom which makes the students more comfortable with the learning environment rather than simply looking at paper and pencil work or reading textbooks or listening to lectures

To increasing the complexity with which students can deal successfully. Sometimes for teachers it becomes rather difficult to move from the simple to the complex and so many teachers uninteresting limit their work to the simple which does not help the students in the long run.

True education should move from the simple to the complex and technology helps do that. With technology with varying modes of complexity built into various software programs for education. Students begin to see complexity in a stepwise incremental manner instead of a sudden burst of work that is beyond their capacity.

So, what technology does it help take the student in small incremental steps along the way from the simple to the complex and so complexity gets automatically built in to what the student does without the student realizing that the work he is doing is becoming more complex and more

complex work means work at higher-order thinking at higher levels of thinking work at upper levels of blooms and if that's what technology can help students do then technology should be used in classrooms for teaching and learning purposes.

Technology can both automate mundane, repetitive portions of a task and support visualizing and presenting more essential abstract elements with animation built into these educational software tools. Technology takes the boring and makes it interesting when you add sound colour music movement into your academic presentations into your teaching abilities. It makes work more interesting and exciting for the student and therefore becomes more challenging and at the same time more acceptable by the students. Students are willing to spend the additional time, the extra time to get their tasks done because they see it as interesting work.

Dramatically enhancing student motivation and self-esteem because as students go incrementally through the software and they see their progress it's motivating to them they don't have to wait for the teacher to check work to check assignments to give feedback a ten days later. They know immediately instantly the feedback is prompt and at that particular moment which motivates students and if they make a mistake it immediately corrects them, explains why this is a mistake help students fix it and move ahead so the students don't have to wait for time, for days, for weeks at times to learn what they know, what they don't know, where they need to focus on, where they need help the computer programs take them through all these various steps in an automated manner.

Using technology increased the amount of time students spent on a task, their willingness to critically review and revise their work and their pride in the finished product. It may take time but the students are learning incrementally along the way, they are not waiting to submit the final product and then get feedback to understand what they've learned, what they know and where they need help.

They get the help along the way in this case students learn in a more concrete manner, in a more instantaneous manner on the spot and they can fix the errors and continue in the learning process without necessarily repeating those errors till a teacher can give feedback and fix them.

Topic 234

Effects of Using Technology 2

The fourth effect is making obvious the need for longer blocks of time. Unfortunately when using technology people are understanding that it should be quick, it should take less time that is not true, because with the use of technology one needs to surf sift find the information, fix the information put the information in a particular order presented save things over time and then come back to the saved files again and again and again. This takes more time and students begin to understand that when they are using technology.

Instead of having to wait for a teacher to tell them their progress the computer program itself directly informs students about their progress and therefore if something takes a longer time student begin to understand it's not going to be instantaneous. So, this effect that students believe and even many teachers believe that technology makes things easier and quicker is not necessarily correct. Technology may make it easier may simplify things but it does not necessarily happen in a short period of time. Time has to still be provided and given appropriately to get a decent project out of the way.

The fifth effect is creating a multiplicity of roles leading to student specialization in different aspects of technology use. It's not that you open the computer and everything just shows up you open the computer and you need to know how to use the search engine you need to know what to feed into the URL and what will the URLs then open up for you. If it opened up a thousand sites no human being has the time to go through a thousand sites so you've served but then how do you sit surfing and sifting kind of go together and these are skills.

Once you've sifted, you need to know are you going to use the staff as is do you need to modify the stuff where you just take the ins from the stuff and develop your own material, all that takes time and all these are multiple skills that students need to learn and experience and be aware of in order to get their work done through technology in a befitting manner.

So, students learn the applications and the use of using the computer and software skills in order to get tasks completed. Each of these roles is valuable in a complex project and students who had not excelled in more conventional academic settings often shown in one or more of these roles.

Now students that did not do well in a traditional classroom which is based on lecture note-taking, reading and giving tests and quizzes. Students, all students are not good at that students did much better when technology was brought into their learning experiences and through this project-based, through this technology-based through this digital driven learning students were able to do much better that is enough evidence to show that technology needs to be used by the teacher and by the students.

Students on their own will not use technology for academic purposes it has to be driven by the teacher. Therefore, it is imperative that the teacher master these skills first in order to teach these skills to the students and transfer these skills to them.

The sixth effect is instigating greater collaboration with students, helping peers and sometimes that teachers. Technology work cannot be done in isolation it has to be done in a group and in a collaborative group. When students collaborate they tend to do better because more than one brain is working even if there are three four five students working together it is important to understand that even two brains are better than one and so this collaboration helps students perform better and it is up to the teacher to make sure that the students are grouped appropriately so that they will be working together in class out of class on their own time. When you work with technology it cannot all be driven by classroom work only. A lot of work needs to be done outside the classroom on the students' own time.

The seventh approach is giving teachers additional impetus to take on a coaching and advisory role. When technology comes into the classroom the teacher is not the teacher, the teacher is the facilitator. The teacher is the coach the teacher is seen as the helper and that is important. When teachers understand that their roles have shifted, they are not providers of information they are

facilitators for students to gain information on their own then students will work better because they are then becoming independent lifelong learners.

Topic 235

Technology-Enabled Education1

We've so far looked at technology-driven education, let us change our focus and look at technology enabled education. In other words, how does technology enable teachers to teach and students to learn. We have to look at technology as an enabling tool in other words it's the helping tool, it's a helping facility that helps teachers teach and help students learn. So, the value in leveraging technology in the classroom is manifold and has the promise of benefiting students and teachers, so both will learn. When technology enables education, the teacher is learning and so is the student learning.

The real strength of educational technology lies in its ability to unlock student learning through enhanced engagement personalized education and equal access for all. So, there are three things that must be considered if technology is used appropriately; one it enhances engagement the students are involved what we've talked about engaged learning active learning, where students become involved in what they are doing, whether it's a task whether it's a project whether it's an assignment. Second is personalized education. Education tailored to fit to the needs of the child as we've said earlier, one size fits all has not worked, will not work. We must tailor educational needs to the individual student regardless of the number of students in the classroom and when technology enables education is used this is possible the third is equal access.

In a classroom traditionally speaking, students in the front rows are the ones that benefit the most. In the last rows, students are on a perpetual picnic, when you have technology enables education in the classroom it becomes equally accessible to all because the software program is there, the tools are enabled all you have to do is to get the program to open on your gadget or device and use it whether 20, 30, 50 students used it at a time it does not matter. So, accessibility is guaranteed and equal accessibility is guaranteed. All students have the same chance of working with a particular program.

Technology enabled education has potential in boosting engagement by promoting interests and participation through the enable and enforcement of interaction between the students. The student and the teacher and the student and the content three areas of interaction in any classroom traditional or technology enables our important. One is of course the interaction between the teacher and the student whatever role the teacher plays that of an instructor or that of a facilitator that interaction is critical then of course the interaction between the student and the content.

What is the student learning, is the student learning? what the student is supposed to learn? or is he learning some other stuff that content interaction with the student and easy learning it to an initial level to the mastery level. All that is important. The third area of interaction is between the students themselves. When you put them in collaborative groups where technology drives or enables learning the cooperation will happen, we need to make sure the students understand that they have to cooperate in a collaborative setting to get work done, otherwise it is not going to help individually.

If students work in isolation on their own machine it is still one brain functioning but when they collaborate either with one machine in a team or with their own individual machines in their own places in a collaborative virtual setting it benefits the students learning and their outputs.

Techniques as simple as assigning content creation like videos or the most of sophisticated amplification of gamification are all instances where the gravitational pull of technology has been wielded into combating student apathy. Now as we look all individuals play games on their machine everyone even I do whatever different types of games we play we do so why not bring this gamification tool into the classroom if teachers would teach their courses take topics take skills take concepts and transfer them into games and bring gamification into the classroom.

