

SARVA SHIKSHA ABHIYAN

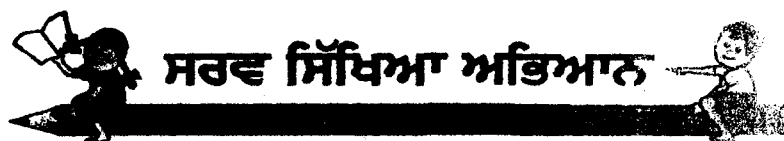
DISTRICT ELEMENTARY EDUCATION PLAN

EDUCATION FOR ALL



Annual Work Plan
2003-2004

District
BATHINDA



ਪੜ੍ਹੋ ਸਾਰੇ ਵਧੋ ਸਾਰੇ

Sarva Shiksha Abhiyan Authority

PUNJAB

VISION STATEMENT-2020

Education is a fundamental human right. It is the key to sustainable development, peace and stability of the state and the country.

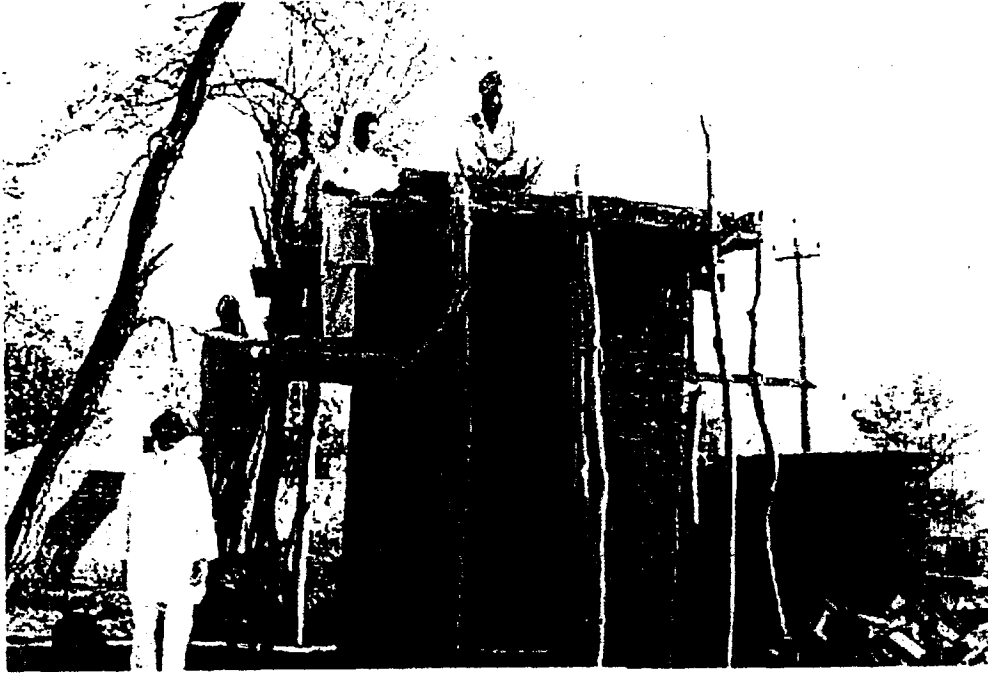
We hereby commit ourselves to the attainment of the following goals:

- i) expanding and improving comprehensive early childhood care and education, especially for the most vulnerable and disadvantaged sections of the society.*
- ii) ensuring that by 2020 all children of 6-18 age, particularly girl children vulnerable, deprived and destitute children, children belonging to difficult and backward areas, have access to and do complete secondary education of good quality.*
- iii) ensuring that learning needs of either 'all people' or 'children' are met through equitable access to appropriate learning and life skills.*
- iv) eliminating gender disparities in all levels of education by 2010, with a focus on ensuring girl's full and equal access to and achievement in school education of good quality.*
- v) improving all aspects of the quality of education and ensuring excellence of all so that recognised and measurable learning outcomes are achieved by all.*
- vi) ensuring that education is fully related to real life and environment and in consonance with the world outside the school.*

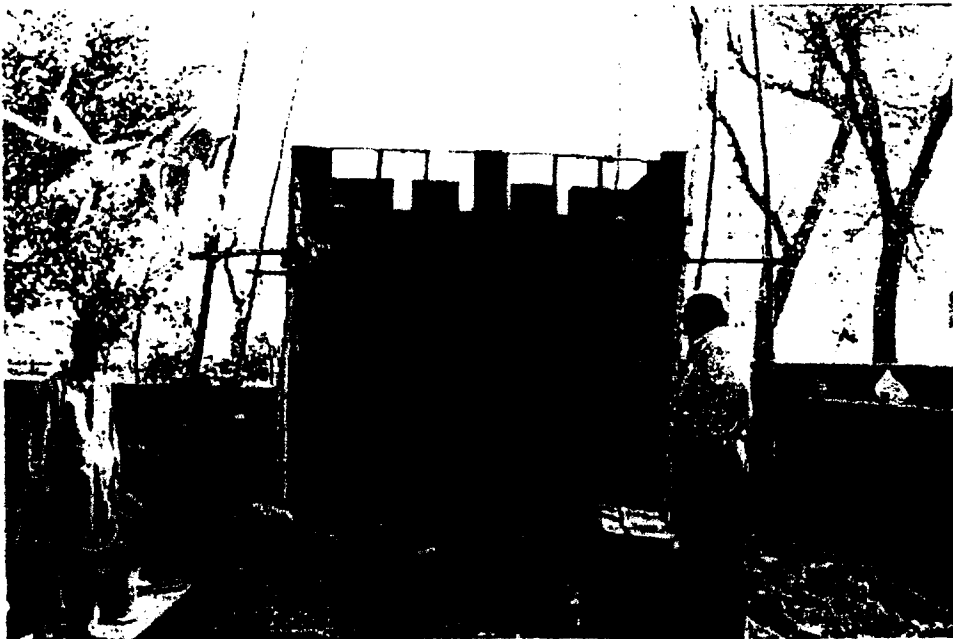
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SSA in News and through Pictures



Govt. Elementary School Phoolewala
Distt. Bathinda



Govt. Elementary School Ghanda Bana
Distt. Bathinda



Govt. Elementary School Dhapie
Distt. Bathinda



Govt. Elementary School Dhapie
Distt. Bathinda



Govt. Elementary School Salabtpur
Block Phool East, Distt. Bathinda



Govt. Elementary School Burj Ladda Singh
Distt. Bathinda

ਬਠਿੰਡਾ ਵਿਚ ਸਰਵ ਸਿੱਖਿਆ ਅਭਿਆਨ ਸੈਮੀਨਾਰ

ਬਠਿੰਡਾ (ਸਿੱਖ) ਸਰਵ ਸਿੱਖਿਆ ਅਭਿਆਨ ਨਾਲ ਦੂਜੇ ਅਧਿਕਾਰੀ/ਕਾਰਜਕਾਰੀ ਵਿਭਾਗ: ਮਿਹਨਤ, ਲਗਨ ਅਤੇ ਨੌਕ ਨਾਗੋ ਨਾਲ ਸੰਬੰਧਿਤ ਹੈ ਕਿ ਕਿਸੇ ਵਿਚ ਅਜਿਹੇ ਇਸ ਕੌਮੀ ਕਾਜ ਨੂੰ ਮਿਲਨਗੀ ਭਾਵਨਾ ਨਾਲ ਅਪਨਾਉਣ ਤੇ ਸੋ. 6 ਸਾਲ ਦੀ ਉਮਰ ਤੱਕ ਦਾ ਹਰ ਬੱਚਾ ਕੁਟਾਡਮਥ ਸਿੱਖਿਆ ਪ੍ਰਾਪਤ ਕਰ ਸਕੇ। ਇਹ ਮਹੱਲ ਬਠਿੰਡਾ ਵਿਖੇ ਸ: ਜਸਬੰਧ ਸਿੰਘ ਦਾਨੀ ਦਿੱਤਾ ਸਿੱਖਿਆ ਅਵਸਥ, (ਪ੍ਰਾਇਮਰੀ) ਕਮ ਬਿਨੈ ਕੇ ਆਡਡੀਨੇਟਰੇ ਸਰਕ ਸਿੱਖਿਆ ਅਭਿਆਨ, ਬਠਿੰਡਾ ਨੇ ਭਰਮਾਥ ਪ੍ਰਾਇਮਰੀ ਸਿੱਖਿਆ ਅਵਸਥਾ ਅਤੇ ਸਿੱਟਰ ਹੋਰ ਟੀਚਾ ਨੂੰ ਸਰਕ ਸਿੱਖਿਆ ਅਭਿਆਨ ਸੈਮੀਨਾਰ ਵਿੱਚ ਕੀਤੀ। ਦਿੱਤਾ ਸਿੱਖਿਆ ਕਿ ਪੰਜਾਬ ਦੇ ਵਿਭੰ ਚੁਣੇ ਤੇ ਸਿੱਖਿਆ ਵਿਭੰਗਪੁਰ ਵਰੀਓਕੋਟ, ਮਾਨਸਾ, ਬਠਿੰਡਾ, ਸਿਰਸੂਰ ਅਤੇ ਮੁਕਰਸਰ ਵਿਚ ਸਰਕ ਸਿੱਖਿਆ ਅਭਿਆਨ ਬਿਨੈਆ ਦੇ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰਾਂ ਦੀ ਦੇਖ-ਰੇਖ ਹੇਠ ਮੁਕਰਸ ਪਠਾਅ ਤੇ ਉਰੂ ਕਰ, ਬਿੰਡੀ ਗਈ ਹੈ ਅਤੇ ਪੰਜਾਬ ਦੇ ਡਿਨ ਓਰ ਬਿਨੈ

ਸਿੱਖ ਪਟਿਆਲਾ ਅਤੇ ਕੋਲਕਾਤਾ ਦੇ ਸਿੱਖ ਵਿਭੰਗ ਦੇ ਡਿਪਟੀ ਕਮਿਸ਼ਨਰਾਂ ਦੇ ਸਿੱਖਿਆ ਅਭਿਆਨ, ਸਰਕ ਦੇ ਪਰਿਵਾਰ ਦੇ ਵੱਡੇ ਸਿੱਖਿਆ ਵਿਭੰਗ ਚਾਖਲ ਨਹੀਂ ਹੋਏ ਜਾ ਪਹੁੰਚੀ ਸਿੱਖਿਆ ਕੁਰੂ ਹਨ, ਨੂੰ ਸਰਕ ਵਿਚ ਦਾਪੁਰਾ ਵਿਭੰਗ ਵਿਭੰਗ ਅਤੇ ਇਸੇ ਕੰਮ ਨੂੰ ਨੇਪਰੇ ਚਾਪੁਰ ਕੀਤੀ ਕੀਤੀ ਡਾ. ਸੁੰਦਰੀ ਦਿਲ ਅਭਿਆਨ ਵਿਭੰਗ ਵਿਭੰਗ ਸਿੱਖਿਆ ਚੀਫੀ ਜਾਵੇਗੀ।

ਦਿੱਤਾ ਕਿਹਾ ਕਿ ਬਠਿੰਡਾ ਵਿਭੰਗ ਵਿਭੰਗ ਸ: ਮੁਕਰਸ ਸਿੰਘ, ਡਿਪਟੀ ਕਮਿਸ਼ਨਰ, ਬਠਿੰਡਾ ਕਮ- ਸਿੱਖਿਆ, ਸਰਕ ਸਿੱਖਿਆ ਅਭਿਆਨ, ਡਿਪਟੀ ਕਮ- ਮੁਕਰਸ ਅਨਪਸੁਰਾ ਦੇ ਪਿਨਾਵ ਅਰੰਭ ਵਿਭੰਗ ਮੁਕਰਸ ਖਰ-ਘਰ ਤੱਕ ਪਹੁੰਚਾ ਕੇ ਲੋਕਾਂ ਵਿਭੰਗ ਸਿੱਖਿਆ ਨਿਮਾ ਕੇ 2010 ਤੱਕ ਹਰ ਅਨਪਸੁ ਕੰਢੇ ਨੂੰ ਅਠਵੀ ਜਮਾਤ ਤੱਕ ਸਿੱਖਿਆ ਚੋਣ ਚੋਣੀ ਨੂੰ ਪੂਰਾ ਕੀਤਾ ਜਾਵੇਗਾ।

**District Profile
and
Statistics**

Brief Profile of District Bathinda

Location

Bathinda District is located in the Central Southern part of Punjab State in the Malwa region. It forms part of Ferozepur Revenue Commissioner's Division and is situated between 29⁰-33' and 30⁰-36' north latitude and 74⁰-38' and 75⁰-46' east longitude. The district shares boundaries with Sirsa and Hisar districts of Haryana State in the south; Sangrur district in the east; and Faridkot district in the north-west. It is constituted of areas of erstwhile princely state of Patiala, which was known as the Phulkian States.

Origin of Name

The district derives its name from the district headquarters town of Bathinda, which is of great antiquity. According to Khalifa Muhammad Hassan, author of History of Patiala, its ancient name was Bikramgarh. According to Raverty, Bathinda was known as Tabarhindh (lab-ut-Twarikh). According to Ibn Batuta it was known as Batrind. The earliest mention of Tabarhindh occurs in the 'Jami-ul-Hakayat', written about 607 Hijri or 1211 AD. According to 'Ainai-Barar Bans' Bathinda was built by Bhati Rao, son of Bal Band, who became ruler of Punjab in 336 Bikrami Sambat. He also founded Bhatner. It was also called Whatinda and Bitunda which finally became known as Bhatinda. But its name was changed on the authority of Survey of India to conform to the phonetical expression, as locally pronounced.

Area

The district has an area of 3,387 sq. kms; as in 2001. The district is the seventh largest in area in the State and has population of 1181236. It is ninth highest populous district in the State (*Annexure-I*).

Climate

The district falls in the Central-Southern part of Punjab, which is distantly located from the Himalayas. The Rajasthan desert is also not far away and its heat, sand and dust storms influence its weather to great extent, the district has a very hot summer, mild rainy season and dry but bracing winter. Due to extension of irrigation facilities during the last few decades the weather has undergone some changes.

The temperature begins to rise in the district from early March and it goes on rising till it touches 46⁰ C or around in June. Hot winds blow over the land and dust storms are frequent, particularly in south-western portion. The monsoon rains commence in July with breaks and may last up to September. During the rainy season the days are hot and sultry but nights are cooler as the season progresses. Average rainfall in the district is 197.8mm (*Annexure-I*).

Towards the middle of September or early of October the weather become fine and by end of October mild cold season sets in. The period from November to February is cold, January being the severest. In winter light frost or rains may be experienced. In March weather becomes fine.

Topography

Bathinda district is a part of the Punjab Malwa plain and is sub-divided into following micro-regions on the basis of soils, topography, climate and natural vegetation, which are briefly described below:

1. Bathinda Sandy Plain

The region spreads over the parts of Bathinda, Rampura Phul and Talwandi Sabo. Being sandy plain the region is dotted with scattered sand dunes which have tendency to shift towards eastern side. The geological structure of this region is formed of Alluvium and the main soils are coarse sandy loam-to-loam, gray or red desert soils which are Orthids Fluvents. Ochrepts Psamments and Psamments Fluvents-Orthids. The maximum height 220 metres is located near village Sooch of Rampura Phul tehsil and the minimum height of 199 metres is found near village Sardargarh of Bathinda tehsil. The natural vegetation includes Kikar, Ber, Neem and thorny bushes.

It has 3 branches of main canal, namely Bathinda branch, Musa branch and Kotla branch (Sirhind canal) and other distributaries.

2. Rampura-Plain

The region spreads over the large parts of Rampura Phul and Bathinda tehsils. This region covers the eastern portion of the district. This is a plain area dotted with sand dunes which are largely concentrated in the near Bareta and Budhlada towns. The geological structure of this region consists of Alluvium and main soils of region are coarse sandy-loam to loam and loam to silty-clay loam, which are classified as Psamments-Fulvents-Orthids and Ochrepts-Psamments. Natural vegetation includes, Kikar, Ber, Neem and thorny bushes. It has Bathinda branch, Kotla branch, Odat branch and Biroke branch (Sirhind Canal) and other numerous distributories for irrigation.

River and Drains

There is no major river flowing through the district. There are some canals which flow through this district.

Drains: The important drains designed to control the floods in the district are Bareta Drain, the Sirhind Choe, the Bahadar Singh Wala Drain, the Lasara Nala, the Chander Bhan Drain and the Mudki Golewala Drain.

Canals: The district is served by two canal systems, the Sirhind canal and the Bhakra canal. The main source of irrigation in the district is the Sirhind canal.

All the three branches namely, the Abohar branch, the Bathinda branch and the Kotla branch irrigate the district. The Bhakra canal system also serves the district but a small area is irrigated.

Present Jurisdiction

Bathinda came into existence as a district with the formation of PEPSU (Punjab and East Punjab States Union) in 1948. Bathinda and Mansa tehsils till then constituted part of east while Patiala State, whereas Faridkot tehsil was part of erstwhile Faridkot state. As a result of internal change affected in PEPSU between 1951-56 i.e. before reorganization of Punjab, a portion of Phul tehsil was gained by this district which was merged into Bathinda tehsil. On 6th August, 1959 this district gained Nathana sub teshil from Ferozepur tehsil of Ferozepur district.

Presently Bathinda district is sub-divided into three tehsils: 1. Bathinda, 2. Talwandi Sabo, and 3. Rampura Phul. The district is further sub-divided into 8 community development blocks 1. Bathinda 2. Nathana, 3. Talwandi Sabo 4. Sangat 5. Phul, 6. Rampura Phul, 7. Maur and 8. Bhagta Bhai Ka. The district constitutes 9 towns and 284 villages (*Annexure-I*).

Major Characteristics of The District

Land Utilisation

In the year 1990-91 against a geographical area of 334 thousand hectares, the area of the district as per village papers is 337 thousand hectares. The two sets of areas show difference due to different methods adopted for measurement by two separate agencies. However, for the purpose of discussion in the succeeding pages we will refer to area as per villages papers only. It may be noted that out of a total area of 337 thousand hectares as per village papers, 7 thousand hectares is under forests, 30 thousand hectares is put to non-agricultural use and 1 thousand hectares is under Culturable Waste. There are 299 thousand hectares 'Net Area Sown' in the district during 2001-02, which is 98.6 per cent to total area 263 thousand hectares is sown more than once. Thus the total cropped area works out to 562 thousand hectares in the district during 2001-02 (*Annexure-I*).

Agriculture

The areas now constituting this district were earlier in Patiala state, where feudal institutions like Jagirdari and biswedari were prevalent which have since been abolished under various land reform measures introduced after independence. As a result many occupancy tenants have become proprietors. Similarly tenancy at will who were able to purchase land under the law also become proprietors. Also ceilings on land resulted in surplus lands, which was distributed among the landless cultivators on payment of compensation. For fear of being deprived of their land many landlords have taken to self-cultivation and have introduced mechanisation in agriculture in a big way.

The farmers generally cultivate their land themselves or through servants. This system is known as Khudkasht. (Self-cultivation). In some cases the land is leased out to other marginal farmers or tenants on batai (share cropping) or theka (contract). The general rate of batai is one half, depending upon the provision of irrigation, fertilizers, etc. However, the rate of theka (contract) varies from time to time depending upon the quality of land and the period of contract. As a large number of farmers own tractors some of them offer services for various agricultural operations against cash payment. This system is gaining popularity in the rural areas.

Agriculture is now being carried on commercial lines as cash crops like cotton, paddy are being raised in the farms with the help of contractual labour, which is available locally or from outside. This has imbibed scientific outlook among the farmers, which has resulted in the development of agriculture in the district.

Bathinda district is mainly an agricultural district as 70.22 per cent of its population is reported to be residing in the rural areas during 2001 Census. Further agriculture alone engaged 51.2 per cent of its main workers during 2001 Census (cultivators 30.0 per cent, agricultural labourers 21.2 per cent). Thus it would be seen that agriculture provides the single largest source of employment in the district though decline is noticeable during the last few decades.

There are two main crop seasons in a year; kharif (sauni) and rabi (hari). In between these two crop seasons additional crops are grown where conditions so permit. These are known as zaid-kharif and zaid-rabi. The kharif crops are, mainly rice, maize, bajra, sugarcane, cotton, oil seeds, pulses, etc. The rabi crops consist of wheat, gram, barley, some oil seeds, fodder crops etc. The principal cash crops of the district are wheat, rice, gram, cotton, rapeseed and mustard.

Among the two crop seasons area under kharif is higher, as during 2001-02 the district reported an area of 2,77,000 hectares under rabi against 2,85,000 hectares under kharif. Further out of 5,62,000 hectares of total cropped area of district, 3,60,000 hectares and 2,02,000 hectares are reported under food and non-food crops respectively. Thus the total cropped area is reported under non-food crops in the district is the 2nd highest for any district in the State following Ferozepur in the year 2001-02. The break up of area under various crops in the district during 2001-02 is as follows: (1) wheat 243.0 thousand hectares, (2) cotton 447.0 thousand hectares (American 414.7 thousand hectares Desi 32.3 thousand hectares). (3) paddy 99 thousand hectares.

Horticulture is gaining popularity in the district for the last few years. During 2001-02, an area of 2,189 hectares was reported under various fruit trees. The break up of area under various fruits is as follows: 1. Kinnow, 57.

hectares, 2. Grapes 806 hectares, 3. Orange and Malta 173 hectares, 4. Ber 271 hectares. 5. Guava 249 hectares other miscellaneous fruits 50 hectares. The area under orchards is very limited due to various factor such as high temperature, stormy wind conditions, unsuitability of sub-soil water for irrigation and inadequacy of canal water. Inspite of these limiting factors the district has reported sizeable area under grapes and kinnow. The area under grapes would have been much more had there been efficient arrangements for procurement of grapes, the farmers had to make their own arrangements for marketing these fruits. The grape farmers have persistently demanded the setting up of some factory to process their produce to bring them remunerative returns from grapes, which require very delicate handling before disposal.

The vegetables are also grown in the district. An area of 5,845 hectare was reported under vegetables during 2001-02. The break up of area is as follows. 1. Potatoes 3550 hectares, 2. Onions 113 hectares, 3. Winter vegetables 1072 hectares and summer vegetables 1110 hectares. The demand for vegetables is picking up in the district as the urban centres have grown over the years. The establishment of various colonies etc. under various central and state projects increased the demand for vegetables.

Besides compost (both urban and rural), cattle dung and green manures, chemical fertilizers are increasingly being used in this district. During 2001-02, 68,000 tonnes of chemical fertilizers, mainly nitrogenous(50,000 tonnes) and phosprtic (17,000 tonnes) were consumed in the district for growing improved varieties of wheat, paddy surgarcae, cotton, etc. The farmers are, however, becoming conscious of the deletetious effects of reckless use of the chemical fertilizers in their farms. The farming scientists are required to provide them with some alternative nutriative soil agents so that their crop yields do not suffer.

Irrigation

The main sources of irrigation are the canals as the rains are low and erratic even during the monsoons. Also the sub-soil water is low and brackish, which is considered unsuitable for irrigation. Besides the canals, the government has sunk and energised 13958 tubewells as on 31st March, 2001 which augment the sources of irrigation in the district. Irrigation by well is also resorted to but to a limited extent. The irrigation is done mainly from Sirhind canal (Bathinda branch, Musa branch, Kotla branch, Odat branch, Biroke branch and New Dhodal branch). But some areas are also irrigated from Bhakra canal and other distributor (Dhapali, Phul, Gumman, Bangi, Bhadaur, Raonta, Joga Bhikhi and Sunam).

However, during the year 2001-02 the net irrigated area reported was 2,94,900 hectares, out of which 2,29,500 hectares from government canals and 65400 hectares from tube wells and wells. Thus percentage of net area irrigated to net area sown worked out of 98.6 per cent for this district during 2001-02.

Also during 2001-02 out of 5,62,000 hectares gross cropped area 5,52,900 hectares was irrigated. Thus the percentage of gross irrigated area to gross cropped area worked out to 98.4 per cent for Bathinda during 2001-02 (*Annexure-I*).

Animal Husbandry

Livestock continues to be a valuable possession of the farmers inspite of the agricultural economy is heading towards mechanization. The district can boast of a fairly rich cattle wealth. According to the 1997 livestock census there were 1,31,700 cattle, 2,28,900 buffaloes, 2,700 horses and ponies, 2,100 donkeys, 300 mules, 77,100 sheep, 53,700 goats, 21,400 camels, 2,700 pigs, total 5,20,600 animals. There are 87 Veterinary Hospitals, 88 permanent outlaying dispensaries and insemination units in the district (*Annexure-I*).

The poultry birds have recorded an increase from 1,75,300 birds to 3,16,600 birds in 1997. The poultry farming is now being practiced on scientific lines, which is evident from the large number of poultry farms, found in the district. This has been made due to acceptability of egg as a vegetarian food.

In order to provide good quality meat to the general public 11 recognised slaughter houses were functioning in the district during 2001-02 where 28,771 animals (26,099 sheep and goats, 2,672 pigs) were slaughtered.

A 1.25 lakhs litre capacity milk plant was located at Bathinda during 2001-02. It had 5 chilling centers attached to it. It not only collected milk from the villagers at the remunerative price but also processed and supplied milk and various milk products to the general public throughout the year at reasonable prices.

Pisciculture has been taken up in a big way in the district. An area of 552 hectares was stocked with fish (*Annexure-I*) during 2002. One Fish Seed Farm and 1 Fish Seed Nursery was located in the district. In these 3.86 lakh seeds were produced for distribution among the fish farmers of the district.

Industry

During the princely times there was not much industrial activity in the district. Village industries like handloom weaving, oil extraction by wooden kohlus, manufacture of agricultural implements, juti making, baan making, and shakar manufacture, calico printing and phulkari making were in vogue in the rural areas. Durries in floral designs were manufactured in the urban centers like Bathinda, Rampura Phul, etc. Calico printing was popular in Talwara Sabo and Sardulgarh. There was a colony of potters (Kumhars) at Bathinda who produced quality earthenware, especially surahis, Desi juties (country shoes) of good quality were produced at Bathinda and some other centers. Phulkari making was done at Bathinda. Phukaries were produced at Rampura Phul.