Let students earn points, let students move from one step of the game to the next step to the and move ahead. Gamification is a great way to teach today, everyone is playing games everyone is involved we can see and games bring in sound music, animation colour movement and all the wonderful things that help students learn better.

Topic 236

Technology – Enabled Education 2

Let us now begin with some examples of technology-enabled education from around the world. Let's begin with Pratham, an Indian based not for profit organization, tested a computer program that presented math questions in an arcade game like format and found that when students used it for two hours a week, it had a considerable positive impact on math test scores.

Imagine learning math in a traditional classroom the teacher does some examples on the board with or without input from the class and then assign the horrible exercise from the textbook. The students work in isolation they may get a drive they get it wrong the teacher may facilitate health depends on the number of students in the classroom the time period of the class and how much assistance the teacher can give but when the same math concept can be taught in a gamified manner in an arcade game of you play games and we all do you know what arcade games are .

So, students begun in this particular program to learn and math through games and the results showed that the test scores marked this improved. This shows that when we have technology enabled education our students can do better because let us understand and realize this is their world both machines these gadgets those buttons are what they enjoy working with why not bring all that wonderful stuff into our classrooms and help them learn.

This is an example from a math class. You could do the same for language for science for social studies. All you have to do is to find a game or create a game or have somebody create the game for you and today. There are lots of sources that will create these things for you at nominal thoughts. So, education needs investment let us not invest in textbooks let us invest in digital means of trying to get our students to do better in our classrooms.

Similarly, there are various others initiatives and organizations, like the MIND Research Institute's ST Math, that are leveraging technology fun and interesting for students. No matter where you look when you look at the gamified ways in which to teach all you are looking for learning is fun and learning is interesting. When learning is fun and interesting students are

hooked in to the learning. Students play games for hours students. If we could through the games teach them math, sciences, history, geography, languages and other staff. It would help make their learning much more interesting, fun and they would remember it longer then in traditional settings all the time.

Technology is also transforming the one size fits all approach of instruction into a personalized learning experience of self-paced education where the availability of resources allows students to absorb information at their own pace. Because the game will be progress depending on your skill on how fast you could move those buttons, but students move through games at their own pace. Yes, there will be students who will do it faster than others there will be average moves and there will be slow movers.

But they are still learning in an interesting manner even in a traditional classroom we always have kids who would finish the exercises and work fast some average and some slow who the class period would be over but still would not be done with. The work in a technology enabled classroom when class work is not done the students can pick it up outside the classroom ate their own pace at their own time, even at their homes. So, we need to make sure that students moving along at the pace that is the comfortable for their own learning needs.

For instance, a student can revisit a complex concept in a Khan Academy video, empowered by the ability to pause and repeat as necessary. This can make all the difference to those self-conscious about asking for help. In a real traditional classroom student are hesitant for asking for help and there is no rewind button so the teacher may have something may have lectured for ten minutes. You may ask the teacher to repeat but the teacher is not going to say same thing because hopefully he/she has not memorized the lecture. In a technology enables classroom what this helps with is the student moves and can repeat a lecture a talk a demonstration of simulation as many times as he needs to order understand it for himself.

That is the beauty of technology enabled education. You can repeat, you can go back, you can move ahead, you can stay on a topic for as long gas necessary for you to understand the topic completely and be able to do something with the knowledge information content skills that you

have now gained.

Topic 237

Technology–Enabled Education 3

As schools begin to accept technology-enabled education into the teaching repository it is necessary that they do not change immediately completely and so this brings us to the concept of flipped classroom where some things you do in the classroom. What this means is:

Some schools have implemented this in the form of "flipped classroom", a format where students learn new concepts at their own pace at home and apply their learning, through exercises or discussions, in the classroom. So, you could review go through the animations or the simulations or the reading materials at the home and next day in the class you are ready for the activity the discussion , the puzzle, the case study or whatever the teacher has planned in order to determine whether you have actually learned as you were going through the technology work overnight at home.

So, this is the flipped classroom and a lot of teachers feel comfortable instead of moving completely into a total technology driven of technology enables learning environment. It makes the teacher realize that I am needed, I am still a part of the classroom and let me tell you no matter how much technology over the teacher will always be required in the classroom. Do not ever think that you will lose job or teacher will not be required in a classroom the teacher will be. So, start more, begin with the flipped classroom over time you may actually end up being when completely technology enables learning environment for your students.

This format also transforms the teacher's role from a "sage on the stage to that of a couch. So, with the flipped classroom with the actual learning happening at home virtually through technology the teacher is not the stage is not the wise guy with all the information ready on the fingertip.

The teacher next day functions as the coach and what does the coach do. The coach does the correct your mistakes makes you practice and helps you learn from the mistakes. That is what

teaching should be all about in a traditional classroom.

Unfortunately, what teachers do is they identify mistakes, penalize the students grade him or down and that's the end of it. That is not learning that is not education unless our students learn from the mistake unless we can make them practice the right things education is not happening. So, automatically with a flipped classroom the teacher role changes. the teacher should never be seen as the person with all the information all of the time

Similarly, schools are experimenting with other innovative models to enable student learning on a daily basis to identify what works best for their students. As schools begin to implement technology -enabled education experimentation will need to be done. We will have to see what works, and what classrooms what works with , what teacher if I have used a technology tool and is has worked for me it may not necessarily work for the teacher in the next classroom, because we are different people our philosophies to education are different.

Therefore, initially a lot of experimentation will need to be done and teachers will have to learn and not give up. See the easiest thing in education and even teachers do that is give up. I tried it did not work it.

Did you prepare the students well enough where all the materials and equipment and everything readily available? Analyzed why it did not work and go back and fix it instead of giving up and saying I tried I would rather just teach in the classroom the normal traditional way that is not going to help our students in the future.

A study by educational psychologist Benjamin Bloom in 1984 concluded that students who were provided one-on-one tutoring performed significantly better (by two standard deviations or 98%) than those who were taught through conventional classroom instructional methods. Now unfortunately in the traditional settings we do not have the luxury of one-on-one tutoring, one- on -one teacher and student. Yes, nobody would learn that ways but with technology that is possible in which technology in any classroom for any subject matter 20,30, or 40 students in the classroom could be doing one-on-one because who is the teacher the software program in your gadget is the teacher.

The human teacher is the only the facilitator, the coach that is going to help you. But all the work comes through the software program and so it is possible to make sure that our students benefit learn better, give us better results when we bring in the right technology at the right time.

This study, called Bloom's 2 sigma problem, is widely accepted to substantiate the link between one-on-one attention and student performance. Any human being no matter where that person is if, that human being gets one -on -one attention chances that he/she learns and does the right thing as dot a higher. But in any classroom as all teachers understand and no this is not possible it's not even luxury, it is just not possible, it's an unrealistic expectation so, bring the technology into your classroom and this could become a reality.

Topic 238

Technology–Enabled Education 4

Exposure through a technology-enabled education enriched classroom is the first step to developing students with technological capabilities for workplace readiness and increased international acumen. The question to ask is are our students ready for the workplace for the job market when they leave our institution?

Our answer is truly be YES! But actually, it is NO because we give them so much theory and we give them very little practical hands-on experience with the content, knowledge, information and skills that they need. And the job market people are looking for individuals prepared with the skills to get in.

This technology-enabled education is actually the first step in making sure that our students are ready for the job market. Because, no matter what job you jib, no matter where you go for work. Technology is there. Technology is all over. Technology everywhere. You are not going to able escaped technology and therefore, what better place to begin, preparing students for that technology driven job market then in a classroom today.

The drive of adopting "ability to program" in the middle school years, is now seen as a fundamental skill, for all students, irrespective of the future career choice. This cannot wait till the students come

to colleges and universities. This practice must begin way earlier and middle school is your grade 6,7, and 8 it needs to begin from there. In some way, we need to make sure that technology becomes part of what teachers and students do beginning from the middle schools which is grade 6,7, and 8 and continue into high school and then into college and university.

With so many years of technological practice, awareness, exposure, experience the students should be ready for the job market should be prepared to meet the challenges of what the job providers are looking for and for the job providers are looking for skills today. Job providers 10, 15 and 20 years ago were not looking for. We saw in an earlier talk in this module that in the industrial revolution time job market was requiring different skill.

Today is the knowledge and intellectual revolution job seekers are looking for very different skills. Are we giving our students those very skills that will help them be successful in their future life? Implemented and utilized effectively, technology- enabled can arm teachers with enhanced and virtually real time visibility into students' performance. If teachers are working as coaches are acting as coaches are helping students, they know it is virtually that the students are working. When teachers follow where the students are how much a student has done which students are slow, which students are moving ahead. It actually translates into real-time virtual visibility for student's performance.

No matters what the role of the teacher is, whether it is that of instructor or a facilitator, student performance is absolutely critical. It cannot be overlooked. So, although the learning is dependent on the virtual world. learning is driven education the performance of how the students are doing can they attempt a case study, can they solve a puzzle can be they do a problem-solving exercises ,can they finish a worksheet based in the virtual technology driven course content that they were supposed to get of not the teacher will need to step in if yes, student is well on moving ahead in the right direction.

They are better equipped to home in on student skill level, Strengths and weaknesses and to provide targeted and personalized help. Both are important the strengthens and the weaknesses, what the student are good and where the student need help, what the student are at good should

automatically continue, where the students need help. The teacher needs to step in or an intervention program need to be created to help the student learn the weakness overcome that weakness and then move on.

Intervention programs are also being treated today in the virtual world and software's are available to help students learn the weak areas and overcome their weaknesses and move on.

Topic 239

Technology–Enabled Education 5

For instance, CAT which is classroom assessment techniques driven assessments are tailored to identify each student learning level of a concept, and monitoring progress in that understanding over time. So, there are lot of classroom assessment techniques of course, there are tests, quizzes, worksheets and lots of other areas portfolios and lots of ways in which a teacher can access. But what happened after the assessment?

The assessment is done the attesting is complete. How do we know where the student needs help and where the student is good? A number 6 out of 10 does not help a student. How is the student supposed to learn? What he/she need to do? So that time that fix is better may be a 7 or 8 or 9 may be even a 10.

So, the returning work to students with only a number in it does not help the student learn from the mistakes or weaknesses that the student has made. And therefore, what the teacher needs to do is to sit with the students and counsel them work with them. In the technology-enabled classroom this assessment is automatically built in to the system or the software. So, that when a student makes a mistake it immediately dealt the students that is incorrect. Why it is incorrect? What the right response is and then puts the students into practicing more problems in the same area to make sure that the student has learned from the initial mistake the student made.

This ability also allows teachers to recognize and nimbly correct gaps in a student's understanding, bolster strengths and assist in areas of weakness. Again, we need as a teacher to focus on the good and the not so good.

So simply focusing on the not so good does not help the student identify the strengths this is where you are good this is what the computer program or the software is telling you are great at. But this is where you need help why do not you do and do more practice and the computer program or the software will give you enough practice and then put you through another assessment.

Before telling you are dine and you can move on to the next content are, next issue, next problem, or whatever, so a student is guaranteed enough practice in the are where he/she appears to be not so good fix that area ,fix that weakness before letting the student move on.

Technology also provides robust means of communication between teachers, students and parents. Again, it depends upon manner in which program is set up or the software has been built. Of course, the student benefits the most but I asked a teacher need to know what my students are doing. If the software program has a built-in teacher communicator or a parent communicator where the parent begin to also understand how their child is doing ,what the child is good at ,where the child need help and what the school the classroom the teacher and technology are doing to help that kids learn better.

It allows for timely and efficient distribution and collection of work, the sharing of a wealth learning material and resources well as collaboration and an exchange of educational dialogue between teachers and students.

Now it is important to understand that in a traditional classroom when you ask a teacher to repeat something or to teach something again and a lot of times reteaching is necessary but, if you teach the same ways you taught this concept XY two days ago, there is no sense teaching that concept again because, if the student was to gain anything from the X way, he would have gained it the first time you did.

So, repeating the same thing again and again and again, only defines infinity. You have to do it differently and unfortunately our teachers are not equipped with professional pedagogical skills to do just that. So, when you use a technology enables program that program if it needs to reteach will do it differently and because that is built-in if method a didn't work the next time method B or C or X or Y whatever will be used. So programs come with built-in multiplicities of teaching approaches

methods and strategy so a student who does not get it the first time hopefully they get it the next time and so teaching pedagogy skills built into the software program in a technology enables classroom would definitely help the student learn better when the computer or the teachers that concept or topic to the child and that is important.

Topic 240

Technology–Enabled Education 6

Many classrooms leverage forums through which students can ask questions and their fellow classmates provide answers and share information, learning from each other forums, blogs, chatroom's are good resources but a teacher needs to set these set up for whatever grade level teaching for whatever subject you are teaching you need to set this up and again when a students asks a question do not be tempted to go and give the answer right away.

Some of the student will read the question and may have the answer so this provides an opportunity for students to answer questions of their peers. This is an important learning mechanism because what students learn is through this is to ask questions and then to think and to come up with possible potentials responses. Only when a response is truly incorrect should the teacher step in and provide hints our students to think about this or that and see if a student still cant come up with the right response.

If a teacher work as a couch this will happen the teacher continues to works as an instructor this will not happen as an instructor. The teacher think it is his/ her duty to give and provide the right answers right away, it is not. It also provides parents easier, quicker and clearer insight into their child's areas of strengths and weaknesses, reinforcing their ability to assist at home.

Parents should play a vital role in the child's education. Unfortunately, in our case this is not true, because our parents are not a educated most of them. Some of them are over there this happen even in homes where our parents are not educated. Simply asking the student what happened in class today, what did you learn today, what are you doing with this computer, with this iPad, what are you trying to learn. When parents ask these kinds of questions and students and student has to respond what they are doing is they are automatically revising the work that has been done. When

this kind of revision even happens at all students learn better because now at home and a school or in a classroom same thing is happening there is a balance instead of when parents totally ignore or not in interested what a student is doing in schools.

So, the parents have to step in and play the role also critically and with technology it is way easier for parents to understand even illiterate parents have these gadgets. They are playing, they are doing all sorts of things they are sending as a method so they know what to do they understand technology and what better way then if students can explain to the parents how they are using technology to help them learn.

This allows parents also to understand strengths and weaknesses of their students so when a teacher interacts with the parents and talks about areas where the child is good and where the child is not so good parents are more accepting of what the teacher has to say about their child.

Technology also has the potential of facilitating an efficient allocation of assets by making a range of solutions available and getting around resources and time constraints. Technology is 24/7, you can do it whenever, wherever, no time constraints required. Resources if you want to find something, you want a map, you want a picture you just plug in the search engine and you will get it so resources time all these become available at your fingertips. Technology enable education is a great way to learn and the range of solutions sometimes the computer program or software will tell you ABCD, now all four are applicable. Why would you choose C, what is wrong with A, B, and D and that kind of thinking where things are so close but you have to do the fine tuning, defying differentiation is absolutely critical.

In many classrooms across the globe, teachers have the autonomy to decide on the technology they incorporate into the curriculum. I totally agree with this. A school should not tell them this is the software to use the teacher should determine software the teacher wants to use to teach a particular topic concept or skill should not be a hierarchical, top-down dictate by the school principal or the head or somebody else the teacher must have the freedom the autonomy to choose the software programs that he/she thinks would help his/her students learn better.