Some industrial units in small-scale sector located in the district are:

1. Cotton ginning and pressing, 2. Agricultural implements, 3. Sewing machines and parts, 4. Steel rerolling mill, 5. Wood and Machine screws, 6. Electric goods, 7. Radio transistors and sound equipment. 8. Conduit pipe and Plastic goods.

Among the medium and large scale industrial units there has been quite an expansion. The various medium and large scale units located in the district are: 1. Flour Mill, 2. Milk Plant, 3. Sugar Mill, 4. Chemical Fertilisers, 5. Textile Mills, 6. Oil Mills, 7. Cement Plant, 8. Rice Shellers, 9. Dal Manufacturing Units and 10. Railway Workshop, Bathinda

In the year 2002 there were total 462 registered working factories in the district, (*Annexure-I*), which employed 14,660 workers on an average. Further during the year the district reported 1242 workers per lakh population. (*Annexure-I*)

Electricity

The erstwhile rulers were well aware of the technological changes taking place in the world. They, therefore, were the first to in their areas in the beginning of the last century. The private suppliers of electricity were replaced by the state government Public Works Department. However, after some time the responsibilities of supplying electricity was bestowed on the Punjab State Electricity Board, Patiala.

In the year 2001-02 district consumed 662.60 million units of electricity (*Annexure-I*). The break up by various sectors of electricity consumed in the district is as follows: 1. Domestic 180.37 million units, 2. Commercial 34.46 million units, 3. Industrial 181.36 million units, 4. Agricultural 207.78 million units, 5. Others 58.63 million units. During 2001-02, the district consumed 3.09 percent of the total state's consumption. The percentage of households using Electricity in the district was 82.17 percent as in 2001-02 as out of 215676 house holds 177222 were electrified.

The government has set up a thermal plant (Guru Nanak Dev Thermal plant) at Bathinda to make available electricity to various types of consumers as the district was distantly located from the hydro power stations of Satluj and Beas river system. Further thermal power generation was necessitated to avoid fluctuations during the winter months when less electricity was generated in the hydro power stations. This plant has come up in three stages. The first stage envisaged setting of two units 110×2MW of 220 Mega Watt capacity. The second stage envisaged setting up two more units 200×2MW 400 Mega Watts. The third stage envisaged setting up of two more units (5th and 6th of 210 Mega Watt capacity each) with 420 Mega Watt capacity. The first two stages have been completed since long. Now the third stage has also been completed. Thus

the GNDTP, Bathinda has a total installed capacity of 1040 Mega Watt in all. The total generation during the year 1986-87 was 2,267,21 Million Units.

It was felt by the Energy Planners that to meet ever-increasing demand for electricity another thermal plant should be set up. Consequently work was started on the Guru Hargobind Sahib Thermal plant at village Lehra Mohabat, this thermal plant will have a capacity of 429 MW. Its first units were commissioned by December 1997. The work on this project is progressing as per schedule; with the completion of this project the district will be a leading district in electricity generation in the state.

Minerals and Mining

The district is poor so far as mineral wealth is concerned. Some Kankar (calcareous nodules) is found at some places, particularly in Utar. It is for road construction and is also burnt for lime. Black clay from which bricks are made also occurs in small quantities. Fine white clay is also found which is used for white washing. In some areas Shora (saltpeter) is extracted but is limited to only few pockets bordering Faridkot district, where patches of Kallar have appeared.

Communications

The means of communication such as roads, railways, waterways, post and telegraph, telephone etc. play an important role in the development of any area. The district is well served in both roads and railways. The Bathinda railway junction is one of the biggest junctions in the State. It is from here that 7-railway lines fan out in various directions. The seven railway lines passing through this district are: 1. Bathinda-Ferozepur railway line 2. Bathinda-Sriganganagar railway line, 3. Bathinda-Jakhal-Delhi railway line, 4. Bathinda-Rajpura railway line, 5. Bathinda-Kot Kaputra-Fazilka railway line, 6. Bathinda-Hanumangarh-Bikaner railway line, and 7. Bathinda-Sirsa-Rewari railway line.

In the year 2001-02 there were 2,177 km of roads maintained by PWD (B & R), Punjab, out of which 110 km was under the National Highway whereas the remaining 2,067 km was provincial highway.

Taking 2,597 km. of road length into consideration, there were 77 km of roads per 100sq.km of area and 220 km of roads per lakh population in the year 2001-02. No. of villages linked with roads was 240. So percentage of villages linked with roads worked out 100 percent.

The important roads in the district are: 1. Bathinda-Malout road, 2. Bathinda-Kot Kapura road, 3. Bathinda-Talwandi Sahbo road, 4. Bathinda-Muktsar road, 5. Bathinda-Dabwali road, 6. Bathinda-Sunam road, 7. Bathinda-Barnala road, 8. Mansa-Barnala road, 9. Mansa-Sirsa road, 10.

Budhlada-Fatehabad road, 11. Budhlada-Munak road, 12. Rampura Phul-Moga road etc.

A comparison of number of different type of vehicles during 1990-91 and 2001-02 reveals that during 1991-2002 there is increase in number of road vehicles from 73196 in 1991 to 141609 in 2002. The passenger vehicles registering and increase from 35448 vehicles to 85131 vehicles.

There is a good network of Post and Telegraph in the district. The telephone facilities have also been improved throughout the district barring few pockets here and there. In 2001-02 there were 161 Post Offices (*Annexure-I*) 14 Telegraph Offices, 83 Telephone exchanges and 1132 Public call offices.

Trade and Commerce

The areas constituting present day Bathinda district were known as jungle where desert like conditions prevailed. But Bathinda being an important centre of halt, enroute Delhi, came to assume importance as a centre of both administration and trade and commerce. It further developed into an important centre of railways as seven railway lines meet here from different directions. The extension of canal irrigation with building of Sirhind canal and Bhakra canal systems ushered in prosperity development resulted in the emergence of grain markets all over the district which gave much needed fillip to the trade and commerce in the district. The position further developed when government built up an excellent road network in the district

Though the wholesale and retail trade is mostly in the private hands there is a District Wholesale Cooperative Marketing and Supply Society at Bathinda, which undertakes wholesale supplies of agricultural implements, seeds, fertilizers, pesticides, kerosene oil, sugar and edible oil, etc. to the farmers/members.

During 2001-02 there were 8 marketing cooperatives, 236 milk supply cooperatives, 287 weavers cooperatives, and 27 consumers cooperatives, in the district. Besides there are number of cooperatives consumer stores in the district. In order to ensure availability of essential commodities, such as wheat, wheat flour, rice, sugar, kerosene oil and cheap cloth to poorer sections of the society in rural as well as in urban areas at reasonable rates the government has introduced State trading. Under this scheme number of fair price shops are being run either through cooperative societies or private traders where essential commodities are supplied to general public at subsidised rates under Public Distribution System (PDS.)

Forestry

Bathinda district falls under the jurisdiction of Divisional Forest Officer, Bathinda. Due to the rapid extension of agriculture the area under forest has declined appreciably during the present century. The district was known as

jungle once but jungles are no longer to be seen anywhere. The break up of area under various types of forest in the district during 2001-02 is 67 sq. km. under protected forests, 8 sq. km. unclassified. Thus total area under forests was 75 Sq. km (*Annexure-I*). The percentage to total area was 2.22 percent.

Medical and Public Health

Ayurvedic and Unani systems of medicine were popular before the introduction of Allopathic system by the erstwhile rulers, who took pains in opening hospitals and dispensaries at various important places in the district. Faith curing and quackery was also popular with the people but it has since lost popularity. In orthopaedic cases (bone fracture) village sianas/pahlwans were consulted but their popularity has also declined appreciably. The homoeopathic system is last to arrive and it has become popular in the urban areas in treatment of children and patients of chronic diseases.

In the year 1960-61 there were 36 hospitals and dispensaries, in addition to Ayurvedic dispensaries in the district, which has made appreciable progress in the number of medical institutions. As on 1st April, 1981, there were 150 medical institutions in the district out of which 124 were in urban areas. In 2001-02, there were 117 Medical Institutions (89 Rural, 28 Urban). Out of these 116 belonged to State Govt. and only 1 belonged to Voluntary Organisation. Number of Dispensaries in rural areas was 60 and 18 in urban areas. There was total 12 hospitals out of these 7 in urban areas and 5 in rural areas (*Annexure-I*) 81 Dispensaries and 22 PHCs.

The incidence of fluorosis is fairly high in certain parts of the district due to fluorine content of water drawn from wells. This produces changes in teeth and bones. In acute cases bones thicken and the body becomes stiff resulting in paralysis and premature death. Therefore, preventive measures were required to be taken for the supply of protected drinking water in problematic villages of the district. In the year 2002, 279 villages were identified as water scarcity villages, out of which protected drinking water schemes were implemented in 277 villages. The scheme has since been implemented in the remaining 2 villages also. It is hoped that this will go a long way in checking the incidence of fluorosis in the district in future.

Education

Before the introduction of modern education on the lines of the British, teaching was done on religious lines in the following three systems; 1. Hindu system, Sikh system and Muslim system. The Hindu system comprised Chatshalas/patshalas run by Pandits in the dharamsalas of temples where instructions were imparted in Hindi. The Sikh system comprised teaching by the Bhai/Granthis in the gurudwaras/dharamshalas in Gurmukhi. In the Muslim system Maulvis taught Arabic/ Persian/ Urdu in the madrassa/ maktabas/ mosques.

In the post-independence period tremendous progress was made in the opening of number of educational institutions and provisioning of staff. The position of educational institutions as on 30th September, 2002, is as follows; Arts, Science, Commerce and Home Science Colleges 9 (5 boys, 4 girls); Engineering, Technology and Architecture College 1, Senior Secondary Schools 84 (76 boys, 8 girls); High Schools 120 (109 boys, 11 girls); Middle Schools 129 (127 boys, 2 girls); Primary Schools 483 (483 boys); Polytechnic (1 boys); Technical Industrial Art Craft Schools 3 (1 boys, 2 girls). It would be noticed that notable increase has taken place in the number of Senior Secondary and Primary Schools in the district during the last decade (*Annexure-III to XIV*).

Bathinda is now receiving due attention in the setting up of educational institutions. The Punjabi University, Patiala, has established Guru Kashi Institute at Bathinda. It has also started Regional Campus of the University at Damdama Sahib, which has become the nucleus of the professional courses. A Government Engineering College has also come up at Bathinda, where instructions in degree courses in a Engineering are imparted. The Government Polytechnic, Bathinda, imparts instruction for diploma courses.

In spite of large number of educational institutions located in the district the district could not make much headway in literacy as it reported the lowest literacy rate of 61.51 percent (Rural 55.30 percent and urban 75.96 percent) 68.31 percent male (Rural 55.30 percent and 75.96 percent), 53.76 percent female (Rural 47.16 percent and urban 69.19 percent) during 2001 census. (*Annexure-XI*).

Occupations

Bathinda district occupies the tenth position in the urbanisation, as it reported 29.78 per cent urban population during 2001 Census, (*Annexure-I*) resulting in more occupational varieties in the district.

If we take into consideration the percentage we notice that in 2001 census there were are 34.5 per cent (51.7 per cent male, 14.7 per cent female) main workers in the district. If we study percentages of main workers by Industrial Categories we notice that there are 30.0 percent cultivators (35.1 male, 18.1 per cent female); 21.2 per cent agricultural labourers (20.7 per cent male, 22.5 per cent female).

Miscellaneous Activities

Though this district was declared industrially backward long back but it could not make rapid progress in industries due to its location. The government has made special efforts to generate sufficient power for supply to industries

and agriculture. Besides expending the Guru Nanak Dev Thermal Plant at Bathinda efforts are afoot for setting up a second thermal plant at Lehra Mohabat located on Bathinda-Rajpura railway line. With its completion the district will emerge as the biggest centre of power generation in the State, surpassing even Rupnagar District.

Special stress is being laid on the development of this district in education. An Engineering College has been set up by the State Government at Bathinda. The University has also opened Guru Kashi Institute at Bathinda and a Regional Campus at Damdama sahib (Talwandi Sabo). This Regional Campus will serve as a nucleus centre for professional courses in the district. There is, however, need that people change their attitude towards education as is the case in educationally advanced district of Jalandhar, Ludhiana and Hoshiarpur.

District: Bathinda Primary Statistics		
S.NO	ITEM	
1	Area	3385 sq.km.
	Tehsils	3
	Sub Tehsils	4
	Blocks	8
	Towns	9
	Inhabited villages	284
2	Population (2001)	
	Total population	1181236
	Rural population	829447
	Percentage to total Population	70.22%
	Urban population	351789
	Percentage to total Population	29.78%
	Density	349 per sq. km.
	Literate and educated persons	637048
	Literacy	61.51%
	Female per 1000 male	865
	Total Workers	498379
	Main Workers	407882
	Marginal Workers	90497
	Non- Workers	682847
	Break up of Main Workers	
	I) Cultivators	149678
	II) Agriculture Labourer	105832
	III) Manufacturing, Processing, servicing and Repairs in Household Industry	13311
	IV) Other Services	229558
3	Local Bodies(2001-2002)	
	I) Zila Parishads	1
	II) Municipal Committees	8
4	Climate	
	Average Rainfall	197.8mm
5	Agriculture (2001-2002)	
	Net Area Sown	299000 hect.
	Area Sown more than once	263000 hect.
6	Irrigation (2001-2002)	
	Net Area Irrigated by:	
	Govt. Canals	229500 hect.
	Wells/Tubewells	65400 hect.
	Total	294900 hect.
	Percentage of net area irrigated to net area sown	98.6%
	Gross Area Irrigated	552900 hect.
	Percentage of gross irrigated area to gross cropped area	98.4%
7	Animal Husbandry (2001-2002)	
	Veterinary Hospitals	87
	Permanent Outlaying Dispensaries & Insemination Units	88
	Area Stocked with fish	552 hect.
	Total Live Stock (Live Stock Census 1997)	520600
	Total Poultry (Live Stock Census 1997)	316600
8	Energy (2001-2002)	
	Consumption of Electricity	662.66 million kwh
9	Forest (2001-2002)	
	Area under State Forests	75 sq. km.
	Area under Private Forests	Nil
	Total area under Forests	75 sq. km.
10	Industries (2001-2002)	
	Regd. Working Factories	462
11	Medical and Health (2002-2003)	
	Hospitals	12
	Dispensaries	81
	P.H.Cs.	22
	Ayurvedic and Unani Institution	28 (27+1)
	Homoeopathic Institutions	7
	Beds installed in Medical Institutions (Allopathy)	992
12	Co-operation (2001-2002)	
	Co-operative Societies	1055
	Primary Agricultural Credit Societies	164
13	Banking (2001-2002)	
	Scheduled Banks & Cooperative Bank	161
14	Miscellaneous(2001-2002)	
	Post Offices	161
	Police-Stations/ Police Posts	16 (15+1)

Source : Statistical Abstract of Punjab

District: Bathinda - Demographic Profile		
	1991	2001
Population-Total	985301	1181236
Male	522961	633249
Female	462340	547987
Rural	719511	829447
Male	381081	444126
Female	338430	385321
Urban	265790	351789
Male	141880	189123
Female	123910	162666
Sex Ratio-Total	884	865
No. of Females per 1000 Males		
Rural	888	868
Urban	873	860
No. of Literates-Total	381877	637048
Male	234893	376695
Female	146984	260353
Rural	234354	400621
Male	148018	240737
Female	86336	159884
Urban	147523	236427
Male	86875	135958
Female	60648	100469
Literacy Rates	43.03	61.51
Male	50.55	68.31
Female	34.51	53.76
Rural	36.42	55.3
Male	44.02	62.46
Female	27.81	47.16
Urban	65.87	75.96
Male	73.11	81.88
Female	57.67	69.19
0-6 Population-Total	257505	145511
Male	138099	81773
Female	119406	63738
Rural	198693	104977
Male	106074	58688
Female	92619	46289
Urban	58812	40534
Male	32025	23085
Female	26787	17449
SC Total-1991	290371	N/A
Male	154952	N/A
Female	135419	N/A
Rural	229631	N/A
Male	122651	N/A
Female	106980	N/A
Urban	60740	N/A
Male	32301	N/A
Female	28439	N/A
Projection 2002		
Total	1202802	

Source : Statistical Abstract of Punjab

District Bathinda																
Number of Recognised Institutions																
Type	1998				1999				2000				2001			
	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions	Boys	Girls	Total	% of Girls to total Institutions
Universities																
Colleges.	4	4	8	50.00	5	4	9	44.44	5	4	9	44.44	5	4	9	44.44
Engineering, Technology and Architecture Colleges.	1	1	2	50.00	1		1	0.00	1		1	0.00	1		1	0.00
Medical Colleges (Allopathic Only)																0.00
Teacher's Training Colleges (B.ed.)													1		1	0.00
Senior Secondary Schools	51	5	56	8.93	50	6	56	10.71	51	7	58	12.07	76	8	84	9.52
High Schools	103	11	114	9.65	106	12	118	10.17	106	11	117	9.40	109	11	120	9.17
Middle Schools	104		104	0.00	112		112	0.00	115		115	0.00	127	2	129	1.55
Primary Schools	432		432	0.00	432		432	0.00	470		470	0.00	483		483	0.00
Pre-Primary Schools																0.00
Elementary Teacher's Training Schools	1		1	0.00	1		1	0.00	1		1	0.00	1		1	0.00
Polytechnic Institutions	1		1	0.00	1		1	0.00	1		1	0.00	1		1	0.00
Technical Industrial Art Craft Schools	1	2	3	66.67	1	2	3	66.67	1	2	3	66.67	1	2	3	66.67

Source : Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

District Bathinda																
Number of Working Teachers in Recognised Schools																
Type	1998				1999				2000				2001			
	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers	Male	Female	Total	% of Female to total Teachers
Universities																
Science Colleges.	120	129	249	51.81	129	103	232	44.40	132	120	252	47.62	136	161	297	54.21
Engineering, Technology and Architecture Colleges.	57	14	71	19.72	59	9	68	13.24	63	14	77	18.18	63	14	77	18.18
Medical Colleges (Allopathic Only)																
Teacher's Training College (B.ed.)													5	2	7	28.57
Senior Secondary Schools	690	826	1516	54.49	706	811	1517	53.46	643	917	1560	58.78	753	1001	1754	57.07
High Schools	716	1114	1830	60.87	746	1259	2005	62.79	732	1230	1962	62.69	657	1248	1905	65.51
Middle Schools	320	481	801	60.05	356	486	842	57.72	321	532	853	62.37	317	659	976	67.52
Primary Schools	728	1385	2113	65.55	810	1288	2098	61.39	752	1348	2100	64.19	733	1328	2061	64.43
Pre-Primary Schools																
Elementary Teacher's Training Schools	9	12	21	57.14	9	12	21	57.14	8	12	20	60.00	7	13	20	65.00
Polytechnic Institutions	30	11	41	26.83	31	15	46	32.61	35	16	51	31.37	36	15	51	29.41
Technical Industrial Art Craft Schools	54	18	72	25.00	52	19	71	26.76	50	20	70	28.57	51	22	73	30.14

Source : Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

District Bathinda																
Number of Students																
Type	1998				1999				2000				2001			
	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment	Boys	Girls	Total	% of Girls to total enrolment
Ph.D.																
M. Phil.																
M.A.	38	12	50	24.00	55	20	75	26.67	20	41	61	67.21	43	37	80	46.25
M.Sc.									24		24					
M.Com.																
B.A / B.A. (HONS.)	2187	2169	4356	49.79	2941	2346	5287	44.37	3273	1862	5135	36.26	3725	2980	6705	44.44
B.Sc./ B.Sc. (HONS.)	279	301	580	51.90	286	308	594	51.85	593	421	1014	41.52	406	376	782	48.08
B.Com./ B.Com. (HONS.)	546	695	1241	56.00	581	695	1276	54.47	593	421	1014	41.52	556	520	1076	48.33
B.E./ B.Sc. (Eng.) / B.Arch. / B. Tech.	917	275	1192		917	237	1154		830	279	1109		830	279	1109	25.16
M. B. B. S																
B. Ed.													28	31	59	52.54
Senior Secondary School	25486	15904	41390	38.42	24623	16984	41607	40.82	24687	17626	42313	41.66	27951	20041	47992	41.76
High School	27450	22351	49801	44.88	29200	24222	53422	45.34	28667	24120	52787	45.69	27590	23600	51190	46.10
Middle School	7459	5753	13212	43.54	8615	6624	15239	43.47	9262	6962	16224	42.91	10619	7193	17813	40.38
Primary School	53370	48420	101790	47.57	54038	46467	100505	46.23	57346	49318	106664	46.24	56417	48316	104733	46.13
Pre - Primary School																
Elementary Teacher's Training School J.B.T.	101	100	201	49.75	102	102	204	50.00	52	52	104	50.00	97	102	199	51.26
Polytechnic Institutions	401	78	479	16.28	442	84	526	15.97	403	87	490	17.76	392	56	448	12.50
Technical Industrial Art and Craft School	449	172	621	27.70	499	163	662	24.62	499	153	652	23.47	512	162	674	24.04

Source : Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

District Bathinda																	
No. of Schedule Caste students																	
Type	1998				1999				2000				2001				
	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment	Boys	Girls	Total	% of SC to total enrolment	
Ph.D.																	
M. Phil.																	
M.A.	5	2	7	14.00	5	5	10	13.33	5	3	8	13.11	7	9	16	20.00	
M.Sc.																	
M.Com.																	
B.A / B.A. (HONS.)	222	222	444	10.19	323	224	547	10.35	287	191	478	9.31	277	278	555	8.28	
B.Sc/ B.Sc. (HONS.)	23	34	57	9.83	22	43	65	10.94	22	12	34	3.35	27	29	56	7.16	
B.Com/ B.Com. (HONS.)	25	39	64	5.16	33	33	66	5.17	12	10	22	2.17	20	16	36	3.35	
B.E/ B.Sc. (Eng.) / B.Arch. / B. Tech.	143	22	165	13.84	150	18	168	14.56	58	23	81	7.30	58	23	81	7.30	
M. B. B. S																	
B. Ed.													6	6	12	20.34	
Senior Secondary School	5479	3457	8936	21.59	4953	3382	8335	20.03	5148	3939	9087	21.48	6318	4658	10976	22.87	
High School	5003	4157	9160	18.39	5669	4337	10006	18.73	5412	4344	9756	18.48	5095	4509	9604	18.76	
Middle School	1851	1551	3402	25.75	2177	1555	3732	24.49	2114	1679	3793	23.38	2520	1870	4390	24.64	
Primary School	23377	19426	42803	42.05	23214	20641	43855	43.63	24519	21240	45759	42.90	25369	22912	48281	46.10	
Pre - Primary School																	
Elementary Teacher's Training School J.B.T.	26	24	50	24.88	26	25	51	25.00	14	12	26	25.00	28	26	52	26.13	
Polytechnic Institutions	98	14	112	23.38	109	11	120	22.81	112	10	122	24.90	118	15	133	29.69	
Technical Industrial Art and Craft School	115	40	155	24.96	128	20	148	22.36	130	29	159	24.39	132	31	163	24.18	

Source : Statistical Abstract of Punjab

1. These figures relate to the state statistical Abstract and are not in conformity with the household survey conducted by the Department
2. For the purpose of District plan Number of School and Enrolment has been take as per survey figures

Annexure -VII

Enrolment by Department District Bathinda												
Description	2000						2001					
	State Government Schools			Total Enrolment (Recognised Schools)			Total Enrolment (Recognised Schools)			SC Enrolment (Recognised Schools)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Primary	43516	38946	82462	71247	58677	129924	70505	57583	128088	27382	24561	51943
Middle	18500	16819	35319	27610	22880	50490	29930	24705	54635	8059	6530	14589
<i>Elementary</i>	62016	55765	117781	98857	81557	180414	100435	82288	182723	35441	31091	66532
High School	8797	7763	16560	13694	11169	24863	13368	11299	24667	2745	2181	4926
Sr. Secondary	4152	3628	7780	5600	4279	9879	6242	4501	10743	1047	631	1678
<i>Secondary</i>	12949	11391	24340	19294	15448	34742	19610	15800	35410	3792	2812	6604
Total (I-XII)	74965	67156	142121	118151	97005	215156	120045	98088	218133	39233	33903	73136

Source : Statistical Abstract of Punjab.

District Bathinda Enrolment by Department						
1999	State Government Schools			Total Enrolment (Recognised Schools)		
	Male	Female	Total	Male	Female	Total
Primary	43910	39451	83361	67111	55272	122383
Middle	19068	16887	35955	27422	22795	50217
Elementary	62978	56338	119316	94533	78067	172600
High School	9332	7947	17279	14309	11228	25537
Sr. Secondary	4244	3323	7567	5783	3936	9719
Secondary	13576	11270	24846	20092	15164	35256
Total (I-XII)	76554	67608	144162	114625	93231	207856

Source : Statistical Abstract of Punjab.