Topic 241

Technology–Enabled Education 7

Even in district-wide technology-enabled Education initiatives, like a tablet roll out program, it is the teachers who decide the device is utilized in the classroom. Now we have seen laptops schemes and programmed by chief minister and the prime minister. How many those laptops actually opposed to academic use in the classroom that is the teacher job the instrument the gadgets equipment is there.

The student automatically is going to use it for entertainment but the teacher also knows that so many laptops have been given out. Why do not they use that in the classroom, why do not they ask the students to bring it. Everybody in the classroom may not have it but two or three students could share one work together learn to cooperate after all, you can do technology enabled teaching even with one gadget in the classroom it is up to the teacher so the teacher has to take initiative. The teacher has to make sure that these gadgets are put to the right use.

Since every classroom is different, thanks to the abundance of options, teachers can now take a selective approach in acquiring resources that best fit the courage content, learning expectations most importantly students' needs. So, you have to look at all three aspects in deciding ,do you need a laptop an iPad or iPhone and honestly all three are equally good but, what are three things you need to focus on is the course content what are you trying to teach and will this program will this software ,will this gadgets support it. What are your learning expectations, how and what will your student lean and how will you know that your students have learned that how will you know is critical question to our most importantly the students the needs of the students?

The need is the student need to learn as much technological skills as possible and if teachers do this regularly in all or most of the courses that the student is enrolled in the exposure the experience the student gets to truly benefit him in the developing acquiring using mastering technology skills that he/she will need for the job market.

In an environment with growing classrooms, the scalability of Technology-Enabled Education can alleviate the pressure on teachers to be omnipresent. Classroom sizes are increasing 20,30,40 or 50 or 60 or 100 in a classroom and the teacher needs to be omnipresent which means visible to all

students. Is it possible realistically speaking, NO! Particularly when you have small classrooms physically and packed with students even if you have large the classroom with ample space for the teachers to move the teacher cannot be present and visible to all students all the time. But when you use technology when you have the gadgets in the classroom and technology enabled education is the norm the teacher is everywhere because the teacher then is the instrument the Machine and the software not the human teacher. The human teacher in the classroom only then needs to function as a facilitator or a coach.

So, this also has enabled teachers to be able to reach multiple students at the same time in a traditional classroom this is not possible because class timings are what about an hour and an hour with 80 students classroom even if you give one minute to each students you are not getting to all the 80 students, it is not possible

As mentioned earlier, the performance benefits of one-on-one assistance are well established. "Automated tutoring enabled by educational technology can provide students the personal assistance they otherwise might not have. Traditionally, what students do this they go to schools, colleges, academies then with technology enabled education you would need academy. Student would be able to do everything automated tutoring.

Everything is built into the program the software whatever kind of help students need and that is today what we call analytic. The computer program software is done in such a way so that the analytic are built in based on how the students moves the speed at which the student is going through the materials the rich frequency or incorrect responses that the student is making the program automatically does not analysis and moves the students into a review of reteaching and enrichment or an accelerated working environment. So individual student gets the individual kind of health then they truly need.

In Los Gatos, California's Hillbrook High, tech savvy students are assigned to be "tablet doctors" who provide their fellow classmates and teachers with technical assistance. To think that technology error free and there will be no problem not correct. Technology will have its problem instrument and gadgets will break down and which will suffer and so what to do. So, the young

people who are so much better at technology than we are, I particularly in this one case in California are used as tablet doctors they go and fix what is wrong because that means to be done you cannot throw tablets away suddenly because of some malfunctioning but you can fix what better resources to use then our students who are so good with this kind of stuff.

Topic 242

Technology–Enabled Education 8

Such a concept not only reduces the teacher's or school administration's time and effort dedicated to addressing technical issue, but such peer collaboration can also succeed in keeping students invested where other attempts have failed. Students who are good at it and you know they are good at it and you can use them it reduces the pressure on school administration. This is pure collaboration and it succeeds in keeping students invested where other attempts have failed because students realized they are needed by the school.

They want to improve, they want to do better, they want to improve and they want to do better they want to work and sure the school administration shows the teacher that they have the capability of fixing these things let them do it.

It takes the burden off the teacher it takes the burden off the schools administration and the students are more than happy to do it even if you keep it even if you keep them after school you collect these gadgets or tablets that are malfunctioning our students to stay for 20-30 minutes after school to fix them . you do not have to get students out of their classes make them miss their learning but you can do it their own time after school hours it is a good.

The role of teachers in the efficacy of educational technology is invaluable as they hold the key to unlocking the many benefits to students discussed earlier. As I said earlier it's the teacher role its what the teacher does in the classroom that is paramount whether it is a traditional classroom whether it's the technology driven classroom or it is the technology enables classroom. It is the teacher that holds the key to unlock what the benefit to the students should be. That is why because this teacher knows the students best.

The teacher is the individual who decides what gadget or instrument to use what software to use how long to use it is a flipped classroom and option how much free time should have, how much time and work should be assigned to students outside the class. Teachers must however also understand I am teaching one course, or student may have three, four five other courses, how much outside classroom work am I assigning ? even if it is virtual even if it is technology driven and technology enabled because when five different teachers for five different courses, a student is enrolled in expect so much too much out of class work it is going to burden the students and students will give us on that.

So, teachers using technology enables education should get together especially those teachers that teach the same students and figure out how much work normally about two hours of work but every other day is what is a good recommendation to use for out of class work. Of course, if a student wants to put in more there are no issues then of course you have the weekend but again remember a student also has a personal life and a social life other than an academic life.

Therefore, it behooves teachers to avail themselves of the benefits of educational technology. What this means is it is the teacher responsibility first to learn, understand and experience the technology they are putting to their students through.

Because if a student has question or concern and the teacher not able to address them it is not going to look good in front of the students so teachers must seek out opportunities today to learned the new technology and a lot of technologies I learn for my students. I also learn from my students other teachers should also learn from their students they are so good at it and when you know and when a student can say, I taught my teacher this, dis it is a wonderful boost for the teacher for the student self-esteem and the teacher performs better with the student and the students' performance better with the teacher.

Topic 243

Technology–Enabled Education 9

As the true vanguards in this transitional period, it is also a tough role. Changing habits and entrenched practices, overcoming tech-shyness and developing new skills and knowledge and

adapting to changes adds further complexity to the inherently challenged job of a teacher. On top of a it if today teachers are expected to go and learn the new technology and then to use that new technology with the students in the classroom it puts pressure. And specially the older the teacher is the longer the teacher has taught in a traditional classroom. The more difficult it is for that teacher to change, but change must have happened. Even if it is slow, change must happen.

A best way to do is the is to pair a veteran teacher with a young teacher. Pair them up, left them work together, make a team that benefit veteran teacher from young teacher. Also, young teacher learns from veteran teacher.

Consequently, it is imperative that the necessary support be duly provided to them as they negative new territory. You can't tell the teacher to go and do this and leave the teacher alone. The teacher needs support from the school, from the principal, from the education department from wherever because teacher is trying to learn something the teacher is not familiar with. May be not very happy in changing this/her hours and days and weeks and months and years of doing something one way suddenly to ask that individual to change and do something differently in a brand new way is a tough decision not only for the school administration but also for the teacher in the classroom because remember who is in the classroom?

Not the administration, it's the teacher who is going to teach the teacher who need s to learn the teacher so focus on the teacher. the teacher today needs all the help with the technology which is new, different, not something that teacher is accustomed to unlike our young learners in the classroom. Who will speed by with their gadget and their buttons with a teacher but, the teacher needs help.it is our job to help the teacher?

All of these elements are poised to engage students, give them the support they need, boost confidence and catapult student learning. So, who is the ultimate beneficiary of all this it is the stood it is not the teacher? The teacher to make the student benefit from the obviously learned experience relearn do things differently, but the ultimate benefit goes to the student and when the student benefits the teacher putting in the extra time in learning the new technology and the software and all that is worth it. Because why we are in education.

We are in education for the students if the student is the one that benefits then the teacher should do whatever the teacher need to do to help the students benefit the most. Otherwise the teacher will the left in the race in the race of technology driven, technology enabled education

For schools, this could lead to lower costs and greater manageability, and consequently effective and efficient data centers that free up resources for education application investments. When technology built in to the classroom into the teaching learning scenario, a lot of time is spent doing the right thing and less time is spent on wastage. Less time is used for filler time of activities where we are only trying to kill time.

Technology allows students to move ahead ,allows to go back, allows to stay as long as the student need and the data that we can get the analytic that the software provide us with can help our teacher help the administrators help the school and the education system learn better of what works ,what does not work, what should be done and what should not be done.

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Lesson No. 45

CHALLENGES AND REFORMS FOR TECH-SUPPORTED EDUCATION

Topic 244

Challenges of T-E Education Initiatives 1

The challenges broadly fall under four areas:

1. **Teacher Adaptation**

For a teacher this is something new. Teacher is not used to using technology in the classroom. The teacher is more comfortable with the textbook and the whiteboard. The teachers are more comfortable using the traditional form of education and teaching. So, when the teacher begins to use technology in the classroom adaptation issues will arrive. How soon can the teacher adapt, what is the frequency of the use of technology that the teacher engages in and what kinds of technology are available to the teacher to pick and choose from.so these teacher adaptation issues will be there.

2. **Student Adjustment**

Also, for the student this is a something new and the students will make to make the necessary adjustment when they make the necessary adjustment moving away from copies textbooks writing to using gadgets and technology in the classroom. It is a change and this is also a broad challenge that not only teachers also students face when moving into a technology enabled education.

3. **Technology Limitations**

Technology itself has limitations and in our cases this technology limitation is coupled and made more severe by the lack of electricity and the power shortages that happened in our institutions. So, it is a challenge without electricity this is not going to be possible and without appropriate bandwidth issues this is also not going to be possible so there will also be issues with technology.

4. **Effectiveness Tracking**

How do we track the effectiveness track the effectiveness of the technology being used? What should the teacher do what should the student do that shows that teaching and learning are

happening through the use of technology and this is important for school's classroom teachers and students. So, we will be looking in each one

Teacher Adaptation Challenges:

- Comfort with technology use a lot of ask teachers have grown up without technology. Our students on the other hand are growing up with technology that makes a difference. Lot of us teachers are not as comfortable with technology as many of our students are. That poses a problem.
- Technical know how when something goes wrong with the gadget what is the teacher supposed to do if we have wait to get technical help to fix the gadget time is wasted that makes a challenge do teachers need technical gadget training as well to teachers need little refresher programs and courses that what would help them and fix gadgets or would these personnel be available readily in schools.
- Understanding of education focused applications, a lot of us used technology primarily for entertainment to focus and change our direction into looking at education focused applications can become challenging. There is certainly lots of material available on the internet today.
- Ability to leverage technology during class instruction, how much time in class is the teachers supposed to give to teacher to talk versus technology, that has to be leverage and sometime giving up the complete control to technology is what teachers end up doing and that is not a good practice.
- Increased accessibility/ availability, the accessibility and availability of gadgets technology is increasingly more young people are getting familiar faster with newer approaches, newer, technology than a teacher are and that also poses a problem
- Perception that technology is disinter-mediating the teaching profession and dislocating teacher identity, many teachers tend to be defensive in say with technology coming into the classroom what is our need, I may not be requires anymore and so they tend to use less of it. I think teacher awareness that technology no matter what extent comes into the classroom the teacher will always be there.

Teacher Adaptation-Mitigation Strategy:

What do we do with all these problems and challenges with teacher adaptation?

- Increased awareness of benefits for teachers (less drudgery, duller tasks automated, and time to reorganize the classes. Give teachers the time and the awareness to become familiar to what is available and let them practice how to use it yes, they will make mistakes let them learn.
- Teacher training to precede technology introduction, teachers will need to be trained in what to do with technology and how to do with technology.
- Teacher involvement in technology decisions-increased ownership, when teachers are consulted by schools' heads and principals by the administration into the kind of technology that should be introduced ownership of the technology increases and the challenges would become less.
- Guidelines for communication with teachers (e-g., responses SLAs), set up some procedures of operations, some guild lines for teachers what to do when what happens when technology works and when technology does not work and finally high lightening sectors technology is always been an enabler. It is not intended to replace the age-old student-teacher interaction.
- High lightening that across different industry sectors, technology has always been an enabler. It is not intended to replace the age-old student-teacher interaction.
- Making sure the teachers understands the technology that technology is used to enable the teaching and the learning process not to replace the teaching and learning process.

Topic 245

Challenges of T-E Education Initiatives 2

As we said earlier this is something new for student too and they will need to adjust to the changing mannerism in which they are taught in the classroom.

Student Adjustment Challenges:

- Distraction factor-this is the distraction with this gadget in the hand and with so much available on the gadget other than the educational tools it is a temptation how often have we teachers seen students looking down and not looking us why they looking down because they have the gadgets in the hands and they are doing something that they should not be doing with those gadgets in the classroom.

  The distraction factor will have to be overcome by the teacher students will be distracted playing games receiving messages responding to messages from friends and just surfing on the internet using Facebook and other application is very common and our students because they have grown up with technology are so good they could actually look you. The teacher in the face and be working with the gadget underneath the desk on their laps without you even knowing that they are not paying attention to your adjustment issues must be dealt somehow
- Affordability- these gadgets may not be as cheap as we would like them to be and for many of our students these are expensive with every student not having a gadget not being able to afford to buy the gadget schools are not going to be able to provide gadgets to all individuals so that creates a challenge how do you deal with all students not having their one gadgets. How do you deal with using may be only one gadget in the classroom for the entire group of students there are ways about it? But one needs to be learned and one needs to experience and use and adapt according to the different situations that may come in any particular classroom.
- Education focused usage- Any particular teacher heard education focused usage we want these gadgets and tools to be used for education we want them to be used for teaching how do we guarantee that students will be using it with that focus in mind what can teachers do what administrations do what can schools provide so that students will begin to understand that this is meant for education it is not meant for entertainment.

Student Adjustment- Mitigation Strategy:

- Parental buy-in and awareness- Yes, we need to educate parents that technology is taking over the job market requires technology employers today are looking for people prepared with the use of technology and what to do with it and so may be they need to sacrifice may be the need to be not do something give up something in order to be able to afford these gadgets for their students or schools may need to look for donors and suppliers who would be more than happy to provide necessary number of gadgets for a particular classroom.
- Lay out technology usage guidelines for school and home- guidelines are important not only in schools but also at home because we know there are lots of gadgetry at homes that district students do for example the TV with cable networks and cable television today is a distractor at home how much time do students spend inf front of the television versus trying to study and catch up their assignments and work. So guidelines need to be laid out when and how will you be able to use technology in the classroom and when and how you will be permitted to use technology at home parents will need to begin to be little more stricter and a little more observant and vigilant as to how much time the children are spending with technology uselessly at home.
- Student training prior to technology introduction- just like the teachers' students will also need to trained in the use of technology in the classroom and this will make sure that the students understand why their teaching and learning modes are changing from paper and pencil from print into digital once they understand the purpose of this will be more open and accepting when the teachers want them to move in to the technology mode.