Annexure -IX

District Bathinda						
Enrolment in rural schools (Recognised- total) 2000-2001						
Year	Enrolment in Rural School			% of Enrolment in Rural to total enrolment		
	Male	Female	Total	Male	Female	Total
Primary	51758	40937	92695	75.23	76.97	75.99
Middle	21679	17192	38871	70.05	70.4	70.20

Source : Statistical Abstract

District Bathinda

Literacy Percentage of the Scheduled Castes and Non-Scheduled Castes (1991)			
	Population	No. of Literates	Literacy Percentage
Total (SC+Non SC)	985301	381877	38.76
Male	522961	234893	44.91
Female	462340	146984	31.79
Scheduled Caste Population			
Total	290371	75830	26.11
Male	154952	54041	34.87
Female	135419	21789	16.09
Non-Scheduled Caste Population			
Total	694930	306047	44.04
Male	368009	180852	49.14
Female	326921	125195	38.29

Source : Census of Punjab, 1991

Annexure -XI

District :Bathinda

Literacy rates by residence and sex- 2001										
Tehsil Code	Tehsil	Literacy Rate								
		Total			Rural			Urban		
		Person	Male	Female	Person	Male	Female	Person	Male	Female
067	Rampura Phul	58.42	64.18	55.44	55.53	61.27	49.11	73.73	79.58	88.95
065	Bathinda	66.22	73.21	58.13	57.87	65.68	48.82	77.92	83.79	71.15
066	Talwandi Sabo	53.59	60.85	45.46	50.72	58.23	42.31	67.05	73.17	60.23
02	<i>District</i>	<i>61.51</i>	<i>68.31</i>	<i>53.76</i>	<i>55.30</i>	<i>62.46</i>	<i>47.16</i>	<i>75.96</i>	<i>81.88</i>	<i>69.19</i>
	<i>State</i>	<i>69.95</i>	<i>75.63</i>	<i>63.55</i>	<i>65.16</i>	<i>71.70</i>	<i>57.91</i>	<i>79.13</i>	<i>82.97</i>	<i>74.63</i>

Census data

Annexure XII

District Bathinda						
Projected School age population						
Year	6-10			11-13		
	Boys	Girls	Total	Boys	Girls	Total
1999	68429	60215	128644	39706	35089	74795
2000	69158	60701	129859	39512	35041	74553
2001	69973	54249	124222	39261	33428	72689
2006	59438	54043	113481	42622	37130	79753
2011	58223	53460	111683	33388	30812	64200
2016	59972	55064	115036	35575	32611	68186

Source : RGI Estimates

District Bathinda							
Dropout Rate							
Level	Level	Total			SC		
		Male	Female	Total	Male	Female	Total
Primary	1999	35.25	33.69	34.50	42.69	45.72	44.16
	2000	36.03	32.07	34.21	48.12	45.63	47.00
Middle	1999	37.75	38.87	38.35	48.89	50.78	51.59
	2000	50.76	45.43	47.77	66.54	68.69	67.51

Annexure XIV

District Bathinda						
Gross Enrolment Ratio 2001- 2002						
	Gross Enrolment Ratio			Gross Enrolment Ratio for SC		
	Male	Female	Total	Male	Female	Total
Primary	75.69	72.71	74.36	66.58	65.23	65.96
Middle	62.42	59.71	61.20	48.97	45.65	47.44
High	62.94	58.21	60.79	44.27	39.61	42.18
SR.Sec	39.22	44.75	41.67	19.37	20.82	19.98

Source : Family Survey 2002

Sr. No.	District	Integrated child development scheme	Classification of Nutritional Status (%)				Total children covered
			Normal	Grade-I	Grade-II	Grade-III+	
2	BATHINDA	Bathinda	68.44	24.83	5.43	1.30	100.00
		Maur	60.01	36.58	2.08	1.33	100.00
		Nathana	66.71	29.63	2.43	1.23	100.00
		Phool	82.23	15.42	1.49	0.87	100.00
		Rampura	74.16	24.29	1.39	0.16	100.00
		Sangat	56.91	37.09	5.21	0.79	100.00
		Talwandi Sabo	54.48	41.11	3.51	0.91	100.00
District Total			66.79	28.89	3.31	1.00	100.00

Source : SW Department

Family Survey 2002

FAMILY SURVEY

Family Survey was conducted in the district in the month of January, 2002. A manual for the guidance of teachers was prepared and distributed at the school level. Master trainers were trained at state level centres which imparted training to district/block/cluster level persons. Data was captured on SSA/ FS/I/1 on the following format:

Reference Date :
Unit : Village/Ward

I. Family

1. House No.
2. Name of Street/Mohalla/Basti/Colony
3. Distance of house from Govt.Primary School (Actual)
4. Head of family
5. Size of family (including children) numbers
6. Caste (SC/BC/others)
7. Type of house (normal/institutional/homeless)
8. Type by period of residence (permanent/semi-permanent)
9. Monthly Income (codified)

II. Child (3-19)

1. Name
2. Sex
3. Age
4. D.O.B.
5. Mother/Father
6. Literacy of parents
 - 6.1 Mother (yes/no)+Level
 - 6.2 Father (yes/no)+Level
7. Mental/Physical challenge
8. Attending School
 - 8.1 School type
 - 8.2 Class (Pre-Primary to Sr. Secondary)
9. Not attending school
 - 9.1 Never attended school
 - 9.2 Left school
 - 9.3 Reasons for not attending school
10. Detail of efforts to mainstream out of school child

Primary Data captured on SSA/FA/I/1 was compiled at village/ward level on the following parameters.

I. Total (3-19) Population

1. Number of Special Need Children
2. Age groupwise/sexwise/castewise school going children
3. Age groupwise/sexwise/castewise school not going children

II. School going Children

1. Caste
2. Special Need
3. Ever attended school
 - 3.1 Class of dropout
4. Age group by sex
5. Child labour by age group/sexwise

III. Out of School/child labour

1. Special Need
2. Ever attended school
 - 2.1 Class of dropout
3. Age group by sex
4. Child labour by age group/sexwise

IV. Mentally/physically challenged

1. Caste
2. Special Need
3. Ever attended school
 - 3.1 Class of dropout
4. Age group by sex
5. Child labour by age group/sex

From the compiled Data following report have been prepared so far.

Reports

1. Total children attending school (classwise)
 - 1.1 Class wise/Genderwise/Casteswise
 - 1.2 Class wise/Genderwise/Casteswise/State Govt. Schools
 - 1.3 Class wise/Genderwise/Casteswise/Non-State Govt. Schools
 - 1.4 Class wise/Genderwise/Casteswise/Unrecognised Schools
2. Total children attending school (Agewise)
 - 2.1 Agewise/Genderwise/Castewise
 - 2.2 Agewise/Genderwise/Castewise/State Government
 - 2.3 Agewise/Genderwise/Castewise/Non State Govt. Schools

- 2.4 Agewise/Genderwise/Castewise/Unrecognised Schools
- 3. Caste type
 - 3.1 Total
 - 3.2 Total SC
 - 3.3 Total BC
- 4. Management type
 - 4.1 In State Govt. Schools
 - 4.2 In Non-state Govt. Schools
 - 4.3 In Un-recognised schools

There is a large variation in enrolment at primary and upper primary level between the reported enrolment and the enrolment compiled from survey data, especially in enrolment in government schools.

District - 02 - BATHINDA

Sarav Sikhiya Abhiyan, Punjab

Family Survey 2002

Form No. : SSA/FS/IV/6

Report : 01

Year : 2001-2002

01 - School Going Children (Total) - (Gradewise)-Total-Districtwise

Class ↓	School Going Children - Total			School Going Children - S.C.			School Going Children - B.C.		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	14412	10075	24487	4786	3801	8587	1744	1328	3072
Pre Primary Total	14412	10075	24487	4786	3801	8587	1744	1328	3072
I	18640	13898	32538	6901	5672	12573	2310	1583	3893
II	13520	10481	24001	5168	4229	9397	1706	1344	3050
III	12228	9624	21852	4394	3802	8196	1500	1307	2807
IV	12811	10082	22893	4437	3752	8189	1618	1346	2964
V	11598	9098	20696	3580	3084	6664	1534	1215	2749
Primary Total	68797	53183	121980	24480	20539	45019	8668	6795	15463
VI	11704	9128	20832	3417	2692	6109	1567	1238	2805
VII	9995	7902	17897	2599	2167	4766	1321	1098	2419
VIII	9250	7391	16641	2309	1776	4085	1232	1045	2277
Midlle Total	30949	24421	55370	8325	6635	14960	4120	3381	7501
IX	7104	5799	12903	1711	1335	3046	896	745	1641
X	9718	7126	16844	2230	1542	3772	1284	918	2202
Secondary Total	16822	12925	29747	3941	2877	6818	2180	1663	3843
XI	3496	3069	6565	570	436	1006	404	335	739
XII	3834	3585	7419	576	469	1045	412	400	812
Sr. Secondary Total	7330	6654	13984	1146	905	2051	816	735	1551
Technical Education	698	804	1502	95	101	196	69	60	129
Technical Education Total	698	804	1502	95	101	196	69	60	129

01 - Out of School Children Total - Agewise-Total Districtwise

Age ↓	Out of School									Working Children								
	Total Children			SC Children			BC Children			Total Children			SC Children			BC Children		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
3	3285	2443	5728	1509	1197	2706	380	292	672									
4	3158	2421	5579	1708	1410	3118	359	246	605									
5	2465	2001	4466	1587	1439	3026	266	225	491									
6	1278	1182	2460	949	886	1835	121	119	240	1		1	1		1			
7	885	778	1663	651	621	1272	66	51	117	2		2	2		2			
8	884	776	1660	695	601	1296	56	73	129	24	5	29	10		10			
9	589	567	1156	461	438	899	39	54	93	10	3	13	9	3	12	1		1
10	1240	1073	2313	915	823	1738	120	100	220	57	15	72	54	14	68	2	1	3
11	836	799	1635	615	614	1229	73	75	148	58	14	72	52	12	64	4	2	6
12	1510	1465	2975	1073	1104	2177	133	131	264	174	65	239	156	62	218	5		5
13	1591	1631	3222	1049	1087	2136	200	201	401	178	68	246	151	61	212	15	4	19
14	2206	2238	4444	1394	1390	2784	237	241	478	277	96	373	241	77	318	25	9	34
15	2888	2696	5584	1744	1619	3363	341	316	657	479	135	614	404	113	517	32	9	41
16	2952	2716	5668	1522	1418	2940	420	318	738	491	115	606	410	92	502	49	4	53
17	2775	2522	5297	1365	958	2323	379	372	751	475	125	600	371	91	462	43	7	50
18	3934	2739	6673	1821	1080	2901	532	362	894	737	149	886	591	84	675	46	13	59

District - 02 - BATHINDA

Sarav Sikhiya Abhiyan, Punjab
Family Survey 2002

Form No. : SSA/FS/IV/10
Report : 01
Year : 2001-2002

01 - Physically/Mentally Challenged Children Total - (Agewise)-Total Districtwise

Age ↓	Total Children						SC Children						BC Children					
	School Going			School Not Going			School Going			School Not Going			School Going			School Not Going		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
3	9	2	11	23	21	44	3	1	4	9	12	21	3		3	4	2	6
4	11	10	21	55	19	74	6	3	9	20	10	30	1	1	2	2	1	3
5	13	7	20	53	21	74	7	4	11	18	8	26	3		3	6	3	9
6	32	17	49	38	28	66	14	9	23	14	11	25	3	2	5		2	2
7	45	27	72	48	32	80	25	17	42	30	23	53	3	4	7	4	1	5
8	58	31	89	65	24	89	34	16	50	33	14	47	6	7	13	5	4	9
9	52	45	97	52	24	76	29	23	52	26	14	40	8	7	15	2	7	9
10	72	47	119	79	43	122	45	25	70	40	24	64	8	10	18	9	4	13
11	63	47	110	50	33	83	26	22	48	22	10	32	7	3	10	8	7	15
12	44	47	91	70	32	102	23	21	44	28	16	44	6	6	12	11	5	16
13	64	24	88	68	43	111	34	6	40	30	23	53	7	8	15	5	6	11
14	51	46	97	69	59	128	23	17	40	28	27	55	6	2	8	6	5	11
15	37	22	59	75	37	112	20	7	27	37	13	50	3	1	4	5	3	8
16	27	11	38	59	40	99	12	6	18	24	17	41	2	2	4	4	5	9
17	25	11	36	57	25	82	15	5	20	22	9	31	2	1	3	7	5	12
18	26	8	34	79	33	112	7	2	9	36	17	53	1	1	2	9		9

District - 02 - BATHINDA

Sarav Sikhiya Abhiyan, Punjab

Family Survey 2002

Form No. : SSA/FS/IV/11

Report : 01

Year : 2001-2002

01 - Physically/Mentally Challenged Children Total - (Category Wise)-Total Districtwise

Class ↓	School Going Total Children			School Going S.C. Children			School Going B.C. Children		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	43	21	64	19	11	30	7	2	9
I	73	39	112	37	22	59	11	7	18
II	78	52	130	44	23	67	7	12	19
III	59	50	109	32	25	57	3	7	10
IV	76	42	118	44	23	67	10	5	15
V	58	41	99	28	15	43	7	6	13
VI	54	43	97	31	15	46	4	2	6
VII	57	28	85	22	11	33	3	3	6
VIII	50	34	84	24	14	38	3	4	7
IX	36	22	58	15	6	21	4	1	5
X	30	21	51	10	11	21	3	1	4
XI	16	11	27	5	1	6	2	2	4
XII	8	4	12	1		1	1	1	2
Technical Education	1	2	3	1		1		1	1

District - 02 - BATHINDA

Sarav Shikshia Abhiyan, Punjab

SSA/FS/IV/15

Report : I

Distribution of School going Children (Percentage) -Total--Districtwise

Year : 2001-2002

Class ↓	Total School Going			State Govt.			Non-State Govt.			Unrecognised		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Pre Primary	58.86	41.14	100.00	56.61	43.39	100.00	60.36	39.64	100.00	61.20	38.80	100.00
Pre Primary Total	58.86	41.14	100.00	56.61	43.39	100.00	60.36	39.64	100.00	61.20	38.80	100.00
I	57.29	42.71	100.00	54.90	45.10	100.00	60.22	39.78	100.00	58.21	41.79	100.00
II	56.33	43.67	100.00	52.26	47.74	100.00	61.26	38.74	100.00	61.36	38.64	100.00
III	55.96	44.04	100.00	53.04	46.96	100.00	60.51	39.49	100.00	59.42	40.58	100.00
IV	55.96	44.04	100.00	53.38	46.62	100.00	60.95	39.05	100.00	57.15	42.85	100.00
V	56.04	43.96	100.00	52.68	47.32	100.00	60.91	39.09	100.00	60.46	39.54	100.00
Primary Total	56.40	43.60	100.00	53.33	46.67	100.00	60.72	39.28	100.00	59.18	40.82	100.00
VI	56.18	43.82	100.00	54.50	45.50	100.00	59.62	40.38	100.00	58.03	41.97	100.00
VII	55.85	44.15	100.00	53.24	46.76	100.00	62.02	37.98	100.00	56.62	43.38	100.00
VIII	55.59	44.41	100.00	52.72	47.29	100.00	60.50	39.50	100.00	61.36	38.64	100.00
Middle Total	55.89	44.11	100.00	53.55	46.45	100.00	60.66	39.34	100.00	58.58	41.42	100.00
IX	55.06	44.94	100.00	53.51	46.49	100.00	59.44	40.56	100.00	52.54	47.46	100.00
X	57.69	42.31	100.00	56.59	43.41	100.00	60.22	39.78	100.00	56.74	43.26	100.00
Secondary Total	56.55	43.45	100.00	55.22	44.78	100.00	59.90	40.10	100.00	54.98	45.02	100.00
XI	53.25	46.75	100.00	56.41	43.59	100.00	49.65	50.35	100.00	44.38	55.62	100.00
XII	51.68	48.32	100.00	55.88	44.12	100.00	48.51	51.49	100.00	40.35	59.65	100.00
Sr. Secondary Total	52.42	47.58	100.00	56.14	43.86	100.00	49.00	51.00	100.00	42.13	57.87	100.00
Technical Education	46.47	53.53	100.00	52.79	47.21	100.00	43.42	56.58	100.00	35.32	64.68	100.00
Technical Education Total	46.47	53.53	100.00	52.79	47.21	100.00	43.42	56.58	100.00	35.32	64.68	100.00
Grand Total	56.32	43.68	100.00	54.04	45.96	100.00	59.80	40.20	100.00	58.31	41.69	100.00

Annual Work Plan
2003-2004

District: Bathinda

District Data Summary Sheet

SL.No.	DESCRIPTION	2003-04
1	No. of C D Blocks/BRC's	8
1.1	No. of B.R. & D.R. Personnels (6x20+2x10)+10	150
2	No. of P E Blocks	6
3	No. of CRC's	41
4	No. of Villages	284
4.1	No. of VEDC's	635
4.2	No. of VEDC's Members	5080
5	No. of Habitations/Wards (Unservd)	1112
5.1	No. of S.C. Bastis	569
6	No. of House Holds	215676
	No. of Schools	
7	No. of Primary Schools (State Govt.)	387
7.1	Non State Govt. Primary Schools	83
7.2	Unrecognised Primary Schools	283
8	No. of Middle Schools/Sections (State Govt.)	248
8.1	Non State Govt. Middle Schools/Sections	99
8.2	Unrecognised Middle Schools/Sections	66
	No. of Teachers (State Govt.)	
9	No. of Primary Teachers	1837
9.1	No. of JBT Teachers + New	1536
9.2	No. of HT	260
9.3	No. of CHT's	41
10	No. of Teachers Middle Schools/Sections	1850
	Primary (State Govt.)	
11	Total No. of Students	73395
11.1	Male Students	38085
11.2	Female Students	35310
11.3	Total No. of S.C. Students	43158
11.4	Male S.C. Students	22254
11.5	Female S.C. Students	20904
	Upper Primary (State Govt.)	
12	Total No. of Students	37901
12.1	Male Students	19953
12.2	Female Students	17948
12.3	Total No. of S.C. Students	12775
12.4	Male S.C. Students	6993
12.5	Female S.C. Students	5782
	Out of School Children	
13	No. of Out of School Children Total	45640
13.1	No. of Out of School Children Male	24106
13.2	No. of Out of School Children Female	21534
13.3	No. of EGS Centres (Proposed)	100
	No. of Handicapped Children	
14	Total No. of Handicapped Children	2953
15	Aanganwari Centre	634

<i>District -Bathinda</i>			
Blockwise list of BRC and CRC			
PEBlock Code & Name			
		CRC	BRC
036	BATHINDA	8	1
037	MANDI PHOOL (EAST)	7	1
038	MANDI PHOOL (WEST)	6	2
039	NATHANA	5	1
040	SANGAT	8	1
041	TALWANDI SABO	7	2
	Total	41	8

Source :- D.E.O. (E.E.)

District wise list of PEBlocks	
PEBLOCK	CODE
BATHINDA	
BATHINDA	036
MANDI PHOOL (EAST)	037
MANDI PHOOL (WEST)	038
NATHANA	039
SANGAT	040
TALWANDI SABO	041

Source : Sarva Shiksha Abhiyan

PEBlock Code & Name		No. of Villages
<i>District - Bathinda</i>		2003-04
036	BATHINDA	61
037	MANDI PHOOL (EAST)	55
038	MANDI PHOOL (WEST)	42
039	NATHANA	35
040	SANGAT	45
041	TALWANDI SABO	46
Total		284

SOURCE :- D.E.O. (E.E)

BLOCK WISE COUNT OF PRIMARY SCHOOLS - 2003
DISTRICT - BATHINDA

PE BLOCK CODE & NAME	G1	G2	G3	G4	TOTG	P1	P2	P3	P4	P5	P6	TOTP	TOTAL
PE036 BATHINDA	108	0	0	0	108	0	82	0	0	0	0	82	190
PE037 MANDI PHOOL (EAST)	67	0	0	0	67	0	10	0	0	0	0	10	77
PE038 MANDI PHOOL (WEST)	54	0	0	0	54	0	12	0	0	0	0	12	66
PE039 NATHANA	42	0	0	0	42	0	7	0	0	0	0	7	49
PE040 SANGAT	56	0	0	0	56	0	8	0	0	0	0	8	64
PE041 TALWANDI SABO	60	0	0	0	60	0	18	0	0	0	0	18	78
TOTAL	387	0	0	0	387	0	137	0	0	0	0	137	524

LEGEND:-

G1 STATE GOVT.

G2 CENTER GOVT.

G3 OTHER ORG. OF STATE GOVT.

G4 OTHER ORG. OF CENTER GOVT.

P1 AIDED AND RECOGNISED

P2 RECOGNISED

P3 AFFILIATED WITH P.S.E.B

P4 AFFILIATED WITH C.B.S.E

P5 AFFILIATED WITH I.C.S.E

P6 ANY OTHER

SOURCE :- D.E.O.(E.E.)

**BLOCK WISE COUNT OF MIDDLE SCHOOLS - 2003
DISTRICT - BATHINDA**

PE BLOCK CODE & NAME	G1	G2	G3	G4	TOTG	P1	P2	P3	P4	P5	P6	TOTP	TOTAL
PE036 BATHINDA	64	5	0	0	69	5	21	0	6	1	2	35	104
PE037 MANDI PHOOL (EAST)	50	0	0	0	50	3	3	0	2	0	0	8	58
PE038 MANDI PHOOL (WEST)	34	0	0	0	34	0	1	0	0	0	0	1	35
PE039 NATHANA	30	0	0	0	30	0	3	0	1	0	0	4	34
PE040 SANGAT	25	0	0	0	25	0	1	1	0	0	0	2	27
PE041 TALWANDI SABO	45	1	0	0	46	5	4	0	1	0	0	10	56
TOTAL	248	6	0	0	254	13	33	1	10	1	2	60	314

LEGEND:-

G1 STATE GOVT.

G2 CENTER GOVT.

G3 OTHER ORG. OF STATE GOVT.

G4 OTHER ORG. OF CENTER GOVT.

P1 AIDED AND RECOGNISED

P2 RECOGNISED

P3 AFFILIATED WITH P.S.E.B

P4 AFFILIATED WITH C.B.S.E

P5 AFFILIATED WITH I.C.S.E

P6 ANY OTHER

SOURCE :- D.E.O.(E.E.)

District -Bathinda					
Blockwise Breakup of Primary Teachers					
PEBlock Code & Name		JBT	HT	CHT	Total
036	BATHINDA	408	64	10	482
037	MANDI PHOOL (EAST)	289	47	7	343
038	MANDI PHOOL (WEST)	212	36	6	254
039	NATHANA	215	29	5	249
040	SANGAT	213	41	6	260
041	TALWANDI SABO	199	43	7	249
	Total	1536	260	41	1837
	Unadjusted Teachers in Peblocks				
	New Teachers				
	Grand Total	1536	260	41	1837

Source :- D.E.O. (E.E.)

CD BLOCKWISE ENROLLMENT MARCH 2003

DISTRICT - BATHINDA

S. NO.	Integrated Child Development Scheme	Anganwari Centres	Pre School Education (3 - 6) Years		
			Boys	Girls	Total
1	Bathinda	122	1989	1772	3761
2	Maur	52	1061	928	1989
3	Nathana	87	1583	1399	2982
4	Phool	132	2241	2042	4283
5	Rampura	69	1408	1350	2758
6	Sangat	79	1349	1330	2679
7	Talwandi Sabo	93	1755	1596	3351
	Total	634	11386	10417	21803

SOURCE : D.E.O. (E.E.)

District-Bathinda							
Blockwise Enrollment in State Govt. Primary Schools - 2003							
Peblock		Total			SC		
		Male	Female	Total	Male	Female	Total
036	BATHINDA	9323	8664	17987	5866	5714	11580
037	MANDI PHOOL (EAST)	7336	6814	14150	4207	3818	8025
038	MANDI PHOOL (WEST)	5096	4864	9960	2913	2722	5635
039	NATHANA	5456	4884	10340	3291	2992	6283
040	SANGAT	5409	5002	10411	2986	2833	5819
041	TALWANDI SABO	5465	5082	10547	2991	2825	5816
	TOTAL	38085	35310	73395	22254	20904	43158

SOURCE :- D.E.O. (E.E)

District-Bathinda							
Blockwise Enrollment in State Govt. Middle Schools -2003							
Peblock		Total			SC		
		Male	Female	Total	Male	Female	Total
036	BATHINDA	4654	4429	9083	1928	1664	3592
037	MANDI PHOOL (EAST)	4249	3888	8137	1425	1204	2629
038	MANDI PHOOL (WEST)	2875	2320	5195	823	683	1506
039	NATHANA	2522	2219	4741	963	766	1729
040	SANGAT	2313	1888	4201	860	582	1442
041	TALWANDI SABO	3340	3204	6544	994	883	1877
	TOTAL	19953	17948	37901	6993	5782	12775

SOURCE :- D.E.O. (E.E)

District-Bathinda					
Blockwise Enrollment in State Govt. Primary Schools -2003					
Peblock		STATE GOVT.	NON-STATE GOVT.	UNRECOGNISED	GRAND
		Total	TOTAL	Total	TOTAL
036	BATHINDA	17987	11469	0	29456
037	MANDI PHOOL (EAST)	14150	4505	0	18655
038	MANDI PHOOL (WEST)	9960	1675	931	12566
039	NATHANA	10340	2396	35	12771
040	SANGAT	10411	2047	1330	13788
041	TALWANDI SABO	10547	2511	4621	17679
	TOTAL	73395	24603	6917	104915

SOURCE :- D.E.O. (E.E)

District-Bathinda					
Blockwise Enrollment in State Govt. Middle Schools -2003					
Peblock		STATE GOVT. Total	NON-STATE GOVT. TOTAL	UNRECOGNISED Total	GRAND TOTAL
036	BATHINDA	9083	7705	0	16788
037	MANDI PHOOL (EAST)	4522	847	0	5369
038	MANDI PHOOL (WEST)	3840	69	0	3909
039	NATHANA	4741	515	0	5256
040	SANGAT	4201	201	0	4402
041	TALWANDI SABO	3842	1071	0	4913
42	BHAGTA	3615	299		3914
43	MAUR	4057	416		4473
	TOTAL	37901	11123	0	49024

SOURCE :- D.E.O. (E.E)

District-Bathinda							
Blockwise out of Schools Children - 2003							
Age Group (6-14)							
Peblock		Total			SC		
		Male	Female	Total	Male	Female	Total
036	BATHINDA	1073	880	1953	620	469	1089
037	MANDI PHOOL (EAST)	2251	2371	4622	1074	1143	2217
038	MANDI PHOOL (WEST)	6250	5353	11603	2273	2015	4288
039	NATHANA	9335	7725	17060	4053	3625	7678
040	SANGAT	1313	1699	3012	910	830	1740
041	TALWANDI SABO	3884	3506	7390	1571	1430	3001
Total		24106	21534	45640	10501	9512	20013

SOURCE :- D.E.O. (E.E.)