Topic 246

Challenges of T-E Education Initiatives 3

- Benefits awareness programs-if student understand today how the use of technology in the classroom will help them 3,4,5, years down the line when the get into the job market. They will be more than happy to work with the teacher and with technology.
- Lock down devices for specific usage -today our devices can be locked down . so only certain programs and software ,application are available to students at the certain time. So

the gadgets used in the classroom whether they are personal belongings of the student or whether they actually belonging to the school and the student are available to use it. The lock down procedures must be applied. Lockdown all programs and applications that you do not want thee student the use in the classroom. That way the student have the gadgets and only the option of using the application and programs that are open and available in the classroom

- Balance effective discipline through either self-discipline or technology controls. Discipline is an issue in the classroom and technology is good way to use it. So if you do the right things and you are completing your in time.

Technology Limitations-Challenges:

We may want technology to do wonderful things for us.But its not going to do every thing. A specially in our part of the world fluctuating electricity that may create problem that people may have major limitation.

- Device Limitations- If all students do no have this same level of device that is the problem. Because certain devices of certain version of programs and software.
- Device security (Physical and Logical)- the device needs to be secure and the person using it is responsible for the security. So whatever security measure you want to students to apply should be decline. You don't want gadgets been stolen , been lost because the replacement not going to be possible by the teachers in the classroom or by the school.
- Typing/formatting issues-difference devices work differently what you can format or what kind of soft wares are available for typing what kind of font are available all this create an issue if we want a generic program it is best if this school invest in such a device and makes all devices generic for use.
- Device interoperability-a device in works versus in home because of when issues creates because of access issues will be a problem. What we have in office the kind of software or materials of available a very different than what is available at home.

- Technology infrastructure at school/home- That differ we all do not have the same technology in infrastructure in homes. Different students depending on the locality with their live may actually have very different technology infrastructure available to them in rural areas this become even a greater issue.
- Multiple points of failure (e-g; device, connectivity, infrastructure) - Failure can happen not in one way that happen in multiple ways the device may break down ,the connectivity may breakdown the infrastructure may not supported and may sometime we forget our accounts and we cannot may work anymore.

Topic 247

Challenges of T-E Education Initiatives 4

Technology Limitations- Mitigation Strategy:

- Have a concerted technology strategy- schools should have the technology strategy though which all classrooms that are using technology operate when we have such a certain technology strategy in schools that all teachers are aware of we can budget how many classes at one time can use technology and then we can actually allocate time slots to different great that this is the time that you can use technology, bandwidth will not be over loaded and you will be able to use technology more comfortably.
- Evaluate and test interoperability of devices- You need to test and ascertain are the devices interoperable in other words, will they work in different conditions in different it works at home but it does not work in school it will serve no purpose.
- Schools to provide neighborhood Wi-Fi coverage- Today are just to Wi-Fi life without is unthinkable. So ask the neighborhood ad many people are willing to provide at a lower cost may be even free for education purposes and the neighbourhood actually chip in because remember a lot of our students that comes to us from same neighborhood
- Schools to introduce loaner programs- we can learn to student especially if schools has worked with the donor or an agency and may be got even 10,20,30 ipads for the example

that can be loaned to students and students understands this is on loan they understand they need to take care of the derives and the gadgets it must be return in the same condition at the end of the class or at the end of the day depending on loaner period.

Effectiveness Tracking-Challenges:

- Limited measurement-this is something new that we have not devised measurement tools that will help us like paper and pencil tests to determine how good this is working or not working , what kind of feedback the computer or the software programme or the application provides to the students is not what the teacher would know its only what a student would because it moves on with the next program / issue or the next question.
- Impact on student's achievement- students are achieving in a technology enabled classroom, can they write good, can they write for a certain period of time, can they discuss things at a forum and contribute to the forum , how do we determine these things. These become challenges.
- Long term vs short term impact measurement-short term this week, today,week,year long term…when you leave after 5,6 or 10 years from the school ,what will you be doing, what are we using to measure short term and long term impact of use of technology in the classroom. This opens up lot of areas for research where people doing maters and may be doctoral degree could come in and actually do the research to help us ascertain how good this initiative or program is or has been.
- Return on investment analysis- you have been put investment the schools have put the in investment you need to see the effect of the returns. What is the return of that investment,again another good area for the future research prospects.

Effectiveness Tracking- Mitigation Strategy

- Track student performance through test scores pre and post technology introduction- before you introduce technology to a class tests your students what do they know ,what can they do. And then when you finished post technology usage test them again. Whatever that time span may be you cannot do post technology things every day or every week it will take maybe a

month two months a semester a term before you you can actually determine that impact.you will need to give you self that kind of time.

- Technology focused surveys for teachers, students and school administration- To prepare a questionnaire ask the student involved the teachers involved the administration involved how it is working is it even working what would you want to continue what would you want to change and why you would want to do it,that is important when all three the administration,teachers and students are on the same page with technology enable education much better results can be observed.

Topic 248

Reforms for Tech- Supported Education 1

Involvement in technology-based educational reform efforts also had effects on the teacher themselves. Whenever you bring about change you bring about something new , the results is not only at the directed target but also at the uncorrected target.. Technology was meant to helps students but we seen that it also helps also teacher. Although technology supported classroom projects required a great deal of the teacher's own time, as well as great effort, they paid sizable dividends in terms of the teachers 'own professional growth.

When teachers became good with certain software ,gadgets, applications they were more willing to try out other and its important in education that teachers try out things before they actually bring them and use them in the classroom.

1. **An increase in their technology and pedagogical skills:**

Obviously when teachers shifted to a technology supported technology enables classroom teaching process their pedagogical skills had to change they could not teach the same way. In addition to learning about the technologies that are incorporated in their classroom activities, teachers acquired skills in setting up cooperative work groups, providing individualized coaching and orchestrating multiple parallel activities within their classrooms.

Lots of things feedback from the teacher was not even required now because the software or the application of the computer programme was providing feedback to the students on how well they were doing,where they needed help and providing the additional help was also built into these programs applications and software . So teachers roles actually took a 180 degree turn the teacher. It did not go 360 degrees because if it went 360 degrees the teacher would be the same traditional spot.

Try to learns the new methods the approaches the strategies to teach using the new technology in the classroom. So, the teachers getting better with the technology and the teaching with and through technology the impact on the students should be really good.

Topic 249

Reforms for Tech- Supported Education 2

2. **Greater collaboration within their own school.**

Teachers normally are not very happy coming together and collaborating with one another but when all teachers in a school are expected to use technology and change their teaching approaches and methods its a great way to get teachers together to collaborate to talk, work out, what happened I tried this ,I use technology today this worked this did not work and to learn from one another experiences.

The introduction of new technologies gave teachers a compelling reason to come together to think about what they were really trying to teach and how technology could support their goals, to learn about new technologies, and to plan multidisciplinary technology-supported projects. Because when you use technology to teach you are not asking for question answer.

You are asking for projects, technology is a great tool that supposed project based learning/ education. Its a great way to involve students ,teach them lifelong learning skills of decision making problems solving ,sharing,negotiating,compromising and those kinds of wonderful things that they will need to work with their real life.

3. **Contact and Collaboration with external school reform and research organizations**

There were lots of topic that lend themselves as good as research topic for the future schools. Schools are not going to do research so why not find a collage,university,NGO ,external organization that conduct educational research, ask them to come to your school and conduct a particular research.

Many technologies supported projects were funded or initiated by outside organization that worked with the classroom teachers in designing and implementing classroom applications of technology. It is good to do longitudinal studies across years to see how technology enables education is enabling teachers and students in the classrooms to work better.

Topic 250

Reforms for Tech- Supported Education 3

4. **Involvement in training and professional conferences.**

When schools introduce technology, the use of technology in that classroom, teachers were trained in what technology is for education how technology an be used for education and then teachers went and tried different aims in that classroom. Some things works something did not works, teachers kept logs and diaries of what happened ,what went well, what did not go well and over time the span of semester or a term they learned a lot. Involvement in technology related activities brought many teachers recognition, not only within their schools but also at state, national, international conferences.