Blockwise Handicapped Children

District : Bathinda - 6-14 Years (Total) - 2003

PEBlock	Visually Impaired Children	Speech Impaired Children	Hearing Impaired Children	Physically Challenged Children	Mentally Challenged Children	Any Other Challenged Children	Total
BATHINDA	44	117	32	291	135	138	757
MANDI PHOOL (EAST)	32	87	40	260	79	25	523
MANDI PHOOL (WEST)	37	77	28	107	61	109	419
NATHANA	7	14	28	207	21	51	328
SANGAT	28	96	30	173	77	33	437
TALWANDI SABO	49	84	23	154	128	51	489
TOTAL	197	475	181	1192	501	407	2953

SOURCE :- D.E.O. (E.E.)

Blockwise Handicapped Children

District : Bathinda - 6-14 Years (Total) - 2003

PEBlock	SC			BC		
	School Going	School Not Going	Total	School Going	School Not Going	Total
BATHINDA	147	189	336	48	40	88
MANDI PHOOL (EAST)	141	112	253	24	32	56
MANDI PHOOL (WEST)	90	104	194	26	11	37
NATHANA	59	54	113	22	5	27
SANGAT	114	141	255	18	45	63
TALWANDI SABO	78	96	174	27	24	51
TOTAL	629	696	1325	165	157	322

SOURCE :- D.E.O. (E.E.)

ANNUAL WORK PLAN AND BUDGET for the year 2003-04

District: Bathinda

(Rs. in lacs)

S.No	Maj. Act.	Activity Description	Unit Cost 2003-04	Total AWP 2002-03		Expenditure 2002-03	Spill over 2002-03	AWP 2003-04		Total AWP 2003-04
				Physical	Financial			Financial	Physical	
1	PFE	Primary Schools								
		Salary of teachers (schools opened last year)	0.072	156	12.168	0	12.168	936	67.392	79.560
		TLE Grants	0.100	39	3.900		3.900	39	3.900	7.800
		Sub-Total			16.068		16.068		71.292	87.360
2	UPE	Upper primary Schools								
		No. of UPS							0.000	0.000
		Salary for teachers in Upper Primary							0.000	0.000
		TLE Grants for uncovered UPS	0.500					19	9.500	9.500
		Sub-Total					0.000		9.500	9.500
3		School Grants	0.020	655	13.100	11.880	1.220	635	12.700	13.920
4		Teachers Grants	0.005	3607	18.035	15.980	2.055	3687	18.435	20.490
5	EGS	EGS Centers for 6-14	0.00845					45640	385.658	385.658
		Sub-Total							385.658	385.658
5.1	IED	Education of disabled		1688	20.256	0	20.256		35.434	55.690
		Sub-Total			20.256	0.000	20.256		35.434	55.690
6	BRC	Salary of staff	0.072	280	21.840		21.840	1440	103.680	125.520
6.1		Contingency Grant	0.125	8	1.000	0.750	0.250	8	1.000	1.250
6.2		TLM Grant	0.050	8	0.400		0.400	8	0.400	0.800
6.3		Workshops and Meetings Grants	0.005	96	0.480		0.480	96	0.480	0.960
6.4		BRC	0.072				0.000	240	17.280	17.280
		Sub-Total			23.720	0.750	22.970		122.840	145.810
7	CRC	Salary CRC coordinator			0.000				0.000	0.000
7.1		Contingency Grant	0.025	41	1.025	1.025	0.000	41	1.025	1.025
7.2		TLM Grant	0.010	41	0.410		0.410	41	0.410	0.820
7.3		Workshops and Meetings Grants	0.002	492	0.984		0.984	492	0.984	1.968
7.4		CRC						0.984	0.000	0.000
		Sub-Total			2.419	1.025	1.394		2.419	3.813
8	R&E	Research and Evaluation Programme		655	9.170	9.170	0.000		8.893	8.893
		Sub-Total			9.170	9.170	0.000		8.893	8.893
9		Civil Works								0.000
9.1		Construction of BRC buildings	6.000	7	42.000	24.000	18.000	3	18.000	36.000
9.2		Construction of CRC buildings	2.000	2	4.000	4.000	0.000	22	44.000	44.000
9.3		Construction of additional room for P/S	1.200	89	106.800	96.000	10.800	150	180.000	190.800
9.4		Construction of additional room for UPS	1.200	30	36.000	31.200	4.800	74	88.800	93.600
9.4		Buildingless Schools	3.000	8	24.000	24.000	0.000	0	0.000	0.000
9.5		Branch School Buildings	3.000	10	30.000		30.000	0	0.000	30.000
9.6		Sanitary Blocks and drinking water facilities for primary and upper primary sections	0.350	188	65.800	61.500	4.300	208	72.800	77.100
9.7		Construction of Headmaster room for UPS	1.200				0.000	35	42.000	42.000
9.8		Varanda	1.000				0.000		0.000	0.000
9.9		Buildings for schools having unsafe buildings	3.000				0.000		0.000	0.000
		Sub-Total		0	308.600	240.700	67.900		445.600	513.500
10		Maintenance and Repair Grant	0.050	1256	62.800	29.350	33.450	635	31.750	65.200
		Sub-Total			62.800	29.350	33.450		31.750	65.200
11	MGT	Management Cost			24.720		24.720		68.119	92.839
		Sub-Total			24.720	0.000	24.720		68.119	92.839
12	TRG	20 days Teachers training (in service)	0.014	3607	50.498	50.498	0.000	3687	51.618	51.618
		Sub-Total			50.498	50.498	0.000		51.618	51.618
13	VEC	Training to VEC Members	0.0003	10480	3.144	3.144	0.000	10160	3.048	3.048
		Sub-Total			3.144	3.144	0.000		3.048	3.048
14	INO	Computer Education			15.000		15.000		15.000	30.000
		Education of Girls			10.000		10.000		10.000	20.000
		Education of SC/ST			10.000		10.000		10.003	20.003
		ECE			15.000		15.000		15.047	30.047
		Sub-Total			50.000	0	50.000		50.050	100.050
15		Free text books for Non SC girls	0.0015	26717	40.076	29.25244	10.823	26572	39.858	50.681
		Sub-Total			40.076	29.25244	10.823		39.858	50.681
		Grand Total			642.606	391.749	250.856		1357.214	1608.070

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
1	PFE	Salary for primary teachers 78 x 12	0.072	936	12 months	67.392		
		TLE for New primary Schools(upgradation of Branch Schools with more than 40 students)	0.100	39		3.900		
		Subtotal				71.292	5.290	
2	UPE	Upper primary Schools						
		TLE for Upper Primary Schools	0.500	19		9.500		
		Subtotal				9.500	23.835	
3		School Grant (P+UP Schools)	0.020	635		12.700	0.942	
4		Teacher Grant (P+UP Teachers)	0.005	3687		18.435	1.368	
5	EGS	Cost of running of EGS centres for 45640 out of school children of 6-14 age group declining by 25%	0.00845	45640		385.658		
		Subtotal				385.658	28.616	
5.1	IED	IED Training to BRC staff 8 x 10 x 5	0.0007	400	5 months	0.280		
		IED assessment camps 2 x 8	0.020	16		0.320		
		One Resource persons honorarium 8 Blocks x 12 months	0.070	96	12 months	6.720		
		Manual for Teachers about visually impaired children for primary & upper primary schools (No. of P +UP Schools)	0.00034	635		0.216		
		Manual for Teachers about hearing impaired children for 655 schools	0.00028			0.000		
		Manual for Teachers about mentally challenged children for primary & upper primary schools	0.00036	635		0.229		
		Special assistance and TLM to disabled children	0.00937	2953		27.670		
		Subtotal				35.434	2.629	

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					Remarks
			Unit cost	Physical	Period	Financial	% to total	
6	BRC	Salary of 20 Block Resource Persons per CD Block having more than 100 schools for 6 Blocks @ Rs.7200/- x 12 P.A.	0.072	1440	12 months	103.680		
6.1		BRC Contingency grant for 8 CD Blocks @ Rs.12500/- P.A.	0.125	8		1.000		
6.2		TLM grant for 8 CD Blocks @ Rs.5000/- P.A.	0.050	8		0.40		
6.3		Meetings, Travel allowance for 8 CD Blocks @Rs.500 x 12 P.A.	0.005	96		0.480		
6.4		Salary of 10 Block Resource Person Per CD Block having less than 100 schools for 2 Block @ Rs. 7200/-x12 P.A.	0.072	240	12 months	17.280		
		Sutotal				122.840	9.115	
7	CRC	Salary of Staff				0.000		
7.1		CRC Contingency grant for 159 CRCs Blocks @ Rs.2500/- P.A.	0.025	41		1.025		
7.2		TLM grant for 41 CRCs @ Rs.1000/- P.A.	0.010	41		0.410		
7.3		Meetings, Travel allowance for 41 CRCs Blocks @Rs.200 x 12 P.A.	0.002	492	12 months	0.984		
		Subtotal				2.419	0.179	
8	R&E	Reasearch and Evaluation Programme						
		Annual School, Block and district planning for Primary and Upper Primary schools @ Rs. 30/-	0.0003	635		0.191		
		Annual School Gradation and Evaluation process for Primary & Upper primary schools @ Rs. 30/-	0.0003	635		0.191		
		Conduct of Pupil Achievement Survey 5% to 10% of schools @ Rs. 2000	0.020	63		1.260		

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Academic monitoring of schools by DIET staff by travelling 12 months 2 ×12 @ Rs. 1000	0.010	24		0.240		
		Academic supervision by BRCs 8 x 5 units @ Rs. 1000	0.010	40		0.400		
		Hiring of Vehicles for Academic supervision by DPD/SPD 5 visits to 10 visits x 12 months @ Rs. 1000/-	0.010	60	12 months	0.600		
		Annual Household survey @Rs.3/- per household for 215676 households 50% per year in parts	0.00003	117650		3.530		
		MIS Data collection and processing of data for 387 primary schools at State/District office	0.0017	387		0.658		
		MIS Data collection and processing of data for 248 upper primary schools/sections at State/District office	0.0018	248		0.446		
		Development and supply of material for evaluation of learning in upper primary schools i) Science ii) Mathematics iii) Health and physical education iv) English v) Hindi vi) Punjabi vii) Social Studies				0.000		

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Study in i) Child's concept of class relations ii) Causal thinking in students iii) Students concept of time & iv) movement - v) Students concept of space vi) Concrete and formal reasoning in Mathematics vii) Teacher expectations and remedial strategies	0.00031×7	635		1.378		
		Subtotal				8.893	0.660	
9		Civil Works						
9.1		Block Resource centre buildings	6.000	3		18.000		
9.2		Cluster Resource Centres	2.000	22		44.000		
9.3		Additional Class rooms for primary schools	1.200	150		180.000		
9.4		Buildings for buildingless school	3.000			0.000		
9.4		Additional Classrooms for Primary schools and upper primary sections	1.200	74		88.800		
9.5		New Primary school buildings Branch Schools	3.000			0.000		
9.6		Sanitary Blocks and drinking water facilities for primary and upper primary sections	0.350	208		72.800		
9.7		Headmaster's room for upper primary sections	1.200	35		42.000		
9.8		Verandah	1.200			0.000		
9.9		Buildings for schools having unsafe buildings	3.000			0.000		
		Sutotal				445.600	33.063	

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
10		Maintenance and Repair Grant						
		Repairs and maintenance of school Primary and upper primary sections	0.050	635		31.750		
		Subtotal				31.750	2.356	
11	MGT	Management Cost						
		Hire charges for vehicles for DPO/State No. of times x 12 months	0.015	257		3.855		
		DPO/state consumables	0.070	12		0.840		
		Water, Electricity, Telephone etc. of District and State office	0.100	12		1.200		
		TA & DA of District and State etc.	0.300	12		3.600		
		Consultants (12 Months × 7) for District and State	0.070	84		5.880		
		Computer Stationery Peripherals DPO/State	0.200	1		0.200		
		Documentation at DPO/State	3.000	1		3.000		
		Running cost of Data centre for all primary and upper primary schools and students 1.400 x 12 inclusive of rent and salaries and other expenses for DPO/State	1.500	12		18.000		
		Jan Samparak Abhiyan (twice a year visit of 10 schools per block by all senior officers for three days- taxi and other charges) to be conducted by State/District office No. of blocks ×2	0.030	16		0.480		
		Development and printing of modules on planning and management by State/District office	0.00036	635		0.229		

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Hiring of experts for pedagogy research, evaluation, community mobilization, gender sensitisation, alternative schooling, planning and management training District 8×12×8000	0.0800	96		7.680		
		Circulation of material prepared by the experts to school/VEDC level.						
		News letter	0.00025	635		0.159		
		Media activity				0.000		
		Development and distribution work training manual for VEDCs 4 x 635	0.00032	2540		0.813		
		Development and distribution training manual on civil works for BRPs and DRPs 4 x (140+10)	0.00068	600		0.408		
		Workshop on Architectural plans and layouts 30 persons x 3 x 300	0.270	2		0.540		
		Development and distribution of architectural plans and layouts 2 x No. of schools (635×2)	0.00047	1270		0.597		
		Hiring of vehicles for monitoring of civil works 6 visits x 12	0.010	72		0.720		
		Hiring of vehicles for monitoring of civil works by State office and seeking advice on civil work	0.100	12		1.200		
		Printing of modules for various districts	0.000350	5080		1.778		
		Office Equipment				4.500		
		EMIS				9.500		
		Annual Household survey @Rs.3/- per household for 215676 households 50% per year in parts	0.00003	98026		2.941		
		Subtotal				68.119	5.054	

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
12	TRG	Teachers training for primary and upper primary= for 20 days	0.0140	3687		51.618		
		Subtotal				51.618	3.830	
13	VEC	Training to VEC Members						
		Orientation to VEDC Members No. of schools x 8 members x 2	0.0003	10160		3.048		
		Subtotal				3.048	0.226	
14	INO	INNOVATIVE						
a) Computer Education								
		Cost of running of computer education centres at block/cluster level	15.000	1		15.000		
		Subtotal				15.000	1.113	
b) Education of Girls								
		Remedial coaching for girls students for two months in primary schools in parts	0.003	200		0.600		
		Remedial coaching for girls students for two months in upper primary schools in parts	0.003	127		0.381		
		Development of supplement reading material and item Bank for 35310 girl student of primary students for use in remedial coaching in parts	0.00038	15210		5.780		
		Development of supplement reading material and item Bank for 17948 girl student of upper primary students for use in remedial coaching in parts	0.00057	5683		3.239		
		Subtotal				10.000	0.742	
c) SC/ST								
		Remedial coaching for 3 months in primary+upper primary schools in parts	0.0030	327		0.981		

**Annual Work Plan & budget for the year 2003-04,
District Bathinda, Punjab**

Account Code	Maj. Act.	Item	2003-04					
			Unit cost	Physical	Period	Financial	% to total	Remarks
		Supplementary reading material for remedial coaching in primary schools SC children 43158 in parts	0.0005	10824		5.412		
		Question Bank for SC children of 12775 upper primary classes for remedial coaching in parts	0.0006	6016		3.610		
		Subtotal				10.003	0.737	
d) ECCE								
		School readiness kits and playway material for 3-5 age children in ICDS Centres for 634 Centres x 3	0.00075	1902		1.427		
		Teaching learning material for 3-5 age children in ICDS centers x 2 partly	0.00030	42500		12.750		
		School readiness kits for first generation learners in primary schools of 5 year age for primary schools x 3 =387×3=(1161)	0.00075	1161		0.871		
		Subtotal				15.047	1.109	
15		Free text books for Non SC girls	0.0015	26572		39.858		
		Subtotal				39.858	2.937	
		Grand Total				1357.214		

Training

DEVELOPING THE PERSONAL AND PROFESSIONAL COMPETENCIES OF TEACHERS AND HEADS THROUGH TRAINING

It is visualised in the GOVERNMENT OF PUNJAB EDUCATION POLICY AND PROGRAMME OF ACTION 2002 that the teachers need to acquire professional competencies and commitment to enable and empower them to perform the multiple tasks in the classrooms as well as in the school and community in genuinely professional manner, which can enable the school system to obtain the necessary criticality to set a chain reaction, starting with the sound teacher performance. It further states, that effective stages of teacher education now necessarily have to be conceived with a more comprehensive paradigm, which encompasses a number of interrelated components. Therefore, in-service teacher training should be offered on a yearly basis in a most organised manner. Training should be conducted through workshops, seminars and orientation programmes.

The policy states that to run the In-Service Programme effectively, competencies of In-Service Training Institutes i.e. DIETs and GISTCs will have to be thoroughly revitalized by providing able teacher educators, equipment, teaching material/modules and other necessary support.

Focus is required for the proper education of teachers both for pre-service as well as in-service teacher training. All pre-service or in-service teacher training programmes are being designed and organised in such a way so as to make a substantial initiation into preparation for the different roles suggested in the PUNJAB EDUCATION POLICY AND POA 2002 for future education. Programmes at all levels are being geared to certain basic and general objectives, keeping in mind the influences of the present technological advances on the education system. These objectives are being commonly applied in varying degrees to all the levels. The need for changing technology, quality management in education, stable staff requirement, and better management of education make it essential that the teachers are trained in specific skills.

Training is an organised activity for increasing the knowledge and skills of educational functionaries for a definite purpose. It involves systematic procedures for transferring technical know-how to the teachers/Heads/administrators so as to increase their knowledge and skills for doing their job with proficiency. A training programme should be able to bring about positive change in the knowledge, skills and attitudes of the teachers.

The enhancement of competencies in regular teachers as well as Heads of schools is a vital step for making our educational system really need based and value based, so as to help develop a child according to the future needs of the society and the country. In a worldwide phenomenon of upgradation of technologies, upgradation of skills of teachers and Heads also has acquired vital dimensions to keep pace with the constantly developing and changing world.

Our obsolete and traditional teaching-learning aids had been directed just to keep the age old educational system at work, whereas the need of the hour is to develop a child with a modern outlook that may greatly suit the further development of technologies and for acquiring an all round understanding of the intricacies and complexities of human existence.

IDENTIFICATION OF TRAINING NEEDS

Identification of training needs has gained new importance in educational programme because of the technological changes taking place. Modern working methods are making it necessary that new techniques of training are used for the professional growth of teachers. Therefore, training programmes related to the current skills with expected needs for future requirements are being designed. While identifying the needs, the gaps between the existing and required levels of knowledge, skills, performance and attitudes have been taken into account. The problem areas that can be resolved through training have also been targeted.

Following types of analysis may be helpful in identification of training needs:

1. Setting specific goals of the teacher training programmes.
2. Analysing long term and short term objectives and their relative priorities.
3. Identification of the physical and professional resources and their efficient utilisation in meeting the operational targets should be analysed.
4. Identification of skills and training through a task analysis.
5. Identification of the time frame within which training must be imparted and introduction of new work methods and technology.

THE OBJECTIVES OF THE TRAINING PROGRAMME

The objectives of the training programmes are to develop competencies in the Teachers and Heads on the following dimensions:

I. Knowledge and Understanding

1. Understand facts and scientific principles involved in various forms of work.
2. Understand the use of teaching-learning material.
3. Understand the utility of working with the community.
4. Understand the needs of a technologically advancing society in terms of education.
5. Understand the process of planning and organization.
6. Develop an awareness of social programmes.
7. Develop the abilities for self-evaluation.

II. Skills

1. Develop skills for the selection, arrangement and assimilation of useful educational concepts.
2. Develop her/his skills of observation, manipulation and participation in work experience.
3. Develop skills of problem solving.
4. Develop her/his skills of inquisitiveness.
5. Use her/his creative faculties to devise innovative methods and materials.

III. Attitude and Values

1. Inculcate socially desirable values such as self-reliance, helpfulness, cooperativeness, teamwork, perseverance, tolerance etc.
2. Develop proper work ethics such as regularity, punctuality, honesty, dedication, discipline etc.
3. Develop self-esteem through achievements.
4. Develop a deeper concern for the environment and a sense of belonging, responsibility and commitment to the society.

TRAINING PROGRAMMES

These programmes are targeted to help develop concrete plans for enhancing competencies in regular teachers, Heads, community and administrative staff. The upgradation of one's skills is entirely one's personal choice and enforcing or thrusting these on any teacher/Head or educational functionaries may not prove fruitful either for the teacher or for the schooling system. So it is of the utmost importance that it be linked with immediate and long-term monetary gains, better professional status and reputation. The absence of the teacher/Head or educational functionaries from home/personal duties must be compensated so as to motivate him to enhance her/his desire to undergo refresher courses.

This list is by no means exhaustive, since the very nature of refresher programmes is need based. The list also contains all other kinds of training i.e. orientation training, on-the-job-training, apprenticeship training, management training, as well as social responsibility training. Personal development training is also included since the personal competence of educational functionaries holds a lot of importance. Any programme of training has to be, by nature, dynamic and flexible meeting the future needs of Heads, teachers and students. The trainer is the best judge of that. This list can be added to at any time if the need is felt.

The information given in the following pages list the training areas of all these. They also state the level, minimum service requirement to undergo the training and duration of the training.

TYPES OF TRAINING

On the basis of the purpose, several types of training programmes can be offered. It should be noted that these programmes are not mutually exclusive. They invariably overlap and employ many common techniques. The important types of training are: –

1. *Orientation Training:* Helps the newly recruited to know better about the department.
2. *Job-Training:* Helps in developing confidence and skills.
3. *Apprenticeship Training:* Tends more towards information. The usual apprenticeship combines on the job training and experience with classroom instructions in particular subjects.
5. *Refresher Training:* As the name implies, this training is meant for the old employees, the basic purpose of refresher training is to acquaint the existing work force with the latest methods of performing their jobs and improve

their efficiency further. The skills of the existing employees become obsolete because of technological changes and because of the tendency of the human beings to forget. Thus refresher training is essential.

6. *Management Training*: This training develops certain management qualities in the educational functionaries such as Leadership, etc
7. *Social Responsibility*: This is meant to develop sensitivity in the employees towards socially relevant subjects e.g. the socially disadvantaged students like the handicapped, the first generation learners and the girl child.
8. *Personal Development Skills*: Skills that would make the Head a more competent person. For example, interpersonal skills, counseling skills, conflict management skills etc.

In education, pre-service and in-service training are familiar concepts. Pre-service training focuses both on theory and practice of the academics, whereas the in-service training methods may involve orientation courses, seminars/workshops, case studies and special projects etc. These training programmes may be conducted through vestibule, direct, cascading or distance learning. These days tele-conferencing is becoming the most commonly used and economic training device for imparting knowledge to more people in lesser time and without traveling much distances.

TRAINING PERIOD

The length of the training period depends upon the skills to be acquired, the trainee's learning capacity and the training methodology used. The use of effective and visual material usually helps to reduce the training time to maintain interest and secure maximum accomplishment. No single session lasts longer than two hours. The duration of the whole training will be 2-3 days for optimum absorption and internalization of the knowledge. It may be useful if workshops/seminars are organized for 3 days and refresher/orientation are organized for 5 days duration.

TRAINING METHODS AND MATERIALS

There are several on-the-job and off-the-job methods of training. The choice of any method would depend upon the specific objectives of the training programme. Mostly, however, the techniques of role-play, lectures and games have been employed to increase interest and participation of the educational functionaries.

To increase the effectiveness of training some written material is given as a basis for instruction, review and reference. The training material is distributed among the trainees well in advance so that they may come prepared in the lecture class and understand the subject quickly their doubts may be removed by asking questions from the instructor. Material is being developed through several working groups that are constituted especially for this purpose. Expertise and experience available in the field is also utilised for this purpose.

TRAINING EFFECTIVENESS

Training effectiveness is the degree to which the trainees are able to learn and apply the knowledge and skills acquired during the programme. The attitudes, interests, values and expectations of the trainees and also the training environment influence it. A

training programme is likely to be more effective when the trainees want to learn, and are involved in their jobs and have career-plans. Contents of the training programme and the ability of the trainees also determine training effectiveness to a certain extent. The learning of the trainees is assessed through assignments and exercises. These are evaluated at the end of the programme and a feedback is given to the participants about their performance.

SUGGESTED CRITERIA FOR THE EFFECTIVENESS OF THE PROGRAMME

This depends upon the quality of the resource faculty to a large extent. The following guidelines help in the selection and deputation of the resource faculty. These are, however, suggestive. Any other guideline(s) particular to the situation can be employed:

1. Selection of the state level key persons

These persons should:

- a. Have a high reputation for teaching and developing innovative practices.
- b. Possess adequate knowledge of the subject content and the pedagogical theory and practice for upgrading the competence of educational functionaries
- c. Have a democratic disposition and skills for initiating and leading group discussions.
- d. Help the nodal agency through various activities in the planning, organisation, implementation and evaluation of the programme.

2. Selection of the resource persons

The resource persons selected for participation should have:

- a. Qualification and expertise both in the contents and pedagogy of the subject areas.
- b. Experiences of organisation and participation in the In-Service Education Programme and activities.
- c. Reputation for teaching and innovative works in classroom situations.
- d. Experience of serving as teacher educators.