Teachers gathered through their own experiences of using technology in the classroom what a great way to help other teachers learn and benefit. In education things need to be multiplied instead of being divided and subtracted what a great way to warn teachers to help teachers who are struggling and beginning and wanting to use technology in the classrooms with real life experiences from real classroom, teachers.

5. **Adequate technology access is needed for all students.**

We started with technology even in the developed world with may be one or two or three computer or laptops in a classroom. We never started even in the real world with every student having their

own device that was not possible but over time what we learned was that the more time students spent with the gadgets, machine using a particular application of software they learned better.
To the extent that there are only a few computers in regular classrooms or computers are clustered in a few labs in one part of the school, most teachers have little opportunity to, and indeed feel little responsibility for, integrating technology into their instruction.

It is concluded that a classroom needs roughly one computer for every four students if students are to have the kind of access they need to engage in significant technology-supported projects. The one to four is a very limited ratio we certainly would like to see a device for every student and today we are not even talking of computers,we are talking really of smartphones, laptops, ipad, for every every students.

This is seen as a luxury and many of our schools and classrooms will not be able to do that. in such cases we need to make sure that there is at least one computer for 4 students that way even if you have a computer lab in the school,you need to look at your largest class size,divide that by 4,to see how many machines you actually need so that students will have exposure and use with the machines.

Topic 251

Reforms for tech-Supported education 4

The sixth area of reform is teachers need time to learn to use technology and to incorporate it into their own curricular goals. You can't throw the teacher into the classroom and say go and use technology tomorrow morning, it's not going to work, the teacher may not be aware of what technology to use. So, through training, through experiences, outside the classroom, preparing the teacher to use the right technology, the right way in the classroom is critical. And for that, time is needed.

Just like students, even teachers, some will learn faster than others, some will just need more time. and school administrators and principals should be willing to give the teachers the time to work around their technology expertise. A good time to put teachers through this kind of training is the

summer break, we do have between two, two and a half to three months of break. That's a good time to put the teachers to use and help them experience the kinds of technology teachers could teach teachers using different kinds of technology, different applications, different software. See, actually try and find some of the loopholes and fix them before they actually go into classroom and use it with their students.

Particularly after the initial hurdles learning to use a new piece of hardware or software in a mechanical sense is a fairly short-term activity. Initially, it will take time. But as technology changes and evolves and becomes more efficient and quicker, learning will need to continue on the path of the teacher.

New devices, updates, gadgetry and all that the teachers will need to keep track off. But once they've overcome the initial hurdles, the learning of the updates and all that should not take that much time. It's the initial thing that will hold the teacher back. And the teacher needs to come out of that shell of being technology shy in being technology open. When the teacher is technology open and ready to embrace technology, the students will learn well with technology in that classroom.

Thinking about how technology can support one's own instructional goals, however, and learning how to orchestrate a class in which students are doing challenging projects, portions of which are technology-based take much longer.

So, two things will take more time on the part of the teacher. Getting the instructional goals linked to the use of technology. It's not just now learning the content or learning the skill, but it's also learning the technology. Because if the students don't know or understand the technology, they're not going to be able to use it.

So, the teacher needs to incorporate instructional goals that are based on technology into the lesson plan. And secondly, projects, a lot of things depend on projects. And so, the time period involved here is also challenging. As I've said many times over in the past, if it takes the teacher 10 minutes to do something, just double the time for the students make it 20 minutes. So, when you're making a plan, when you're looking at the time management aspect of a lesson plan, ask yourself, how long would I take to finish this. Two days? Well, the project the students will need four days to finish it.

Be realistic, you are the adult, you have more education, you have more experience, you are more mature, the students are not they will need more time. So just double the time you think it's going to take you to do the job, and the students should be able to do it within that time.

It is this latter kind of training that is all too often missing from technology implementation efforts. When we do technology training, we teach the technology but we don't teach the pedagogy involved with technology, the time management for projects, the instructional objectives that are technology based or pedagogical skills that need to be incorporated in any technology training for teachers. These kinds of learning need to occur over time, preferably with opportunities to observe models, to practice and to receive feedback on one's actions.

So, the trainer who's trying to teach the technology pedagogy skills to teachers must be very good himself or herself. For example, if I'm the trainer and I cannot give really good examples of technology driven objectives, how do I expect the teachers to do it? If I don't have examples of good project-based learning across disciplines, and with a time management factor involved in it how do I expect the teachers to do it? Individuals learn better when they have an example, when they have a good sample, when they have quality work to follow, they tend to do better work themselves.

Topic 252

Reform for tech-Supported education 5

The seventh reform is the system should provide rewards and recognition for exemplary technology supported activity. Once teachers are trained, and they begin to use technology in the classroom, and prepare lessons and activities based on technology, some activities will be very good and some won't. But what do you do with the very good activities that have worked, that have helped students learn better, that have helped teachers teach better, you make examples of these teachers. And a simple way of how this can happen in a school is at a faculty meeting.

Faculty meeting are not timed simply to crib about what is not working in the school. Faculty meetings should be used as professional development opportunities within the school system. So,

call a faculty meeting and ask the teacher or teachers who this week or this fortnight or this month, have done really good work with technology, and share it with the rest of the faculty.

What better way to learn than from your own colleague who has gone through and experienced and is now telling you what to do, how to do, what works, what doesn't work. Take notes, share, you could even videotape part of the lesson, you could have the activity done by the teachers.

There are lots of ways in which the school head will have to think and figured out of how to this sharing could happen at a faculty meeting. Normally, unfortunately, what I have seen as faculty meetings, honestly are a waste of time. Faculty meetings are not meant to discuss administrative issues. faculty meetings are not meant to discuss how many teachers came late this week. That's not the purpose. The purpose of a faculty meeting should be to have teachers learn from one another.

So, pick your teachers, and any school that are 2030 teachers, even if two, three, do it every week or every fortnight. even if you begin once a month with faculty meetings, I think it will go a long way. It will help teachers understand. Some teachers just like students are shy of asking questions, won't come up, won't go to the head of the principal and say, I just didn't understand this, can you help me or I tried this, it didn't work. As adults, we feel embarrassed and ashamed to admit that something didn't work. But guys, this is teaching, everything won't work. And remember, even teachers are learners, we are in the Learning Mode ourselves.

Not surprisingly, school leadership that values technology and education reform activities is associated with more widespread and sustained emphasis on these areas. What are these areas? These areas are teachers who are willing to experiment and learn firsthand and then are willing to share those experiences with their colleagues, is what the emphasis should be.

The emphasis is on sharing what I learned because I was brave enough to experiment with it. And I am brave enough to admit that it did not work. But this is what I did next. This is what I changed. This is how I modified. This is how I adapted and the next time I used it; it did work. So, when people hear success stories of teachers, they who haven't tried this before, are probably more willing now to go and try this on their own. And this is what good teaching is all about. It is all about sharing, even among the teachers.

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When we don't share, when we hide our success stories, we are the only ones that are learning, when we share our success stories, imagine 10, 20, 30 how many other faculty members learn through that experience.

Topic 253

Reforms for tech-Supported education 6

The eighth reform area is just a reminder, good curricular content must come first. In other words, when teachers are trying to teach through technology, technology cannot overcome the entire teaching. The curricular content, whatever the information, knowledge skill, concept is, has to be taught, has to be conveyed to the student.

So, we must focus on the curricular content and on technology. But the first thing to look at is content. This is what I want to teach. This is how I would normally have taught it in a traditional classroom. But with technology, this is how I could teach. Try, experiment, see how it works. But the focus has to be on the concept of content area that you're trying to teach. It can't be on the technology.

In the technology arena, you may have animation that supports it, you may have a PowerPoint that supports it, you may have a graphical representation that supports it, you may have a reading and practice activity that supports it. What are you going to use? See, as the teacher you have to make that decision of the technology tool that you could use, keeping in mind what you want the student to learn about the concept or topic. So, although in some cases, the availability of new technology may inspire projects.

It is critical that strong curriculum content drive the design of technology supported activities. I'll give you a very common example. PowerPoint, we see a lot of teachers using PowerPoint. But what are most teachers doing with the PowerPoint, the slide goes up and they're reading the PowerPoint. That's not good use of technology.

The PowerPoint is not meant for you to write in advance, instead of writing on the board and then read it out. The purpose of the PowerPoint is to help you learn. So, on the PowerPoint, there should be very little text. And you could have animations, diagrams, charts, graphs, pictures, photographs,

and those kinds of things should be there to help students understand what you're trying to teach without the words. And that is good technology enabled or technology supported, or technology driven educational practice.

So just making PowerPoint and even in classrooms at university and college level where I teach teachers ask students to make PowerPoint. But that's not the kind of PowerPoint we want. If the student also does the same thing, right everything on the PowerPoint slides and then reads it out. It's not good technology education. And unless students get this kind of exposure and experience and learn. And when they see teachers not doing that also, I think it's a good way for students to learn how to use technology appropriately.

For some, there will be a temptation to assign projects that use an exciting new technology, but have little curricular value. Starting planning with educational needs and instructional goals can provide the discipline to keep technology supported projects on track.

As technology changes, and it's changing very fast, new things are coming out. We want to try those out. And the students have already tried it out before we have. But does that mean if a student does that new thing, it is the best thing to do? No, it does not. Because, the new exciting technology may not provide curricular value. When curricular value is not provided, the use of technology does nothing to help the student learn.

If we want students to learn in the planning phase when we are writing our objectives, when you're trying to see what kind of activities we could do. We as teachers will need to keep in focus what we are trying to teach. The content area, the concept is and should be the primary focus of anything that happens in a classroom.

Topic 254

Reforms for tech-Supported education 7

The ninth reform area is: the technology project should provide opportunities for teachers to collaborate with peers. When teachers use technology, and especially when they begin to use technology, it is important to provide opportunities for them to get together with their colleagues,

with their peers to talk about what's happening, and what's working and what's not working. When these opportunities are provided, and they should be done on a weekly basis. There is no sense getting a group of teachers together at the end of a month, talk about what worked in your technology classroom four weeks ago, no teacher is going to remember that.

So, every week these teachers need to meet, there needs to be dedicated time where teachers come together to discuss with their colleagues, what technology impacts are working in their classrooms, for them. The most ambitious and successful technology supported projects, typically were planned and executed by teacher teams, rather than a teacher working alone.

Because just remember, this is something new, all the teachers are involved in the change. Alright, so when you are trying to bring about change at such a level, one brain is not going to do it.

To get 3, 4, 5, 10 brains together, let them come and develop the kind of collaborative projects that would help students learn, understand and master the concept or topic that these teachers are trying to teach. So that's a reform. Why is this a reform? because normally, teachers wouldn't come together and talk about what happens in that classroom.

After all, teaching happens behind closed doors, who knows what the teacher is doing. And so, it's considered very secretive and private. But when teachers are made to talk about what is happening in their classrooms, it's a reform, it's a change, it is something that teachers are not used to, and initially may not even be comfortable with.

If these collaborative meetings with colleagues, by teachers are to become really meaningful, it requires a very good administrator. Because, if teachers are not sharing, if teachers are not talking, the administrator needs to throw prompts, to make the teachers talk, and make them feel comfortable about admitting that this did not work. That's not the problem when things don't work. The problem is, when teachers give up when things don't work. When things don't work, it is time to reflect it is time to go back and see what could I have done differently that would have made this work. So not to give up is the key over here.

All the well-known advantages of teamwork, such as multiple sources of inspiration, expertise and energy apply to the difficult job of bringing off a student-centered classroom. When teachers work

together, they seem to plan more far reaching and ambitious activities than when they work in isolation. This is research supported. Individuals who work on their own, tend to limit what they can think, or tend to limit the ambition, or the stretch or the extent to which they would like to take a project. But when teachers work in teams, when people work in teams, you are willing to go the extra bit. You're willing to try out beyond the normal range. Why? because you have support. Why?

Because if it doesn't work, you're not the only one to blame. This entire team that put this together will have to come back, sit, thrash out and see why it didn't work, what went wrong, what could be done differently. And then after a week, 10 days, two weeks, repeat the activity to see if the modifications you made, if the changes you made to the initial plan, now make it work better.

Topic 255

Reforms for tech-Supported education 8

The final reform area is, technology should be used across subject matters and classrooms, which means across the board. Technology should be used from the early years, primary school, middle school, high school, should be used in all subject areas across. Normally when schools have a computer lab where students go once a week, that is not technology education.

If technology enabled education is to be provided, schools will need to change their timetabling, will need to change their efforts to make technology accessible and available for all students. There is a certain amount of overhead that goes with learning to use any new technology. Students need to acquire keyboarding skills and learn how to get into programs and files and to store their work in appropriate ways.

So keyboarding, now you're not writing. But if you're typing with one finger, it's going to take you forever, you need to get your keyboarding skills, you need to get your typing skills, it's a different thing.

It's a new thing, and it will have an overhead, you will need to teach the students the keyboarding skills. Yes, computer work will not be finished in one class period. So, you will need to save, retrieve, and all those wonderful things that technology allows you to do, you will need to teach to your students. So these little skills, these little natty gritty things that we take for granted, actually will have

to be taught to students. Let me honestly admit, I today still type with one finger, I can do it pretty fast after doing it for 30 years, because I was not taught, how to type or I was not taught keyboarding skills. But that's not what I tell my students to do. My students are way better at using the keyboard and their typing skills.

The more classes and grades over which this technology overhead can be spread, the better. Moreover, when technology is used across a broad range of classes, many more students find enjoyable uses for new technology applications and feel confident about their ability to learn them.

Let's say for example, a school starts using technology in grade five English. But if that's the only time students can experience the use of technology, when math or Science or History or Geography or Urdu, or Pakistan studies or whatever else is taught without technology. And the teacher that's teaching English with technology is very good at it, students are looking forward to that class. They are not interested in the math in the science and the history because it's done in the same old boring way.

So, the more overhead a school expenses out, the chances that students will begin to enjoy all of their learning experience becomes a reality. And that is what good education should be aiming at. Aiming at, students using technology in all classes, in all subject areas, at all grade levels. How that happens? not an easy thing to do but different schools will have to work within their own means to make this as accessible as possible to their students.

Costs for implementing technology supported reforms will vary from school to school, depending on the kinds of technology use the number of students and the requirements for major infrastructure investments. That is wiring and structural modification. A lot of old school buildings are not suited for good technology use because technology requires wiring and you need good electrical wiring to support it.

So, based on the kind of school, the location of the school, the number of students attending the school, the number of teacher's classrooms, the size of the classrooms, all that will make an impact on how technology enabled education will impact the teaching and learning process in those schools.

With this, we come to the end of this module on technology in education. I sincerely hope you have picked up how technology is a trend and an issue at the same time. In today's tech savvy world.

Technology is a trend because everyone is Using it, and we need to use it in education. It is an issue because it's not equally accessible to all at the same level, which favor some and does not favor some. So how will you as teachers going into classrooms to teach, treat this technology piece as an issue and a trend and how will you help change from the issue to the trend and bridge the gap? Good luck as you begin to use technology with your students in your classrooms

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