Training Programmes For Teachers/Heads

A. Training Programme For Regular Teachers					
Sr. No.	Name of Training	Level	Minimum Length of Service	Duration	Frequency
Plan of Programs for General Training to Develop/Enhance Personal & Professional Competencies of Regular Teachers					
1	Induction Training	All	On joining	1 week	On joining
1.	Attitude to learn more, how to fetch more work	All	2 years	3 days	Once in a year
2.	Right and justified Benchmarking of self & others	All	2 years	2 days	Once in 2 years
3.	First-Aid	All	2 years	2days	Once in 2 years
4.	Handling Emergencies - General fire - Laboratory - Swimming pool accidents	All	2 years	1 day	Once in 2 years

5.	Authentic Vs inauthentic labour	All	2 years	1 day	Once in a year
6.	'Work on & forget the fruit'	All	2 years	1 day	Half yearly
7.	Grievances and Feedback	All	2 years	1 day	Half yearly
8.	Gender Sensitization	All	All	2 days	Once in 3 years
9.	Value Education Relationships in real life	All	All	2 days	Once in 3 years

Plan of Programs for Training for Focus Groups to Develop/Enhance Personal & Professional Competencies of Regular Teachers

1.	Competence to identify refer special children	Primary and Upper Primary	5 years	3 days	Annual
2.	Sensitivity to a) Freedom of choice of mode of studies writing Vs typing b) Alternative curriculum e.g. talking Vs writing	Primary Upper Primary	2 years	2 days	Annual
3.	Access to Facilities provided by Govt., Education. Board and other bodies for special children	All	2 years	1 day	Annual
4.	Working with First Generation learners e.g. Academic house management, counseling.	Primary	All	3 days	Once in 3 years
5.	Programs for socially Disadvantaged, e.g. Academic, nutritional, house management etc.	Primary Upper Primary	2 years	3 days	Annual
6.	Tolerance for failure	All	All	1 day	Annual

Plan of Programs to Enhance Academic and Professional Competencies of Regular Teachers

1.	Curriculum Development: content and methodology to transact content	All	5 years	5 days	Once in 2 years
2.	Innovation in content or methodology				
	a) Languages	All	5 years	2 days	Once in 2 years
	b) Science	All	5 years	2 days	
	c) Physics, Biology, Chemistry	Secondary	5 years	2 days	
	d) Geography	Upper Primary Secondary	5 years	2 days	
	e) Social Studies	Primary	5 years	2 days	
	f) History	Upper Primary Secondary	5 years	2 days	
	g) Maths	All	5 years	2 days	
3.	Use of computers and internet	All	All	3 days	Once in 2 years
4.	Concept of Discipline				
	- how - responsibility, wrong definitions of love and affection.	All All	All All	2 days 2 days	Once in 3 years Once in 3 years
5.	Evaluation: Trends & Constraints who, what, why, where, whom & how	All	2 years	2 days	Annual

6.	Current trends which influence teacher's future	All	5 years	1 day	Once in 5 years
7.	Relevance of Education with real life: beyond text book	All	All	3 days	Once in 2 years
8.	Cooperative Supervision with discussion & feedback	All	All	2 days	Once in 2 years
Plan of Programs to Develop/Enhance Personal & Professional Competencies of Pre Primary Teachers					
1.	Discipline	-	All	2 days	Annual
2.	Behavior Modification	-	2 years	2 days	Once in 2 year
3.	Child Development	-	2 years	2 days	Once in 2 years
4.	Content Innovations	-	5 years	3 days	Once in 3 years
5.	Innovation in conduct of Program	-	5 years	3 days	Once in 3 years
6.	Brain Storming sessions for improvement in infrastructure and total program	-	5 years	1/2 days	Annual
7.	Referral – Why? Constraints & limitations	-	All	2 days	Annual
8.	Grievances and feedback* (This is a local Program)	-	All	½ days	Annual

B. Training Programme For School Heads					
Sr. No.	Name of Training	Level	Minimum Length of Service	Duration	Frequency
Plan of Programs for General Training to Develop/Enhance Personal & Professional Competencies of School Heads					
1	Induction Training	All	On promotion	1 week	On promotion
1.	Attitude to learn more, how to fetch more work	All	2 years	3 days	Once in a year
2.	Right and justified Benchmarking of self & others	All	2 years	2 days	Once in 2 years
3.	First-Aid	All	2 years	2days	Once in 2 years
4.	Handling Emergencies - General fire - Laboratory - Swimming pool accidents	All	2 years	1 day	Once in 2 years
5.	Authentic Vs inauthentic labour	All	2 years	1 day	Once in a year
6.	'Work on & forget the fruit'	All	2 years	1 day	Half yearly
7.	Grievances and Feedback	All	2 years	1 day	Half yearly
8.	Gender Sensitization	All	All	2 days	Once in 3 years
9.	Value Education Relationships in real life	All	All	2 days	Once in 3 years
10	Stress Management -what	All	All	1 days	Once in a year

	-how to manage -various exercises				
11.	Behaviour Modification	All	2 years	2 days	Once in 2 years
12.	Child Development	All	2 years	2 days	Once in 2 years
Plan of Programs for Training for Focus Groups to Develop/Enhance Personal & Professional Competencies of School Heads					
1.	Competence to identify refer special children	Primary and Upper Primary	5 years	3 days	Annual
2.	Sensitivity to a) Freedom of choice of mode of studies writing Vs typing b) Alternative curriculum e.g. talking Vs writing	Primary Upper Primary	2 years	2 days	Annual
3.	Access to Facilities provided by Govt., Education. Board and other bodies for special children	All	2 years	1 day	Annual
4.	Working with First Generation learners e.g. Academic house management, counseling.	Primary	All	3 days	Once in 3 years
5.	Programs for socially Disadvantaged, e.g. Academic, nutritional, house management etc.	Primary Upper Primary	2 years	3 days	Annual
6.	Tolerance for failure	All	All	1 day	Annual
Plan of Programs to Enhance Academic and Professional Competencies of School Heads					
1.	Curriculum Development: content and methodology to transact content	All	5 years	5 days	Once in 2 years
2.	Innovation in content or methodology				
	a) Languages	All	5 years	2 days	Once in 2 years
	b) Science	All	5 years	2 days	
	c) Physics, Biology, Chemistry	Secondary	5 years	2 days	
	d) Geography	Upper Primary Secondary	5 years	2 days	
	e) Social Studies	Primary	5 years	2 days	
	f) History	Upper Primary Secondary	5 years	2 days	
	g) Maths	All	5 years	2 days	
3.	Use of computers and internet	All	All	3 days	Once in 2 years
4.	Concept of Discipline - how - responsibility, wrong definitions of love and affection.	All All	All All	2 days 2 days	Once in 3 years Once in 3 years
5.	Evaluation: Trends & Constraints who, what, why, where, whom & how	All	2 years	2 days	Annual
6.	Current trends which influence Head's future	All	5 years	1 day	Once in 5 years
7.	Relevance of Education with real	All	All	3 days	Once in 2 years

	life: beyond text book				
8.	Cooperative Supervision with discussion & feedback	All	All	2 days	Once in 2 years
9.	Motivation -how to find level -how to create -how to maintain level	All	All	3 days	Once in 2 years
10.	Leadership -how to develop -how to maintain	On promotion	On promotion	3 days	Once in 3 years
11.	Communication -techniques of clear communication	All	All	3 days	Annual
12.	Administrative and Financial Competency	On promotion	On promotion	2 days	Once in 2 years

The above training programmes were identified on the basis of job and need analysis in order to improve quality and efficiency of school education. The trained teachers and Heads can act as trail-blazers in the lives of learners and in the process of education for development. If teachers and Heads acquire professional competencies and commitment, and if they are enabled and empowered to perform their multiple tasks in the classroom as well as in the school and the community in the genuinely professional manner, then a chain reaction can begin, starting with the sound teaching performance and culminating into a high quality learning among increasingly more students in respect of cognitive, affective and psychomotor areas of human development.

TRAINING PARTICULARS		
S.No.	Particular	Details
A	Agencies for Conducting Training for Teachers	DIET/GISTC/SSA
B	Agencies for Conducting Training for Heads	GISTC/SSA
C	Arrangement of venue, OHP, paper, pens, etc	Training Agency
D	Arrangement of Reading Material	Punjab Government
E	No. of Master Trainers @ of 5 per district (17)	85
F	No. of Resource Persons (district wise)	
	District	(District) + (Block)
1	Amritsar	$(12*20+4*10)+(10)= 290$
2	Bhatinda	$(6*20+2*10)+(10)=150$
3	Faridkot	$(1*20+1*10)+(10)=40$
4	Fatehgarh Sahib	$(4*20+1*10)+(10)=100$
5	Ferozepur	$(8*20+3*10)+(10)=200$
6	Gurdaspur	$(11*20+4*10)+(10)=270$
7	Hoshiarpur	$(8*20+2*10)+(10)=190$
8	Jalandhar	$(8*20+2*10)+(10)=190$
9	Kapurthala	$(4*20+1*10)+(10)=100$
10	Ludhiana	$(9*20+3*10)+(10)=220$

11	Mansa	$(4*20+1*10)+(10)=100$
12	Moga	$(3*20+1*10)+(10)=80$
13	Mukatsar	$(3*20+1*10)+(10)=80$
14	Nawan Shehar	$(4*20+1*10)+(10)=100$
15	Patiala	$(7*20+2*10)+(10)=170$
16	Ropar	$(5*20+2*10)+(10)=130$
17	Sangrur	$(9*20+3*10)+(10)=220$
	TOTAL	2630

Above are the various particulars regarding the Training to be imparted to the School Heads and the Teachers. In the following pages is the Training Schedule for the year of Training starting January 2003 and ending March 2004. The description of the Training topic; number of trainees; number and source of trainers; materials required and the Training Calendar are given.

PLANNING THE CURRICULUM

Planning for the state level training programme is a decentralized process. At the national level only a suggestive syllabus frame for various subjects is prepared to ensure relevance to the needs, resources and conditions that are present. The model syllabus developed by the state has been elaborated into detailed syllabus at the district and local levels.

Expert groups are helping the state in developing a balanced curricula and to indicate the kind of curricula and content which can go into the syllabi after passing the test of relevance to state needs and resources. The lists of such material are being prepared both for the elementary and secondary stage separately. The training activities for various stages may continue over a span of time. Accordingly, the contents need to be graded over successive training programmes. Therefore, selection, modification, elaboration and gradation of the training activities will constitute the process of its adaptation to the needs of the state. There is ample scope for local variation in content, finalized in consultation with the district authorities and professionals.

A balanced selection of activities is made in each of the areas according to the educational potentials of each activity and the facilities and time available for it. A variety of activities should be provided as far as possible so that teachers / Heads / administration can develop self-sufficiency in meeting their needs. Besides, a balanced distribution of activities over the three dimensions i.e. life skills, education and community involvement is being achieved in accordance with their importance at different stages of education.

The training includes planning, analysis and detailed preparation at every stage, so that it is educational in character. Improved tools and modern techniques have been adopted so that it leads to the understanding of a progressive society based on technology.

CONTENTS OF THE TRAINING PROGRAMME

1. Contents of the training programme have been so designed so that the functionaries are able to relate their knowledge of facts and the scientific principles involved, to various types of work. They should learn to apply problem-solving methods and be able to identify and use the tools, raw materials and equipment in scientific manner. Observation, manipulation and work practice are the methodologies to achieve the stipulated goals. The process of inoculation of positive attitudes and values is being continued. Besides, a deeper concern for the environment and a sense of belonging, responsibility and commitment to the community is being developed in the participant.
2. The content at the elementary stage has three components--environmental studies and application; experimentation with the materials, tools and techniques; and work practices. At the secondary stage, the content comprises two parts i.e. essential activities for the academic gain and the essential activities for the satisfaction of day-to-day living needs of the teachers, their families and communities.
3. National, physical and human resources in the locality and the socio-economic background of the local community also influence the contents of the programme.
4. Activities are selected that they help the teachers in giving shape to their imagination. Activities should also offer scope for experimentation with material and tools and participation in activities that involve helping the others in diverse work situations, sharing work in group situations as well as in fulfilling individual responsibilities. In the selection of activities special care has been taken to select those that satisfy their curiosity and have the potential for developing desirable work and social values.

These activities lead to the development of self-reliance in meeting day-to-day needs and to the improvement of the environment. A large number of activities in related areas have been put in such a sequence that they assume the form of project. The choice of activities and project is such that the needs of the students and community are met.

If the continuity is maintained, it may be conceived that sufficient experience gathered in a particular area can equip the individual in a fair degree with regard to her/his vocational competencies.

The training programme keeps in its focus, the needs of the teachers on the one hand and on the resources available in the community and the facilities available in the schools on the other hand. Since these will differ from place to place, no fixed programme can be prescribed for all the employees in an area let alone in a state or in the country as a whole. It is in keeping with this realization that a suggestive list of activities rather than a prescriptive syllabus is recommended for the subject at the national level also.

FACILITIES REQUIRED FOR TRAINING

Two types of facilities are required for the training programme namely,

- (i) Physical facilities consisting of accommodation, venue, technical facilities etc.
- (ii) Teacher/Trainer expertise.

For physical facilities some resources of the community are being used. It is ensured that the venue is centrally located for the participants and well connected by rail and roads.

EVALUATION OF TRAINING CONDUCTED

Effectiveness of training programme is judged by the degree to which trainees are able to learn and apply the knowledge and skills acquired during the programme. It is influenced by the attitudes, interest, values and expectations of the trainees. A training programme is always more effective with willing participants. Besides this the quality of contents also affects the results. The following criteria are being used to measure the effectiveness of training.

1. *Reactions*: Of the trainees to the objectives, contents and methods of training and also the competency of the trainer. In case the trainees are satisfied with the way training is conducted, programme may be considered successful.
2. *Learning*: The extent to which the trainees have assimilated the desired knowledge and skills. This is a useful indicator to evaluate the training effectiveness.
3. *Behaviour*: Changes in the behaviour of the trainees will reflect the extent to which the learning has been put to practice.
4. *Results*: Quality improvement, decrease in absenteeism, high level of motivation, curiosity to learn more, improvement in the behaviours, satisfying administration and management behaviours are used as indicators of evaluating training effectiveness.

Evaluative programme or studies are also being conducted at different levels, through different agencies. At some places the University Departments of Education are collaborating with state level nodal agencies. At some place the SCERTs/SIEs are conducting evaluative studies at their own levels. State has requested some National level agencies to evaluate the training programmes and suggest ways to improve the effectiveness. But in all the cases the evaluation is being treated as the most important exercise. The evaluation of various programmes gathers information on: –

1. Facilities provided.
2. Distribution and quality of material.
3. Use of transaction and demonstrative activities.
4. Process of transaction and demonstrative activities.
5. Participation by teachers in content areas.
6. Likely gain of the programme to the teacher.
7. In-service education needs of teachers.
8. Suggestions for the improvement of the programme.
9. Capability of the trainers.
10. Evaluation of action plan of the trainee.

COMMUNITY SUPPORT

Effective community support is required for a successful training programme. There is provision in the training programme for the involvement of experts from the community. This is particularly necessary to provide orientation at the beginning of various programmes, for the identification of various problems and strengthening of educational issues.

The programmes are built on policy support and the strength of pedagogical foundations. The problem solving approach and the integration of knowledge relating to different subject areas demands a new type of literature for the guidance of teachers. Instructional material in the form of curriculum guides, handbooks, source books, manuals, resources units and doing learning units along with community participation plays a very vital role in the implementation and success of various educational programmes. Teachers' involvement in the community activities is especially necessary in the future training schedules.

Community is represented by the VEDCs i.e. the Village Education Development Committees.

EMERGING ISSUES AT ELEMENTARY AND SECONDARY EDUCATION LEVEL

1. Nature of students and their behaviour pattern.
2. Discipline, self-discipline, freedom necessary for solving education problems relating to school discipline/class room discipline, discipline & drug abuse. Need for resource mobilization.
3. Application of advanced technology in teaching learning and administration.
4. Quality Management in Elementary and secondary education: Necessity of modern times.
5. Vocalization of secondary and higher secondary education
6. Teaching of Professional ethics.
7. Handling the exceptional children.
 - Education of girl child.
 - Education of gifted/creative children.
 - Education of disabled children.
 - Education of delinquent /truant child.
 - Education of drug-abused child: considerations for remedial teaching.
8. Examination and their uses
 - Learning facilities
 - Teacher's role as facilitator and ways to minimise the learning fatigue in the students.
 - Improving learning conditions in the school/classrooms.
 - Ways and means of motivating children in the classroom.
9. Creating Congenial School Environment
 - Classroom identification
 - Classroom illumination
 - The problem of supplying Mid-day meals.
 - Drinking water facilities

- Aspects of school health education programme
 - Factors affecting health of school children: with special emphasis on drug abuse, alcoholism and training in school children.
10. Strategies of teaching
 11. Techniques of teaching
 12. Management in teaching –learning
 13. Planning of teaching
 14. Organising teaching
 - Leading teaching
 - Meaning of Motivation
 - Selection of Appropriate Strategies of Motivation

IN-SERVICE EDUCATION TRAINING

The main contents of the In-service Programmes are organized around,

- (i) the school curriculum,
- (ii) innovations in pedagogy,
- (iii) changes in curriculum areas,
- (iv) enrichment of curriculum, and
- (v) development of new approaches to teaching methodologies.

The other areas of In-service education are concerned with the development of awareness about vital contemporary issues, developments of professional skills and abilities including those required for development of instructional materials and evaluation procedures. Clarification of concepts, development of healthy attitudes and values, motivation devices and pedagogical theories are also areas of concern in in-service education.

Some new items in the content may emerge according to the needs and development of education from time to time. The planners and organizers of in-service education programmes have to be sensitive and responsive to changes. This attitude will help in identifying needs promptly so that the required programmes can be arranged in a timely manner.

Refresher courses are meant for renewing the information already available with the teachers. Any addition in the available information is communicated to teachers. Even where the persons appointed have some job experience, they are being given some training to renew their knowledge and skills and to tell them what they are expected to do. The talent of on-the-job teachers cannot be fully utilized without a systematic programme of training and development.

The Education Department of Punjab has been restructured recently and two directorates of education have become operational i.e. (i) Directorate of Elementary Education and, (ii) Directorate of Secondary Education. Elementary consists of first-eight classes, secondary education consists of secondary and senior secondary levels relating to age group fourteen to seventeen. As per the GOVERNMENT OF PUNJAB EDUCATION POLICY AND POA 2002, all urban primary schools shall be elevated to elementary level in the state. Urban middle schools are a stand-alone unit. Middle

sections of urban high/senior secondary schools will be nominally separated and the separated middle section shall start primary classes to complete their elementary school structure. Thus, only two levels of education will remain operative i.e. elementary and secondary as per the policy decision of the Govt. of Punjab.

This restructuring of the system calls for a readjustment of the teachers and hence the need for changing the teacher training of elementary teachers both pre-service and in-service. Keeping in mind the new scenarios, New Instructional Strategies are being planned which focus more on the inter-related personal, social and physical environment. The elementary teachers are being trained to teach children to explore: -

1. Processes, systems, relationships, areas and regions in arranged learning environments.
2. Providing opportunities for values exploration related to their personal, social and physical environments.
3. Guiding children in solving problems related to social issues.
4. By providing children with opportunities to learn and use the skills characteristic of their age and surroundings.
5. Involving children in the exploration of survival and to suggest probable solutions.

The above-mentioned strategies are workable and are effective in use. They help in the development of skills in thinking, information, assimilation and processing and expressing ideas. Learning and achievement of elementary stage are less a matter of teaching strategies and more a matter of the adequacy of children skills. The elementary teacher training therefore expands this point of view.

Training Contents For The Resource Persons (Administrators/ DEOS /CEOS / Principals Of DIETs And GISTCs)

- 1. Education policy-2002 and the Administrators Role in the Education of Punjab**
 - Education policy-2002
 - Application of Education Policy
 - Two-tier system of schooling instead of four
 - Recruitment Policy
 - Re-deployment of teachers
 - Leading Quality Institutions
 - Participatory management and Team work
- 2. Principles of School Administration / School organizations.**
 - Principles of school administration.
 - Objectives of School administration
 - Importance of physical aspects of School Administration
 - Needs of a school building.
 - Economy in construction.
 - Healthful school condition
 - Securing parental co-operation.
 - Building proper relations with the staff.

- Staff meetings-their utility and organization.
- School management, school finance and budget.
- 3. Inspection and Supervision**
 - Objectives of school inspection and ways to improve it.
 - Functions of supervision.
 - Modern trends in supervision
 - Leading Quality Institutions
 - Discipline in schools
- 4. Importance of Management system for administration**
 - Role of education technology in the effective management
 - Importance of data system, data analysis and presentation of data.
 - Administrator's role in the effective management of education.
 - Storage of educational data for preparing comparative profiles
- 5. Agencies of Education**
 - Community as an agency of Education.
 - Society as an agency of Education: Special emphasis on global society as a complementary agency of Education.
 - Passive agencies of Education.
 - Wastage and stagnation in Elementary Education.
 - Role of community in controlling wastage and stagnation
 - How to control wastage and stagnation.
 - Role of Administration/PTA/Community in controlling wastage and stagnation

Contents given above will be spread in subsequent training programmes. The training related to the above contents will be converted during the year 2003-04.

Contents For The Training Of Center Head Teachers / Head Teachers And Headmasters

1. Social Role

- Head Teachers as the Liaison Officer between the govt. and the society.
- Head Teacher as the motivator for the community.
- Functional Relationship of Chairman of VEDC of the society and the member secretary.
- School Head as community member
- Management of community grievances, students and parents' problems

2. Teachers Role

- School Head as a teacher.
- Breaking isolation of Teacher Education
- Improving the quality of classroom teaching in the school.
- A catalyst for providing quality training to teachers and global education to students.
- Computer savvy Head Teacher: Role as modern administrator

3. Administrator's Role

- Head Teacher as a Professional Democratic Leader.

- Duties and responsibilities of Head Masters and Head Teachers.
- Position of Head Teachers in the Schools / Classroom / Community.
- School Head: A link between the administration and the community
- School Head as a perfect communicator and stress buster
- Head Teacher as Accounts Administrator

4. School Discipline

- Traditional vs. Modern concepts of discipline.
- Rewards and discipline.
- Punishment and discipline
- Indiscipline: A result of bad school organization
- Common forms of Indiscipline in schools.
- Steps to check indiscipline.

5. Special Role of the Head Teachers

- Need and importance of education for girl child
- Making the community gender sensitive.
- Importance of education for disabled children identification of disabled children.
- Knowledge of Personal Disability Law
- Institutions catering to the needs of mild/moderate/severely disabled
- Role of special teachers in the education of disabled children.
- Head Teacher as a stress buster: Techniques for minimizing the staff stress

6. Promoter of Co-Curricular Activities in the school.

- Bringing a change in the attitude towards extra-curricular activities.
- Organization of Co-Curricular activities.
- Literacy and academic activities promoting healthy competition among students.
- Creating congenial school environment.

Contents of syllabus to be prescribed for E.T.T. teachers who are to be on contract for two years before joining as confirmed teachers.

- In-service Education Field Interaction and Innovative Co-ordination (IFIC)
- M.L.L.s for all the school subjects up to eighth class.
- Knowledge, skills and attitudes for the foundation courses, with particular emphasis on Educational fundamental right and its legal aspects.
- Fundamental duties and how to inculcate dedication in the teachers and the learners.
- Training of children with special needs regarding P.W.D. Act 1995 and its implementation.
- Practical performance in aspects of learning, personality traits, child psychology.
- Community cooperation regarding infrastructure.
- Maintenance of school records and registers regarding school complex.
- To impart knowledge regarding maintenance of funds and rules to minimise court cases.

Educational Technology:

- In service training regarding Educational Technology.

- Preparation of low cost and no-cost Teaching Aids.
- Preparation of audio and video educational cassettes and use of scientific instruments and computers.
- Use of Science Kit, Maths Kit, Tool Kits.

Work Experience:

- In service work experience of various crafts.
- Use of Operation Black Board material like Harmonium, Dholak, and Manjira for community singing for national integration.
- Preparation of charts for different subjects i.e. drawing and painting.
- Papier-mâché and Collage work in art education, cutting and tailoring for art purposes.
- Preparation of puppets, charts for the various games and knowledge about different rules.
- Systematic conduct of morning assembly and use of Tippery, dumbles and drum etc. for parade.

Planning Management:

- In service training regarding Planning and Management for different activities of the school and S.S.A. activities.

Curriculum Material Development and Education:

- Curriculum Material Development and Education.
- Preparation of different tools and material for evaluating achievement of students and introduction of grading system.
- Play way child-centered and activity-based approach to attract the children to attend the schools right from the age group of three to six to enhance enrolment to achieve U.E.E. and U.P.E., D.P.E.P activities etc.

TRAINING IN COMPUTER EDUCATION

THE GOVERNMENT OF PUNJAB EDUCATION POLICY AND PROGRAMME OF ACTION-2002 states that with the setting up of Information and Communication Technology Centres, it should be made obligatory for all the teachers to make themselves conversant with the computer technology and to achieve a minimum level of competency in handling computers. Information and Computer Technology (ICT) has the potential to change the entire scenario of Indian Education System. Each change brings with it new roles, new relationships and most importantly new and unique information needs. These information needs are related to global education and can be satisfied by access to external data bases which when programmed properly can provide new knowledge and suggestions on how it might be used. This development in communication technology and information has generated new patterns and mode of learning and this has influenced the very approach to curriculum transaction. The didactic functions of computers, for example, are not limited to simple presentations of information. Computers can also provide interactive instructions and instructional simulation.

This implication of educational technology to teacher education training and curriculum is far reaching. In the first place, curriculum transaction within teacher education institutions is itself undergoing a drastic transformation calling to its disposal

all the available technological hardware and software. Secondly, the methodologies that are taught to the trainees are becoming more forward looking. Further teacher training programme focus more on self-directed learning and the development of learning to learn skills utilizing computers. The future teacher will be a competent, computer-savvy, professional and skilled teacher. She/he will be an effective communicator. Therefore, teacher education both pre-service and in-service strives to incorporate the new role perceptions and expectations. The vision is that: -

1. The ICT be introduced in the teacher-training programme for reducing the transmission time and also making the training cost effective.
2. The ICT facilities (telephone, computer, dish antenna, radio, television) are provided in all SCERTs, DIETs and BRCs for organising the training programme continuously. The SCERT is to act as presentation centre and DIETs will be learning centres.
3. A time slot has been provided in the timetable prepared by DIETs and In-Service Training Centres in the state for the teaching of computers. Equipment should be provided for the state agencies by the government.
4. Training in computers will increase the skills in the performance of jobs. Increase in skills usually helps increase both quantity and quality of output. Such training will also help in increasing the current performance and will prepare for the future assignments.

Teachers who are teaching class III onwards should have a sound knowledge of computers. The future of education depends to a great extent on the computerization because the concept of global education is finding favours from the specialists as well as parents and communities. Therefore, becoming computer savvy is becoming a necessity rather than a fashion for the teachers.

Content for Teacher's Training Programme for Elementary Teachers of Punjab (Computer Education)

1. Role of computers in Elementary Education
2. Role of computers in global education.
3. Education policy and computer education
4. Computer awareness; Explaining about the computers.
5. Information technology and classroom education.
6. Information about hardware and software educational appliances.
7. Exposure to the world of windows.
8. Understanding storage device.
9. Folders and files.
10. Web site and its use in the elementary education.
11. Introduction to Internet facilities and their use in the classrooms.
12. Teacher's reactions to the computerization and globalization of education.
13. How community can be benefited in the computerization process.
14. Possible practical problems in the use of computers in the classes.
15. Viruses and scanners.
16. Information about the Microsoft world.
17. Input/output devices.

18. Abbreviation related to computers.

TRAINING OF ENGLISH TEACHERS

In Punjab, English is to be taught from class 3rd in all government and private aided and recognised schools of the state as stated in the GOVERNMENT OF PUNJAB EDUCATION POLICY AND POA-2002. Privately managed schools are also introducing the instruction in second language and English from class III is being taught compulsorily if not introduced earlier. Science, mathematics and commerce are being taught compulsorily in English medium, instructions are optional in other subjects. This vision of the policy makers makes it essential that the teachers in the schools of Punjab should have a high level of professional competency for teaching the students in English medium. A concentrated and effective training programme is required for providing short-term training to teachers for immediate improvement in usage of English as a teaching medium in the schools of Punjab. Therefore, teachers with specialized training are needed for effective instructions in the classroom. These teachers should: –

1. Have high degree of competence in basic skills of reading, writing, listening; and speaking;
2. Have high quality skills in social interaction; and
3. Have capacity for logical and critical thinking in expression of ideas and in acceptances and rejections of ideas,
4. Follow and give instructions in English,
5. Keep up with technical knowledge available for teaching English.
6. Develop needed professional skills.

The teacher of English is expected to help students accomplish the following goals:

1. Develop basic competencies in the accurate reading, writing and speaking of English language.
2. To develop competence in those reading skills necessary for the performance of school tasks and for the use of reading as an instrument of personal enlightenment and enjoyment.
3. To teach students how to write simply and effectively.
4. Give students a sense of security and such competence, as they are able to achieve in the use of the mother-tongue including effectively express their thoughts clearly in sentences and paragraphs and convey exact meanings through discrimination in the choice of words.
5. Help in the development of linguistic competence necessary for vocational efficiency in their future professional lives. English as a school subject has been judged to be of major importance by almost every authority who has dealt with the practical working day needs of people. The teacher must realize, however, that teaching skills and ideas related to the subject matter of English is not an end in itself but a means of achieving the objectives of English as they relate to General Education.

Tentative Training Programme Contents for the (English) (Elementary Teachers)

- Review of English Text Books prepared by the Punjab School Education Board for teaching English Classes III- VIII.
- Justification for this training programme
- Contents (Grammar & Usage)
 - Synonyms
 - Affixes
 - The Phrase and the Clause
 - Formation of different parts of speech
- Methodology
 - Aims of Teaching English in India
 - As a International Language
 - As a Link Language
 - As a Library Language
- Difference between learning the mother tongue and a foreign language.
- Teaching of English in Indian schools: Causes of decline and suggestions for improvements with special emphasis on the schools of Punjab
- Methods of Teaching English
 - Grammar Translation Method
 - Direct Method
 - Bilingual Method
 - Structural Approach
 - Pragmatic Approach
- Methods of Teaching Grammar
 - Inductive and Deductive Method
 - Drill Method
 - Substitution Method
- Communication skills

Tentative Training Programme Contents for the English Teachers (Secondary)

- Review of English Text Books prepared by the Punjab School Education Board for teaching English in classes IX-XII
- The above exercise will continue to establish the rapport with the teachers and to find out the practical problems faced by the teachers while teaching
- Justification for this programme
- Contents
 - Voice Modulations & Pronunciations
 - Narrations
 - Common errors
 - Drafting of letters/advertisements etc.
 - The Art of Communication
- Methodology

- The art of teaching prose
- The Art of teaching poetry
- Steps in Planning of Lessons for teaching English
- Use of audio-video aids in teaching English
 - Audio aids
 - Video aids
 - Use of Computer in teaching English
- Remedial English and Corrections
 - Identifying areas of remedial English
 - Requirement and measures of remedial English
 - Developing correct listening, speaking, reading and writing ability in the students

TRAINING OF SCIENCE AND MATHS TEACHERS

Like any language, the language of the science changes, some times rapidly in definitions and contexts. There are no easy solutions for teachers interested in keeping up with the changes in the language, the processes and progress of science, knowing the latest elements that the teachers should be constantly exposed to training. Such training is able to give greater insight into how that content relates to the students and the community. In the present world, science is not an insulated entity but an amalgamation of educational, psychological and sociological research studies. Therefore, the contents of the training are designed to help in the development of students, scientific thinking and learning and assessment in the classrooms. The trainers keep in mind that the high school students' attitudes towards science may be affected by several variables some of which teachers and family can influence. Therefore, the teacher-training programmes are being designed accordingly.

Science now is an integral part of school curriculum up to the secondary stage. The objectives of the science teachers training are to develop such competencies and skills in the teachers so that she/he is able to: –

1. Develop in the students an understanding of the nature of science.
2. Develop the concept of holistic view of science.
3. State instructional objectives in terms of specific behavioral outcomes.
4. Analyse content in terms of concepts, sub-concepts and the relation between them.
5. Plan suitable activities, select appropriate resources, organise group activities.
6. Design teaching strategies aimed at development of science process and skills.
7. Select, Develop and Relate learning experience/learning activities with the developmental stages of the learner.
8. Design and Employ suitable activities and learning experiences to help children.

The teacher has to be competent at: –

1. Planning of activities
2. Preparing the students for activities.
3. Conducting and supervising activities.
4. Conducting discussions.
5. Designing activities for evaluating the learning outcomes.

While designing the contents of the training it is kept in mind that "integrated science" is a component of science curriculum, therefore, its contents and methodology are properly dealt with. It is emphasised during training that the teachers use a variety of strategies in and out of the classroom to capture and continue students' interest in science.

It is essential that the participants think about their goal orientation. Once they establish their goals, training helps them to monitor their own progress in achieving those goals so that they can be more successful in attaining them and thereby further increase their motivation to learn science. During training:

1. Before beginning a lesson the participants are shown an overview of the day's contents.
2. Analogies are used to help them develop more valid conceptions.
3. Conceptual change models are used to overcome participants' misconceptions.
4. A problem-centred or problem-based approach to teaching learning is encouraged.
5. Work directly with the participating teachers as often as possible.
6. Apply the Learning-cycle approach to science teaching to understand scientific concepts.
7. Efforts are made to improve the alignment between teaching practices and learning styles.
8. Present a more authentic view of the nature of scientific practice and how it is integrated into culture and society.
9. Reasoning and problem solving skills are encouraged
10. Questioning skills are encouraged
11. Co-operative activities are encouraged.
12. Involvement of community is emphasised during training.
13. Science is promoted as a value free activity.
14. Scientific inquiry is taught as a simple algorithmic process.
15. Science proceeds via induction.
16. Observation provides direct and reliable access to secure knowledge.
17. Special efforts are made to encourage girls to study science and to be sure that girls are given the same quantity and quality of attention as is given to the boys. Cultural biases are discouraged. These may steer the female students away from biology, chemistry and physics, in particular and science in general, whereas given a change many might really enjoy science.

Improvement of Science Education Scheme
Contents for Middle Science Seminar (Medical Group) Year 2003-04
(5-5-03 to 14-5-03)

Day-1 (5.5.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.

- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 8th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practicals

Seminarians will be divided in three groups: A, B and C. The following Practical of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the Practicals themselves.

Physics	Chemistry	Biology
1. To show the weight of air by experiment.	1. To prepare lime water and show that exhaled air contains more CO than present in ordinary air	1. To study plant cell from epidermal cells of onion peel & animal cell from epithelial cells of cheek.
2. To find the focal length of mirror.	2. To determine the melting point of ice.	2. To study micro-organisms such as amoeba, paramecium etc. from pond water.
3. Prove that sound needs a medium to propagate.	3. To determine the boiling point of water.	3. To study human digestive system, human heart and ear from models.

4. To find pressure using Barometer.	4. To prepare oxygen gas in the laboratory.	
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Discussion

Teachers will be asked to give problems to be faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (6-5-03)

Element, Compound & Mixture (Chemistry)

- Element, Compound and mixture.
- Elements, Compounds and mixtures with examples.
- Chemical symbol, its significance.
- Molecular formula, its significance, molecular formulae of some common compounds.
- Chemical equation.

Work and Energy (Physics)

- What is work (specially in terms of mechanics)? Explanation to be given by using some examples.
- How work changes into energy.
- Different Type of Energy (Detailed forms. E.g. mechanical Energy, Electric energy, Nuclear energy, Sound energy, Electromagnetic energy, Sun energy etc.)
- Relationship between different forms of energy.
- Uses of energy.

Health & Diseases (Biology)

- Importance of balanced diet.
- Preservation of food.
- Deficiency diseases due to nutrients.
- Food Pyramids.
- Importance of cheaper but nutritious foods.
- Diet plan according to age, life-style, and nature of work.
- Communicable & Non Communicable Diseases.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic.
- They can also see latest magazines of Physics, Chemistry & Biology.

Practical

- Groups of seminarians will be inter-changed.

Day-3 (7-5-03)

Nature of matter and separation of substances (Chemistry)

- States of matter, properties of solid, liquid & gas.
- Pure substances and mixtures.
- Need for separating components of a mixture

- Methods/Principles of separation-magnetic separation, sedimentation, decantation, filtration etc.
- Separation using more than one method.

Light and its Projections

- Light- a source of energy on sources of light energy.
- Incident, Reflected, Refracted, Transmitted radiations and respective angle. Relationship between them.

Light and its Projections

- Prism, Angle of incidence, Angle of deviation. Angle of emergence. Relation between them.
- Mirror, lens, Images formed by them and their defects.

Basic Algebraic Concepts (Maths)

- Relationship between numbers & letters.
- Operations on numbers and letters.
- Indices.
- Algebraic expressions.
- Operations on algebraic expressions.
- Simplification.
- Linear equation.
- Solution of Linear equation.
- Problems leading to linear equations.

Practicals

Groups of seminarians will be inter-changed.

Day-4 (8.5.03)

Acid, Base & Salt (Chemistry)

- Acidic and basic oxides with demonstrations.
- Properties of acids, bases & salts.
- Uses of salts in daily life.
- To prepare soap.
- To prepare Carbon-di-oxide gas and to study its properties.

Heat & flow of heat (Physics)

- Heat – one of the forms of energy.
- Production of heat in molecules (due to molecular vibrations).
- Temperature, Difference between Heat and Temperature; Scale of Temperatures. Relationship between different scales.
- Units of Heat.
- Heat capacity with examples.
- Conductors, Insulators.
- Conduction, Convection with examples.

Measurement (Physics)

- Mass, length and time.
- A few basically physical quantities derived from them.

Educational Excursion

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-5 (9-5-03)

Number System (Maths)

- Introduction to 'Set' & notations used to represent relation between sets.
- Set of Natural Numbers & Fundamental operations.
- Set of whole Numbers & Fundamental operations.
- Set of Integers & Fundamental operations.
- Set of Rational Numbers & Irrational Numbers.
- Decimal representation of Rational Numbers.
- Recurring and non-terminating Numbers.
- Set of Real Numbers.
- Number line:-one-one correspondence between numbers & points on line.

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Practicals

Physics	Chemistry	Biology
1. To show the direction of ray of light using glass slab.	1. To show that during the process of photosynthesis, oxygen gas is produced.	1. To study structure of Spirogyra from pond water and Rhizopus from decaying bread.
2. To show the direction of ray of light using glass prism.	2. To prepare Carbon dioxide gas in the laboratory and test it with limewater.	2. Study of parts of a flowering plant and a seed.
3. To prepare Volta cell	3. With the help of valve tubes make a model of graphite.	3. To study plant tissue and animal tissues from slides.
4. To show real and virtual images by using lens.	4. To study the different parts of flame.	

Day -6 (12-5-03)

Biology

- According to choice of seminarians.

- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Electricity (Physics)

- Concepts of changes.
- Flow of electricity in terms of changes.
- Relationship between current & Change.

Basic Geometrical Concepts (Maths)

- Point, line, surface.
- Relation between points & lines in a surface.
- Relation between lines in a surface.
- Line segment.
- Ray, Angle, types of Angles.
- Units of measuring line segment & Angles.

OHP, Slide Projector

- Knowledge regarding working of OHP (Over Head Projector), Slide Projector, preparation of transparencies etc. will be imparted to seminarians. In future they can make their lessons more effective by using this information.

Practicals

- Groups of seminarians will be inter-changed.

Day-7 (13-5-03)

Electricity (Physics)

- Force among changes. Relationship between electric force & other forces.
- Hazards of electricity.

Man made Materials

- Building materials.
- Natural stone, Cement, Glass, glass fibbers.
- Ceramics, polymers, plastics.
- Synthetic fibbers.
- Soaps and Detergents.
- Fertilizers, Pesticides.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology .

Post-Test

- A Post-test containing Questions of Physics, Chemistry Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practicals

- Groups of seminarians will be inter-changed.

Day-8 (14-5-03)

Carbon & its compounds (Chemistry)

- Allotropic forms of carbon.

- Structure of diamond and graphite with models.
- Compounds of carbon, their nomenclature.
- Saturated and unsaturated hydrocarbons.

Animal System (Biology)

- Digestive system, or
- Respiratory System, or
- Circulatory System

Sound (Physics)

- Production of sound waves.
- Types of waves (Transverse & longitudinal)
- Pulse, Difference between pulse & waves.
- Concept about amplitude, Time period, frequency of wavelength.

Science Kit

- Subject experts of Physics Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA./DA. & Relieving slips to seminarians.

* All the topics of this module will be supplemented with latest information from Newspaper, Magazines, etc. for additional impact on seminarians.

Contents for Middle Science Seminar (Non-medical Group) Year 2003-04 (5-5-03 to 14-5-03)

Day-1 (5.5.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.
- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario

- Including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topics of Physics, Chemistry, Biology from Classes 6th to 8th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and there previous knowledge will be tested.

Practicals

Seminarians will be divided in three groups A, B and C. The following Practical of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively, & then they will be asked to do the Practical themselves.

Physics	Chemistry	Biology
1. To show the weight of air by experiment.	1. To prepare lime water and show that exhaled air contains more CO than present in ordinary air	1. To study plant cell from epidermal cells of onion peel & animal cell from epithelial cells of cheek.
2. To find the focal length of mirror.	2. To determine the melting point of ice.	2. To study microorganisms such as amoeba, paramecium etc. from pond water.
3. Prove that sound needs a medium to propagate.	3. To determine the boiling point of water.	3. To study human digestive system, human heart and ear from models.
4. To find pressure by using Barometer.	4. To prepare oxygen gas in the laboratory.	

Discussion

Teachers will be asked to give problems to faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (6-5-03)

Element, Compound & Mixture (Chemistry)

- Element, Compound and mixture.
- Elements, Compounds and mixture with examples.
- Chemical symbol, its significance.

- Molecular formula, its significance, molecular formulae of some common compounds.
- Chemical equation.

Cell & Cell Structure (Biology)

- Discovery of cell
- Structure of Plant cell
- Structure of animal cell
- Structure & functions of cell organelles.
- Difference between plant cell & animal cell

Health & Diseases (Biology)

- Importance of balanced diet.
- Deficiency diseases due to nutrients.
- Importance of Cheaper but nutritious Foods.
- Communicable & Non Communicable Diseases.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic.
- They can also see latest magazines of Physics Chemistry & Biology

Practical

- Groups of seminarians will be inter-changed.

Day-3 (7-5-03)

Nature of matter and separation of substances (Chemistry)

- States of matter, properties of solid, liquid & gas.
- Pure substances and mixtures.
- Need for separating components of a mixture
- Methods/Principles of separation-magnetic separation, sedimentation, decantation, filtration etc.
- Separation using more than one method.

Micro-organisms (Biology)

- Major Groups of Micro organisms –Bacteria, Fungi, Protozoa, Algae & Virus, Major Functions of Micro- organisms. (Brief account)
- Micro-organisms and disease.
- Medicinal uses of micro organisms & vaccination
- Commercial uses of micro-organisms.

Useful Plants and Animals (Biology)

- Food producing plants, Fiber producing plants
- Timber producing plants, ornamental plants
- Medicinal plants
- Animal Husbandry (Feeding, breeding, weeding, heeding etc.)
- Poultry, Apiculture, Sericulture etc.
- Other uses of animals.

Construction and Theorems in Geometry (Maths)

- Construction of triangles (different types of triangles).
- Construction of medians, angle bisectors, bisectors of sides of triangles.

- Circum-circle of triangle. In-circle of triangle.
- Tangents to a circle.
- Cyclic-quadrilateral.

Practical

- Groups of seminarians will be inter-changed.

Day-4 (8.5.03)

Acid, base & salt (Chemistry)

- Acidic and basic oxides with demonstrations.
- Properties of acids, bases & salts.
- Uses of salts in daily life.
- To prepare soap.
- To prepare Carbon-di-oxide gas and to study its properties.

Heat & flow of heat (Physics)

- Heat – one of the forms of energy.
- Production of heat in molecules (due to molecular vibrations).
- Temperature, Difference between Heat and Temperature; Scales of Temperatures. Relationship between different scales.
- Units of Heat.
- Heat capacity with examples.
- Conductors, Insulators.
- Conduction, Convection with examples.

Our Environment (Biology)

- Physical and Biological Environment.
- Biotic & Abiotic components.
- Interaction between abiotic and biotic components.
- Socio-cultural environment.
- General awareness regarding protection of environment.

Educational Excursion.

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-5 (9-5-03)

Conservation of Natural resources (Biology)

- Natural resources
- Renewable resources
- Limits of renewable resources
- Non-renewable resources and their conservation.
- Forest conservation.
- Habitat conservation.
- Recycling.

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Participation of Teachers

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Practicals

Physics	Chemistry	Biology
1. To show the direction of ray of light using glass slab.	1. To show that during the process of photosynthesis, oxygen gas is produced.	1. To study structure of Spirogyra from pond water and Rhizopus from decaying bread.
2. To show the direction of ray of light using glass prism.	2. To prepare Carbon-di-oxide gas in the laboratory and test it with limewater.	2. Study of parts of a flowering plant and a seed.
3. To prepare Volta cell	3. With the help of valve tubes make a model of graphite.	3. To study plant tissue and animal tissues from slides.
4. To show real and virtual images by using lens.	4. To study the different parts of flame.	

Day -6 (12-5-03)

Animal System (Biology)

- Digestive system, or
- Respiratory System

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Animal System (Biology)

- Circulatory system, or
- Excretory system.

OHP, Slide Projector

- Knowledge regarding working of OHP (Over Head Projector), Slide Projector, preparation of transparencies etc. will be imparted to seminarians. In future they can make their lessons more effective by using this information.

Practical

- Groups of seminarians will be inter-changed.

Day-7 (13-5-03)

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Man made Materials

- Building materials.
- Natural stone, Cement, Glass, glass fibers.
- Ceramics, polymers, plastics.
- Synthetic fibers.
- Soaps and Detergents.
- Fertilizers, Pesticides.

Organic Evolution (Biology)

- Evidences of evolution (from fossils)
- Embryological evidences
- Homologous organs, Analogous & vestigial organs.
- Origin of species.
- Origin of life.

Post-Test

- A Post-test containing Questions of Physics, Chemistry, Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day-8 (14-5-03)

Carbon & its compounds (Chemistry)

- Allotropic forms of carbon.
- Structure of diamond and graphite with models.
- Compounds of carbon, their nomenclature.
- Saturated and unsaturated hydrocarbons.

Food (Biology)

- Constituents of food
- Importance of balance diet
- Preservation of food.
- Diet plan according to age, life style, nature of work etc.

Electricity (Physics)

- Concepts of changes.
- Flow of electricity in terms of changes.
- Relationship between current & Charge.
- Force among charges
- Relationship between electric force & other force.
- Hazards of electricity

Science Kit

- Subject experts of Physics, Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.

- Address & thanks by Co-ordinator.
- Disbursement of TA/DA. & Relieving slips to seminarians.

***All the topics of this module will be supplemented with latest information from Newspaper, Magazines, etc. for additional impact on seminarians.**

Contents for High Science Seminar (Non-medical Group) Year 2003-04
(21-7-03 to 1-8-03)

Day-1 (21.7.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
- ii) Name of participant, Name of School, School's Phone No. & District.
- iii) Distance of school from venue of seminar.
- iv) Category (General, SC, ST, BC etc.)
- v) Educational Qualification.
- vi) Medical or Non-medical background.
- vii) Last seminar attended (Date, Year, Place & Name of seminar).
- viii) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 10th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test.

- A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practical

- Seminarians will be divided in three groups A, B & C. The following Practicals of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the practical themselves.

Physic	Chemistry	Biology
1. To study the variation in time period of a simple pendulum with length and to plot L-T graph.	1. To distinguish between Saturated and unsaturated organic compounds.	1. To study the presence of starch, sugar, fat & protein in food sample.
2. To determine the value of acceleration due to gravity.	2. To test different samples of soil (4-5 samples) for its acidity and alkalinity	2. To study yeast (by preparing yeast culture)
3. To verify the laws of reflection of light using plane mirror.	3. To prepare a colloidal solution of sulphur and differentiate it from (i) True solution and (ii) suspension on the basis of transparency and filtration criterion respectively.	3. Identification of plant tissues and animal tissues & draw diagrams.

Discussion

- Teachers will be asked to give problems to be faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (22-7-03)

Matter-Nature & behavior (Chemistry)

- Atoms and molecules.
- Atomic theory of matter.
- Atomic and molecular masses. The mole concept.
- Law of constant proportion.
- Calculation of percentage composition of elements in simple compounds.
- Determination of empirical and molecular formulae of simple substances.

Cell & Cell Structure (Biology)

- Discovery of cell
- Structure of Plant cell
- Structure of animal cell
- Structure & functions of cell organelles.
- Difference between plant cell & animal cell

Diversity in living World (Biology)

- Need & importance of classification, Binomial nomenclature.
- Classification of plants upto division level.
- Classification of Animals (Invertebrates upto phylum & vertebrates upto class.)
- Importance of Conservation of biodiversity.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic. They can also see latest magazines of Physics, Chemistry & Biology.

Practical

- Groups of seminarians will be inter-changed.

Day-3 (23-7-03)

Periodic Table (Chemistry)

- A brief historical background of periodic classification of elements.
- Mendeleev's periodic Law.
- Modern periodic Law.
- Variation in properties across a period and along a group.
- Atomic size, metallic and non-metallic character.
- Ionization Energy and factors on which I.E. depends.
- Electron affinity and electro-negativity.

Human Diseases (Biology)

- Types of diseases, mode of spread of communicable diseases, Symptoms, Prevention & control of some diseases (malaria, influenza, cholera, diarrhea, jaundice, typhoid, rabies, AIDS, tuberculosis).

Human Diseases (Biology)

- Heart diseases, Cancer, Diabetes.
- Protein Energy malnutrition, Vitamin deficiency (Scurvy, rickets, beriberi, pellagra, xerophthalmia, mineral deficiency (anaemia, goitre)

Construction and Theorems in Geometry (Maths)

- Construction of triangles (different types of triangles).
- Construction of medians, angle bisectors, bisectors of sides of triangles.
- Circumcircle of triangle, Incircle of triangle.
- Tangents to a circle.
- Cyclic-quadrilateral.

Practicals

- Groups of seminarians will be inter-changed.

Day-4 (24.7.03)

Chemical bonding (Chemistry)

- Chemical bond and Lewis concept.
- Formation of chemical bond.
- Types of chemical bond (Ionic bond, covalent bond.).
- Ionic bond- conditions for the formation of ionic bond.
- Properties of ionic compounds.
- Covalent bond-Lewis concept, a polar covalent bond and properties of covalent compounds.
- Examples of compounds having both the types of bonds.

Sun and Nuclear energy (Physics)

- Structure of sun, exothermic & endothermic reaction, and energy produced in the Sun, proton- proton cycle. , Structure of atom, A little bit about nuclear reactor.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Population Education

- Information regarding birth rate, death rate, literacy rate, sex-ratio, density of population of Punjab and India will be given to seminarians.
- An awareness regarding AIDS Education, Adolescence Education will also given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To study the variation in limiting with mass and the nature of surfaces in contact.	1. To carry out the following chemical reactions and record observations: - i) Iron nail with copper sulphate solution in water. ii) Burning of magnesium ribbon in air. iii) Zinc with sulphuric acid. iv) Heating of NH ₄ Cl. v) Sodium sulphate with barium chloride in the form of their aqueous solution.	1. To study different microorganisms from pond water.
2. To determine the focal length of a concave mirror by attaining image of distant object.	2. To prepare the methane gas in laboratory and study its properties.	2. Identify & draw labeled diagrams of stages of mitosis from prepared slides.
3. To trace the path of ray of light passing through a glass prism and measure the angle of deviation.	3. To determine the %age of oxygen in air.	3. To study bacteria from different sources.

Day-5 (25-7-03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Life processes (Biology)

- Digestive system, or
- Respiratory System

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Moral values

- Along with academic skills, inculcation of moral values in school students is also very important aspect of education.
- Emphasis will be given to remind the teachers about their responsibility in this regard.

Practical

- Groups of seminarians will be inter-changed.

Day –6 (28-7-03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Life Processes (Biology)

- Circulatory system, or
- Excretory system.

Assignments

- Seminarians will discuss and submit their assignments to subject experts.

Practical

- Groups of seminarians will be inter-changed.

Day-7 (29.7.03)

Heredity (Biology)

- Heredity and variation.
- Physical basis of heredity-chromosomes
- DNA (Elementary idea)
- Genes, sex determination.

Educational Excursion

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-8 (30-7-03)

Evolution (Biology)

- Evidences of evolution
- Theories of evolution.

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

NTSE

- Eligibility of class X students regarding National Talent Search Examination (NTSE), preparation for this examination, importance for this examination, motivation of the students for this examination, this type of information will be given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To prepare Volta cell.	1. To study the interaction of following metals with their salt solution and arrange according to their reactivity: Cu, Al, Zn, Sn.	1. To study fungus growing on decaying food materials.
2. To find out the resultant resistance of two resistors connected in (i) Series, and (ii) Parallel.	2. To prepare soap and study its properties.	2. To test the presence of adulterant turmeric or coriander.
3. To study the dependence of current on the potential difference across a resistor and determine its resistance.	3. Determine the caloric value of wax.	3. To prepare temporary mount of leguminous root nodules to study bacteria.

Day-9 (31.7.03)

Magnetism (Physics)

- Origin of magnetism.
- Properties of magnet.
- Relationship between magnetism & electricity.
- Permanent & Temporary magnets.

Carbon & its compounds (Chemistry)

- Coal and petroleum as natural resources of carbon.
- Destructive distillation of coal (in brief)
- Fractional distillation of petroleum (in Brief)
- Carbon- its tetra-valency and catenation.

Sustainable Agriculture (Biology)

- Mixed farming
- Mixed cropping
- Crop rotations
- Variety improvement through breeding and selection.

Post-Test

- A Post-test containing Questions of Physics, Chemistry, Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day –10 (1-8-03)

Electricity (Physics)

- Electricity in terms of electrons and protons, Electric field produced.
- Units, Properties of changes
- Difference between changes & masses.
- Analogous of electricity & gravitation.

Carbon & its compounds (Chemistry)

- Hydro carbons-saturated and unsaturated.
- Isomerism, Homologues series.
- Carbon compounds- alcohols, aldehydes, ketones. carboxylic acids (Preparation, properties and uses.)
- Soaps and detergents.

Our Environment (Biology)

- Habitat and its types, adaptation in plants and animals, conservation of habitats.
- Biosphere – ecosystem, structure of an ecological system, food-chain, food web. trophic levels, function of an ecological system.
- Flow of energy, biogeochemical cycles of materials (Carbon and Nitrogen), and types of ecosystems, biomass, biodiversity and its importance.

Science Kit

- Subject experts of Physics, Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA /DA. & Relieving slips to seminarians.

***All the topics of this module will be supplemented with latest information from Newspapers, Magazines, etc. for additional impact on seminarians.**

Contents for High Science Seminar (Medical Group) Year 2003-04 **(21-7-03 to 1-8-03)**

Day-1 (21.7.03)

Registration

Particulars of the teachers will be registered as per following columns.

- i) Date of joining.
 - ii) Name of participant, Name of School, School's Phone No. & District.
 - iii) Distance of school from venue of seminar.
 - iv) Category (General, SC, ST, BC etc.)
 - v) Educational Qualification.
 - vi) Medical or Non-medical background.
 - vii) Last seminar attended (Date, Year, Place & Name of seminar).
 - viii) Stationary (Folder, Register, Pen etc.) Received/not received.
- From teachers. Relieving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario
- Including emphasis on moral responsibilities of the teachers by Coordinator of the scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Physics, Chemistry, Biology from Classes 6th to 10th.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

A pre-test contains questions of Physics, Chemistry & Biology from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

Practical

Seminarians will be divided in three groups A, B and C. The following Practicals of Physics, Chemistry and Biology will be first demonstrated by the subject experts to Group A, B & C respectively & then they will be asked to do the practical themselves.

Physic	Chemistry	Biology
1. To study the variation in time period of a simple pendulum with length and to plot L-T graph.	1. To distinguish between Saturated and unsaturated organic compounds.	1.To study the presence of starch, sugar, fat & protein in food sample.
2. To determine the value of acceleration due to gravity.	2. To test different samples of soil (4-5 samples) for its acidity and alkalinity	2.To study yeast (by preparing yeast culture)
3. To verify the laws of reflection of light using plane mirror.	3. To prepare a colloidal Solution of sulphur and differentiate it from (i) True solution and (ii) suspension on the basis of transparency and filtration criterion respectively.	3. Identification of plant tissues and animal tissues & draw diagrams.

Discussion

- Teachers will be asked to give problems to faced by them regarding content and methodology of a particular topic and solutions will be evolved by interaction among them. Subject experts of practical group will act as facilitators.

Day-2 (22-7-03)

Matter-Nature & behavior (Chemistry)

- Atoms and molecules.
- Atomic theory of matter.
- Atomic and molecular masses. The mole concept.
- Law of constant proportion.
- Calculation of percentage composition of elements in simple compounds.
- Determination of empirical and molecular formulae of simple substances.

Diversity in living World (Biology)

- Need & importance of classification, Binomial nomenclature.
- Classification of plants upto division level.
- Classification of Animals (Invertebrates upto phylum & vertebrates upto class.)
- Importance of Conservation of Biodiversity.

Force (Physics)

- Origin of force
- Newton's Laws & its applications.
- Units, momentum, Force of friction.

Library

- Teachers will go to Library & they can get issued textbooks & reference books for the preparation of assignment & their topic. They can also see latest magazines of Physics, Chemistry & Biology

Practical

- Groups of seminarians will be inter-changed.

Day-3 (23-7-03)

Periodic Table (Chemistry)

- A brief historical background of periodic classification of elements.
- Mendeleev's periodic Law.
- Modern periodic Law.
- Variation in properties across a period and along a group.
- Atomic size, metallic and non-metallic character.
- Ionization Energy and factors on which I.E. depends.
- Electron affinity and electro-negativity.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminarians.

Measurement, units & motion (Physics)

- Mass, length and time.
- A few basically physical quantities derived from them.

Basic Algebraic Concepts (Maths)

- Relation between numbers & letters.
- Operations on numbers and letters.
- Indices.
- Algebraic expressions.

- Operations on algebraic expressions.
- Simplification.
- Linear equation.
- Solution of Linear equation.
- Problems leading to linear equations.

Practical

- Groups of seminarians will be inter-changed.

Day-4 (24.7.03)

Chemistry

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Sun and Nuclear energy (Physics)

- Structure of sun, exothermic & endothermic reaction, and energy produced in the Sun, proton- proton cycle, structure of atom, A little bit about nuclear reactor.

Electricity (Physics)

- Electricity in terms of electrons and protons.
- Electric field produced.
- Units, Properties of charges. Difference between charges & masses.
- Analogous of electricity & gravitation.

Population Education

- Information regarding birth rate, death rate, literacy rate, sex ratio, density of population of Punjab and India will be given to seminarians.
- An awareness regarding AIDS Education, Adolescence Education will also given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To study the variation in limiting with mass and the nature of surfaces in contact.	1.To carry out the following chemical reactions and record observations:- i) Iron nail with copper sulphate solution in water. ii) Burning of magnesium ribbon in air. iii) Zinc with sulphuric acid. iv) Heating of NH Cl. v) Sodium sulphate with barium chloride in the form of their aqueous solution.	1. To study different microorganisms from pond water.
2.To determine the focal length of a concave mirror by attaining image of distant object.	2. To prepare the methane gas in laboratory and study its properties.	2. Identify & draw Labeled diagrams of stages of mitosis from prepared slides.

3. To trace the path of ray of light passing through a glass prism and measure the angle of deviation.	3. To determine the %age of oxygen in air.	3. To study bacteria from different sources.
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Day-5 (25-7-03)

Chemistry

- According to choice of seminararians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Number System (Maths)

- Introduction to 'Set' & notations used to represent relation between sets.
- Set of Natural Numbers & Fundamental operations.
- Set of whole Numbers & Fundamental operations.
- Set of Integers & Fundamental operations.
- Set of Rational Numbers & Irrational Numbers.
- Decimal representation of Rational Numbers.
- Recurring and non-terminating Numbers.
- Set of Real Numbers.
- Number line:-one-one correspondence between numbers & points on line.

Participation of Teachers

- Teachers will speak on the topics prepared by them for 5-7 minutes.

Moral values

- Along with academic skills, inculcation of moral values in school students is also very important aspect of education.
- Emphasis will be given to remind the teachers about their responsibility in this regard.

Practical

- Groups of seminararians will be inter-changed.

Day -6 (28-7-03)

Carbon & its compounds (Chemistry)

- Coal and petroleum as natural resources of carbon.
- Destructive distillation of coal (in brief)
- Fractional distillation of petroleum (in brief)
- Carbon- its tetra-valency and catenation.
- Hydro carbons- saturated and unsaturated.

Physics

- According to choice of seminararians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding topic will be given to the seminararians.

Light (Physics)

- Light in the form of wave.
- A little bit about interference, Diffraction, Polarisation.
- Details of mirror, lens, prism and their defects.

Assignments

- Seminarians will discuss and submit their assignments to subject experts.

Practical

- Groups of seminarians will be inter-changed.

Day-7 (29--03)

Heat (Physics)

- Heat as a form of energy, its origin (Origin basically from vibrational motion of molecules.
- Each and every term of heat i.e. specific heat etc.

Educational Excursion

- An Educational Excursion will be arranged for seminarians to update their knowledge.

Day-8 (30-7-03)

Physics

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & more emphasis will be given regarding its methodology.

Electricity (Physics)

- Units, Properties of charges. Difference between charges & masses.
- Analogous of electricity & gravitation.

Basic Geometrical Concepts (Maths).

- Point, line, surface.
- Relation between points & lines in a surface.
- Relation between lines in a surface.
- Line segment.
- Ray, Angle, types of Angles.
- Units of measuring line segment & Angles.

NTSE

- Eligibility of class X students regarding National Talent Search Examination (NTSE). preparation for this examination, importance for this examination, motivation of the students for this examination, this type of information will be given to seminarians.

Practicals

Physics	Chemistry	Biology
1. To prepare Volta cell.	1.To study the interaction of following metals with their salt solution and arrange according to their reactivity: Cu, Al, Zn, Sn.	1. To study fungus growing on decaying food materials.
2.To find out the resultant resistance of two resistors connected in i) Series and (ii) Parallel.	2. To prepare soap and study its properties.	2. To test the presence of adulterant turmeric or coriander.
3. To study the dependence of	3. Determine the caloric	3. To prepare temporary

current on the potential difference across a resistor and determine its resistance.	value of wax.	mount of leguminous root nodules to study bacteria.
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Day-9 (31.7.03)

Magnetism (Physics)

- Sources of magnetism.
- Properties of magnet.
- Electro magnet & Permanent magnets.

Chemical bonding (Chemistry)

- Chemical bond and Lewis concept.
- Formation of chemical bond.
- Types of chemical bond (Ionic bond, covalent bond.).
- Ionic bond- conditions for the formation of ionic bond.
- Properties of ionic compounds.
- Covalent bond-Lewis concept, a polar covalent bond and properties of covalent compounds.
- Examples of compounds having both the types of bonds.

Human Diseases (Biology)

- Types of diseases, mode of spread of communicable diseases, Symptoms. Prevention & control of some diseases (malaria, influenza, cholera, diarrhea, jaundice, typhoid, rabies, AIDS, tuberculosis).

Post-Test

- A Post-test containing Questions of Physics, Chemistry & Biology from the topics taught by subject experts will be given to seminarians and their acquired knowledge will be assessed.

Practical

- Groups of seminarians will be inter-changed.

Day -10 (1-8-03)

Universe (Physics)

- Stars, Galaxies, Meteors, Meteorites, Comets.
- Units used to measure distances.
- Milky way galaxy etc.

Carbon & its compounds (Chemistry)

- Isomerism, Homologues series.
- Carbon compounds- alcohols, aldehydes, ketones, carboxylic acids (Preparation, properties and uses.)
- Soaps and detergents.

Biology

- According to choice of seminarians.
- If no choice, an important topic will be taken by the subject expert & innovative ideas regarding the topic will be given to the seminarians.

Science Kit

- Subject experts of Physics Chemistry & Biology will impart knowledge regarding equipment in kit to the seminarians.

Valedictory

- Welcome of Chief Guest by Co-coordinator.
- Presentation of report of seminar by one seminarian.
- Valedictory address by Chief Guest.
- Address & thanks by Co-ordinator.
- Disbursement of TA/DA. & Relieving slips to seminarians.

* All the topics of this module will be supplemented with latest information from Newspapers, Magazines, etc. for additional impact on seminarians.

Contents of Middle Maths Seminar (8 days)

Number System (2Pds)

- Natural number and their properties
- Concept of Zero and its operation
- Whole numbers and its properties
- Integers and its properties including absolute values
- Decimal representation of Numbers
- Rational numbers and their properties
- Irrational numbers and their properties
- Real numbers
- Number line and its use
- Rational number between two given Rational numbers

Indices, Exponents and Surds (1Pd)

- Representing Numbers in Exponent and Surd form
- Laws of radicals
- Negatives and Positives Indices
- Zero Exponent

Squares and Cubes (1 Pd)

- Concept of Square, Square root, Cube, Cube root
- Square root by factorisation, division method and by using table
- Cube root by factorisation and using tables
- Representing Square Roots Geometrically
- Square and Cube of decimals, rational numbers (Negative and Positive)
- Square Root of +ve numbers
- Cube root of +ve and -ve numbers

Commercial mathematics (5 Pds)

- Percentage and its application
- Profit and Loss
- Discount
- Simple. Compound interest and its application in public sector
- Ratio and Proportion

- Unitary Methods
- Banking- General information and use of table in calculating interest
- Share and Debentures

Algebra (4Pds)

- Introduction to Algebraic Expression in one variable
- Relation between number and letters
- Finding value of algebraic expressions
- Operation on algebraic expressions
- Factorization of algebraic expressions
- Concept of Linear equations in one variable
- Solution of Linear equations and Verification of solution.
- Use of linear equation in daily life
- Algebraic Indices
- Application of Algebraic Indices
- Division of Algebraic Expression.

Geometry (7 Pds)

- Basic Geo. Concept
- Angle and its properties
- Triangle and its properties
- Quadrilateral and its properties
- Circle related problems
- Geometrical construction
- Units of mass, length, capacity temperature, Volume &
- Conversion of units.

Mensuration (2 Pds)

- Area of Rectangle, Triangle, Parallelogram, Trapezium, Circle, Sector and Segment of Circle,
- Volume of Cuboid, Cube, Cylinder, Cone Sphere,

Statistics (1Pd)

- Raw data
- Primary and Secondary data
- Mean
- Frequency distribution
- Bar graphs and Histogram and their applications

Teaching Aids (2Pds)

Contents of High Maths Seminar (10 days)

Algebra (10Pds)

- Irrational numbers
- Rationalization of Surds
- Polynomials
- Remainder Theorem and its applications
- Factor Theorem and its applications
- Ratio Proportion – Some useful relations

- Simultaneous linear equations with two variables. Their analytical and Geographical solutions. application of these equations
- Quadratic equations. Solution by factorization and by Completing squares
- Equations reducible to Quadratic equations
- Word problems related to Quadratic equations.
- Rational Expressions, their operations
- GCD and LCM of polynomials.

Mensuration (2Pds)

- Area of Parallelogram, Triangle, Polygon, Circle. Sector and Segment of Circle using Teaching Aids.
- Surface area of Prism, Pyramid, Tetrahedron, and Octahedron.
- Volume & Surface area of Cube, Cuboid, Cylinder, Cone and Sphere, Hemisphere.

Trigonometry (2Pds)

- Introduction with interesting examples
- Trigonometrical ratios
- Trigonometrical table
- Trigonometrical Identities
- Solving sums without using Trigonometrical tables
- Height and Distance (Sufficient number of sums)

Commercial Maths (5Pds)

- Banking
- Share & Debentures
- Income Tax & Sales Tax
- Compound interest

Statistics (3 Pds)

- Statistical data – Raw, Primary and Secondary.
- Geo. Representation of data – Bar graph, Histogram, Frequency polygon, Ogive.
- Arithmetic Mean of ungrouped data
- Arithmetic Mean of grouped data
- Shortcut method for calculating Mean of grouped data
- Weighted Mean
- Median of ungrouped data
- Cost of living Index
- Crude death and birth rates
- Probability

Geometry & Co-ordinate Geo. (9 Pds)

- Theorems, their application the topics
- Congruent triangles
- Similar triangles
- Parallelogram
- Loci and Concurrency Theorem
- Circle and its properties
- Cyclic Quadrilateral

- Tangent to Circle
- Geometrical Construction using Geometry Box in class room
- Construction of Triangles (Simple and Hard Cases). Quadrilaterals.
- Construction of Tangent and using Tangent / Chord properties
- Construction of simple figures
- Distance, Section formulae and their use.

Teaching Aids (2 Pds)

Note: -

1. Probability and Coordinate Geometry is proposed to be included in Class X for 2004-05

2 Area of Tetrahedron, Octahedron etc in class X for 2004-05 by PSEB, which has been included by CBSE. So our teachers should be ready to teach these topics.

Guidelines for Maths Seminar Year 2003-04

Registration

Particulars of the teachers will be registered as per following columns.

- ix) Date of joining.
- x) Name of participant, Name of School, School's Phone No. & District.
- xi) Distance of school from venue of seminar.
- xii) Category (General, SC, ST, BC etc.)
- xiii) Educational Qualification.
- xiv) Medical or Non-medical background.
- xv) Last seminar attended (Date, Year, Place & Name of seminar).
- xvi) Stationary (Folder, Register, Pen etc.) Received/not received.

From teachers, reliving slips will be collected and roll numbers will be issued.

Inauguration

- Prayer
- Welcome of seminarians by Co-coordinator of scheme.
- Inaugural address by Director S.I.S.E./Principal of G.I.S.T.C.
- Information regarding seminar and importance of seminar in the present scenario including emphasis on moral responsibilities of the teachers by Coordinator of the Scheme.
- Vote of thanks by Co-coordinator.

Assignment

- Teachers will be given information regarding preparation of assignment for a particular topic of Maths of particular classes.
- Teachers will be asked to prepare a lesson of 5-10 minutes duration on the topic, which they think that they can give some innovative idea regarding its methodology.
- Performa will be given to teachers regarding their choice of topics of particular subject (to be included in seminar.)

Pre-Test

- A pre-test contains questions of Maths from the syllabus and general awareness regarding subject will be given to teachers and their previous knowledge will be tested.

MANAGEMENT OF TEACHER TRAINING

The management of teacher training requires human approach in dealing with problems. The ability to treat the child as a human being, to gain mutual respect and understanding, to have her/his trust, to win her/his cooperation without any command or coercion is among the essential qualities that characterise the truly successful teachers. In order to function effectively on the human relations front, a teacher should be impartial, open minded and fair in dealing with the everyday problems of her/his class. She/he must be easily approachable by her/his class and listen to their problems with care and sympathy. Effective teacher training is being imparted to develop the following qualities in the teachers for the better management of the classroom activities.

- Positive attitude
- Clear Instructions
- Personal Contact
- Open communications
- Teamwork orientation

When all the students are involved in the planning and decision making activities of the classroom, the communication becomes successful. Therefore proper use of the group management system in the classroom is being made. It implies providing environment to the students in the classroom with different aptitudes, talents, aspirations, needs and motivation for their proper academic growth and development. Such an approach helps in increasing the potential for the academic attainment of the students.

Therefore, the management requires that principles of sociology, psychology and group dynamics as well as management of resources i.e. child, money, material, motivation and building work and performance and culture are applied in the classroom. The objective is to achieve the target for proper growth and development of the child. To achieve this, integrated plans for teacher education are required both at pre-service and in-service training levels. These training programmes focus on making teachers committed to goals, teachers who can work in terms and teachers who are a part of the community.

CHALLENGES OF EDUCATIONAL SCENARIOS

Teaching is a multidimensional, multidisciplinary profession. A teacher is required to plan, to lecture, to demonstrate, question, guide and even keep silent, keeping the situation in mind the flow of information and changes in the communication programmes.

All pre-service teacher education programmes are being designed and organized in such a way as to make for substantial initiation into an adequate preparation for the different roles envisaged in the Punjab Education Policy and POA 2002 and future education. Programmes at all levels are geared to certain basic and general objectives and which may be commonly applicable in varying degrees to all the levels.

During the past fifty years or so, significant changes have taken place in the social, economic, technological and political environment of Indian education. However, recent policies, both educational and economic, and trends towards globalization have suggested many changes for the educational organizations. These changes cannot be

ignored; instead serious and scientific efforts are required to execute innovative mechanisms of developing skills and competencies of teacher trainees. Such an effort will prepare the teachers to accept the emerging challenges. Changing technology is leading to obsolescence of present skills and to tough competition. Changing international environment is building academic pressures due to emphasis on e-mail, Internet and multimedia techniques in teaching learning. Changing profiles of teachers, increased educational level, rising participation of women in the teaching profession and increased emphasis on fulfillment of psychological needs is changing the social as well as value structures of the society.

The above trends will have a tremendous impact on the teachers of future who will have to act as Change Agents or "Change facilitators". Therefore, a judicious use of various mechanisms is required for the teachers' training to meet the challenges of future environment. It is required that the teacher training is so professionally oriented that it has the capacity and capability to train the teachers from experiment, action, past experiences and the experiences of others and transfer of learning to all for greater educational effectiveness. The concept of TQM (Total Quality Management) in the education is one experience, which can bring far-reaching improvements in the system and can contribute to the teacher development on a continuous basis.

With the changes coming in the wake of advance technology, new jobs need to be created and many old jobs may become redundant. There is a general apprehension of impending unemployment. In the competitive world of today, education cannot hope to survive for long with old technology. The problem of unemployment resulting from modernization may be solved by properly assessing the educational needs and training the teachers in alternative skills. Changes and modernization have to be accepted because these are so essential for professional as well as personal growth and development and unavoidable for survival of the system.

Computerization will have a revolutionary impact on the management of teaching learning process as well as management of educational systems. This aspect of education will effect:

- The decision-making processes at higher levels.
- Teaching learning processes in the classrooms.
- Collection and processing of data.

It is being visualized that management of human relations in the future will be more complicated than it is today. This will be in part the result of change in the value systems coupled with interference of advanced technology. This will mean that the teachers should be so professional and so trained that they are responsible and do their jobs for the strengthening of the system. This requires the creation of not only on academic considerations but also cultural or specific psychological considerations. The teacher training in future therefore needs to be modified accordingly. Open communication systems, which involve sharing of information, sharing of ideas and sharing of skills, need to be encouraged. These will also strengthen the concept of total quality management involving encouragement of creativity, motivation and commitment. This will help the teachers in becoming effective professionals with readiness for change. This will also create an atmosphere of trust in the system.

IMPROVEMENT OF SCIENCE EDUCATION SCHEME

TIME-TABLE FOR MIDDLE SCIENCE SEMINAR YR. 2003-4 (5.5.30 TO 14.5.03)

VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB

Day	9:30 to 10:15	10:15 to 11:00	11:00 to 11:15	11:15 to 12:00	12:00 to 12:45	12:45 to 1:30	1:30 to 3:30	3:30 to 4:30
1	Registration	Inauguration	T e a	Assignment	Library	L u n c h	Practical of phy, chem, bio according to syllabus	Discussion regarding problems faced by teachers and teacher's presentation
2	Element, compound & mixture	Health and Diseases		Work & Energy	Pre-test		as above	
3	Heat and Flow of Heat	Nature of matter & separation of substances		Micro-organisms	Moral values/maths		as above	
4	Useful Plants and Animals	Light and its projections		Rocks, Minerals & Metals	Educational excursion		Educational Excursion	
5	Acid, Base & Salt	Conservation of natural resources		Sound	Participation of teachers		Practical of phy, chem, bio according to syllabus	
6	Magnetism	Carbon and its compounds		Our Environment	Film Librarian (OHP, slide, projector)		as above	
7	Animal Systems	Electricity		Man-made Materials	Post Test		as above	
8	Chemistry according to choice of seminararians	Biology according to choice of seminararians		Physics according to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement	

IMPROVEMENT OF SCIENCE EDUCATION SCHEME

TIME-TABLE FOR HIGH SCIENCE SEMINAR YR. 2003-4 (5.5.30 TO 14.5.03)

VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB

Day	9:30 to 10:15	10:15 to 11:00	11:00 to 11:15	11:15 to 12:00	12:00 to 12:45	12:45 to 1:30	1:30 to 3:30	3:30 to 4:30
1	Registration	Inauguration	T e a	Assignment	Library	L u n c h	Practical of phy, chem, bio according to syllabus	Discussion regarding problems faced by teachers and teacher's presentation
2	Nature of Matter	Diversity in the living world		Energy	Pre-test		as above	
3	Human Diseases	Classification of elements		Sun and Nuclear Energy	Maths		as above	
4	Magnetism	Chemical bonding		Natural Resources	Population Education		as above	
5	Chemical Reactions	Light		Participation by Teachers	Moral Values		as above	
6	Carbon and its Compounds	Our Environment		Electricity and its Applications	Assignments		as above	
7	Life Processes	Educational Excursion		Educational Excursion			Educational Excursion	
8	Heredity and Evolution	Metals and Non-metals		Universe	NTSE		Practical of phy, che, bio, acc to syllabus	
9	Chemistry acc to choice of seminararians	Biology acc to choice of seminararians		Physics acc to choice of seminararians	Post Test		as above	
10	Biology acc to choice of seminararians	Chemistry acc to choice of seminararians		Physics acc to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement	

MIDDLE MATHS SEMINAR (8 DAYS)

Day	9:00	9:30 to 10:30		10:45 to 11:45	11:45 to 12:45		1:30 to 2:30	2:30 to 3:30		3:45 to 4:30
1	Attendance & Morning Assembly & Moral Values Talks	Registration	T e a	Regarding Seminar	Pre-test	L u n c h	Number Systems-I	Linear equations	T e a	Assignments, Mathematical teaching problems faced by teachers and discussions in a planned manner
2		Basic Geo Concepts		Square and Cubes	NTSE		Number System-II	Word Problems		
3		Shares & Debentures		Indices and Exponents	Physics		Basic Geo Concepts	Geo Construction		
4		Shares & Debentures		Area	Env. Ed.		Triangles	Geo Construction		
5		Banking		Volume	Chemistry		Quadri-laterals	Teaching Aids		
6		Statistics		Educational Excursion			Educational Excursion			
7		Algebraic Concepts		Percentage, Profit-Loss	Biology		Circles & Related Concepts	Teaching Aids		
8		Algebraic Expressions		Interest (simple, compound)	Population Education		Concluding session			

HIGH MATHS SEMINAR (8 DAYS)

Day	9:00	9:30 to 10:30		10:45 to 11:45	11:45 to 12:45		1:30 to 2:30	2:30 to 3:30		3:45 to 4:30
1	Attendance & Morning Assembly & Moral Value Talks	Registration	T e a	Regarding Seminar	Pre-test	L u n c h	Factorisation, LCM, HCF	Linear Equations	T e a	Assignment: Mathematics teaching problems faced by teachers & discussion in a planned manner
2		Basic Geo Concepts		Income Tax and Sales Tax	NTSE		Function and Relation	Word Problems		
3		Trigonometry		Surds	Physics		Basic Geo Concepts	Geo Construction		
4		Height and Distance		Area	Env. Ed.		Similar Triangles	Geo Construction		
5		Banking		Volume	Chemistry		Quadrilaterals	Teaching Aids		
6		Statistics		Educational Excursion			Educational Excursion			
7		Statistics		Remainder Theorem	Biology		Circles & Related Concepts	Teaching Aids		
8		Simultaneous Equations		Sequence & Series	Shares and Debentures		Circles & Related Concepts	Locus		
9		Quadratic Equations		Probability	Shares and Debentures		Geo Concepts on Area	Some more figures		
10		Rational Expressions		Compound Interest	Population Education		Concluding Session			

IMPROVEMENT OF SCIENCE EDUCATION SCHEME

TIME-TABLE FOR HIGH SCIENCE SEMINAR (MEDICAL GP.) YR. 2003-4 (5.5.30 TO 14.5.03)

VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB

Day	9:30 to 10:15	10:15 to 11:00		11:15 to 12:00	12:00 to 12:45		1:30 to 3:30	3:30 to 4:30	
1	Registration	Inauguration		Assignment	Pre-test		Practical of Phy, Chem, Bio acc to syllabus	Discussion regarding problems faced by teachers & Teachers' presentation	
2	Matter-Nature & Behaviour (che)	Diversity in living world (bio)		Force (phy)	Library		as above		
3	Periodic Table (che)	Biology acc to choice of seminararians		Measurement, units & motion (phy)	Basic Algebraic Concepts (maths)		as above		
4	Chemistry acc to choice of seminararians	Sun & Nuclear Energy (phy)		Electricity (ohy)	Population Education	L	as above		
5	Chemistry acc to choice of seminararians	Number System (maths)	T E A	Participation by teachers	Moral Values	U N C H	as above		
6	Carbon & its Compounds	Physics acc to choice of seminararians		Light (phy)	Assignments		as above		
7	Heat (Phy)	Educational Excursion		Educational Excursion			Educational Excursion		
8	Physics acc to choice of seminararians	Electricity (phy)		Basic Geometrical Concepts (maths)	NTSE		Practical of Phy, Chem, Bio acc to syllabus		
9	Magnetism (phy)	Chemical Bonding (che)		Human Diseases (bio)	Post-test		as above		
10	Universe(phy)	Carbon & its Compounds		Biology acc to choice of seminararians	Science Kit		Valedictory & TA/DA disbursement		

IMPROVEMENT OF SCIENCE EDUCATION SCHEME								
TIME-TABLE FOR HIGH SCIENCE SEMINAR (NON-MEDICAL GP.) YR. 2003-4 (5.5.30 TO 14.5.03)								
VENUE: SISE,PB, CHANDIGARH & INSERVICE TRAINING CENTRES OF PUNJAB								
Day	9:30 to 10:15	10:15 to 11:00		11:15 to 12:00	12:00 to 12:45		1:30 to 3:30	3:30 to 4:30
1	Registration	Inauguration		Assignment	Pre-test		Practical of Phy, Chem, Bio acc to syllabus	Discussion regarding problems faced by teachers & Teachers' presentation
2	Matter-Nature & Behaviour (che)	Cell & Cell Structure (bio)		Diversity in living world (bio)	Library		as above	
3	Periodic Table (che)	Human Diseases (bio)		Human Diseases (bio)	Construction & Theorems in Geometry (maths)		as above	
4	Chemical Bonding (che)	Sun & Nuclear Energy (phy)		Biology acc to choice of Seminararians	Population Education		as above	
5	Chemistry acc to choice of seminararians	Life Processes (bio)	T E A	Participation by teachers	Moral Values	L U N C H	as above	
6	Chemistry acc to choice of seminararians	Physics acc to choice of seminararians		Life processes (bio)	Assignments		as above	
7	Heredity (bio)	Educa-tional Excursi-on		Educational Excursion			Educational Excursion	
8	Evolution (bio)	Physics acc to choice of seminararians		Biology acc to choice of Seminararians	NTSE		Practical of Phy, Chem, Bio acc to syllabus	
9	Magnetism (phy)	Carbon & its Compounds (che)		Sustainable Agriculture (bio)	Post-test		as above	
10	Electricity (phy)	Carbon & its Compounds (che)		Our Environment (bio)	Science Kit		Valedictor y & TA/DA disbursement	

Material Prepared for SSA

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Title/Description	Objective	Language	Source material	Circulation	No. of Copies
Teacher Training					
ਆਪਣੇ ਕੌਮੀ ਚਿੰਨ੍ਹ ਅਤੇ ਕੌਮੀ ਏਕਤਾ Our National Symbols and National Integration	Teacher Training	Punjabi	NCERT	School level	1
ਜਨਸੰਚਾਰ ਸਾਧਨ ਅਤੇ ਕੌਮਾਂਤਰੀ ਸਮਝ Communication Media and Understanding	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/In-Service Training Centre	1
ਸਹਾਇਕ ਸਾਧਨਾਂ ਦੀ ਤਤਕਾਲੀ ਸਿਰਜਣਾ Improvising Teaching-Aids	Teacher Training	Punjabi	NCERT	Block level	1
ਸਿੱਖਿਆਰਥੀ ਮੁੱਖੀ ਪਹੁੰਚ Learner-centred Approach	Teacher Training	Punjabi	NCERT	Block level	1
ਵਿਦਿਆਰਥੀਆਂ ਵਿਚ ਘੋਖਣ ਦੀ ਆਦਤ ਪਾਉਣਾ Developing Inquiry skills in students.	Teacher Training	Punjabi	NCERT	Block level	1
ਕਦਰਾਂ ਕੀਮਤਾਂ ਵੱਲ ਸੋਧਤ ਸਿੱਖਿਆ Values oriented Education	Teacher Training	Punjabi	NCERT	Block level	1
ਨੈਤਿਕ ਸਿੱਖਿਆ -ਸੰਚਾਰ ਅਤੇ ਮੁੱਲਾਂਕਣ Moral Education : communication and Evaluation	Teacher Training	Punjabi	SSA, Punjab	School level	1
ਵਾਤਾਵਰਣ, ਸਕੂਲ ਅਤੇ ਬੱਚਿਆਂ ਦੀ ਸਵੱਛਤਾ Environment, School and children cleanliness	Teacher Training	Punjabi	SSA, Punjab	School level	1
ਪ੍ਰੇਰਣਾ (ਕੁਸ਼ਲਤਾਵਾਂ ਲਈ ਪ੍ਰੇਰਕ ਸ਼ਕਤੀ) Motivational Skills & Self Motivation	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਵਾਤਾਵਰਣ ਅਧਿਐਨ -ਅਧਿਆਪਕ ਅਗਵਾਈ ਪੁਸਤਕ Environment Care - a teachers /-manual	Teacher Training	Punjabi	NCERT	Manual/School Level	1
ਸਕੂਲ ਮੁਖੀ -ਇਕ ਕੁਦਰਤੀ ਲੀਡਰ Leadership skills	Teacher Training	Punjabi	SSA, Punjab	Manual/School Level	1
ਸੰਚਾਰ ਕੁਸ਼ਲਤਾ Communication Skills	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਸਫਲ ਸਕੂਲ ਮੁਖੀ A proficient School Head	Teacher Training	Punjabi/English	SSA, Punjab	School level	1
ਸਿੱਖਣ ਵਿਚ ਸਮੱਸਿਆਵਾਂ ਵਾਲੇ ਬੱਚੇ : ਉਨ੍ਹਾਂ ਦੀਆਂ ਸਿੱਖਿਆ ਲੋੜਾਂ Children with learning problems: Their Educational Needs	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸਰੀਰਕ ਅਤੇ ਮਾਨਸਿਕ ਚੁਣੌਤੀਆਂ ਵਾਲੇ ਬੱਚਿਆਂ ਦੀਆਂ ਵਿਸ਼ੇਸ਼ ਸਿੱਖਿਆ ਲੋੜਾਂ Special Educational needs of physically and mentally challenged children	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸੁਣਨ ਦੇ ਵਿਕਾਰ ਅਤੇ ਭਾਸ਼ਾ ਵਿਕਾਸ Hearing Impaired and Language Development	IED/Teacher Training	Punjabi	NCERT	School level/ Manual	1
ਸਿੱਖਿਆ ਅੰਕੜਿਆਂ ਦਾ ਮਿਆਰੀਕਰਨ Updation of Educational Data	School Planning and management	Punjabi	NIEPA	District Block	1
ਸਿੱਖਿਆ ਯੋਜਨਾਵਾਂ ਲਾਗੂ ਕਰਨ ਲਈ ਯੋਜਨਾਬੰਦੀ Planning for implementation	School Planning and Mangament	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਿੱਖਿਆ ਵਿਕਾਸ ਦੇ ਸੰਕੇਤਕ ਭਵਿੱਖੀ ਸਕੂਲੀ ਦਾਖਲੇ: ਅਧਿਆਪਕ ਅਨੁਮਾਨ Indicators of Educational Development. Future School, School Enrolments: Teacher Projection	Planning management	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
ਸਿੱਖਿਆ ਯੋਜਨਾਬੰਦੀ ਤੇ ਸਿੱਖਿਆ ਵਿਕਾਸ ਦੀ ਪੜਚੋਲ Educational Planning Diagnosis of Educational Development	Planning & Management	Punjabi	NIEPA	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਜ਼ਿਲ੍ਹਾ ਪੱਧਰੀ ਵਿਦਿਅਕ ਯੋਜਨਾਬੰਦੀ- ਧਾਰਨਾ ਤੇ ਸੰਭਾਵਨਾ District level Educational Planning	Planning & Management	Punjabi	NIEPA	Distt. Level	1
ਸਿੱਖਿਆ ਬਾਰੇ ਰਾਸ਼ਟਰੀ ਨੀਤੀ: ਅਧਿਆਪਕਾਂ ਲਈ ਭਾਵ ਅਰਥ, ਸੰਸਥਾਗਤ ਯੋਜਨਾ ਅਤੇ ਪ੍ਰਬੰਧ National Educational Policy meaning & scope for teachers Institutional Planning	School Planning and management	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਿੱਖਿਆ ਬਾਰੇ ਰਾਸ਼ਟਰੀ ਨੀਤੀ (ਮੂਲ ਰੂਪ ਦਾ ਪੰਜਾਬੀ ਅਨੁਵਾਦ) National Educational Policy-1986 Punjabi Translation of the original document	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਸਕੂਲ ਯੋਜਨਾਬੰਦੀ ਉਦੇਸ਼ ਅਤੇ ਵਿਸਤਾਰ School Planning	Planning & Management (work book)	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਯੋਜਨਾ (ਮਡਿਊਲ) School Planning	Planning & Management (Module)	Punjabi	SSA, Punjab	School level	1
ਪੰਜਾਬ ਸਿੱਖਿਆ ਨੀਤੀ 2002 ਅਤੇ ਇਸਦਾ ਕਾਰਜ ਪੋਗਰਾਮ Punjab Education Policy 2002 and Programme of Action	Policy, Programme of Action	English	SSA, Punjab	State/District level	1
ਵਿਰਵੇ ਸਮੂਹ ਸਿੱਖਿਆ ਦੇ ਬਰਾਬਰ ਮੌਕੇ Disadvantaged groups: Equal Educational opportunities to women	Teacher Training	Punjabi	NCERT	Cluster level/Block level/ Distt level/Diets/ In-Service Training Centre	1
ਅਧਿਆਪਕ ਸਿਖਲਾਈ ਕਿਵੇਂ ਹੋਵੇ Training Manual for Teachers	Teachers training	Punjabi	SSA, Punjabi	Cluster/block/DIETS & inservic training centres	1
ਮੁੱਢਲੀ ਬਾਲ ਸਿੱਖਿਆ ਅਧਿਆਪਕ ਅਗਵਾਈ ਪੁਸਤਕ - I, II, III & IV Pre-Primary Education- a teachers manual -- I, II, III & IV	ECCE/EGS training	Punjabi	NCERT	School & Anganwari level	4
Learning Material for EGS					
ਈ. ਜੀ. ਐਸ. ਪ੍ਰਾਇਮਰ -1 E.G.S. Primer-I	Learning material	Punjabi	SSA, Punjab	EGC	1
ਕਾਰਿਆਸ ਪੁਸਤਕ ਈ. ਜੀ. ਐਸ. ਪ੍ਰਾਇਮਰ -1 E.G.S. Work Book	Learning material	Punjabi	SSA, Punjab	EGC	1

Sarva Shiksha Abhiyan

Title/Description	Objective	Language	Source material	Circulation	No of Item
Community Participation and Monitoring /PASWAK					
ਪਸਵਕ ਦੇ ਹਿਸਾਬ-ਕਿਤਾਬ ਰੱਖਣ ਦੀਆਂ ਵਿਧੀਆਂ - ਸਿਖਲਾਈ ਮੈਨੂਅਲ Accounting procedures of PASWAK: Training Manual	Planning & Management (VEDC) Training Manual	Punjabi	SSA, Punjab	School level	1
ਪਸਵਕ ਦੇ ਕੰਮਾਂ-ਕਾਰਜਾਂ ਲਈ ਨੇਮ Procedures of functioning of PASWAK	VEDC (Rules)	Punjabi	SSA, Punjab	Village level, School level	1
ਪਸਵਕ- ਉਸਾਰੀ ਵਿਧੀਆਂ ਅਤੇ ਅਧਿਕਾਰ Procedures of construction by PASWAK	VEDC (Rules Manual)	Punjabi	SSA, Punjab	Village level, School level	1
ਐਸ. ਐਸ. ਏ. ਬੁੱਝਰ SSA Brochure	Motivation and awareness	Punjabi	SSA, Punjab	School level	1
ਐਸ ਐਸ ਏ ਬੁੱਝਰ SSA Brochure	Motivation and awareness	Hindi	SSA, Punjab		1
ਹਿਸਾਬ- ਕਿਤਾਬ ਰੱਖਣ ਦੀਆਂ ਵਿਧੀਆਂ Accounting Procedures for PASWAK	VEDC (Accounts,Manual)	Punjabi	SSA, Punjab	School level	1
ਪਸਵਕ ਆਮਦਨ, ਖਰਚੇ, ਸਟਾਕ, ਇਨਸਪੈਕਸ਼ਨ, ਵਰਤੋਂ, ਸਮਾਜਿਕ ਆਡਿਟ ਅਤੇ ਮਤੇ ਸਬੰਧੀ About Paswak income, stock, inspection, utility, social audit, expenditure and resolution SSA/PASWAK/1,1-R,2,3,4,5,6,7,8,9,10	VEDC (Accounts)	Punjabi	SSA, Punjab	School level	11
ਮਾਸਿਕ /ਸਾਲਾਨਾ ਪ੍ਰਗਤੀ ਰਿਪੋਰਟ ਕਲੱਸਟਰ, ਬਲਾਕ, ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ ਐਸ. ਐਸ. ਏ./ ਪਸਵਕ .II/III/IV/10 Monthly/Yearly Progress Report SSA/Paswak/II/III/IV/10	VEDC (Accounts)	Punjabi	SSA, Punjab	Cluster	3
ਪੋਸਟਰ ਐਸ. ਐਸ. ਏ. 1,2,3,4,5,6,7,8,9,10,11,12 Posters SSA 1,2,3,4,5,6,7,8,9,10,11,12	Motivation and awareness	Punjabi	SSA, Punjab	School level	12
ਐਸ. ਐਸ. ਏ ਦਾ ਲੋਗੋ ਮਾਨਵ ਸੰਸਾਧਨ ਮੰਤਰਾਲੇ ਵੱਲੋਂ ਤਿਆਰ SSA Logo prepared by MHRD	Management/awareness	Punjabi	MHRD SSA, Punjab	School level	1
ਈ. ਜੀ. ਐਸ. ਕੇਂਦਰ (ਜਾਣਕਾਰੀ, ਤਿਆਰੀ ਅਤੇ ਕਾਰਗੁਜ਼ਾਰੀ) E.G.S Centres (Introduction, Initiation and activity)	Learning Material	Punjabi	SSA, Punjab	EGC	1
ਸਰਕਾਰੀ ਸਕੂਲੀ ਇਮਾਰਤਾਂ ਦੇ ਕੰਮ ਕਾਰਜ School Building works	VEDC (Construction Draw-ings and schedules of material)	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਮੁਲਾਂਕਣ ਤੇ ਗਰੇਡੇਸ਼ਨ School evaluation & gradation		Punjabi	SSA, Punjab	School level	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
Household Survey					
ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ, ਉਮਰ ਬ੍ਰੇਟੀ ਅਨੁਸਾਰ ਬੱਚਿਆਂ ਦੀ ਵੰਡ, 3-19 ਸਾਲਾਂ ਦੀ ਪਿੰਡ, /ਵਾਰਡਾਂ ਵਿਚ ਕੁੱਲ ਵਸੋਂ, ਪ੍ਰੀ, ਪ੍ਰਾਈਮਰੀ ਅਤੇ ਸਕੂਲ ਨਾ ਜਾਂਦੇ ਅਤੇ ਮਜ਼ਦੂਰੀ ਕਰਦੇ ਬੱਚੇ ਅਤੇ ਬ੍ਰੇਟੀ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. 1,2,3,4,5 Family survey for universalisation of education, classification of children as per age, population of 3-19 age group, Pre school and school not going to school and doing labour and school going children category wise SSA/FS/I/1,2,3,4,5	Family Survey	Punjabi	SSA, Punjab	School level	5
ਬ੍ਰੇਟੀ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ/ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) . ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/6 School going children category wise (village/ward, cluster, block and district) SSA/FS I,II,III,IV/6	Family Survey	Punjabi	SSA, Punjab	School level	4
ਉਮਰ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. .I,II,III,IV/7 Age wise School going children (village/ward, cluster, block and district) SSA/FS I,II,III,IV/7	Family Survey	Punjabi	SSA, Punjab	School level	4
ਬ੍ਰੇਟੀ ਅਤੇ ਉਮਰ ਅਨੁਸਾਰ ਸਕੂਲ ਜਾਂਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. .I,II,III,IV/8 Category wise School going children age (village/ward, cluster, block and district) SSA/FS I,II,III,IV/8	Family Survey	Punjabi	SSA, Punjab	School level	4
ਸਕੂਲ ਨਾ ਜਾਂਦੇ/ ਮਜ਼ਦੂਰੀ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/9 School not going working children (village/ward, cluster, block and district) SSA/FS I,II,III,IV/9	Family Survey	Punjabi	SSA, Punjab	School level	4
ਉਮਰ ਅਨੁਸਾਰ ਸਰੀਰਕ ਮਾਨਸਿਕ ਚੁਣੌਤੀਆਂ ਦਾ ਸਾਹਮਣਾ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. .I,II,III,IV/10 Age wise Physically/Mentally handicapped children (village/ward, cluster, block and district) SSA/FS I,II,III,IV/10	Family SurveyII	Punjabi	SSA, Punjab	School level	4

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Title/Description	Objective	Language	Source material	Circulation	No It
ਬੁੰਟੀ ਅਨੁਸਾਰ ਸਰੀਰਕ/ਮਾਨਸਿਕ ਚੁਣੌਤੀਆਂ ਦਾ ਸਾਹਮਣਾ ਕਰਦੇ ਬੱਚਿਆਂ ਦੀ ਰਿਪੋਰਟ (ਪਿੰਡ, ਵਾਰਡ, ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ./ਐਫ. ਐਸ. I,II,III,IV/11 Category wise Physically/Mentally handicapped (village/ward, cluster, block and district) SSA/FS I,II,III,IV/11	Family Survey	Punjabi	SSA, Punjab	School level	4
ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ ਨਿਰਦੇਸ਼ ਪੁਸਤਕ ਐਸ. ਐਸ. ਏ./ਐਸ. ਆਰ/1 Family survey Instruction - book for general expansion of Education SSA/FS/SR/1	Family Survey	Punjabi	SSA, Punjab	School level	1
ਸਿੱਖਿਆ ਦੇ ਆਮ ਪਸਾਰ ਲਈ ਪਰਿਵਾਰ ਸਰਵੇਖਣ ਨਿਰਦੇਸ਼ ਪੁਸਤਕ- 1&2 Family Survey Instruction book - 1&2	Family Survey	Punjabi	SSA, Punjab	School level	2
ਪਿੰਡ/ਵਾਰਡ ਦਾ ਨਾਨ-ਸਕੇਲ ਨਕਸ਼ਾ Non-Scale map of the Village/ward	Family Survey	Punjabi	SSA, Punjab	School level	1

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Title/Description	Objective	Language	Source material	Circulation	No of Item
Research and Evaluation EMIS					
ਕੋਲ ਸਕੂਲਾਂ ਦੇ ਕੋਡ ਰਿਕਾਰਡ ਦੀ ਕਿਤਾਬ (ਮੁੱਢਲਾ/ਬਸਤੀ, ਕਲੱਸਟਰ, ਬਲਾਕ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ - I,II,III/1 Records of schools code (Mohalla / basti, cluster & block) SSA/SET-I,II,III/1	Survey/EMIS	Punjabi	SSA, Punjab	School level	3
ਤਿਮਾਹੀ ਐਨਰੋਲਮੈਂਟ ਅਤੇ ਅਧਿਆਪਕਾਂ ਦੀ ਸੂਚਨਾ ਅਤੇ ਵੇਰਵਾ (ਸਕੂਲ ਬਲਾਕ ਅਤੇ ਕਲੱਸਟਰ, ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ - I,II,III,IV/2, ਅਤੇ 2.1 Quarterly Enrolment and Teachers Information and details (school, cluster, block and district level) SSA/SET-I,II,III,IV/2 and 2.1	Survey/EMIS	Punjabi	SSA, Punjab	School level	5
ਤਿਮਾਹੀ ਐਨਰੋਲਮੈਂਟ ਅਤੇ ਅਧਿਆਪਕ ਸੂਚਨਾ ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ/1/2.2 Quarterly Enrolment and Teachers Information SSA/SET/1/2.2	Survey/EMIS	Punjabi	SSA, Punjab	School level	1
ਅਪਰ-ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੀ ਗਿਣਤੀ ਬਾਰੇ ਰਿਪੋਰਟ (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ- II,III,IV/3 Number of Upper Primary School/Sections (cluster, block & district) SSA/SET-II,III,IV/3	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਤਿਮਾਹੀ ਸਕੂਲ ਐਨਰੋਲਮੈਂਟ ਸੂਚਨਾ ਜਮਾਤ I ਤੋਂ V (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ-II,III,IV/4 Quarterly School Enrolment Information I To V class (cluster, block & district) SSA/SET-II,III,IV/4	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਤਿਮਾਹੀ ਸਕੂਲ ਐਨਰੋਲਮੈਂਟ ਸੂਚਨਾ ਜਮਾਤ VI ਤੋਂ X (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਐਸ. ਏ/ਐਸ. ਈ. ਟੀ-II,III,IV/5 Quarterly School Enrolment Information (cluster, block & district) VI To X class SSA/SET-II,III,IV/5	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੇ ਅਧਿਆਪਕਾਂ ਰਿਪੋਰਟ ਸਬੰਧੀ ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਏ. (ਐਸ. ਈ. ਟੀ.- II,III,IV/6 Reports on Teachers of Primary Schools/Sections (cluster, block & district) SA/SET- II,III,IV/6	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਅਪਰ ਪ੍ਰਾਇਮਰੀ ਸਕੂਲਾਂ/ਸੈਕਸ਼ਨਾਂ ਦੇ ਅਧਿਆਪਕਾਂ ਸਬੰਧੀ ਰਿਪੋਰਟ (ਕਲੱਸਟਰ, ਬਲਾਕ ਅਤੇ ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ) ਐਸ. ਏ. (ਐਸ. ਈ. ਟੀ.- II,III,IV/7 Report on Teacher of Upper Primary School/Sections (cluster, block & district) A/SET-II,III,IV/7	Survey/EMIS	Punjabi	SSA, Punjab	Cluster	3
ਸੂਚੀਕਰਨ School Listing	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	3

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Title/Description	Objective	Language	Source material	Circulation	No of Item
ਜ਼ਿਲ੍ਹਾ ਆਂਕੜਾ ਪੁਸਤਕਾਂ District Data Books	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	17
ਬਲਾਕ ਆਂਕੜਾ ਪੁਸਤਕਾਂ Block Data Books	Survey/EMIS	English	SSA, Punjab & District	State, District, Block	216
ਸਕੂਲ ਮੁੱਲਾਂਕਣ ਅਤੇ ਗ੍ਰੇਡੇਸ਼ਨ ਪ੍ਰਕਿਰਿਆ School Evaluation and Gradation Process	Research/Evaluation	Punjabi	SSA, Punjab	School level	1
ਸਕੂਲ ਮੁਆਇਨਾ ਫਾਰਮੈਟ I ਅਤੇ II School Inspection Format I and II	Research Evaluation	English	SSA, Punjab	State, District	7
(Funds Distribution to VEDCs and their Monitoring) - Management					
ਜ਼ਿਲ੍ਹਾ ਪੱਧਰ, ਬਲਾਕ ਪੱਧਰ, ਕਲੈਂਸਟਰ ਪੱਧਰ ਤੇ ਸਕੂਲ ਪੱਧਰ ਅਤੇ ਟੀਚਰ ਗ੍ਰਾਂਟਾਂ ਅਤੇ ਸਿਵਲ ਵਰਕਸ, ਸਕੂਲ ਮੁਹੰਮਤ ਦਾ ਵੇਰਵਾ। ਐਸ. ਐਸ. ਏ. /ਡੀ. ਐਫ ਐਮ. -1,2,3,4,5,6 Details of Block grants at District level SSA/D&M-1/2/3/4/5/6	Funds monitoring	Punjabi	SSA Punjab	District	6